New Jersey Turnpike Authority
Newark Bay–Hudson County Extension

Interchange 14 to Interchange 14A
Newark Bay Bridge Replacement and Associated Improvements

NEW JERSEY EXECUTIVE ORDER 215 ENVIRONMENTAL IMPACT STATEMENT APPENDIX F: BIOLOGICAL RESOURCES

Submitted to:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Submitted by:

New Jersey Turnpike Authority

April 18, 2025

Appendix F-1

USFWS Information For Planning And Consultation (IPaC)
and USFWS Correspondence

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

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Project information

NAME

NJ Turnpike Newark Bay Bridge Replacement

LOCATION

Essex and Hudson counties, New Jersey

DESCRIPTION

Some(Bridge replacement, Newark and Bayonne, NJ)

Local office

New Jersey Ecological Services Field Office

(609) 646-9310

4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

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Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found This species only needs to be considered if the following condition applies: • This species only needs to be considered if the project includes wind turbine operations. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

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Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read

"Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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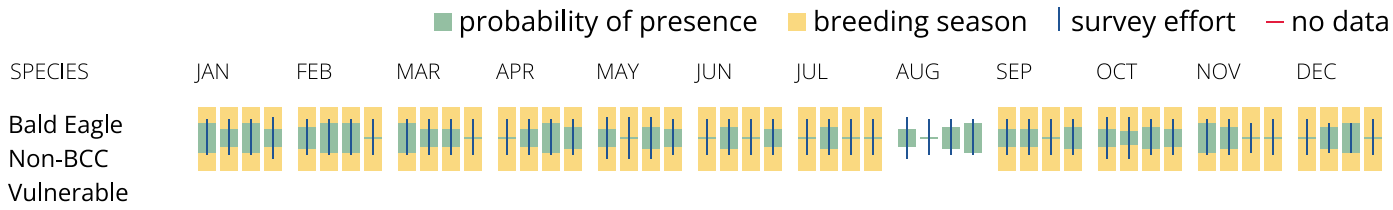
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

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Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

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For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus** This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo *Coccyzus erythropthalmus** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Chimney Swift *Chaetura pelagica** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
King Rail *Rallus elegans** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Red-headed Woodpecker *Melanerpes erythrocephalus** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus** This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush *Hylocichla mustelina** This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read

"Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
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To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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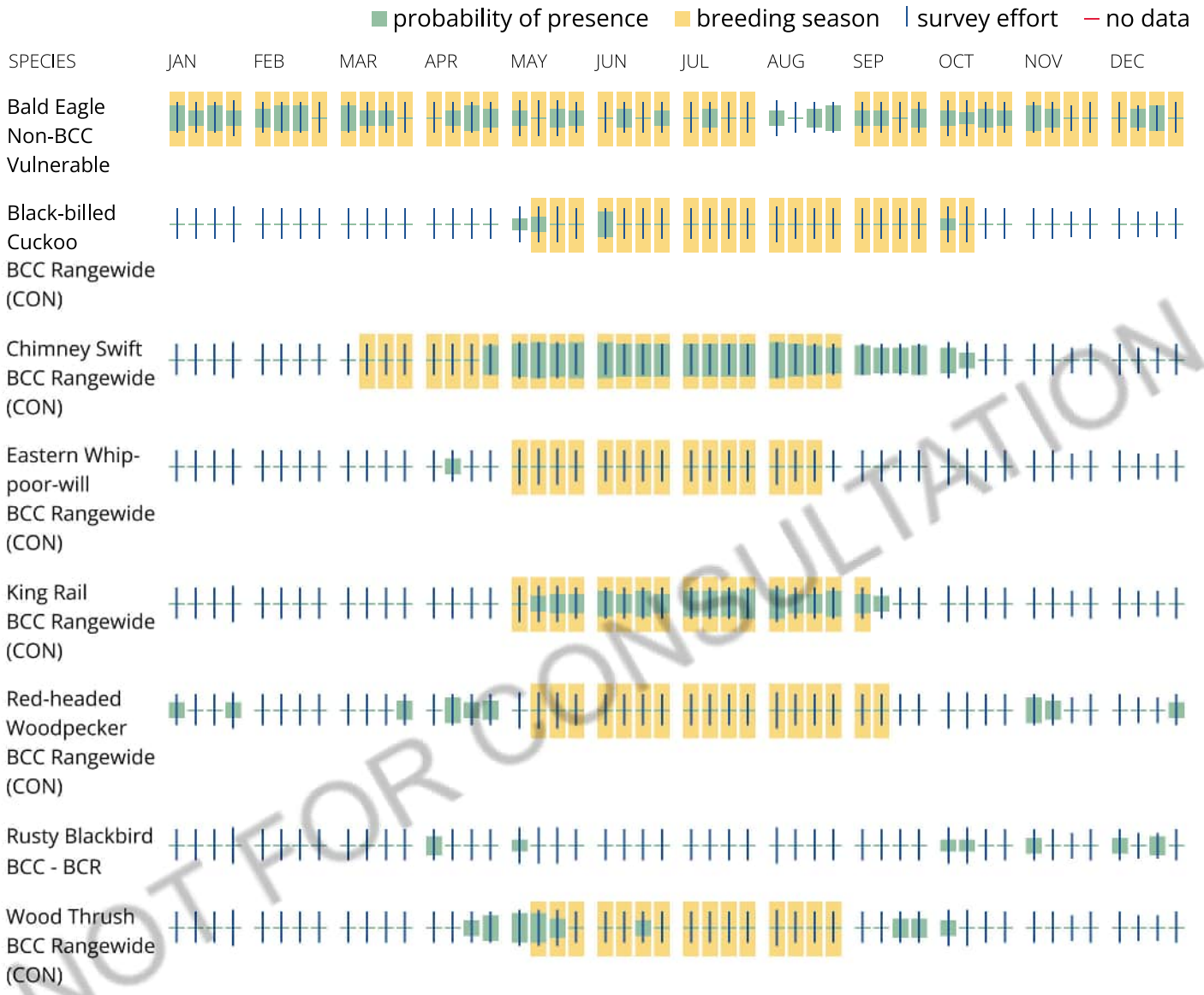
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

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Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

- E1UBL

ESTUARINE AND MARINE WETLAND

- E2EM5P
- E2EM1P
- E2EM1N
- E2USN

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

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The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310

In Reply Refer To: 04/02/2024 18:40:07 UTC
Project Code: 2023-0039248
Project Name: NJ Turnpike Newark Bay Bridge Replacement

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
(609) 646-9310

PROJECT SUMMARY

Project Code: 2023-0039248
Project Name: NJ Turnpike Newark Bay Bridge Replacement
Project Type: Bridge - Replacement
Project Description: Bridge replacement, Newark and Bayonne, NJ
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.696534400000004,-74.12198292466032,14z

Counties: Essex and Hudson counties, New Jersey

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

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

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

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

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Endangered
No critical habitat has been designated for this species.	
This species only needs to be considered under the following conditions:	
▪ This species only needs to be considered if the project includes wind turbine operations.	
Species profile: https://ecos.fws.gov/ecp/species/9045	
Tricolored Bat *Perimyotis subflavus*	Proposed Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/10515	

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/9743	

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: WSP USA, Inc.
Name: Dana Flynn
Address: 350 Mount Kemble Avenue
City: Morristown
State: NJ
Zip: 07960
Email dana.flynn@wsp.com
Phone: 9734071475

LEAD AGENCY CONTACT INFORMATION

Lead Agency: U.S. Coast Guard

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Field Office
4 East Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
(609) 646-9310

In Reply Refer To:
2023-0039248

June 11, 2024

Donna A. Fisher
Bridge Program Manager
U.S. Department of Homeland Security
U.S. Coast Guard
Battery Park Building
1 South Street
New York, New York 10004-1466

Dear Ms. Fisher:

The U.S. Fish and Wildlife Service's (Service) New Jersey Field Office has reviewed the public notice for a Bridge Permit and Draft Environmental Assessment (DEA) prepared by the U.S. Coast Guard (USCG) for the New Jersey Turnpike Authority's (NJTA) proposed replacement of the Newark Bay-Hudson County Extension Interchange 14 to Interchange 14A/Newark Bay Bridge Replacement and Associated Improvements project. The project is located within Newark, Essex County and Bayonne and Jersey City in Hudson County. The proposed project will replace existing structures, including the Newark Bay Bridge with two parallel spans, increase the number of travel lanes in each direction from two to four, provide left shoulder areas, and modify/improve ramp merges and lanes. The project will involve property acquisitions, impacts to watercourses and wetlands, tree clearing, stormwater management, and other related construction.

AUTHORITIES

The following comments are provided pursuant to the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (BGEPA); the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*); Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001; 66 FR 3853); the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq.*); the Migratory Bird Treaty Act of 1918 (40. Stat 755, as amended; 16 U.S.C. Section 703-712) (MBTA); and the National Environmental Policy Act (83 Stat. 852, as amended; 42 U.S.C. 4321 *et seq.*) (NEPA). The following comments do not preclude additional comments on forthcoming phases of the project, including consultation on potential effects to federally listed species pursuant to Section 7(a)(2)

of the ESA.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES

The Service appreciates that the Service's Information for Planning and Consultation (IPaC) tool was used to obtain an official species list (dated April 2, 2024). As described within the list, the tricolored bat (*Perimyotis subflavus*, proposed endangered) and monarch butterfly (*Danaus plexippus*, candidate) are the only species to consider within the action area. The northern long-eared bat (*Myotis septentrionalis*, endangered) was also included on the list. However, northern long-eared bat does not need to be considered/evaluated pursuant to Section 7(a)(2) of ESA since the action area is within a portion of New Jersey that only needs to be considered/evaluated if wind turbine operations are proposed.

Tricolored bat

On September 14, 2022, the Service published a proposal in the *Federal Register* (FR) to list the tricolored bat as endangered under the ESA (FR Vol. 87 (177): 56381-56393). A final determination to either list the tricolored bat under the ESA or to withdraw the proposal is anticipated during Fiscal Year 2024.

In 2023, the tricolored bat was acoustically detected within 6.5 miles of the action area. It is a small insectivorous bat that typically overwinters in caves, abandoned mines and tunnels, and road-associated culverts (southern portion of the range). They spend the rest of the year in a wide variety of forested areas where they roost and forage, including adjacent and interspersed non-forested areas such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. This also includes forests and woodlots containing trees with potential roost substrate (*i.e.*, live and dead leaf clusters of live and recently deceased deciduous trees, Spanish moss (*Tillandsia usneoides*), and beard lichen (*Usnea trichodea*)), as well as linear features such as fencerows, riparian forests, and other wooded corridors. Tricolored bats will roost in a variety of tree species, especially oaks, and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (*e.g.*, 4-inch [10-centimeter]; Leput 2004). They may also roost in human-made structures, such as bridges and culverts, and occasionally in barns or the underside of open-sided shelters (*e.g.*, porches, pavilions).

This project is not likely to jeopardize the continued existence of the tricolored bat therefore, ESA Section 7(a)(4) conference is not required. Once a final rule to list the tricolored bat is published and goes into effect (typically 30–60 days after publication), Section 7(a)(2) requirements for consultation and Section 9 prohibitions against unpermitted "take" of the species will apply. However, informal Service review may be requested for actions that may affect a proposed species. The Service encourages that project impacts are analyzed to ensure that effects to proposed species are reviewed if/when they are officially listed. Given that construction is not proposed to begin until 2026, this will be beneficial to the USCG since it will help to prevent potential future delays or complications for project construction. Therefore, the Service recommends that the effects of the proposed project on tricolored bat and their habitat is analyzed and minimized.

Conservation measures the Service recommends to ensure the proposed action is not likely to adversely to affect the tricolored bat include:

1. Ensuring that the cutting or other means of knocking down, bringing down, or trimming of trees that contain suitable roosting substrate (*i.e.*, live and dead leaf clusters of live and recently deceased deciduous trees, Spanish moss (*Tillandsia usneoides*), and beard lichen (*Usnea trichodea*)) is avoided during the pup season from May 15 to July 31 (recommended from April 1 to September 30).

The Newark Bay Bridge and other structures within the action area may serve as a roosting location for tricolored bats. However, given the urbanization of the area and active use of the bridge/associated roadways this appears to be extremely unlikely to occur/is discountable.

Monarch butterfly

The monarch butterfly was designated a candidate for ESA listing in December 2020. Although candidate species receive no substantive or procedural protection under the ESA prior to listing, the Service encourages consideration of these species in project planning. The monarch butterfly range includes all of New Jersey, including small habitat patches within developed areas. The DEA explains that milkweed was found within one upland sample point within the action area. The Service encourages adherence to best management practices for avoiding impacts to the monarch and improving habitat where possible. The following is recommended:

1. Identifying presence of and avoiding impacts to suitable monarch butterfly habitat. If avoiding impacts to suitable monarch habitat is not possible, avoid impacts during times of year monarch's may be present from May 1 to September 30. Review the "Mowing and Management: Best Practices for Monarch's" handout at: *https://monarchjointventure.org/blog/revised-handout-mowing-and-management-best-practices-for-monarchs* to see if any other conservation measures are applicable to this project/can be implemented.

2. Review the conservation measures and descriptions included in Section VII of the "Monarch CCAA Application" that can be found at: *https://rightofway.erc.uic.edu/working-group-access/monarchccaatoolkit.* Although the Candidate Conservation Agreement for monarch butterfly is not applicable for this project, we recommend reviewing the application to help aid in the development of possible conservation measures.

3. Review the Services website at: *https://www.fws.gov/initiative/pollinators/monarchs*, New Jersey Department of Environmental Protection's (NJDEP) (2017) Monarch Butterfly Conservation Guide, and the Monarch Joint Venture website at: *https://monarchjointventure.org/mjvprograms/science/roadside-habitat-for-monarchs/best-management-practices-resources* for possible conservation measures to implement.

If future listing of the monarch butterfly occurs before or during project construction, the Service

may recommend additional conservation measures.

SPECIES UNDER REVIEW FOR LISTING AND PRIORITY AT-RISK SPECIES

The saltmarsh sparrow (*Ammospiza caudacuta*) is under review for Federal listing per the ESA and may be present within the salt marshes of the project area. It is also a Service identified priority at-risk species, indicating that its populations are declining and that they are "at-risk" of becoming candidates for ESA listing. It is a tidal marsh-obligate songbird that breeds in coastal states from Maine to Virginia (Hartley and Weldon 2020). Saltmarsh sparrows generally nest in high marsh areas just above the mean high-water line. They are most frequently sited and prefer habitats in salt marsh ecosystems where *Spartina* (usually *patens*) and *Distichlis spicata* are present (Hartely and Weldon 2020). Due to the historic loss and degradation of salt marsh habitat, especially high marsh, as well as accelerated sea level rise, saltmarsh sparrows have experienced an 87 percent population decline since 1998 (Hartley and Weldon 2020). Concentrated efforts are being made for the saltmarsh sparrow to preclude the need for listing and improve salt marsh habitat. The Atlantic Coast Joint Venture developed a Saltmarsh Sparrow Habitat Prioritization Tool to identify and rank salt marsh habitat patches within the species' breeding range. The salt marsh/tidal wetlands in the project area contain habitat patches within the species breeding range. The saltmarsh sparrow habitat prioritization tool is available at: *https://fws.maps.arcgis.com/apps/MapSeries/index.html?appid=1bc5b29be4ac43d8949b2941d2ce5174.*

Species under review for listing and Service priority at-risk species do not receive any protections under the ESA, and the Service has not yet determined if listing of the saltmarsh sparrow is warranted. A determination for ESA listing of the saltmarsh sparrow is anticipated in Fiscal Year 2024. The National Listing workplan for Fiscal Years 2024-2028 can be found at: *https://www.fws.gov/project/national-listing-workplan* for more information on species listing timelines. If saltmarsh sparrow is proposed for or listed pursuant to the ESA before or during construction, potential delays/additional consultations may be necessary. As such, the USCG may wish to analyze effects to them, to help avoid or minimize delays if they are listed before or during project construction.

The saltmarsh sparrow was observed adjacent to the proposed project at Richard A. Rutkowski Park and also at other sites within 5 to 10 miles of the project area (ebird accessed 2024). Provided that the species has previously been observed in the vicinity and that potentially suitable salt marsh/tidal wetland habitat with *Spartina* is proposed to be permanently impacted, the Service recommends the following conservation measures:

1. As possible, avoid impacting high and adjacent low marsh areas that may contain suitable saltmarsh sparrow habitat.

2. If work in potentially suitable saltmarsh sparrow habitat cannot be avoided, utilize a time of year restriction within high and adjacent low marsh areas from May 1 to September 15, to avoid impacts during sensitive times of year when saltmarsh sparrows may be breeding, nesting, and have unfledged juveniles (Hartley and Weldon 2020; Service 2020). Saltmarsh sparrows typically nest in high marsh areas to avoid tidal flooding and

forage in the adjacent low marsh areas. The *Spartina* salt marsh/tidal wetlands located on the western portion of the Newark Bay Bridge is the area that appears most likely to contain habitat for this species.

3. Refer to the Atlantic Coast Joint Venture's Saltmarsh Sparrow Conservation Plan (Hartley and Weldon 2020). The document provides a description of saltmarsh sparrow and their habitat. We recommend reviewing this document and any other applicable information to confirm if suitable habitat is present and, if necessary, to develop additional conservation measures.

Additional conservation measures may be required if the species is listed in the future. The saltmarsh sparrow is also protected pursuant to the MBTA, and the measures described below are recommended for conserving the species.

MIGRATORY BIRD TREATY ACT

Migratory birds are a Federal trust responsibility and are afforded protection under the MBTA. Unlike the ESA, the MBTA does not currently have a regulation specific to the incidental take of migratory birds. Birds such as the peregrine falcon (*Falco peregrinus*), barn swallow (*Hirundo rustica*), and the saltmarsh sparrow (mentioned above) may utilize the structures and habitat within the project area for breeding, foraging, resting or other purposes. Notably, peregrine falcons have definitively been documented nesting on the Newark Bay Bridge. For all birds, nests, eggs, chicks, and adults that have recently molted are most at risk of being impacted by the proposed activities since they are unable or unlikely to fly away. As such, to ensure that future activities do not cause actions prohibited under the MBTA (such as the wounding, killing, trapping capturing, or collecting of migratory birds and their nests or eggs) without prior authorization by the Service, we recommend the creation of a migratory bird protection plan for the project.

The migratory bird protection plan should identify project areas that have the potential to adversely impact birds and explain how the NJTA plans to avoid actions prohibited by the MBTA during construction. At a minimum, the plan should involve:

1. Identifying the project areas that are likely to be inhabited by migratory birds and determining the times of year there may be nests, eggs, and flightless birds (*e.g.*, chicks, birds that recently molted). This is already known for some species in the project area, such as the peregrine falcons that nest on the Newark Bay Bridge. The structures, wetlands, and trees within the project area may also contain habitat for nesting birds. Tools such as ebird; the Migratory Birds section of the Service requested official species list; NJDEP landscape shapefiles; communications with the NJDEP; and previous documentation/studies of the area may also be helpful to accomplish this goal (ebird accessed 2024; NJDEP accessed 2024; Service accessed 2024). The DEA does evaluate potential affects to migratory birds and this step may have already been completed for the project.

2. For work anticipated to occur within the areas identified above and during times of year that nests, eggs, and flightless birds may be present (most likely March 15 to September 15, depending on the species): the Service recommends that a person(s) knowledgeable and capable of bird identification visually inspects the identified areas for the presence of nests, eggs, and flightless birds no more than five days prior to project activities commencing. For visual inspections of areas where peregrine falcons are/may occur, the breeding period of March 1 to July 31 should be utilized. Please ensure that the plan considers the difficulty of detecting species that may be present in that area.

   When discussing impacts to terrestrial vegetation and wildlife (including birds) the DEA explains that "marsh vegetation would be removed outside of the breeding window for these species in New Jersey (March through August) to eliminate the potential for nesting during the active season if work cannot abide by breeding season timing restrictions for migratory bird species. Based on this analysis, pursuant to the Migratory Bird Treaty Act, the Proposed Action will not result in a take of migratory birds or the parts, nests, or eggs of such bird." This measure will be especially helpful for the conservation of birds, such as the saltmarsh sparrow. While the Service appreciates this measure and agrees that it will be helpful to reduce the possibility of actions prohibited under the MBTA, we recommend additional measures including:

   - Expanding the breeding window referenced to be inclusive of March 15 to September 15 to protect species such as the saltmarsh sparrow.
   - Continuing to visually inspect the wetland areas (as explained above), regardless of if the vegetation is removed as bird nesting in the area remains possible. Visual inspections should be relatively brief if vegetation is already removed.
   - Visually inspecting structures proposed for construction, prior to it occurring to ensure that active nests will not be destroyed.

3. If nests, eggs, and flightless birds are present, the Service recommends avoiding work that could cause actions prohibited under the MBTA (such as the wounding, killing, trapping, capturing, or collecting of migratory birds and their nests or eggs) without prior authorization by the Service. An example of a prohibited activity would be removing or relocating the peregrine falcon nest while it is being used or permanently impacting a wetland that contains an active nest. Destruction of inactive nests (contains no eggs or chicks and is no longer being used by birds for breeding) is not prohibited under the MBTA, provided that no possession occurs during the destruction. More information about bird nests and the MBTA can be found at the Service's website (Accessed 2024b).

4. Regardless of time of year, if native migratory birds are present at the time of the proposed construction, the Service recommends providing an opportunity for those birds to leave the area before construction occurs. This will help to ensure that birds are not incidentally wounded or killed by the proposed action.

For future activities that cannot avoid actions prohibited by the MBTA, project proponents should contact the Service for further information on how to proceed. If a migratory bird

protection plan is developed, the Service requests to review it in coordination with the NJDEP to ensure it will achieve conservation results. The Service appreciates that the NJTA has already coordinated with the NJDEP regarding the nesting peregrine falcons.

In addition to the issues described above, the proposed project includes installations that may introduce new lighting into areas where birds may be present. As such, the Service recommends that the NJTA uses (as applicable) lighting that reduces adverse effects to migratory birds at night. We recommend that these measures are incorporated into the future version of the Environmental Assessment. For more information, please refer to Enclosure A - Beneficial Practices to Reduce the Potential Impact of Lighting on Migratory Birds.

BALD AND GOLDEN EAGLE PROTECTION ACT

As explained in the DEA, bald eagles (*Haliaeetus leucocephalus*) have been documented nesting within 1.5 miles north of the project area. Additionally, bald eagles likely forage in the project area. Bald eagles are protected by the BGEPA and impacts from the proposed project may require the NJTA to apply for a permit from the Service if nesting is observed within 660 feet of the proposed activities. The Service recommends using the Northeast Bald Eagle Project Screening Form to determine if further review by the Service is required for bald eagles in the future (available at: *https://www.fws.gov/sites/default/files/documents/northeast-bald-eagle-project-screening-form-2021-12-01.pdf).* Please review the Service's Eagle Management Program website (*https://www.fws.gov/program/eagle-management)* for additional information and appropriate contacts for questions or concerns. Unlike birds protected solely under the MBTA, removal of inactive bald eagle nests would still require approvals/permits pursuant to the BGEPA. Additionally, please be aware that the bald eagle is listed as endangered (breeding season) and threatened (non-breeding season) under New Jersey's Endangered and Nongame Species Conservation Act of 1973 (New Jersey Statutes Annotated 23:2A-1 to 23:2A-1:16). As such, when the proposed work proceeds in the future, the NJDEP's Endangered and Nongame Species Program may need to be consulted to ensure compliance with the New Jersey Endangered Species Conservation Act of 1973. Information about bald eagles in New Jersey can be found at: *https://dep.nj.gov/wp-content/uploads/njfw/baldeagle.pdf.*

GENERAL COMMENTS

Executive Summary

The Executive Summary of the DEA, on page xvii, explains that the Service is a cooperating agency for the project. While the Service will review the project for the Federal trust resources we are concerned about, we have not elected to be and are not a cooperating agency pursuant to the NEPA. Please correct this throughout the DEA and in all future versions.

Wetland and Watercourse Mitigation

The DEA explains that the proposed project will permanently impact 3.808 acres of tidal waters, 2.025 acres of tidal wetlands, and 9.118 acres of nontidal freshwater wetlands. Mitigation for these impacts includes the restoration of 0.817 acres of tidal open water through the removal of

the existing bridge piers and either purchasing mitigation credits from an existing bank within Watershed Management Area 5 and 7 or the development of a permittee-responsible mitigation project. If mitigation bank credits are not able to be purchased and permittee-responsible mitigation is proposed, the Service requests the opportunity to review the mitigation plan.

The Service appreciates the opportunity to review the USCG's public notice for a bridge permit and DEA. We look forward to the opportunity to work with the USCG in the future. For further assistance or questions, please contact Michael Ciappi at michael_ciappi@fws.gov.

Sincerely,

Eric Schrading
Field Supervisor

Enclosures:

Enclosure A – Beneficial Practices to Reduce the Potential Impact of Lighting on Migratory Birds

cc:
Ross Conover, USFWS
Donna Leoce, USCG
Rosita Miranda, USACE

REFERENCES

eBird. Accessed 2024. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available at: *http://www.ebird.org.*

Hartley, M.J. and A.J. Weldon, eds. 2020. Saltmarsh Sparrow Conservation Plan. Atlantic Coast Joint Venture. Available at: *https://www.acjv.org/documents/SALS_plan_final.pdf.*

Leput, D.W. 2004. Eastern red bat (Lasiurus borealis) and eastern pipistrelle (Pipistrellus subflavus) maternal roost selection: Implications for forest management. Master's Thesis Clemson University, Clemson, South Carolina.

Monarch Joint Venture. 2019. Mowing and Management: Best Practices for Monarchs. Available at: *https://monarchjointventure.org/blog/revised-handout-mowing-and-management-best-practices-for-monarchs.*

New Jersey Department of Environmental Protection. 2017. New Jersey Monarch Butterfly Conservation Guide. Available at: *https://www.nj.gov/dep/docs/monarch-guide.pdf.*

New Jersey Department of Environmental Protection. Accessed 2024. Landscape 3.3 Data for Regions of New Jersey. Bureau of Geographic Information System. Trenton, New Jersey. Available at: *https://gisdata-njdep.opendata.arcgis.com/*.

U.S. Fish and Wildlife Service. 2020. Report on the Current Conditions for the Saltmarsh Sparrow (*Ammospiza caudacuta*). U.S. Fish and Wildlife Service, Northeast Region, Charlestown, RI. 106 pp.

U.S. Fish and Wildlife Service. Accessed 2024a. Information for Planning and Consultation tool [web application]. Available at: *https://ipac.ecosphere.fws.gov/*.

U.S. Fish and Wildlife Service. Accessed 2024b. Bird nests. Available at: *https://www.fws.gov/story/bird-nests#:~:text=While%20it%20is%20illegal%20to,no%20possession%20occurs%20during%20destruction.*

Enclosure A

Beneficial Practices to Reduce the Potential Impact of Lighting on Migratory Birds

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Migratory Bird Program
https://www.fws.gov/program/migratory-birds

May 12, 2023

Subject: Beneficial practices to reduce the potential impact of lighting on migratory birds

To Whom It May Concern:

The enclosed document identifies beneficial practices to reduce the potential adverse effects of artificial light at night on migratory birds. The U.S. Fish and Wildlife Service (Service) is the Federal agency delegated with the primary responsibility for managing migratory birds. Our authority derives from the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 et seq.), which implements treaties with Canada, Mexico, Japan, and the Russian Federation. Migratory bird in 50 CFR 10.12 means "any bird, whatever its origin and whether or not raised in captivity, which belongs to a species listed in 50 CFR 10.13, or which is a mutation or a hybrid of any such species, including any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof." The list of protected birds is maintained in regulation at 50 CFR 10.13 and includes over 1,000 species.

The Service interprets MBTA to prohibit incidental take of migratory birds and will enforce the statute accordingly (see https://www.fws.gov/policy-library/do225). Incidental take means the taking or killing of migratory birds that results from, but is not the purpose of, an activity. The Service recognizes that a wide range of activities may result in incidental take of migratory birds. Pursuing enforcement for all these activities would not be an effective or judicious use of our law enforcement resources. For that reason, the Service will focus our enforcement efforts on specific types of activities that both foreseeably cause incidental take and where the proponent fails to implement known beneficial practices to avoid or minimize incidental take. Our intention through this policy is to apply a transparent and consistent approach to managing and prioritizing our enforcement of incidental take, taking into account the case law applicable in a given jurisdiction and the facts and circumstances of each case.

a. The following types of conduct are not a priority for enforcement:
    (1) A member of the general public conducting otherwise legal activities that incidentally take migratory birds;
    (2) A Federal agency conducting activities in accordance with a signed memorandum of understanding with the Service developed under Executive Order 13186 for the conservation of migratory birds; or
    (3) A public- or private-sector entity conducting activities in accordance with applicable beneficial practices for avoiding and minimizing incidental take.

b. The Service prioritizes the following types of conduct for enforcement:
    (1) Incidental take that is the result of an otherwise illegal activity; or
    (2) Incidental take that:
        (i) results from activities by a public- or private-sector entity that are otherwise legal;
        (ii) is foreseeable; and
        (iii) occurs where known general or activity-specific beneficial practices were not implemented.

To better protect migratory bird populations and provide more certainty for the regulated public, the Service seeks to address human-caused mortality by providing information on beneficial practices to avoid and minimize the incidental injury and killing of migratory birds. Beneficial practice means an action implemented to avoid or minimize the incidental take of migratory birds. We also refer to beneficial practices as best management practices, conservation measures, best practices, mitigation measures, etc.

Artificial light at night can attract and disorient migratory birds, leading to exhaustion and collisions with humanmade structures such as buildings and communications towers. Under certain circumstances (*e.g.*, low cloud ceiling, precipitation, high migration passage rate), artificial light at night may contribute to mass mortality of nocturnally migrating birds. This risk may be significantly reduced or eliminated through informed design and operation of artificial lighting. Effective interventions include modifying lighting's angle/direction, timing, and color/wavelength. Please use the attached Service-provided beneficial practices as your guide for reducing risk of incidental take from lighting.

Attachment:
Incidental Take Beneficial Practices: Lighting

PROTECT OUR NIGHT SKIES

Using Bird-Conscious Lighting

Why We Should Protect Our Night Skies

The night sky is a resource that all people and wildlife, including birds, share. The cycle of day and night is important for the natural rhythms of all living things, promoting natural behavior, health, and well-being. For example, a dark sky is important for billions of birds to properly navigate their nighttime migrations. Artificial lighting at night (lighting), meaning light from sources created by people, may be helpful for security and increasing visibility when it is used well, to the extent it is needed, and when it illuminates only what is intended. However, lighting can attract large numbers of night-migrating birds from as far as 5 kilometers away. Birds can become entrapped in these areas of bright lights, circling endlessly, depleting energy stores needed for migration, and colliding with buildings and infrastructure. This phenomenon can be exaggerated on nights with low-cloud ceilings or foggy weather, when birds tend to migrate at lower altitudes and light reflecting on clouds is disorienting. Multiple mass-mortality events involving hundreds of birds have been documented associated with lighting at substations and other towers, buildings, and construction sites on foggy nights during migration.

Bird-conscious lighting is using lighting only where and when it is necessary and illuminating only the intended area. When lighting is necessary, the direction of the light, how long the light is on, the color of the light, and restricting light to the minimum required for safety can all help reduce lighting's negative effects. Below are voluntary approaches to reduce lighting, and we recommend special attention to reduce lighting on foggy nights at substations and other towers, buildings, and construction sites.

Spotlight on Practical and Easy Solutions

Use this step-by-step guide to adopt bird-conscious lighting and make our skies safer for birds.

Turn It Off

- If the lighting is not needed, consider turning it off permanently or see "Timing" below.
- Birds are at greater risk from lighting during spring and fall migration on cloudy nights. Consider if lighting can be temporarily turned off on cloudy nights April-May and August-October.
- If birds become entrapped in an area of bright light that cannot be turned off permanently, turning lights off for 15 to 20 minutes can allow birds to escape the disorienting light and return to normal behavior. If you are unsure whether birds are or will be entrapped, plan regular breaks in the lighting or implement timers (see below) to allow an opportunity for birds to escape.

Migrating birds become disoriented by lights and drawn into brightly lit areas where they can easily collide with structures, injuring or killing them.

To the left, you see an example of a shielded light, using amber light, which is less impactful to birds.

U.S. FISH & WILDLIFE SERVICE

Turning Lights Off

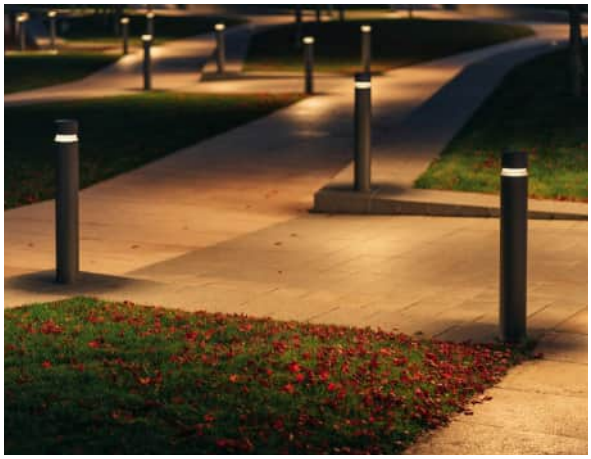
Always In Fashion!

Timing

- Limit lighting to necessary times only.
- Use timers, dimmers, or motion sensors to turn lights on and off automatically and as needed.

Direction

- Turn off lights that face up into the sky or lights that illuminate the surrounding landscape.
- Avoid upward light scatter by shielding, selecting, or positioning lights where light is not emitted above the horizontal plane.
- Keep lighting as low to ground as possible, only illuminating necessary structures.



Illuminate paths as close to the ground as possible with shielded amber or red lights.

Color and Brightness

- Use amber, or "warmer", light that is less harmful for most species.
    - Warmer colors have longer wavelengths (≥560 nm) and lower correlated color temperatures (CCT ≤ 3000 Kelvin degrees)
- Avoid using blue, white, or "cooler", light that is least favorable for birds and other wildlife.
    - Cooler colors have short wavelengths (<560 nm) and higher correlated color temperatures (CCT >3000 Kelvin degrees)
- Keep light as dim as possible or is necessary.

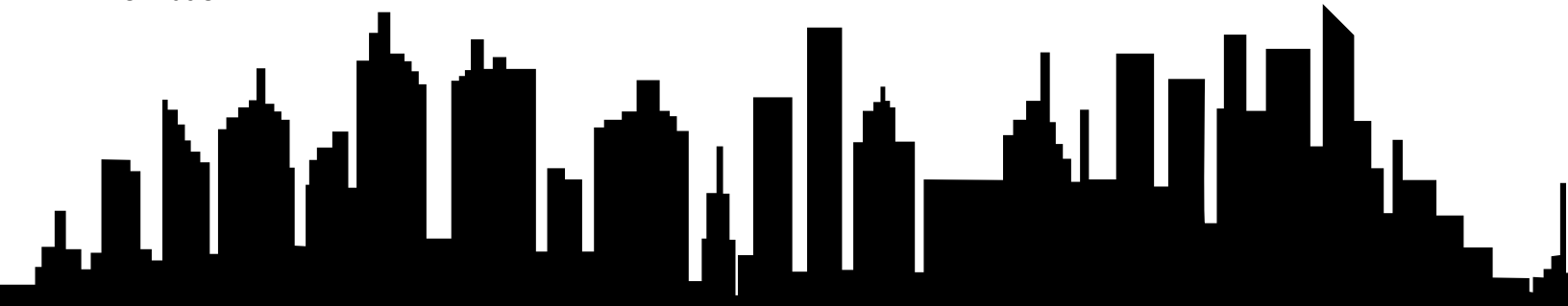
Benefits Of Bird-Conscious Lighting

- Immediately effective
- Saves money through less infrastructure and lower energy consumption
- Increases visibility of night skies
- Helps preserve natural cycles important to the health of people, birds, and other wildlife

Additional Resources To Help You Preserve The Night Sky

- Learn when seasonal lighting restrictions can be most helpful to migrating birds: https://birdcast.info/
- More information about requirements to light tall structures is here: https://www.faa.gov/faq/what-are-requirements-aircraft-warning-lights-tall-structures, and Communication Tower lighting recommendations are here: https://www.fws.gov/sites/default/files/documents/usfws-communication-tower-guidance.pdf
- Illuminating Engineering Society. 2020. Lighting Practice: Environmental Considerations for Outdoor Lighting, An American National Standard. Illuminating Engineering Society, 120 Wall Street, New York, New York 10005.
- Guide for parking lot lighting: ParkingLotLightingGuide.pdf (rpi.edu)
- States with laws to reduce light pollution: https://www.ncsl.org/environment-and-natural-resources/states-shut-out-light-pollution
- Night sky friendly products (*these products can be considered bird-conscious when the voluntary approaches described above are used)*: https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/fsa-products/

Questions? Please contact your local Ecological Services Field Office or Regional Migratory Birds office for more information.



Using timers to turn lights off in office buildings is an effective and easy solution to keeping our night skies dark.

HOW TO IMPROVE YOUR LIGHTS

1. To adopt bird-conscious lighting, first evaluate individual or groups of lights wherever they occur, for example: buildings, parking lots, roadways, walkways, nighttime projects and construction, towers, and any supporting infrastructure. Evaluate lights for whether they are required, useful, or aesthetic. If you are in the design phase of the project, consider the questions below for outdoor and indoor lighting; if your project is already constructed, visit lit areas at nighttime and include visible indoor lighting in the evaluation. Below is an example data sheet for conducting an evaluation.

Location	Interior or Exterior	# of lights	Required or Useful (Y or N)	Aesthetic (Y or N)	Illuminating more than intended area (Y or N)	Steady burning (Y or N)	Color	Direction

2. Review the results of the evaluation using the if/then table below, create an action plan, and then implement the action plan.

If:	and:	then you should:
lighting is not required, useful, or aesthetic		turn the lighting off
lighting is required or useful	illuminating more than the intended area	physically adjust, shield, or lower exterior lighting and block interior lighting with blinds to only illuminate desired areas or switch to lower intensity or dimmer lighting
lighting is required or useful	steady-burning	use timers, dimmers, or motion sensors to turn lighting on/off as needed and turn lights off during spring and fall migration
lighting is required or useful	a 'colder' color (e.g., blue or white)	switch to warmer amber lighting (wavelength > 560 nm, color temperature < 3000 K)
lighting is required or useful	pointing upward (i.e., uplighting)	turn the lighting off during spring and fall migration or if this is not feasible, turn it off intermittently and during bad weather/low cloud ceiling
lighting is not required or useful but is aesthetic		discuss with the people using the lighting whether it can be turned off when not in use or made unnecessary by shifting activity from night to day

August 29, 2024

Eric Schrading, Field Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
4 East Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205

Re: 2023-0039248 - U.S. Coast Guard Response to Comments from the U.S. Fish and Wildlife Service for the Proposed Replacement of the Newark Bay-Hudson County Extension between Interchanges 14 to 14A including the Newark Bay Bridge (NBB) across Newark Bay, in Newark, Essex County, and Bayonne and Jersey City, Hudson County, New Jersey (Public Notice-D01-209-2024)

Dear Mr. Schrading,

The U.S. Coast Guard (USCG) is in receipt of comments from the U.S. Fish and Wildlife Service (the Service), New Jersey Field Office, dated June 11, 2024, in response to the subject Public Notice (PN). USCG appreciates the Service's prompt response to the PN. Comments from the Service and the USCG response are outlined herein.

USFWS Comment:

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES

The Service appreciates that the Service's Information for Planning and Consultation (IPaC) tool was used to obtain an official species list (dated April 2, 2024). As described within the list, the tricolored bat (Perimyotis subflavus, proposed endangered) and monarch butterfly (Danaus plexippus, candidate) are the only species to consider within the action area. The northern long-eared bat (Myotis septentrionalis, endangered) was also included on the list. ***However, northern long-eared bat does not need to be considered/evaluated pursuant to Section 7(a)(2) of ESA since the action area is within a portion of New Jersey that only needs to be considered/evaluated if wind turbine operations are proposed.***

Tricolored bat
On September 14, 2022, the Service published a proposal in the Federal Register (FR) to list the tricolored bat as endangered under the ESA (FR Vol. 87 (177): 56381-56393). A final determination to either list the tricolored bat under the ESA or to withdraw the proposal is anticipated during Fiscal Year 2024.

In 2023, the tricolored bat was acoustically detected within 6.5 miles of the action area. It is a small insectivorous bat that typically overwinters in caves, abandoned mines and tunnels, and road-associated culverts (southern portion of the range). They spend the rest of the year in a wide variety of forested areas where they roost and forage, including adjacent and interspersed non-forested

areas such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. This also includes forests and woodlots containing trees with potential roost substrate (i.e., live and dead leaf clusters of live and recently deceased deciduous trees, Spanish moss (Tillandsia usneoides), and beard lichen (Usnea trichodea)), as well as linear features such as fencerows, riparian forests, and other wooded corridors. Tricolored bats will roost in a variety of tree species, especially oaks, and often select roosts in tall, large diameter trees, but will roost in smaller diameter trees when potential roost substrate is present (e.g., 4-inch [10-centimeter]; Leput 2004). They may also roost in human-made structures, such as bridges and culverts, and occasionally in barns or the underside of open-sided shelters (e.g., porches, pavilions).

This project is not likely to jeopardize the continued existence of the tricolored bat therefore, ESA Section 7(a)(4) conference is not required. Once a final rule to list the tricolored bat is published and goes into effect (typically 30–60 days after publication), Section 7(a)(2) requirements for consultation and Section 9 prohibitions against unpermitted "take" of the species will apply. However, informal Service review may be requested for actions that may affect a proposed species. The Service encourages that project impacts are analyzed to ensure that effects to proposed species are reviewed if/when they are officially listed. Given that construction is not proposed to begin until 2026, this will be beneficial to the USCG since it will help to prevent potential future delays or complications for project construction. Therefore, the Service recommends that the effects of the proposed project on tricolored bat and their habitat is analyzed and minimized.

Conservation measures the Service recommends to ensure the proposed action is not likely to adversely to affect the tricolored bat include:

1. Ensuring that the cutting or other means of knocking down, bringing down, or trimming of trees that contain suitable roosting substrate (i.e., live and dead leaf clusters of live and recently deceased deciduous trees, Spanish moss (Tillandsia usneoides), and beard lichen (Usnea trichodea)) is avoided during the pup season from May 15 to July 31 (recommended from April 1 to September 30).

USCG Response:

The NEPA EA will be updated to reflect this recommendation that removal or trimming of any tree within the project limits that provides suitable roosting substrate will be performed between October 1 and March 31.

USFWS Comment:

The Newark Bay Bridge and other structures within the action area may serve as a roosting location for tricolored bats. However, given the urbanization of the area and active use of the bridge/associated roadways this appears to be extremely unlikely to occur/is discountable.

USCG Response:

The USCG understands this conclusion and the NEPA EA will be updated to reflect this statement regarding tricolored bats and the Newark Bay Bridge and other project structures.

USFWS Comment:

Monarch butterfly

The monarch butterfly was designated a candidate for ESA listing in December 2020. Although candidate species receive no substantive or procedural protection under the ESA prior to listing, the Service encourages consideration of these species in project planning. The monarch butterfly range includes all of New Jersey, including small habitat patches within developed areas. The DEA explains that milkweed was found within one upland sample point within the action area. The Service encourages adherence to best management practices for avoiding impacts to the monarch and improving habitat where possible. The following is recommended:

1. Identifying presence of and avoiding impacts to suitable monarch butterfly habitat. If avoiding impacts to suitable monarch habitat is not possible, avoid impacts during times of year monarch's may be present from May 1 to September 30. Review the "Mowing and Management: Best Practices for Monarch's" handout at: https://monarchjointventure.org/blog/revised-handout-mowing-and-management-best-practices-for-monarchs to see if any other conservation measures are applicable to this project/can be implemented.

USCG Response:

Based on field surveys, the New Jersey Turnpike Authority (Authority) has determined that suitable habitat for monarch butterfly is limited to only small areas within the project limits. Where milkweed is present and proposed for removal, it will be removed between October 1 and April 30 (inclusive of avian species) outside of the active season for monarchs in New Jersey. The NEPA EA will be updated to reflect this statement regarding monarch butterfly habitat within the project limits.

USFWS Comment:

2. Review the conservation measures and descriptions included in Section VII of the "Monarch CCAA Application" that can be found at: https://rightofway.erc.uic.edu/working-group-access/monarchccaatoolkit. Although the Candidate Conservation Agreement for monarch butterfly is not applicable for this project, we recommend reviewing the application to help aid in the development of possible conservation measures.

USCG Response:

The Authority will review and consider the Candidate Conservation Agreement application. The Service should note that temporarily disturbed areas will be revegetated post-construction. Wetland transition areas will be reseeded with a coastal successional field mix comprised of warm season grasses and perennial wildflowers, a mix which includes five (5) species of milkweed (*Asclepias* spp.) and includes but is not limited to various nectar species such as asters *(Symphyotrichum* spp.*)* and goldenrods *(Solidago* spp.*)*. Palustrine emergent wetlands will be re-seeded with a native emergent wetland mix which also includes native forbs such as beggarticks *(Bidens* spp.*)*, seaside goldenrod *(Solidago sempervirens*) and perennial saltmarsh aster *(Symphyotrichum tenuifolium*). The NEPA EA will be updated to reflect the above-mentioned language regarding temporarily disturbed areas and monarch habitat.

USFWS Comment:

3. Review the Services website at: https://www.fws.gov/initiative/pollinators/monarchs, New Jersey Department of Environmental Protection's (NJDEP) (2017) Monarch Butterfly Conservation Guide, and the Monarch Joint Venture website at: https://monarchjointventure.org/mjvprograms/science/roadside-habitat-for-monarchs/best-management-practices-resources for possible conservation measures to implement.

If future listing of the monarch butterfly occurs before or during project construction, the Service may recommend additional conservation measures.

USCG Response:

The Authority will monitor the Service's website, the NJDEP Monarch Butterfly Conservation Guide, and the Monarch Joint Venture websites for potential conservation measures and best management practices. The Authority understands the potential for the monarch butterfly to be listed in the ESA in the future and will continue to work with the Service to limit impacts to monarch butterflies and their habitat.

USFWS Comment:

SPECIES UNDER REVIEW FOR LISTING AND PRIORITY AT-RISK SPECIES

The saltmarsh sparrow (Ammospiza caudacuta) is under review for Federal listing per the ESA and may be present within the salt marshes of the project area. It is also a Service identified priority at-risk species, indicating that its populations are declining and that they are "at-risk" of becoming candidates for ESA listing. It is a tidal marsh-obligate songbird that breeds in coastal states from Maine to Virginia (Hartley and Weldon 2020). Saltmarsh sparrows generally nest in high marsh areas just above the mean high-water line. They are most frequently sited and prefer habitats in salt marsh ecosystems where Spartina (usually patens) and Distichlis spicata are present (Hartely and Weldon 2020). Due to the historic loss and degradation of salt marsh habitat, especially high marsh, as well as accelerated sea level rise, saltmarsh sparrows have experienced an 87 percent population decline since 1998 (Hartley and Weldon 2020). Concentrated efforts are being made for the saltmarsh sparrow to preclude the need for listing and improve salt marsh habitat. The Atlantic Coast Joint Venture developed a Saltmarsh Sparrow Habitat Prioritization Tool to identify and rank salt marsh habitat patches within the species' breeding range. The salt marsh/tidal wetlands in the project area contain habitat patches within the species breeding range. The saltmarsh sparrow habitat prioritization tool is available at: https://fws.maps.arcgis.com/apps/MapSeries/index.html?appid=1bc5b29be4ac43d8949b2941d2ce5174.

Species under review for listing and Service priority at-risk species do not receive any protections under the ESA, and the Service has not yet determined if listing of the saltmarsh sparrow is warranted. A determination for ESA listing of the saltmarsh sparrow is anticipated in Fiscal Year 2024. The National Listing workplan for Fiscal Years 2024-2028 can be found at: https://www.fws.gov/project/national-listing-workplan for more information on species listing timelines. If saltmarsh sparrow is proposed for or listed pursuant to the ESA before or during construction, potential delays/additional consultations may be necessary. As such, the USCG may

wish to analyze effects to them, to help avoid or minimize delays if they are listed before or during project construction.

The saltmarsh sparrow was observed adjacent to the proposed project at Richard A. Rutkowski Park and also at other sites within 5 to 10 miles of the project area (ebird accessed 2024). Provided that the species has previously been observed in the vicinity and that potentially suitable salt marsh/tidal wetland habitat with Spartina is proposed to be permanently impacted, the Service recommends the following conservation measures:

1. As possible, avoid impacting high and adjacent low marsh areas that may contain suitable saltmarsh sparrow habitat.

2. If work in potentially suitable saltmarsh sparrow habitat cannot be avoided, utilize a time of year restriction within high and adjacent low marsh areas from May 1 to September 15, to avoid impacts during sensitive times of year when saltmarsh sparrows may be breeding, nesting, and have unfledged juveniles (Hartley and Weldon 2020; Service 2020). Saltmarsh sparrows typically nest in high marsh areas to avoid tidal flooding and forage in the adjacent low marsh areas. The Spartina saltmarsh/tidal wetlands located on the western portion of the Newark Bay Bridge is the area that appears most likely to contain habitat for this species.

USCG Response:

The USCG and Authority understand the likelihood of saltmarsh sparrow listing in Fiscal Year 2024 and will incorporate the species into the NEPA EA special status species evaluations. Suitable saltmarsh sparrow habitat is present on the west side of Newark Bay but is limited within the project limits. There is a small area of low marsh south and adjacent to the Bridge (~1 acre), but the low/high marsh matrix located north of the Bridge provides the most suitable saltmarsh sparrow habitat (~6 acres) located outside of the project limits. This is reflected in the Atlantic Coast Joint Venture Saltmarsh Sparrow Habitat Prioritization tool. Proposed permanent impacts to tidal wetland areas comprise approximately 0.624 acres on the west side of Newark Bay and consist of *Phragmites*-dominated marsh and tidal creek – areas not considered suitable for saltmarsh sparrows. Regardless, marsh vegetation in the areas to be permanently disturbed will be removed between September 15 and March 15, inclusive of other migratory birds.

Temporary impacts are proposed in approximately 0.825 acres of tidal marsh from the temporary trestle and include approximately 0.653 acres of *Spartina alterniflora* low marsh habitat. 0.653 acres represents marsh areas shaded from the trestle deck and is not indicative of displaced marsh area. There is approximately 0.034 acres (~68 piles) of proposed temporary fill from trestle piles in low marsh habitat. Activity on the trestle may deter bird use of nearby marsh due to noise and the presence of moving equipment and human activity, but it will not physically impact individuals once installed due to the raised position of the trestle deck. . Temporarily disturbed areas will be restored post-construction and replanted with *Spartina alterniflora*, *Spartina cynosuroides*, *Disticulus spicata*, and *Juncus gerardii* plugs. The Authority will continue to coordinate with the USFWS, and if the saltmarsh sparrow is formally listed prior to construction, additional protective measures may be discussed and/or implemented. The NEPA EA will be updated to incorporate the saltmarsh sparrow and the associated impact minimization measures.

Currently, the intent to off-set impacts from both permanent and long-term temporary disturbance from the project from wetland mitigation banks in the appropriate Watershed Management Areas. Ultimately, mitigation banks provide more extensive and higher quality high and low marsh habitat for saltmarsh sparrows. If permittee-responsible mitigation is proposed for the project, high marsh and low marsh habitat will be considered and the Service will be provided the opportunity to review the mitigation proposal.

USFWS Comment:

3. Refer to the Atlantic Coast Joint Venture's Saltmarsh Sparrow Conservation Plan (Hartley and Weldon 2020). The document provides a description of saltmarsh sparrow and their habitat. We recommend reviewing this document and any other applicable information to confirm if suitable habitat is present and, if necessary, to develop additional conservation measures.

USCG Response:

The Authority will review the Atlantic Coast Joint Venture's Saltmarsh Sparrow Conservation Plan and consider additional conservation measures, if appropriate.

USFWS Comment:

Additional conservation measures may be required if the species is listed in the future. The saltmarsh sparrow is also protected pursuant to the MBTA, and the measures described below are recommended for conserving the species.

MIGRATORY BIRD TREATY ACT

Migratory birds are a Federal trust responsibility and are afforded protection under the MBTA. Unlike the ESA, the MBTA does not currently have a regulation specific to the incidental take of migratory birds. Birds such as the peregrine falcon (Falco peregrinus), barn swallow (Hirundo rustica), and the saltmarsh sparrow (mentioned above) may utilize the structures and habitat within the project area for breeding, foraging, resting or other purposes. Notably, peregrine falcons have definitively been documented nesting on the Newark Bay Bridge. For all birds, nests, eggs, chicks, and adults that have recently molted are most at risk of being impacted by the proposed activities since they are unable or unlikely to fly away. As such, to ensure that future activities do not cause actions prohibited under the MBTA (such as the wounding, killing, trapping capturing, or collecting of migratory birds and their nests or eggs) without prior authorization by the Service, we recommend the creation of a migratory bird protection plan for the project.

The migratory bird protection plan should identify project areas that have the potential to adversely impact birds and explain how the NJTA plans to avoid actions prohibited by the MBTA during construction. At a minimum, the plan should involve:

1. Identifying the project areas that are likely to be inhabited by migratory birds and determining the times of year there may be nests, eggs, and flightless birds (e.g., chicks, birds that recently molted). This is already known for some species in the project area, such as the peregrine falcons that nest on the Newark Bay Bridge. The structures, wetlands, and trees within the project area may also contain

habitat for nesting birds. Tools such as ebird; the Migratory Birds section of the Service requested official species list; NJDEP landscape shapefiles; communications with the NJDEP; and previous documentation/studies of the area may also be helpful to accomplish this goal (ebird accessed 2024; NJDEP accessed 2024; Service accessed 2024). The DEA does evaluate potential affects to migratory birds and this step may have already been completed for the project.

USCG Response:

The Authority anticipates removing all upland and freshwater wetland vegetation (trees, shrubs, herbaceous) proposed for permanent and temporary disturbance between September 15 and March 15. Tidal marsh vegetation in areas proposed for permanent and temporary disturbance will be removed between September 15 and March 15. As part of the NJDEP Permit No. 0000-23-0012.2 threatened and endangered species conditions and coordination with the NJDEP Endangered and Nongame Species Program, a Peregrine Falcon Impact Avoidance Proposal was submitted to NJDEP to outline efforts to encourage falcon nesting on a proposed nesting platform north of the proposed bridge, in the northern tidal marsh. Part of the Proposal includes peregrine falcon monitoring, which will occur from March 1 to July 31 of each season until Newark Bay Bridge demolition.

The Authority proposes to expand upon the peregrine falcon monitoring to include all migratory bird species and will develop a Migratory Bird Monitoring Plan to be implemented prior to and during construction between March 1 and September 15 by qualified wildlife biologists with avian experience. The monitoring will consist of daily visual searches of structures and remaining vegetation in or adjacent to work areas to determine bird use. The NEPA EA will be revised to reflect the implementation of a Migratory Bird Monitoring Plan.

USFWS Comment:

2. For work anticipated to occur within the areas identified above and during times of year that nests, eggs, and flightless birds may be present (most likely March 15 to September 15, depending on the species): the Service recommends that a person(s) knowledgeable and capable of bird identification visually inspects the identified areas for the presence of nests, eggs, and flightless birds no more than five days prior to project activities commencing. For visual inspections of areas where peregrine falcons are/may occur, the breeding period of March 1 to July 31 should be utilized. Please ensure that the plan considers the difficulty of detecting species that may be present in that area.

When discussing impacts to terrestrial vegetation and wildlife (including birds) the DEA explains that "marsh vegetation would be removed outside of the breeding window for these species in New Jersey (March through August) to eliminate the potential for nesting during the active season if work cannot abide by breeding season timing restrictions for migratory bird species. Based on this analysis, pursuant to the Migratory Bird Treaty Act, the Proposed Action will not result in a take of migratory birds or the parts, nests, or eggs of such bird." This measure will be especially helpful for the conservation of birds, such as the saltmarsh sparrow. While the Service appreciates this measure and agrees that it will be helpful to reduce the possibility of actions prohibited under the MBTA, we recommend additional measures including:

• Expanding the breeding window referenced to be inclusive of March 15 to September 15 to protect species such as the saltmarsh sparrow.

• Continuing to visually inspect the wetland areas (as explained above), regardless of if the vegetation is removed as bird nesting in the area remains possible. Visual inspections should be relatively brief if vegetation is already removed.
• Visually inspecting structures proposed for construction, prior to it occurring to ensure that active nests will not be destroyed.

USCG Response:

As noted previously, the Authority proposes to develop a Migratory Bird Monitoring Plan to be implemented prior to and during construction between March 1 and September 15 by qualified wildlife biologists with avian experience. Migratory bird monitoring will occur even after vegetation is removed in areas proposed for disturbance and on structures proposed for construction. The NEPA EA will be revised to reflect the implementation of a Migratory Bird Monitoring Plan.

USFWS Comment:

3. If nests, eggs, and flightless birds are present, the Service recommends avoiding work that could cause actions prohibited under the MBTA (such as the wounding, killing, trapping, capturing, or collecting of migratory birds and their nests or eggs) without prior authorization by the Service. An example of a prohibited activity would be removing or relocating the peregrine falcon nest while it is being used or permanently impacting a wetland that contains an active nest. Destruction of inactive nests (contains no eggs or chicks and is no longer being used by birds for breeding) is not prohibited under the MBTA, provided that no possession occurs during the destruction. More information about bird nests and the MBTA can be found at the Service's website (Accessed 2024b).

USCG Response:

The Authority will avoid work that would cause actions prohibited under the MBTA without prior authorization. The intent of a Migratory Bird monitor would be to prevent disturbance or destruction to nests, eggs, or flightless birds during construction activities.

USFWS Comment:

4. Regardless of time of year, if native migratory birds are present at the time of the proposed construction, the Service recommends providing an opportunity for those birds to leave the area before construction occurs. This will help to ensure that birds are not incidentally wounded or killed by the proposed action.

USCG Response:

The Migratory Bird monitor would actively monitor bird use in or near construction areas. The monitor would encourage the contractor(s) to allow native migratory birds to vacate areas prior to commencing construction activities.

USFWS Comment:

For future activities that cannot avoid actions prohibited by the MBTA, project proponents should contact the Service for further information on how to proceed. If a migratory bird protection plan is developed, the Service requests to review it in coordination with the NJDEP to ensure it will achieve conservation results. The Service appreciates that the NJTA has already coordinated with the NJDEP regarding the nesting peregrine falcons.

In addition to the issues described above, the proposed project includes installations that may introduce new lighting into areas where birds may be present. As such, the Service recommends that the NJTA uses (as applicable) lighting that reduces adverse effects to migratory birds at night. We recommend that these measures are incorporated into the future version of the Environmental Assessment. For more information, please refer to Enclosure A - Beneficial Practices to Reduce the Potential Impact of Lighting on Migratory Birds.

USCG Response:

Upon the development of a Migratory Bird Monitoring Plan, the Authority will coordinate with the Service and the NJDEP to ensure that the plan achieves conservation results. Due to the NB-HCE's proximity to Newark-Liberty International Airport, the project is required to abide by Federal Aviation Administration (FAA) lighting standards, but the Authority will consider the provided Service guidance regarding lighting impacts on migratory birds and use recommendations, where appropriate.

USFWS Comment:

BALD AND GOLDEN EAGLE PROTECTION ACT

As explained in the DEA, bald eagles (Haliaeetus leucocephalus) have been documented nesting within 1.5 miles north of the project area. Additionally, bald eagles likely forage in the project area. Bald eagles are protected by the BGEPA and impacts from the proposed project may require the NJTA to apply for a permit from the Service if nesting is observed within 660 feet of the proposed activities. The Service recommends using the Northeast Bald Eagle Project Screening Form to determine if further review by the Service is required for bald eagles in the future (available at: https://www.fws.gov/sites/default/files/documents/northeast-bald-eagle-project-screening-form-2021-12-01.pdf). Please review the Service's Eagle Management Program website(https://www.fws.gov/program/eagle-management) for additional information and appropriate contacts for questions or concerns. Unlike birds protected solely under the MBTA, removal of inactive bald eagle nests would still require approvals/permits pursuant to the BGEPA. Additionally, please be aware that the bald eagle is listed as endangered (breeding season) and threatened (non-breeding season) under New Jersey's Endangered and Nongame Species Conservation Act of 1973 (New Jersey Statutes Annotated 23:2A-1 to 23:2A-1:16). As such, when the proposed work proceeds in the future, the NJDEP's Endangered and Nongame Species Program may need to be consulted to ensure compliance with the New Jersey Endangered Species Conservation Act of 1973. Information about bald eagles in New Jersey can be found at: https://dep.nj.gov/wp-content/uploads/njfw/baldeagle.pdf.

USCG Response:

The Northeast Bald Eagle Project Screening form was utilized to determine if further review is required by the Service (Enclosure A). Due to the distance of the nest from the project limits, the Authority anticipates implementing the applicable avoidance measures for each proposed activity. The NEPA EA will be updated to reflect the applicable avoidance measures to avoid disturbance to bald eagles during project construction. Additionally, bald eagles were not a species of concern during NJDEP permit review. The NJDEP is proposing to de-list bald eagles from the NJ Endangered Species list, as announced in June 2024.

USFWS Comment:

Executive Summary

The Executive Summary of the DEA, on page xvii, explains that the Service is a cooperating agency for the project. While the Service will review the project for the Federal trust resources we are concerned about, we have not elected to be and are not a cooperating agency pursuant to the NEPA. Please correct this throughout the DEA and in all future versions.

USCG Response:

The NEPA EA will be updated to clarify that the Service is not a cooperating agency pursuant to the NEPA.

USFWS Comment:

Wetland and Watercourse Mitigation

The DEA explains that the proposed project will permanently impact 3.808 acres of tidal waters, 2.025 acres of tidal wetlands, and 9.118 acres of nontidal freshwater wetlands. Mitigation for these impacts includes the restoration of 0.817 acres of tidal open water through the removal of the existing bridge piers and either purchasing mitigation credits from an existing bank within Watershed Management Area 5 and 7 or the development of a permittee-responsible mitigation project. If mitigation bank credits are not able to be purchased and permittee-responsible mitigation is proposed, the Service requests the opportunity to review the mitigation plan.

USCG Response:

If permittee-responsible mitigation is proposed for any portion of the mitigation required for the project, the Authority will provide the Service the opportunity to review the mitigation plan.

The USCG appreciates your review and consideration. Please direct any questions regarding these responses to Donna Leoce, donna.d.leoce@uscg.mil.

Sincerely,

Donna A. Fisher
Bridge Program Manager
U.S. Coast Guard

Copy:
Michael Ciappi, USFWS

Attachment
Enclosure A – Northeast Bald Eagle Project Screening Form

NORTHEAST BALD EAGLE PROJECT SCREENING FORM

Welcome!

What is the purpose of this form? The U.S. Fish and Wildlife Service (Service) designed this form as a voluntary tool to help people comply with the Bald and Golden Eagle Protection Act (BGEPA) by planning activities in a manner that avoids disturbing nesting bald eagles. To disturb a bald eagle nest means to agitate or bother a bald eagle to a degree that causes, or is likely to cause, that eagle to abandon its nest, suffer injury, or be unable to perform activities necessary to its survival. While all guidance included in this form is voluntary, individuals and organizations that disturb eagles may be subject to fine and prosecution under BGEPA.

How is this form different from the National Bald Eagle Management Guidelines? The National Bald Eagle Management Guidelines (Guidelines) is a document published by the Service in 2007 that provides background information on the biology of bald eagles, explains the Federal laws and regulations protecting them, and lays out guidance for several categories of human activities that can affect their nesting. This form takes the Guideline's recommendations, fits them to the regional conditions of the Northeast, and offers them to you in an interactive and intuitive format. Because the form fits its assessments and recommendations to the needs and behaviors of nesting bald eagles in the Northeast, you may find that it differs from the Guidelines on certain details. Nonetheless, the ultimate goal remains the same: to keep project proponents in compliance with BGEPA, while also protecting nesting bald eagles from disturbance.

How this form works. To complete this form, first, find the category of activities that includes your proposed activity. Then, go to the page listed for that category to assess whether your project may risk disturbing nesting bald eagles. If the form identifies that your activities may disturb nesting bald eagles, follow the recommended avoidance measures. These measures will identify factors that could influence nesting eagles' sensitivity to your activities: distance, visibility, timing, and exposure to other human activities. Sign the self-certification that you have committed to implementing the appropriate measures. If your proposed activities fall into multiple categories, repeat this process for each category. Additionally, if your project has the potential to affect multiple nests, complete a separate form for each nest site.

What to do with your completed form. Once you have signed your self-certification, keep the form for your personal records. You do not need to submit your completed form to the Service. Keep the form and additional pages that may be helpful to your future planning and compliance. If a local, state, or federal authority asks for documentation that you are complying with the Service's regional guidance, you can present them with your completed and signed form.

INTRODUCTION

What to know before you start. You will need a few pieces of information to help you complete this form.

Breeding Season

For temporary activities that might be loud or very visible, one of the simplest and most effective ways to avoid disturbing a bald eagle nest is to time the activity when eagles are not nesting, that is, outside the bald eagle breeding season. Wildlife agencies often refer to this type of measure as a time-of-year restriction. The bald eagle breeding season lasts approximately seven to eight months and has many stages. Start and end dates to this season can vary by location, year, and breeding pair. For simplicity, general dates are often set at a statewide level. Consult Appendix A to find the breeding season in your area.

Visibility

For some categories of activities, this form will ask whether your project activities will be visible to the nest. There are two general approaches to answering this question, a desktop assessment and a site visit. A desktop assessment involves consulting online mapping resources, such as Google Maps or state nest maps (see Appendix B), which can display your project location and the nest location on satellite or aerial imagery. When viewing this imagery, look to see whether there are landscape features or structures that might screen the nest's view of your activities. Your assessment is only as good as your imagery. Make sure the imagery is current and accurately reflects visibility conditions on the ground.

The second option is to visit your project location. Assess from various points in your project footprint whether you can see the nest. Use binoculars (4X power or greater) or spotting scope to assist your viewing. If you plan to visit the project site during the breeding season, be aware that your presence could also disturb the nest. Maintain 330' feet between you and the nest, or at least as much distance as the nearest ongoing foot traffic at the nest site. You should only perform your site visit from property legally accessible to you.

Using both the field and desktop approach will give you your best answer. If there is need to select between the two options, a site visit will generally provide a better sense of visibility. In either approach, consider that your activities may become more visible during portions of the year when leaves are off trees and other vegetation.

Nest Location

To figure out how close or how visible your activities will be, you will need precise knowledge of the nest's location. If you do not already have this information, check Appendix B to see if any online or state resources are available. If you are unable to get this information from any of these sources, survey the site. As when assessing visibility, you should only perform your visit on property legally accessible to you. You should also avoid coming within 330 feet of a nest during the breeding season, unless you know that the eagles have previously tolerated people at whatever shorter distance you are planning to use. For descriptions and examples of bald eagle nests, and explanation of how they differ from other large bird nests, see "Appendix C – Guide to Nest Identification."

If you feel unable to perform this search, consider employing the services of a wildlife biologist experienced in this type of surveying. Alternatively, consider contacting your state or local wildlife agency to see if they would be able to perform a site visit (please be aware that many state and local wildlife agencies are constrained in their resources and time and may not be able to offer this service). Be sensitive to sharing information about nest locations. Attracting public interest to a nest site can threaten the safety of that nest. Some states also continue to prohibit the release of nest locations.

It is possible that you will be unable to find a reported nest. While bald eagles commonly use nests across breeding seasons, nests do not always survive from one season to the next. Nests may fall apart of their own accord or be blown down by high winds. Bald eagles may also stop using a nest for one season or more, even if the nest as a structure still exists. In these scenarios, bald eagles may still reuse a former nest site in the following breeding seasons. The temporary absence of a nest or nesting eagles does not absolve you of your responsibilities to avoid disturbing future nesting at that site. The Service recommends implementing the measures included in this form for five years after the last breeding season eagles used a nest or, where the nest no longer exists, three years after the last breeding season in which the nest existed.

Similar Activities

One of the best indicators of what a nesting bald eagle pair will tolerate is what they have already tolerated. In certain places, this form will ask whether the nesting pair has experienced and tolerated similar activities at the nest location. To answer this question, you will need to know about previous human activity at that location. Was that activity similar in nature to what you propose? As close as or closer than what you propose to do? Did it occur at the same time of day? Time of year? Did it last as long? Was it as frequent? Was it as loud? Was it as visible? You will also need to know basic history about the nest. Did the nest exist before that previous activity? Was it ever used after that activity? If your answer to any of these questions is 'no,' you cannot answer 'yes' to the broader question of whether there is similar activity at that site. See "Appendix D – Similar Activity Example Exercise" for a demonstration of how to apply this principle.

Limitations

Know when and how you should be using this form. See "Appendix E – Limitations of this form."

Where to go for help. The Service understands that project proponents may occasionally need clarification on which assessments are relevant to them and how to implement certain avoidance and minimization measures. If you find you are unable to complete this form, you can contact your regional eagle coordinator (Tom Wittig) for assistance at

thomas_wittig@fws.gov - or - 413-253-8577

When emailing, please include in your subject line "BALD EAGLE SCREENING FORM QUESTION." If you are unable to connect with your regional eagle coordinator when calling, please leave a voice message that you are calling about this form and how best to reach you.

For explanation of technical terms used in this form, see "Appendix F – Glossary of Terms."

PROJECT INFORMATION

Project Name: Newark Bay - Hudson County Extension, 14 to 14A/Newark Bay Bridge Replacement and Associated Improvements

City: Newark, Bayonne, Jersey City **County:** Essex and Hudson **State:** NJ

Lat/Long (decimal degrees; ex. *38.418310, -76.001096*)**:** 40.6967 -74.1234

Find Lat/Long via map

Size: 4 mi. acres\miles

PROJECT CONTACT INFORMATION

Name: Dana Flynn, Consulting Project Biologist, WSP **Phone:** 973-407-1475

Address: 350 Mount Kemble Ave.
Morristown, NJ 07960

Email: dana.flynn@wsp.com

If your project has a Federal (ex. U.S. Army Corps), state (ex. PNDI), or other ID number, please list here: USACE NAN-2020-00729; NJDEP Permit No. 0000-23-0012.2

PROJECT ACTIVITY CATEGORY(S)

Place a check next to all activities you plan to perform.

- [x] Construction and Development Activities → go to pages 5 - 7
- [ ] Maintenance and Restoration Activities → go to pages 8 - 9
- [ ] Timber Operation and Forestry Practices → go to page 10
- [ ] Use of Helicopters and Fixed-wing Aircraft → go to page 11
- [x] Blasting and Other Loud, Intermittent Noises (including Fireworks) → go to page 12
- [ ] Recreational Activities → go to pages 13 – 14

Feedback? The Service is continuously looking to improve this form. If you have suggested changes, please feel free to email them to us at thomas_wittig@fws.gov. Include "Bald Eagle Project Screening Form – Feedback" in your subject line.

Construction and Development Activities

Which specific construction activities do you plan to perform? (check all that apply)

- [x] Building construction
- [ ] Tree and land clearing
- [ ] Construction of roads, trails, canals, power lines, pipelines and other linear utilities
- [ ] Agriculture or aquaculture – new or expanded operations
- [ ] Alteration of shorelines or wetlands
- [x] Installation of docks, piers, or moorings (pile driving may qualify as loud noise, page 12)
- [ ] Water impoundment or withdrawal
- [ ] Mining
- [ ] Oil and natural gas drilling and refining
- [ ] Wind farm construction
- [ ] Installation or expansion of marinas with a capacity of 6 or more boats
- [ ] Communications tower construction (excluding maintenance and repairs)

Is your activity similar to an ongoing or previous activity that coincided with the breeding season and that bald eagles tolerated? Consider both construction and use/operation of your project.

Consider all of the following elements/factors in answering:

-duration	-time of season	-area/footprint
-frequency	-visibility	-magnitude
-time of day	-distance	-nature

- [ ] Yes → No avoidance measures recommended. Go to self-certification (page 7).
- [x] No → Go to next question.

Will your activities be visible to the bald eagle nest(s)?

- [ ] Yes → Stop. Implement Avoidance Measures (AM) 2, 4, and 5 (see page 7)
- [x] No → Go to the next question

Which of these categories most closely matches your proposed project or activity?
(check all that apply)

- ☐ Building construction, 1 or 2 story, with a project footprint of ½ acre or less
- ☒ Construction of roads, trails, canals, power lines, or other linear utilities
- ☐ Agriculture or aquaculture – new or expanded operations
- ☐ Alteration of shorelines or wetlands
- ☒ Installation of docks or moorings
- ☐ Water impoundment or withdrawal
- ☐ Construction of communication towers

→ Implement AM 3, 4 and 5 (page 7)

- ☐ Building construction or expansion, 3 or more stories
- ☐ Building construction or expansion, 1 or 2 story, with project footprint more than ½ acre
- ☐ Mining
- ☐ Oil and natural gas drilling and refining
- ☐ Installation or expansion of marinas with a capacity of 6 or more boats

→ Go to the next question

Is there a similar activity within 1 mile of the nest?

- ☐ Yes → Implement AM 3, 4 and 5 (see page 7)
- ☒ No → Implement AM 1 and 5 (see page 7)

AVOIDANCE MEASURES - Place a check mark next to each avoidance measure (AM) that this form instructed you to implement and that you can commit to following. The Service recommends you follow the applicable AMs to prevent your activities from disturbing nesting bald eagles.

☒ AM 1 – Maintain a distance buffer of at least 660 feet (200 meters) between all project activities and the nest.

☐ AM 2 – Maintain a distance buffer of at least 660 feet (200 meters) between all project activities and the nest. If there is an existing human-made feature (e.g., house, road, dock) similar to your project that is closer than 660 feet and tolerated by the nesting eagles, maintain a distance buffer equal to or greater than the distance separating that tolerated feature and the nest.

☐ AM 3 – Maintain a distance buffer of at least 330 feet (100 meters) year-round between all project activities and the nest. If a similar activity (i.e., similar in kind and size) is closer than 330 feet and has been tolerated by eagles, the distance buffer will be the same or greater than that of the existing tolerated activity.

☐ AM 4 – Do not perform disruptive project activities within 660 feet (200 meters) of the nest during the breeding season. This time-of-year restriction is in addition to your recommended distance buffer. Disruptive activities include, but are not limited to, external construction, excavation, use of heavy equipment, use of loud equipment or machinery, vegetation clearing, earth disturbance, planting, and landscaping.

☐ AM 5 – Maintain existing landscape buffers that visually screen the activity from the nest.

Do you commit to following all recommended avoidance measures?

☒ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

dana.flynn@wsp.com Digitally signed by dana.flynn@wsp.com DN: cn=dana.flynn@wsp.com Date: 2024.10.24 09:27:07 -04'00' 10/24/2024

(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

Maintenance and Restoration Activities

This category includes outdoor maintenance of existing structures or infrastructure, where the maintenance activity is temporary and obtrusive (e.g., requires use of heavy equipment or loud machinery), and within the previously disturbed footprint of the structure or infrastructure. If maintenance is proposed outside the previously disturbed footprint, see **Construction and Development Activities** (pages 5-7). This category also applies to the maintenance and restoration of natural habitats (e.g., wetlands, streams, rivers, non-forested uplands). This category does not include routine, ongoing activities to which bald eagles have already exhibited a tolerance (e.g., lawn mowing; plowing, planting or harvesting of agricultural fields; etc.).

Which maintenance or restoration activities do you plan to perform? (check all that apply)

- ☐ Maintenance of linear utilities (e.g., power lines, pipelines, water and sewer lines)
- ☐ Road, bridge, or culvert maintenance
- ☐ Trail, campground, or recreational area maintenance
- ☐ Maintenance of oil and gas wells, well pads, and storage tanks
- ☐ Maintenance of dams, levees, berms, canals and other water-control structures
- ☐ Pond, lake, or reservoir maintenance (draw downs, dredging)
- ☐ Stream or stream bank maintenance /restoration (e.g., stream bank fencing, stream bank stabilization, livestock crossings, in-stream habitat improvements, channel maintenance, dredging)
- ☐ Wetland maintenance / restoration (e.g., invasive plant control, restoration of hydrology)
- ☐ Prescribed burning for invasive control
- ☐ Upland habitat maintenance / restoration (e.g., planting or cutting of vegetation, invasive plant control, trash cleanup, abandoned mine lands restoration). This does not include activities in forests/woodlands (see **Timber Operation and Forestry Practices**) or in agricultural fields.

Is your activity similar to an ongoing or previous activity that coincided with the breeding season and that bald eagles tolerated? Consider both construction and use/operation of your project.

Consider all of the following elements/factors in answering:

-duration	-time of season	-area/footprint
-frequency	-visibility	-magnitude
-time of day	-distance	-nature

- ☐ Yes → No avoidance measures recommended. Go to self-certification.
- ☐ No → Go to Avoidance Measures.

AVOIDANCE MEASURES - Place a check mark next to each AM that you can commit to following. The Service recommends you follow these AMs to prevent your activities from disturbing nesting bald eagles.

☐ AM 6 - Within 660 feet (200 meters) of the nest, perform all loud and intrusive maintenance and restoration work outside the breeding season. These activities include, but are not limited to, the following: construction, excavation, use of heavy equipment, use of loud equipment or machinery, vegetation clearing, earth disturbance, planting, landscaping, and habitat restoration activities.

☐ AM 7 - Maintain existing landscape buffers that visually screen the activity from the nest.

☐ AM 8 - Do not perform prescribed burning within 660 feet (200 meters) of the nest during the breeding season. If there is no practicable alternative to scheduling prescribed burning during the breeding season, only conduct burns when adult eagles and young are absent from the nest tree (i.e., at the beginning of, or end of, the breeding season, either before the particular nest is in use or after the young have fledged from that nest).

☐ AM 9 - When performing prescribed burning within the drip line of the nest tree, rake leaves, vines, and woody debris from around the base of the tree to prevent fire from climbing the tree. When burning within a patch of forest containing the nest tree, take precautions to prevent crown fire.

Do you commit to following all recommended avoidance measures?

☐ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

_____ _____

(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

Timber Operation and Forestry Practices

AVOIDANCE MEASURES - Place a check mark next to each AM that you can commit to following. The Service recommends you follow these AMs to prevent your activities from disturbing nesting bald eagles.

☐ AM 10 – Do not perform clear-cutting or overstory tree removal within 330 feet (100 meters) of the nest at any time of the year.

☐ AM 11 - During the breeding season, do not perform timber harvesting, road construction, chain saw use, or yarding operations within 660 feet (200 meters) of the nest. Around alternate nests (including nests that were attended during the current breeding season but not used to raise young), you may reduce this distance to 330 feet (100 meters), provided the eggs laid in another nest within the nesting territory have hatched.

☐ AM 12 – Do not construct or operate log transfer facilities and in-water log storage areas within 330 feet (100 meters) of nests at any time of the year.

☐ AM 13 – Do not perform selective thinning, prescribed burning, or other similar silviculture practices for the enhancement or conservation of habitat within 660 feet (200 meters) of the nest during the breeding season. If there is no practicable alternative to scheduling prescribed burning during the breeding season, only conduct burns when adult eagles and young are absent from the nest tree (i.e., at the beginning of, or end of, the breeding season, either before the particular nest is active or after the young have fledged from that nest).

☐ AM 14 – When performing prescribed burning within the drip line of the nest tree, rake leaves, vines, and woody debris from around the base of the tree to prevent fire from climbing the tree. When burning within a patch of forest containing the nest tree, take precautions to prevent crown fire.

Do you commit to following all recommended avoidance measures?

☐ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

_____ 10/24/2024

(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

Use of a Helicopter and Fixed-wing Aircraft

Is your activity similar to an ongoing or previous activity that coincided with the breeding season and that bald eagles tolerated?

Consider all of the following elements/factors in answering:

-duration	-time of season	-area/footprint
-frequency	-visibility	-magnitude
-time of day	-distance	-nature

☐ Yes → No avoidance measures recommended. Go to self-certification.

☐ No → Go to Avoidance Measures.

AVOIDANCE MEASURES - Place a check mark next to each AM that you can commit to following. The Service recommends you follow this AM to prevent your activities from disturbing nesting bald eagles.

☐ AM 15 - During the breeding season, do not fly within 1000 feet (305 meters) of bald eagle nests.

Do you commit to following all recommended avoidance measures?

☐ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

_____ _____

(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

Blasting and Other Loud, Intermittent Noises (including Fireworks)

Is your activity similar to an ongoing or previous activity that coincided with the breeding season and that bald eagles tolerated?

Consider all of the following elements/factors in answering:

-duration	-time of day	-distance
-frequency	-time of season	-volume

☐ Yes → No avoidance measures recommended. Go to self-certification.

☒ No → Go to Avoidance Measures.

AVOIDANCE MEASURES - Place a check mark next to each AM that you can commit to following. The Service recommends you follow this AM to prevent your activities from disturbing nesting bald eagles.

☒ AM 16 - During the breeding season, do not perform blasting and other activities that produce extremely loud noises within 1/2 mile (800 meters) of in-use nests. This measure also applies to the use of fireworks classified by the Federal Department of Transportation as Class B explosives, which includes the larger fireworks intended for licensed public display.

Do you commit to following all recommended avoidance measures?

☒ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

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(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

Recreational Activities

Is your activity similar to an ongoing or previous activity that coincided with the breeding season and that bald eagles tolerated?

Consider all of the following elements/factors in answering:

-duration	-time of season	-area/footprint
-frequency	-visibility	-magnitude
-time of day	-distance	-nature

☐ Yes → No avoidance measures recommended. Go to self-certification.

☐ No → Go to next question

Will your recreation occur during the breeding season?

☐ Yes → Go to Avoidance Measures.

☐ No → No avoidance measures recommended. Go to self-certification.

AVOIDANCE MEASURES – For each applicable recreational subcategory, place a check mark next to the AMs you can commit to following. The Service recommends you follow the applicable AMs to prevent your activities from disturbing nesting bald eagles.

Non-motorized recreation and human entry (including hiking, camping, fishing, hunting, canoeing)

☐ AM 17 - Stay at least 330 feet (100 meters) from the nest if you walk, bike, canoe, camp, fish, or hunt near an eagle nest during the breeding season and your activity will be visible or can be heard from the nest.

Off-road vehicle use (including snowmobiles)

☐ AM 18 - Stay at least 330 feet (100 meters) from the nest. In open areas, where there is increased visibility and exposure to noise, stay at least 660 feet (200 meters) from the nest.

Motorized watercraft use (including jet skis/personal watercraft)

☐ AM 19 - Do not operate jet skis (personal watercraft) or airboats within 330 feet (100 meters) of the nest.

☐ AM 20 - Avoid concentrations of noisy vessels (e.g. commercial fishing boats and tour boats) within 330 feet (100 meters) of the nest, except where eagles have demonstrated tolerance for such activity.

☐ AM 21 - For all motorized boat traffic within 330 feet (100 meters) of the nest, minimize trips and avoid stopping in the area, particularly where eagles are unaccustomed to boat traffic.

Do you commit to following all recommended avoidance measures?

☐ YES – I certify that I have completed this form to the best of my ability, answered all questions completely and accurately, and committed to implementing all applicable avoidance measures.

_____ _____

(signature) (date)

U.S. Fish and Wildlife Service Determination: Based on your responses and commitment to implementing all applicable avoidance measures, the Service has determined that your proposed activities are unlikely to disturb nesting bald eagles.

☐ NO – I am unable to follow one or more of the avoidance measures recommended by this form.

Go to page 15 for further instruction.

-- SEEK FURTHER GUIDANCE --

You have indicated that you are unable to implement all the recommended avoidance measures. Without all avoidance measures, your activities may risk disturbing nesting bald eagles.

Consult with your regional eagle coordinator to determine the appropriate next steps. The Service will work with you to help develop alternate measures to avoid disturbance of nesting bald eagles. If there are no feasible alternate measures, the Service may advise that you obtain an eagle incidental take permit to relieve you of legal liability in the event that your activities unintentionally disturb nesting bald eagles.

Contact your regional eagle coordinator (Tom Wittig) for assistance at thomas_wittig@fws.gov

When emailing, please include in your subject line "[Your project name] – SCREENING FORM FURTHER GUIDANCE." In the body of your message, include

-a brief description of your project, including its location and when you plan to start;

-the activity category(s);

-the ID number(s) (e.g., AM 5) of the Avoidance Measure(s) you are unable to implement; and

-the nest location(s), if available.

To see the Service's eagle incidental take permit application form, go to

https://www.fws.gov/forms/3-200-71.pdf

For answers to Frequently Asked Questions on this form, go to

https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/3-200-71FAQ.pdf

The Service advises you talk with your regional eagle coordinator before deciding to apply.

APPENDIX A

Bald Eagle Breeding Season by State

State	Breeding Season
VA	December 15 – July 15
DC	December 15 – July 15
WV	January 1 – June 30
MD	December 15 – June 30
DE	December 15 – June 30
PA	January 1 – July 31
NY	January 1 – September 30
NJ	January 1 – July 31
RI	January 1 – July 31
CT	January 1 – July 31
MA	January 1 – August 15
VT	February 1 – August 15
NH	February 1 – August 15
ME (coastal)	February 1 – August 15
ME (northern)	March 1 – August 30

APPENDIX B

State Mapping Resources

Connecticut

Contact state
Brian Hess, CT DEEP
Brian.Hess@ct.gov

Delaware

Contact state
Katie Kadlubar, Delaware Division of Fish & Wildlife
Kathryn.Kadlubar@delaware.gov

DC

Contact National Park Service
Mikaila Milton, NPS
mikaila_milton@nps.gov

Maine

https://www.arcgis.com/apps/webappviewer/index.html?id=796b7baa18de43b49f911fe82dc4a0f1

Maryland

https://marylandbirds.org/report-bald-eagle-nest/

Massachusetts

Contact state
Andrew Vitz, MassWildlife
Andrew.vitz@state.ma.us

New Hampshire

Contact state
https://www2.des.state.nh.us/nhb_datacheck/signin.aspx

New Jersey

Contact state
https://www.nj.gov/dep/parksandforests/natural/heritage/datareq.html

New York

Contact state
https://www.dec.ny.gov/animals/31181.html

Pennsylvania

https://fws.maps.arcgis.com/apps/webappviewer/index.html?id=87ac96536654495b9f4041d81f75d7a0

Rhode Island

Contact state
DEM.DFW@dem.ri.gov

Vermont

Contact state
https://vtfishandwildlife.com/conserve/development-review

Virginia

https://www.ccbbirds.org/maps/#eagles

West Virginia

Contact state
Rich Bailey, WVDNR
Richard.S.Bailey@wv.gov

Please note that maps are not exhaustive records of all nests within that state.

APPENDIX C

Guide to Nest Identification

Is it a bald eagle nest? Because bald eagle populations have grown so rapidly in recent years, not every bald eagle nest is registered to an online map or known to wildlife management agencies. As a result, project screening form users may occasionally have to make their own assessment of whether the nest near their project or activity is a bald eagle nest. Users should be cautious in making these determinations. Bald eagle nests can easily be confused with nests of other large birds such as osprey.

This guide will help landowners and project proponents assess whether a nest belongs to bald eagles or another species. It describes for readers the most commonly encountered large nests in the Northeast, with several reference figures for bald eagle nests, and provides tips for telling nest types apart. Any user who reads this guide and still feels uncertain about what type of nest they have encountered should contact their regional eagle coordinator for further guidance.

Common types of large nests.

Bald Eagle

The most notable aspect to a bald eagle nest is generally its size. Bald eagles build some of the largest nests in the world, with most nests around 5 feet in diameter and 3 feet in height (Fig. 1). Nests can grow well beyond these dimensions (Fig. 2), as bald eagles tend to repair and expand their nests each year and can use individual nests for decades. Bald eagle nests are mainly composed of large interwoven sticks. Nests will also have a soft interior bowl made up of materials such as hay, cornhusks, and grass clippings. However, this portion of the nest is rarely visible to human observers. The shape of bald eagle nests varies; they can take the general form of flat discs, inverted cones, cylinders (Fig. 2), or spheres (Fig. 3).

Bald eagles typically place their nests in prominent trees that sit above the surrounding forest canopy. These nest trees will often be on hillsides, lake and ocean shorelines, riverbanks, and forest edges. Nests are generally in the top third of a tree, below the crown, secured in a prominent fork off the main trunk (Fig 4.). Bald eagle nests can be in living deciduous (Fig. 3-4) and coniferous trees (Fig. 1), or dead trees (snags; Fig. 5). Within the Northeastern U.S., bald eagles use a wide range of tree types, including white pines, loblolly pines, tulip poplars, sycamores, oaks, and cottonwoods. Despite their common perception as an emblem of wilderness, bald eagles are also increasingly nesting on human-made structures such as electric transmission towers (Fig. 6) and communication towers.

Osprey

Osprey build large stick nests that can look quite similar to bald eagle nests. In general, osprey nests are smaller, flatter, more disorganized, and more often composed of unnatural materials, such as bailing twine and plastic bags. Osprey also show a stronger preference than bald eagles for human made structures, regularly nesting on light polls, channel markers, and cell towers. When osprey do select a natural support for their nest, it tends to be the topmost part of dead trees, in contrast to bald eagles, which seek out slightly lower portions of trees.

The best clue to which species occupies a nest, osprey or bald eagles, is who shows up. Bald eagles arrive back at their nests earlier in the year than osprey, but by late spring, both species are usually attending their nests. At this time of year, watching a nest over a period of hours will generally reveal which species is using it. However, through fall and early winter, both species are usually away from their nests. During these seasons, the only immediate sources of information on nest will be the physical details described above and online mapping resources.

In addition to the state maps for bald eagles listed in Appendix C, Osprey Watch (http://www.osprey-watch.org/) provides a mapping database of osprey nest locations. As with the bald eagle mapping resources, this map is thorough, but does not represent all existing nests.

Red-Tailed Hawk/Red-Shouldered Hawk

Generally around 1.5 feet wide and 2 feet tall, nests of red-tailed hawks and red-shouldered hawks are less than one-half the size of bald eagle nests. The individual sticks in these hawk nests also tend to be smaller, with diameters of about 1-2 inches. Overall appearance of these nests can be slightly more frayed and chaotic than that of bald eagle nests. Like bald eagles, both hawk species show a tendency towards nesting in upper portions of prominent trees. Red-tailed hawks also share bald eagle's occasional preference for human made structures such as cell towers and transmission towers.

Common Raven

Common ravens construct stick nests that vary substantially in size, from 1.5 to 5 feet across and from little over 0.5 to 2 feet high. The sticks making up the main structure of these nests can be around 3 feet in length and 1 inch in diameter. Ravens place their nests in a variety of natural and developed settings. Raven nests are easily confused with bald eagle nests when located on cell towers, transmission towers, or in trees. When situated in trees, these nests are usually in the upper portion of the tree in a crotch of the main tree stem. The best means of telling raven and bald eagle nests apart are likely size and shape; raven nests are noted for occasionally being asymmetric, and even at their larger sizes, they still tend to be smaller than bald eagle nests.

Great Horned Owl

In addition to nesting in tree cavities, great horned owls also frequently use the former nests of other animals, including squirrels, ravens, crows, and herons. The size and nature of a great horned owl nest therefore depends on the nest's original creator. Red-tailed hawk may be the most common source of nests for great horned owls in the Northeast. However, great horned owls will also occasionally take over bald eagle nests.

Heron

Herons nest in colonies known as "rookeries" where many nests are present; individual heron nests are rare. Multiple nests can be present in one tree and some nests may be located relatively high up or far out on branches. Nest sites are usually near water. Heron nests are mainly composed of sticks, and are flat and broad, often resembling a thin platform. Nests used for several years may grow taller and wider. Heron nests can give off a general impression of messiness or flimsiness.

Squirrel

Squirrel nests can reach basketball size or larger. They are distinguished from bird nests mainly by their materials, which include leaves and other soft vegetation material (e.g., grasses), and very few sticks. They are usually round shaped, and often look messy.

Legal definitions and protections for eagle and migratory bird nests.

Eagle Nests

BGEPA protects eagle nests in same manner it protects eagles; they cannot be destroyed, possessed, or relocated without a permit from the Service, which the Service only provides under a limited set of circumstances. Regulation defines an eagle nest as "any assemblage of materials built, maintained, or used by bald eagles or golden eagles for the purpose of reproduction" (50 CFR 22.3). A nest is an eagle nest if it was built by or ever used by eagles, even if other species of birds played a role in the nest's history. For example, if osprey build a nest and eagles take that nest over, legally, the nest is an eagle nest. Alternatively, if great horned owls begin to use a nest originally built by eagles, that nest remains an eagle nest for as long as it exists. An eagle nest also retains protection regardless of where it was built, whether it was ever finished or successful, or when it was last used. Additionally, BGEPA's protections apply regardless of the nest's size and condition.

Migratory Bird Nests

The Migratory Bird Treaty Act (MBTA) protects migratory bird nests in the many of the same ways that BGEPA protects eagle nests. Unless a permit is in place, migratory bird nests cannot be possessed or relocated at any time or intentionally destroyed while active. One notable difference between MBTA and BGEPA is MBTA's standard on inactive nests. If a migratory bird nest is inactive, meaning it does not contain viable eggs or chicks, it can be destroyed without a permit. (Note: the

terms ‘active’ and ‘inactive’ here are different from the ‘in-use’ and ‘alternate’ standards used for eagle nests [see Appendix E for definitions].) For more information, please read the Service’s 2018 Nest Destruction Memo. Bird species protected under MBTA are listed under regulation at 50 CFR 10.13. Additional protections not described here apply to any migratory bird species listed under the Endangered Species Act. Tribal, state, and local laws may also place greater restrictions on the destruction of migratory bird nests.

Figure 1.

Figure 2.

Figure 3.

Figure 4.

Figure 5.

Figure 6.

APPENDIX D

Similar Activity Example Exercise

What is the purpose of this appendix? This appendix provides project screening form users with an example of how to assess the similarity between two activities. By reading through this example, landowners and project proponents can develop a better sense of what factors they should consider when answering the question of whether their activity is similar to an ongoing or previous activity tolerated by eagles.

In the example scenario, a proposed residential construction project is compared to previous farming activity. The example starts with an overview of the historic farming activity, nest, and proposed project; then goes through a full assessment, set up in table format; and finally closes with a summary of the determination and explanation of how that determination would influence completion of the form.

What is the scenario?

Previous/Existing Activities

The project site is a large agricultural field that was farmed nearly every year for the past two decades. Human activity at the site was limited to occasional operation of heavy farm equipment. The broader area out to one mile includes other agricultural fields and medium density residential and commercial development.

Nest Location & History

Five years ago, a pair of bald eagles constructed a nest in a cottonwood located in the hedgerow bordering the agricultural field. The pair were unsuccessful in their first year, but fledged young from the nest each of the following four years up to present. Workers observed that the pair did not respond to operation of farming equipment, but became vigilant whenever an equipment operator stepped outside their vehicle.

Project Narrative

The proposed project will convert portions of the existing agricultural field to a residential development with 30 single-family homes, which places it under the screening form's Construction and Development category. Construction will require extending water, sewage, and electrical utilities and adding a small network of residential streets. Preparing each lot will involve grading, home and driveway construction, and landscaping. Ten acres of property near the nest will be signed over as a conservation easement.

APPENDIX D

Factor	Previous/Existing Activity: Farming	Proposed Activity: Construction	Similar?
NATURE	Heavy equipment preparing field, planting, and harvesting crop. Two-three workers, generally confined to closed cab tractors.	Twenty workers either in heavy equipment or on foot. Ground disturbance. Placement/extension of utilities. Landscaping. Construction of 20 homes.	No
HISTORY	Farming activity predated nesting and continued while eagles successfully fledged young from the nest. This success demonstrates the eagles tolerated the farming.	N/A	Yes
DISTANCE	Distance between farming activity and the nest tree was essentially 0 feet; the hedgerow in which the nest is located bounds the agricultural field.	Nearest lot boundary will be 400 feet from nest. Area between home and nest will be converted conservation easement and left in passive, natural state.	Yes
TIMING	Farming activity began in March and continued through October each year.	Proposed schedule is April through October.	Yes
DURATION	The field was generally worked for one to two days at time, from sunrise to sundown.	On days of construction activity, work will occur during standard business hours.	Yes
FREQUENCY	Intermittent. Farming occurred in stages (e.g., fertilizing, plowing, harvesting) and events were often separated by weeks or months.	Continuous. Work will occur most weekdays and occasionally on weekends.	No
NOISE	Farming equipment (e.g., tractor) generated loud noises within the range of 80 – 100 decibels.	Construction will not require blasting or pile driving. Construction equipment (e.g., backhoes) will generate loud noise within the range of 80 – 95 decibels.	Yes
VISBILITY	High. Because the field was flat and there was no vegetation other than the hedgerow, practically all farming activity was visible to the nest.	High. There will be no topography or vegetation screening view of construction. Visibility will only begin to lower once exterior walls are put up.	Yes

Final Assessment & Conclusion

The proposed construction activity is different from the historic farming activity in general nature and frequency. Construction will require more workers and more equipment, operating at greater intensity and higher frequency. Because of these differences, the construction cannot be considered similar to the historic farming activity, and it cannot be assumed that the breeding pair will tolerate the activity. Avoidance measures will be necessary to reduce the likelihood of disturbing the nest.

Having made these conclusions, the form user would mark 'No' to the question on page 5 of whether the activity was similar to an ongoing or previous activity. Then, at the next question the user would mark 'Yes' because the project would be visible to nest over the open intervening space. At that point, the form would direct them to implement AMs 2, 4, and 5. The project design, as proposed, would not meet AM 2, the 660-foot buffer. The user's options then would be to revise the project to eliminate the portions within 660 feet of the nest and sign the self-certification, or check no on the commitment to follow all recommended AMs and seek further guidance.

APPENDIX E

Limitations of This Form

This project screening form is not a permit or authorization to disturb bald eagles. It does not free you from legal liability under BGEPA. Rather, this form provides instruction on how to minimize the legal risk of disturbing nesting bald eagles.

The effectiveness of this form depends on the accuracy and completeness of your answers and your compliance with the avoidance measures. Using this form inappropriately may put you at risk of disturbing nesting bald eagles and violating BGEPA.

This form's recommendations are specific to the Northeast and may not be effective outside this region. If your project is in another area of the U.S., do not use this form. Instead, consult with your regional eagle biologist or migratory bird permit office for guidance matched to your locality.

This form only relates to managing activities near bald eagle nests. It does not provide direction on how to avoid disturbing bald eagle communal roosts and concentration areas, which, compared to nest sites, have different biological significance to eagles and present different sets of concerns. If you believe your activities have any potential to affect a communal roost or concentration area, consult the Guidelines document for guidance.

Conditions such as the location and existence of nests and surrounding habitat are subject to change between years. For this reason, the Service recommends revisiting your determinations every breeding season after completing this form until your project is complete. The more time that passes between when you complete this form and when you end your activities, the more likely it is that conditions will change enough that your original determinations no longer apply.

This form only addresses nesting bald eagles. To identify other USFWS-managed resources and suggested conservation measures for your project, go to https://ecos.fws.gov/ipac/.

Wind energy developers seeking to address potential take of eagles should use this form in conjunction with the Service's Eagle Conservation Plan Guidance. Use of this form alone will not assure wind projects' compliance with BGEPA's protections on disturbance or other take.

Certain states and localities have their own laws, regulations, and guidelines for protecting bald eagles and their nests. Completing this form does not guarantee that you are also in compliance with these other standards and/or regulations. If you are unfamiliar with your state and local standards, consult with the appropriate agencies and authorities.

You are responsible for ensuring that your activities comply with all applicable Federal, tribal, State, and local laws and regulations. This form will only help you in your compliance with BGEPA and its protections on the nesting activity of bald eagles.

APPENDIX F

Glossary of Terms

Alternate nest – one of potentially several nests within a nesting territory that is not an in-use nest at the current time. When there is no in-use nest, all nests in the territory are alternate nests. Also sometimes referred to as an inactive nest (e.g., in the Service's 2009 Eagle Rule).

Communal roost – an area where eagles gather repeatedly in the course of a season and shelter overnight and sometimes during the day in the event of inclement weather.

Disturb – to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

Eagle nest – any assemblage of materials built, maintained, or used by bald eagles or golden eagles for the purpose of reproduction.

Fledge – to leave the nest and begin flying. For bald eagles, this normally occurs at 10-12 weeks of age.

In-use nest – a bald or golden eagle nest characterized by the presence of one or more eggs, dependent young, or adult eagles on the nest in the past 10 days during the breeding season. Also sometimes referred to as an active nest.

Landscape buffer – a natural or human-made landscape feature that screens eagles from human activity (e.g., strip of trees, hill, cliff, berm, sound wall).

Nest abandonment – nest abandonment occurs when adult eagles desert or stop attending a nest and do not subsequently return and successfully raise young in that nest for the duration of a breeding season. Nest abandonment can be caused by altering habitat near a nest, even if the

alteration occurs prior to the breeding season. Whether the eagles migrate during the non-breeding season, or remain in the area throughout the non-breeding season, nest abandonment can occur at any point between the time the eagles return to the nesting site for the breeding season and the time when all progeny from the breeding season have dispersed.

Nesting territory – the area that contains one or more eagle nests within the home range of a mated pair of eagles, regardless of whether such nests were built by the current resident pair.

Northeast – Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, and the District of Columbia.

Project footprint – the area of land (and water) temporarily or permanently altered by a project.

Tolerate – the acceptance of specific human activities by eagles at the nest site. Demonstrated in the eagles' continued ability to successfully feed, breed, and shelter, and the general absence of stress or agitation in their behavior.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Field Office
4 East Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
(609) 646-9310

In Reply Refer To:
2023-0039248

September 16, 2024

Donna A. Fisher
Bridge Program Manager
U.S. Department of Homeland Security
U.S. Coast Guard
Battery Park Building
1 South Street
New York, New York 10004-1466

Dear Ms. Fisher:

On June 11, 2024, the U.S. Fish and Wildlife Service's (Service) New Jersey Field Office submitted a review of the public notice for a Bridge Permit and Draft Environmental Assessment (DEA) to the U.S. Coast Guard (USCG) for the New Jersey Turnpike Authority's (NJTA) proposed replacement of the Newark Bay-Hudson County Extension Interchange 14 to Interchange 14A/Newark Bay Bridge Replacement and Associated Improvements project. Responses to Service comments were received on August 30, 2024. This letter provides the Services continuing review/comments.

AUTHORITIES

The following comments are provided pursuant to the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (BGEPA); the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.); Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 10, 2001; 66 FR 3853); the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq*.); the Migratory Bird Treaty Act of 1918 (40. Stat 755, as amended; 16 U.S.C. Section 703-712); and the National Environmental Policy Act (83 Stat. 852, as amended; 42 U.S.C. 4321 *et seq.*) (NEPA). The following comments do not preclude additional comments on forthcoming phases of the project.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES

Tricolored bat

The Service appreciates the commitment to ensure that any cutting or other means of knocking down, bringing down, or trimming of trees is avoided from April 1 to September 30 (which avoids the pup season from May 15 to July 31). With this conservation measure, the proposed project is not likely to adversely affect the tricolored bat. If a wetland/watercourse permittee responsible mitigation project is proposed, please reconsult with our office if this conservation measure cannot be applied to that area.

As mentioned in our June 11, 2024 letter, this project is not likely to jeopardize the continued existence of the tricolored bat; therefore, ESA Section 7(a)(4) conference is not required. Once a final rule to list the tricolored bat is published and goes into effect (typically 30–60 days after publication), Section 7(a)(2) requirements for consultation and Section 9 prohibitions against unpermitted "take" of the species will apply. If the tricolored bat becomes listed pursuant to the ESA and the project is not yet constructed, the Service recommends that the USCG initiates ESA consultation. This concurrence and your August 30, 2024 responses, which describes that the project will implement conservation measures to ensure effects will be discountable to tricolored bat, should be included in that submission. Since the project is already incorporating measures to avoid and minimize effects to tricolored bats that have been reviewed by Service biologists, the Service should be able to provide a quick email response at that time to indicate our concurrence. Information on the tricolored bat is available at *https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus*.

Monarch butterfly

The Service appreciates the commitments and other details provided in your August 30, 2024 response, including to:

1. Avoid removing milkweed in suitable monarch butterfly habitats during the times of year they may be present from May 1 to September 30.

2. Consider and review the conservation measures and descriptions included in the Monarch Butterfly Candidate Conservation Agreement application. Also, to review the websites explained in our June 11, 2024 letter.

3. Revegetate temporarily disturbed areas post-construction with a seed mix that includes milkweed (*Asclepias spp.*), goldenrods (*Solidago spp.*), and other warm season grasses and perennial wildflowers.

4. As necessary, continue working with the Service to limit impacts to monarch butterflies and their habitat.

SPECIES UNDER REVIEW FOR LISTING AND PRIORITY AT-RISK SPECIES

Saltmarsh sparrow

The Service appreciates the commitments and other details provided in your August 30, 2024 response, including to:

1. Remove marsh vegetation in areas proposed to be permanently disturbed between September 15 and March 15.

2. Restore temporarily disturbed wetland areas post-construction.

3. Continue coordinating with the Service if the saltmarsh sparrow is listed pursuant to the ESA before construction.

4. Provide the Service an opportunity to review the wetland/watercourse permittee-responsible mitigation project (if mitigation bank credits are not able to be purchased).

5. Review the Atlantic Coast Joint Venture's Saltmarsh Sparrow Conservation Plan (Hartley and Weldon 2020).

MIGRATORY BIRD TREATY ACT

The Service appreciates the commitment to develop a Migratory Bird Monitoring Plan and other details received in the August 30, 2024 response.

BALD AND GOLDEN EAGLE PROTECTION ACT

The Service appreciates the usage of the Northeast Bald Eagle project screening form (submitted with the August 30, 2024 response) and applicable avoidance measures to be implemented. Please contact the Service if a bald eagle is observed nesting within 660 feet of the proposed project activities. If project activities change or bald eagles are observed nesting closer to the project area, you may also reference the Service's website (*https://www.fws.gov/story/do-i-need-eagle-take-permit)* to determine if a bald eagle permit may be needed and appropriate contacts. Please be aware that the BGEPA is a Federal law implemented by the Service and is separate from state protections. As such, if the bald eagle is de-listed from the New Jersey Endangered Species List, compliance with the BGEPA is still required.

GENERAL COMMENTS

The Service appreciates removing us as one of the listed cooperating agencies on the NEPA documentation and the commitment to provide us with the opportunity to review any potentially required wetland/watercourse permittee-responsible mitigation.

We look forward to the opportunity to work with the USCG in the future. For further assistance or questions, please contact Michael Ciappi at michael_ciappi@fws.gov.

Sincerely,

Eric Schrading
Field Supervisor

cc:
Ross Conover, USFWS
Rosita Miranda, USACE

REFERENCES

Hartley, M.J. and A.J. Weldon, eds. 2020. Saltmarsh Sparrow Conservation Plan. Atlantic Coast Joint Venture. Available at: *https://www.acjv.org/documents/SALS_plan_final.pdf*.

Appendix F-2

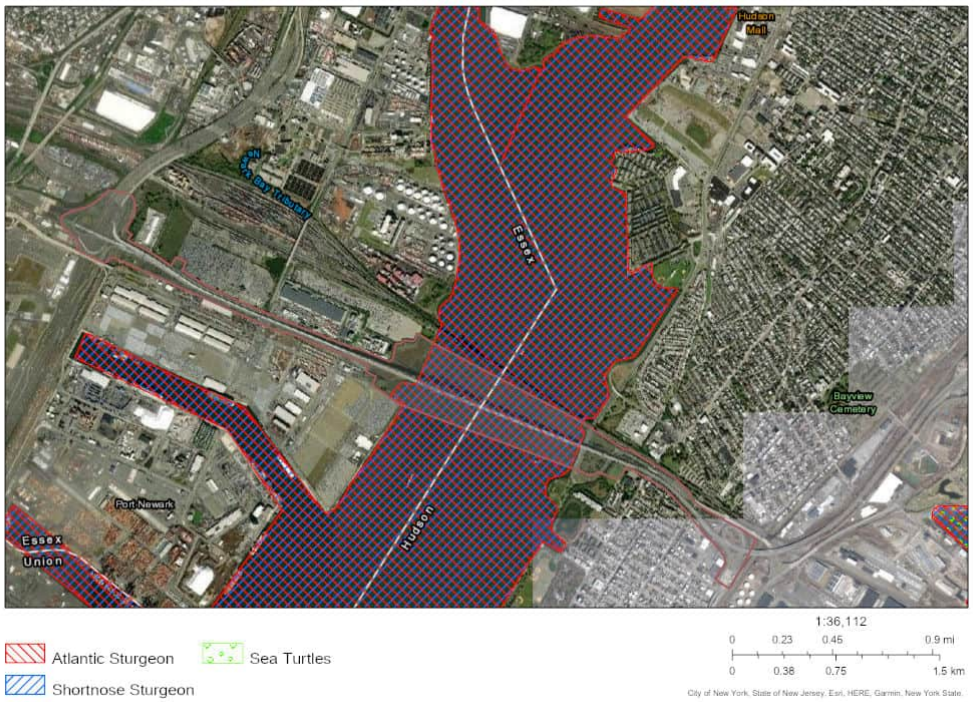
NMFS Section 7 Mapper Report and NMFS Correspondence

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 320.16 acres

Jun 4 2021 14:54:30 Eastern Daylight Time



Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	265.66	N/A
Shortnose Sturgeon	1	132.83	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

Atlantic Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_C50_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	N/A	01/01	12/31	N/A	N/A	132.83
2	ANS_C50_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	N/A	01/01	12/31	N/A	N/A	132.83

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_C50_ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	N/A	04/01	11/30	N/A	N/A	132.83

DISCLAIMER: Use of this App does NOT replace the Endangered Species Act (ESA) Section 7 consultation process; it is a first step in determining if a proposed Federal action overlaps with listed species or critical habitat presence. Because the data provided through this App are updated regularly, reporting results must include the date they were generated. The report outputs (map/tables) depend on the options picked by the user, including the shape and size of the action area drawn, the layers marked as visible or selectable, and the buffer distance specified when using the "Draw your Action Area" function. Area calculations represent the size of overlap between the user-drawn Area of Interest (with buffer) and the specified S7 Consultation Area. Summary table areas represent the sum of these overlapping areas for each species group.

From:	Edith Carson-Supino - NOAA Federal
To:	Flynn, Dana
Cc:	Pesesky, Lawrence; mmorgan; Campagnino, Marjorie M.; Jessie Murray - NOAA Federal
Subject:	Re: NJTA Newark Bay-Hudson County Extension Program - ESA request for info
Date:	Friday, August 6, 2021 11:55:49 AM
Attachments:	image003.png Incoming - USGSTopo.pdf

Ms. Flynn,

We received your email on August 5, 2021, regarding the proposed geotechnical borings in Newark Bay and adjacent tidal wetlands (attached). In your email, you requested any available information regarding the presence of federally listed threatened or endangered species within the vicinity of the site. Please note that you can also look up species presence in your project area by using our Mapper: http://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27

We offer the following comments.

Endangered Species Act

Atlantic Sturgeon

Atlantic sturgeon could be present in the waters of Newark Bay and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPS) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area. As young remain in their natal river/estuary until approximately age 2, and early life stages are not tolerant of saline waters, no eggs, larvae, or juvenile Atlantic sturgeon will occur within Newark Bay and its adjacent bays and tributaries.

Shortnose Sturgeon

Shortnose sturgeon could be present in the Newark Bay and could occur in its adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. As early life stages are not tolerant of saline water, no eggs, larvae, or juvenile shortnose sturgeon will occur within the saline waters of Newark Bay and its adjacent bays and tributaries.

As project details develop, we recommend you consider the following effects of the project on Atlantic and shortnose sturgeon:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- For activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	Injury	Behavioral Modification
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of sturgeon may occur within the vicinity of your proposed project. The federal action agency will be responsible for determining whether the proposed action may affect listed species. If they determine that

the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See
- https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).

Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat

Recent changes to the Corps of Engineers' Nationwide Permits have removed the requirement that NOAA Fisheries be contacted for information on essential fish habitat and that applicants provide evidence of the contact and our resources. You now access the information on your own from our websites. The Habitat Conservation Division's website is: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/conserving-habitat-greater-atlantic-region. Information on essential fish habitat can be found there.

Thank you,

Edith

Edith Carson-Supino, M.Sc (she/her/hers)
Section 7 Fish Biologist, Greater Atlantic Regional Fisheries Office
NOAA Fisheries | U.S. Department of Commerce
Office: (978) 282-8490
For ESA Section 7 guidance please see:
https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region

On Thu, Aug 5, 2021 at 11:54 AM Flynn, Dana <dana.flynn@wsp.com> wrote:

> Good Morning Ms. Carson-Supino,
>
> On behalf of the New Jersey Turnpike Authority (Authority), Gannett Fleming, Inc. Design Team member WSP USA, Inc. (WSP) is preparing geotechnical boring permit applications to obtain state and federal approvals for activities associated with Newark Bay-Hudson County Extension (NB-HCE) Program. The NB-HCE Program (Program) limits extend from a point just east of Interchange 14 in Newark, Essex County, across the Newark Bay

Bridge, and through Bayonne, Hudson County to the eastern terminus of the Authority's jurisdiction at Jersey Avenue in Jersey City, Hudson County, New Jersey. The project consists of the NB-HCE corridor, including the Newark Bay Bridge, and abutting areas. The project area is shown on the attached USGS topographic map.

As part of preliminary design, geotechnical borings are proposed in Newark Bay and adjacent tidal wetlands. This email is requesting information regarding the presence of Endangered Species Act (ESA) listed threatened or endangered species under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS) within the subject project site. Should you require additional information, please do not hesitate to contact me at dana.flynn@wsp.com or 973-407-1475.

Thank you for your assistance,

Dana Flynn, CWB, CE

Senior Environmental Scientist

T+ 1 973.407.1475

M + 1 484.225.3650
WSP USA

412 Mount Kemble Avenue 5th Floor

Morristown, NJ 07960 USA

wsp.com

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EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 40º 41' 44" N, Longitude = 75º 52' 56" W
Decimal Degrees: Latitude = 40.695, Longitude = -74.118

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

***** W A R N I N G *****

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
		Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP
		Red Hake	Adult Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Clearnose Skate	Adult Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Eggs	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Bluefish	Adult Juvenile	Mid-Atlantic	Bluefish
		Atlantic Butterfish	Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Summer Flounder	Larvae Juvenile Adult	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass

Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council
		Summer Flounder	Mid-Atlantic

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All spatial data is currently available for the Mid-Atlantic and New England councils,
Secretarial EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

October 17, 2024

Gregory Hitchen
U.S. Department of Homeland Security
United States Coast Guard
One South Street
Battery Park Building
New York, NY 10004-1466

Re: Newark Bay Bridge Replacement

Dear Mr. Hitchen:

We have completed our consultation under section 7 of the Endangered Species Act (ESA) in response to your email received on October 2, 2024, regarding the above-referenced proposed project. We reviewed your consultation request document and related materials. Based on our knowledge, expertise, and your materials, we concur with your conclusion that the proposed action is not likely to adversely affect any National Marine Fisheries Service ESA-listed species or designated critical habitat. Therefore, no further consultation pursuant to section 7 of the ESA is required.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 FR 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act (84 FR 45015; 89 FR 24268). We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this letter of concurrence would not have been any different under the 2019 regulations or pre-2019 regulations.

Reinitiation of consultation is required and shall be requested by the lead federal agency or by us, where discretionary federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; or, (c) if a new species is listed or critical habitat designated that may be affected by the identified action. No take is anticipated or exempted. If there is any incidental take of a listed species, reinitiation would be required. Should you have any questions about this correspondence please contact Edith Carson-Supino at (978) 282-8490 or by email (Edith.Carson-Supino@noaa.gov).

For questions related to Essential Fish Habitat, please contact Jessie Murray with our Habitat and Ecosystems Services Division at (732) 872-3116 or Jessie.Murray@noaa.gov.

Sincerely,

Jennifer Anderson

Jennifer Anderson
Assistant Regional Administrator
for Protected Resources

ec: Murray, NMFS/HESD; Leoce, USCG; Heeren, Dewberry
ECO: GARFO-2024-02480
File Code: H:\Section 7 Team\Section 7\Non-Fisheries\USCG\Informal\2024\USCG Newark Bay Bridge Replacement

U.S. Department of Homeland Security
United States Coast Guard

Commander
First Coast Guard District

One South Street
Battery Park Bldg
New York, NY 10004-1466
Staff Symbol: D1 (dpb)
Phone: (212) 514-4335

16591
2 October 2024

MEMORANDUM

Gregory P Hitchen

From: Gregory P. Hitchen
Bridge Program Manager
First Coast Guard District (dpb)

Reply to: D. Leoce
U.S. Coast Guard

To: Ms. Jennifer Anderson
Assistant Regional Administrator for Protected Resources
NOAA Fisheries, Greater Atlantic Regional Fisheries Office

Subj: REQUEST FOR INITIATION OF INFORMAL CONSULTATION

1. The Coast Guard is in receipt of comments from Edith Carson-Supino of the NOAA Fisheries, Greater Atlantic Fisheries Office dated May 9, 2024, in response to the Coast Guard's Public Notice dated May 8, 2024. The Public Notice and draft Environmental Assessment (draft EA) describe activities proposed to occur within the waters of Newark Bay that would be authorized by the Coast Guard under the bridge permit for which the New Jersey Turnpike Authority (the Authority) has applied.

2. As the Lead Federal Agency for National Environmental Policy Act (NEPA) review, the Coast Guard requests informal consultation with the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act (ESA) and concurrence with the Coast Guard's determination that the proposed activity may affect but is not likely to adversely affect (NLAA) the ESA-listed Atlantic sturgeon and short nose sturgeon. The Coast Guard's justification of the proposed action and its NLAA determination are based on the analysis included in the attached document and associated attachments, which were provided by the Authority and reviewed by the Coast Guard. The analysis includes a discussion of the proposed action, minimization and mitigation measures, action area, listed species and an analysis of the effects of the proposed action, including acoustic effects.

3. Please direct any questions regarding this request to Mr. James Heeren at JHeeren@Dewberry.com or 973-576-0149 or Donna Leoce, Coast Guard Project Officer at donna.d.leoce@uscg.mil or 516-265-4770.

#

Encl: ESA Analysis
Coast Guard Public Notice
Attachments A-G

Copy: Edith Carson-Supino, NOAA NMFS
Kristin Andrade, USACE
Lisa Navarro, NJTA

U.S. Coast Guard Request for Informal Consultation under Section 7(a)(2) of the Endangered Species Act (ESA)

New Jersey Turnpike Authority, Newark Bay Bridge (NBB) across Newark Bay, Mile 3.8 Newark, Essex County and Bayonne, Hudson County, New Jersey

October 2, 2024

Proposed Action

Under the proposed action, the Coast Guard would authorize the Authority's replacement of the Newark Bay Bridge (NBB) with two new parallel bridges over Newark Bay. The NBB replacement is part of a larger Authority project to replace the roadway between Interchanges 14 to 14A as shown in Figure 1 below. The center of Newark Bay is located at 40.694905 north and -74.117001 west within the project area.

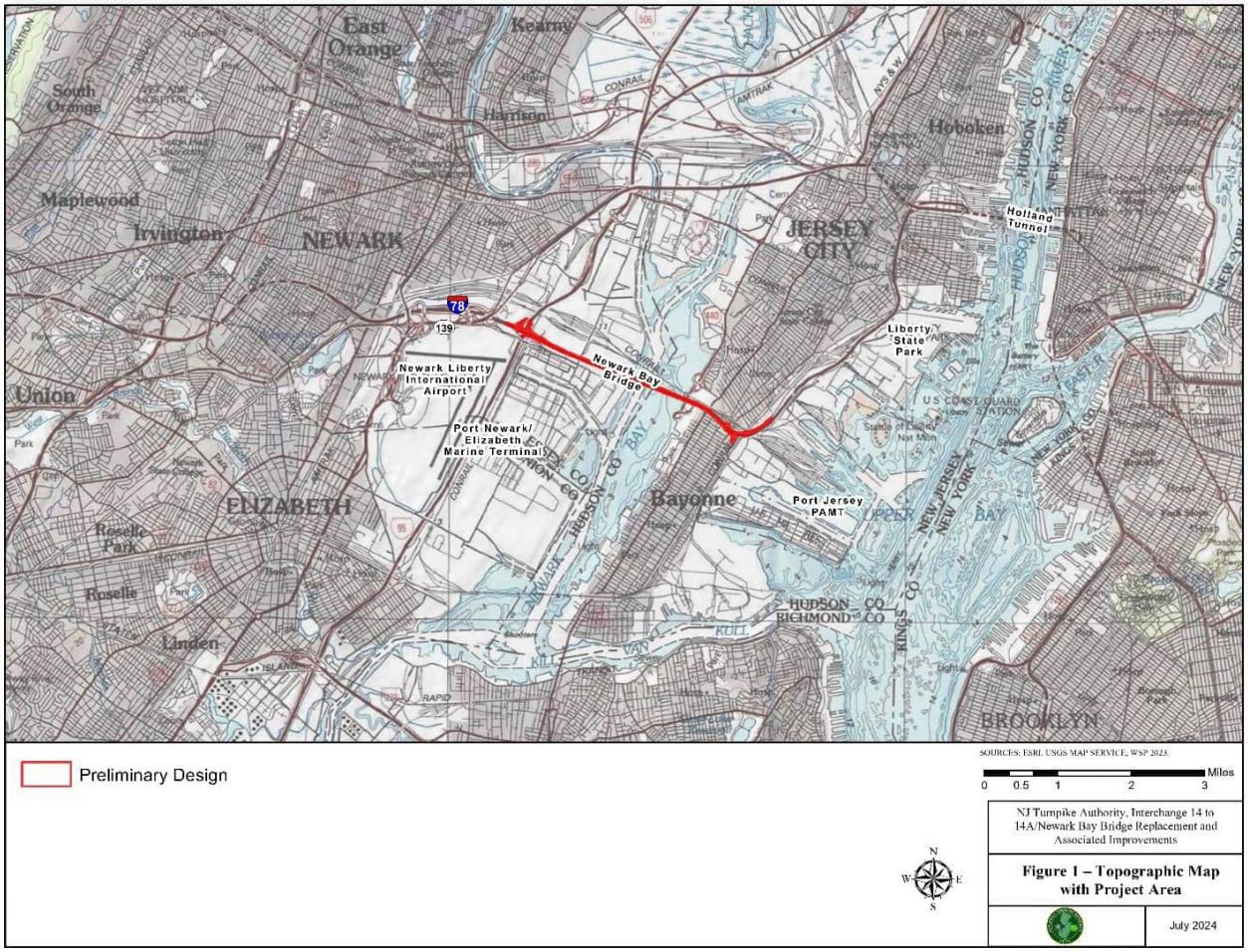

Figure 1 – Topographic Map with Project Area

The NBB structure is approaching the end of its design service life. The NBB has experienced nearly 70 years of fatigue-inducing dynamic live load stresses on steel members, typical of any structure of that age, and it does not meet modern design standards for vehicular live loads or earthquake events. The project will replace the existing bridge with new structures designed and constructed to accommodate today's heavier truck traffic and

seismic design requirements while providing a minimum 100-year service life with a goal of a 150-year service life.

Under the proposed action, a new 4-lane westbound bridge is proposed to the north of the existing bridge, while a new 4-lane eastbound bridge will be built in the general location of the existing NBB. The proposed cable stayed bridge will provide the clearances shown on page 4 of 8 of the April 25, 2024, plan sheets which are part of the Coast Guard Public Notice. The vertical clearance is 135 feet (MHW) which is the same as the existing bridge. The horizontal clearance is increased to 611 feet between the fenders. The horizontal clearance accommodates the existing 550-foot approved navigation opening and the 500-foot U.S. Army Corps of Engineers maintained channel. Over the 550-foot horizontal clearance/500-foot navigational channel, a cable-stayed bridge design is proposed. Within the project limits, the NB-HCE comprises elevated structures; therefore, no causeways or approach fills are associated with the NBB replacement.

The NBB replacement construction would be staged as follows:

1. one of the new parallel bridges and its approaches would be constructed north of and adjacent to the existing bridge;
2. after construction of the first of the new bridges, eastbound and westbound traffic would be temporarily shifted from the existing bridge to the new bridge, and the existing bridge would be demolished;
3. after demolition of the existing bridge, the second of the new bridges and approaches would be constructed on essentially the same roadway alignment of the existing bridge; and
4. after completion of the second bridge, eastbound traffic would be shifted to that bridge's four travel lanes while westbound traffic would remain on the initially constructed bridge's four travel lanes.

The west and east approaches of the existing bridge would be replaced in conjunction with construction of the new bridges. Several new stormwater basins would be constructed with hydrodynamic separator-type manufactured treatment devices to intercept and treat stormwater runoff. The preliminary schedule for the project is to begin construction in 2026 and complete construction in 2036. Westbound bridge construction is expected to occur from 2027 to 2031. Demolition of the existing NBB and eastbound bridge construction is expected to occur from 2031 to 2036.

The west and east approaches of the existing bridge would be replaced in conjunction with construction of the new bridges. Several new stormwater basins would be constructed with hydrodynamic separator-type manufactured treatment devices to intercept and treat stormwater runoff. The preliminary schedule for the project is to begin construction in 2026 and complete construction in 2036. Westbound bridge construction is expected to occur from 2027 to 2031. Demolition of the existing NBB and eastbound bridge construction is expected to occur from 2031 to 2036.

The construction of the new bridge piers will involve installation and removal of over 1,000 42-inch steel pipe piles and approximately 10,000 linear feet of temporary sheet pile cofferdams. The new bridge piers are proposed to be constructed by the drilled shaft method. These piers will be accessed via a temporary construction trestle extending out from each shore to the new main span pier locations just outside of the navigation channel. The temporary access trestle for the new westbound bridge would be supported by 42-inch diameter steel pipe piles and is expected to be in place for a period of up to 5 years. Once the new westbound bridge is completed, another temporary trestle would be constructed out from each shore alongside the existing bridge and used for both demolishing the existing NBB and constructing the new bridge within its existing footprint. This temporary trestle would be in place for a period up to 6 years. Bridge demolition would include removing all of the existing piers within Newark Bay to 2 feet below the mudline in accordance with Authority practice, except that one main span pier will remain in its entirety and the other will have a portion removed from the USACE-dredged channel limits so that both can support the fendering system for the new bridges. Bridge pier demolition is anticipated to be completed using hoe-rams.

There is no dredging or in-water excavation associated with the proposed project.

Trestle Pile Installation

Trestle piles located below the mean high-water line (MHWL) would be installed initially by vibratory driving as deep as feasible (at least 40 feet in depth) and finally by impact driving (additional 20-40 feet in depth). During the timing restriction, trestle pile installation will be conducted within bubble curtains. Bubble curtains will be used either with or without a larger 60-inch diameter confined casing set to the mudline and equipped with air compressor lines to reduce sediment resuspension and underwater noise transmission during pile driving. Over 1,000 new trestle piles will be installed. The conservative estimated time to install one pile is one half day to one day, working from a spud barge. Multiple spud barges may be employed to install pilings faster.

New Bridge Piers

The drilled shafts for the bridge piers will be advanced in-water with turbidity barriers used to minimize sediment resuspension and reduce impacts to the aquatic community. During timing restrictions, cofferdams or bubble curtains may be used for drilled shaft construction depending on the concrete cap footings. Concrete cap footings may be constructed within cofferdams or using precast or preformed forms supported by the drilled shafts (no traditional cofferdams). Bridge pier construction would then take place within dewatered steel sheet pile cofferdams, and other sediment control structures. Demolition of the existing bridge piers would also occur within turbidity barriers, sheet pile cofferdams. All in-water pier work would take place outside of the January 1 through June 30 time of year restriction.

Cofferdam/Trestle Removal

Following completion of bridge construction and demolition, cofferdams and trestle piles would be removed by vibratory extraction. All of this in-water construction activity requires use of spud barges, tugboats and other support vessel types over a period of 10 years. In-water work is depicted on Figure 2. Cofferdams, new piers, and existing piers, new fender and trestle piles are shown.

Best Management Practices

Best management practices (BMPs) will be implemented during construction to control turbidity, noise, and overall habitat disturbance. For in-water installation of the trestle piles, an optional larger 60-inch diameter casing would be set to the mudline and equipped with air compressor lines at the bottom of the casing, which creates air bubbles in the annular space between the pipe pile and the casing to reduce sediment resuspension and underwater noise transmission during pile driving. The isolation casing would be pushed or vibrated into the Bay bottom 5 to 10 feet depending on the stability of the sediments. Pile installation would begin with a reduced blow energy soft start to minimize initial effects and give any potentially affected species time to vacate the area before the higher energies are used. Cushion blocks will be used when using an impact hammer. A 12-hour quiet (recovery) period will be observed between pile driving days. The temporary cofferdam sheet piles would be installed by a vibratory hammer. Bubble curtains will be used to protect sturgeon and other fish species from sediment resuspension during sheet pile driving. Additional BMPs to be followed include:

- Low-ground pressure construction vehicles will be used whenever possible to perform construction in wetlands. Skid rigs will only be used when wooden planks or snow fencing is laid down to minimize disturbance/compression of the ground surface.
- Temporarily disturbed areas will be restored to pre-existing conditions. Planting of disturbed areas will occur as soon as possible to minimize erosion.
- Excavation (on land only) and filling activities will be conducted in a manner to minimize turbidity and sedimentation into wetlands and open waters. Placement of embankments (filling) will be conducted

in such a manner as to contain sediment at the fill areas. All construction activities will be performed in accordance with an approved Soil Erosion and Sediment Control Plan.

- The limit of encroachment will also be posted with signage to prevent further intrusion by construction vehicles.
- Staging and temporary roads or soil stockpiles will not be permitted in wetland areas that are not needed for actual construction. Appropriate soil erosion and sediment control measures will be utilized in the vicinity of any construction activities.

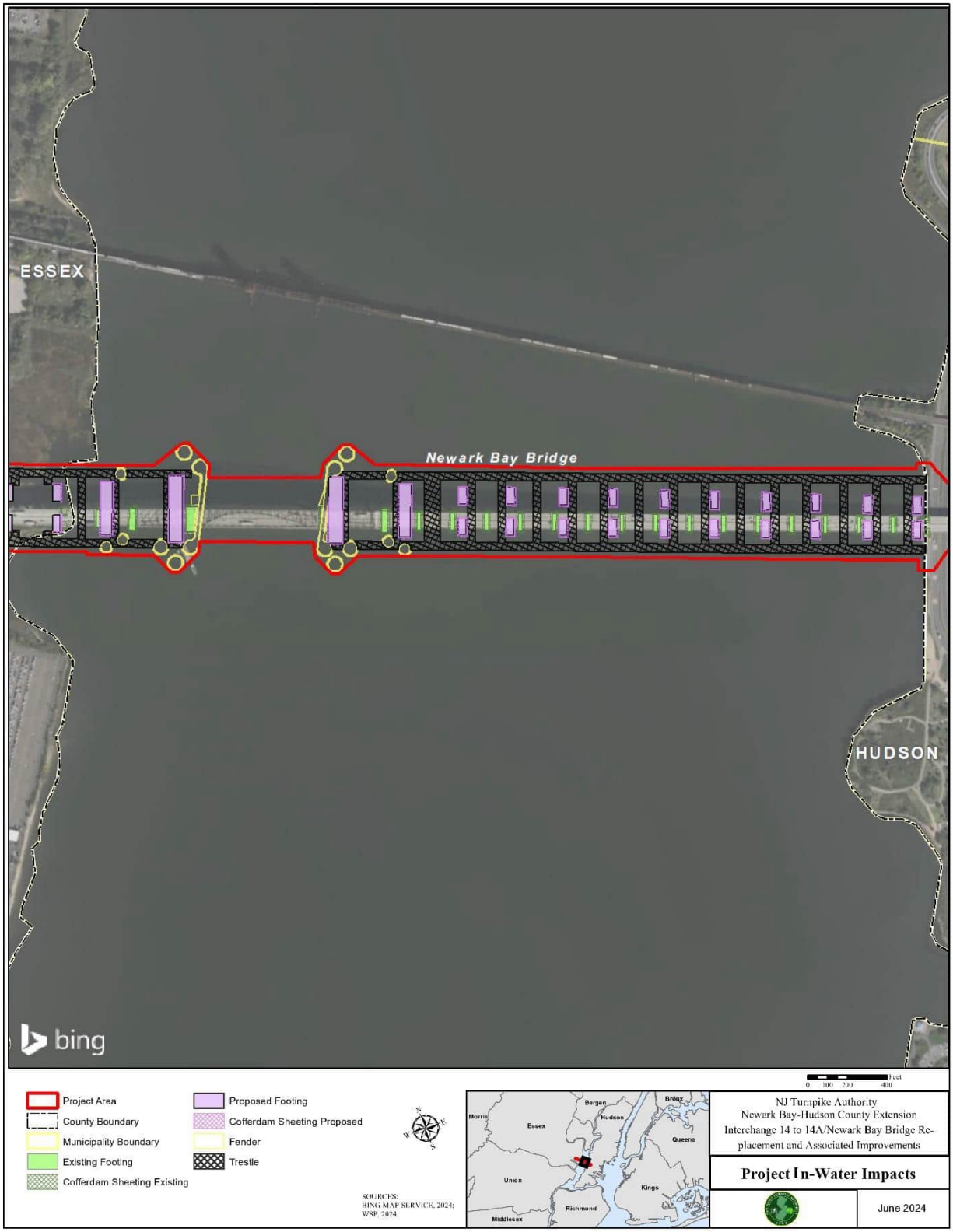

Figure 2 – Project In-Water Impacts Description of the Action Area

Minimization and Mitigation Measures

Note that timing restrictions and pile installation mitigation measures described subsequently are listed in NJDEP Waterfront Development and Freshwater Wetlands Individual Permit File No. 0000-23-0012.2, received on April 3, 2024, and included as Attachment C.

Timing Restrictions[1]

- To protect anadromous species spawning runs within the Newark Bay and associated UNT tributaries, a timing restriction from **March 1 through June 30** is required for any in-water disturbance, sediment generating activities, and pile driving activities.
- A separate timing restriction of **January 1 through May 31** is required to protect Winter Flounder species during migration and spawning in the area. This Winter Flounder species timing restriction shall be applied to tidal waters ranging from near shore (sub-tidal) to 20-foot depths, in low to moderate tidal velocity areas, and in waters averaging between 10-32 ppt salinities. Furthermore, any activity outside the Bay, which would likely introduce sediment into the Bay and/or increase its turbidity, is also prohibited during this time.
- If sediment control structures, cofferdams or other water isolation measures are installed prior to the timing restrictions stated above, construction activities behind the sediment control structures may proceed during the restricted period.

Pile Installation Methods[1]

Due to the number of piles to install for the temporary trestle structure, piles may be installed during the above-listed timing restrictions by using bubble curtains, either with or without an external confinement casing, as additional mitigation measures will be implemented below:

- When feasible, pile driving will occur in dry or during low water conditions in intertidal areas.
- Piles will be driven as deep as possible with a vibratory hammer prior to using impact hammer.
- Number and size of piles will be minimized, where feasible.
- Pile driving will be limited to no more than 12 hours per day.
- A 12-hour quiet (recovery) period will be observed between pile driving days.
- A soft start will be used to start pile driving (driving will not start at 100% energy)
- Cushion blocks will be used when using an impact hammer.
- Drilled shafts will be used instead of hammered piles, where appropriate.

Compensatory Wetland Mitigation

The Authority will acquire available wetland mitigation credits from existing mitigation banks with Service Areas that overlap Watershed Management Area (WMA) 5 (Hackensack River, Hudson River, and Pascack Brook Watersheds) and WMA 7 (Arthur Kill Watershed). Attachment D is a copy of a Mitigation Conditions Correction Letter from NJDEP dated June 7, 2024, adding an additional mitigation bank to the permit conditions of File No. 0000-23-0012.2. Attachments E, F, and G are three letters of credit availability from potential mitigation banks to provide compensatory tidal and freshwater credits. If necessary, the Authority will also pursue permittee-responsible mitigation to provide for the balance of the compensatory requirements not covered by available mitigation credits. The form and type of the additional mitigation activity will be

[1] As stated in the NJDEP Waterfront Development, Freshwater Wetland, Flood Hazard Area Individual Permit and Water Quality Certificate No. 0000-23-0012.1 provided in Attachment C.

coordinated with the regulatory agencies and may include third-party turnkey mitigation projects as well as publicly funded tidal wetland mitigation opportunities.

Description of the Action Area

The action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50CFR§402.02). The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

For the project, the action area is within Newark Bay and extends approximately 9,608 feet from the project limits in all directions (Figure 3). The action area is conservatively defined as the area within which project-related noise levels exceed 150 dB, the behavior threshold for fish species. It should be noted that the NOAA Fisheries Multi-Species Pile Driving Calculator Tool (NMFS 2022a) does not have either an impact or vibratory pile driving proxy sound level estimate for 42-inch steel piles, so 48-inch measurements were used for impact driving and 72-inch measurements were used for vibratory driving for this evaluation. It should be noted that due to the smaller size of the actual piles to be installed and the use of vibratory driving in addition to impact driving, predicted noise levels associated with the project are expected to be less than those noted in Table 1 below and therefore the action area will ultimately be smaller.

This action area also encompasses any sediment or turbidity disturbances that will occur as well as all project-vessel routes. Vessel home ports are unknown at this time, but the action area includes areas where vessel traffic will occur for bridge work. This area is expected to encompass all the effects of the proposed project.

Within the project limits, Newark Bay depths range from -41.5 feet in the navigation channel to -2 to -3 feet near the shoreline. There is a rapid change in depth on either side of the navigation channel with the gradient steeper on the west side. The mean tidal range is approximately 5 feet. Within the NBB main span, most of the subsurface conditions based on available historical borings show a thin layer of soft to medium organic silt, underlain by a stratum of coarse to fine sand up to about 10 feet thick with varying amount of silt and gravel, and a stratum of clay and silt with varying amounts of sand and gravel and thickness of about 60 feet or greater. There is no submerged aquatic vegetation located in the project limits.

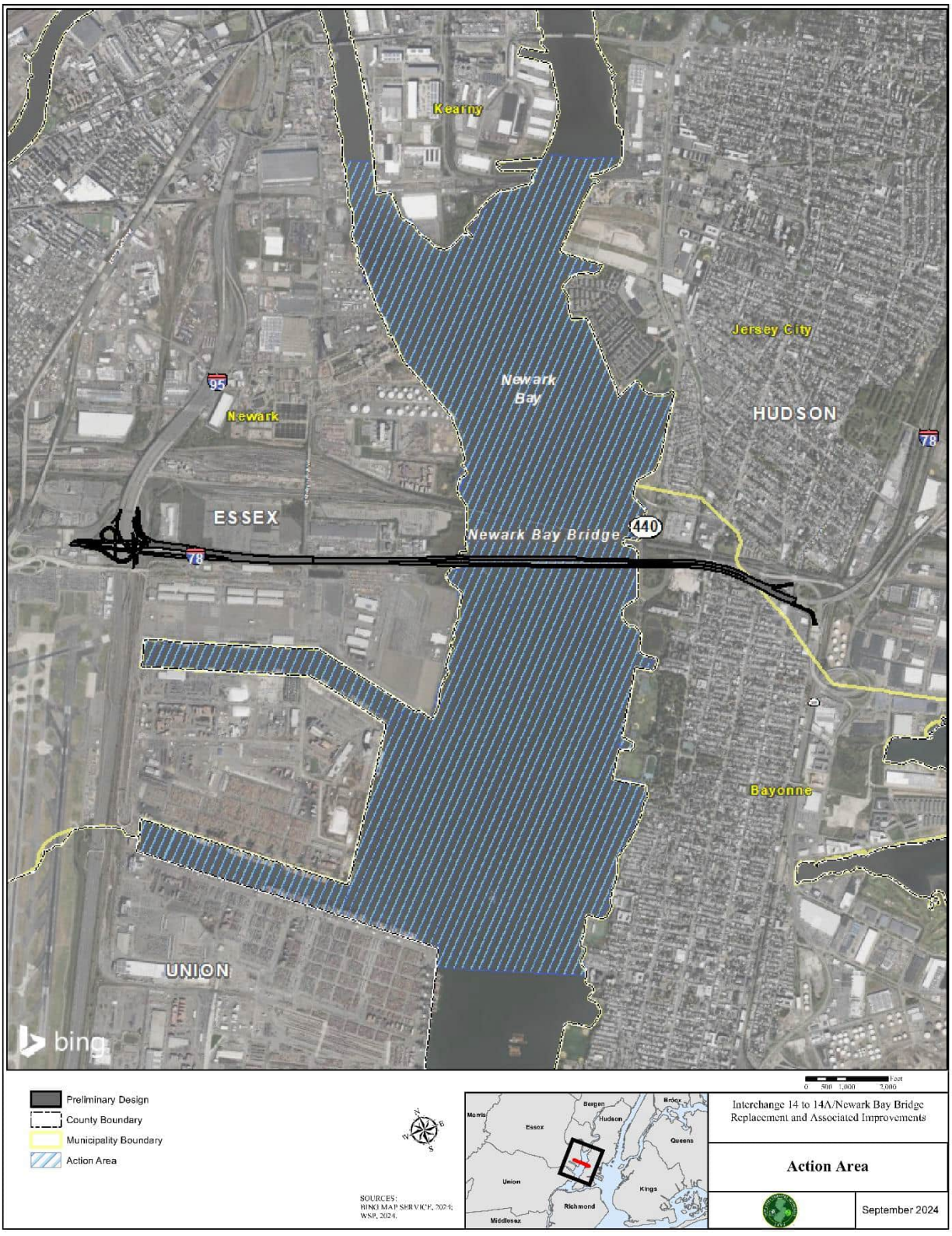

Figure 3 – Action Area

Listed Species and Critical Habitat

Shortnose sturgeon (*Acipenser brevirostrum*) (32 FR 4001; Recovery plan: NMFS 1998)

Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) (77 FR 5880 and 77 FR 5914)

The potential presence of federally listed marine species within the action area was determined through communication with NMFS staff and by reviewing NOAA Section 7 Mapper for the Greater Atlantic Region (NOAA GARFO 2022); see Attachment A. Federally listed Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus)* and shortnose sturgeon (*Acipenser brevirostrum*) may occur within the action area. Newark Bay is not known for sturgeon aggregations and is located outside of the migratory pathway where sturgeon transit back and forth from the marine offshore coastal waters to the spawning sites in the Hudson River. However, Atlantic sturgeon have been detected in the vicinity of Newark Bay, with 11 acoustic tagged subadult Atlantic sturgeon detected in Kill Van Kull during a study in 2011 (NMFS 2022b). NMFS (2022b) indicated that, while the presence of shortnose sturgeon in the area has not been well documented, they have been detected in the Upper New York Bay and there are no barriers preventing transient and opportunistically foraging adult shortnose sturgeon from entering Newark Bay. There is no critical habitat for either species in the action area.

Atlantic sturgeon

The Atlantic sturgeon is a long-lived, estuarine-dependent, anadromous fish. Adults migrate upstream, often long distances, into freshwater to spawn in the spring and early summer in deep parts of large rivers. They mature and spend the remainder of their lives in estuarine and marine waters. Atlantic sturgeon are benthic feeders and typically forage on benthic invertebrates (e.g., crustaceans, worms, and mollusks). The nearest spawning population to the action area is in the Hudson River. In this system, females return to spawn at age 15 or older and males return earlier at 12 years or older (Bain 1997). Young et al. (1988) reported that in the Hudson River, maturity of female Atlantic sturgeon begins at age 11 and increases gradually for the next ten years until all females are mature.

Five Distinct Population Segments (DPS) of Atlantic sturgeon have the potential to occur in the action area:

- New York Bight DPS – Endangered
- Chesapeake Bay DPS – Endangered
- Carolina DPS – Endangered
- South Atlantic DPS – Endangered
- Gulf of Maine DPS – Threatened

NMFS (2021) reported that the project area intersects habitat potentially used by adult and subadult Atlantic sturgeon for migration and opportunistically foraging, but not by early life stages (eggs, larvae, or juvenile). No eggs, larvae, or juvenile Atlantic sturgeon are anticipated to occur within Newark Bay and its adjacent bays and tributaries because they are intolerant of saline waters. Atlantic sturgeon formerly inhabited the Passaic River, but urbanization, industrialization, and pollution in the late 19th century became a barrier to the upstream spawning (USACE, No Date). However, fishing restrictions and improved water quality have led to an increase in Atlantic sturgeon in New York and New Jersey's coastal waters (Hudson River Foundation, 2018). Suitable habitat for Atlantic sturgeon is present in Newark Bay.

NMFS caught an Atlantic sturgeon in Newark Bay during 1993/1994 sampling (NMFS, No Date), though this species was not collected in any other fish studies within Newark Bay or adjacent waters conducted from 1986 to 1999 (USACE, 2004). While Newark Bay is not within a migration path to spawning grounds for Atlantic sturgeon, adult Atlantic sturgeon could occur in the action area.

In an email response to a project inquiry dated August 6, 2021, NOAA Fisheries offered the following comments:

"Atlantic sturgeon could be present in the waters of Newark Bay and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPS) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area. As young remain in their natal river/estuary until approximately age 2, and early life stages are not tolerant of saline waters, no eggs, larvae, or juvenile Atlantic sturgeon will occur within Newark Bay and its adjacent bays and tributaries."

Shortnose sturgeon

The shortnose sturgeon is much smaller than the Atlantic sturgeon but is also long-lived and found in large estuaries and near-shore waters. It is listed as endangered throughout its range. Also, like the Atlantic sturgeon, shortnose sturgeon are anadromous, meaning it spawns and remains in freshwater for most of its life cycle, but spends some time in saline waters. The largest number of shortnose sturgeon in New Jersey occur in the upper tidal Delaware River, and they can also be found within the Hudson River. Suitable habitat for adult and subadult shortnose sturgeon is present in Newark Bay.

As provided in Attachment A*,* NMFS (2021) reported that the project area intersects habitat potentially used by adult shortnose sturgeon for migration and foraging, but not by early life stages (eggs, larvae, or juvenile), which are intolerant of saline waters. The shortnose sturgeon has not been collected in any of the studies conducted in Newark Bay or adjacent waters. Per the NMFS (2022b) biological opinion for the New York and New Jersey Harbor Deepening Channel Improvements Feasibility, shortnose sturgeon are not expected to occur in the study area; they have only been observed as far south as the Statue of Liberty, which is more than 10 miles away via the most direct water route.

In an email response to a project inquiry dated August 6, 2021, NOAA Fisheries offered the following comments:

"Shortnose sturgeon could be present in the Newark Bay and could occur in its adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. As early life stages are not tolerant of saline water, no eggs, larvae, or juvenile shortnose sturgeon will occur within the saline waters of Newark Bay and its adjacent bays and tributaries."

Effects of Proposed Action

Acoustic Effects from Pile Driving

Demolition of the existing NBB and construction of the replacement bridges would introduce sound into the water that could potentially impact Atlantic sturgeon. As described above, BMPs such as soft starts and working within a bubble curtain and cofferdam will be implemented.

The NMFS Multi-Species Pile Driving Calculator (Version 1.2-Multispecies: 2022) was used to determine noise thresholds and to assess the potential effects to sturgeon exposed to elevated levels of underwater sound anticipated to be produced during the proposed project. In addition to the "peak" exposure criteria which relates to the energy received from a single pile strike, the potential for injury exists for multiple exposures to noise over a period of time; this is accounted for by the cSEL threshold. The cSEL is not an instantaneous maximum noise level but is a measure of the accumulated energy over a specific period of time (e.g., the period of time it takes to install a pile). Exposure to underwater noise levels of 206 dB re 1µPaPeak and 187 dBcSEL can result in injury to sturgeon. Behavioral effects, such as avoidance or disruption of foraging activities, may occur in sturgeon exposed to noise above 150 dB re 1µPaRMS.

Pile Driving Reports created using the Office of Protected Resources Multi-Species Pile Driving Calculator are included as Attachment B. Tables 1 and 2 below summarize the estimated sound levels and distances to species injury and behavioral thresholds associated with the proposed pile driving activities based on the Pile Driving

Reports. The sound levels in Table 1 are an estimate and would vary depending on the geometry and boundaries of the surrounding underwater environment (i.e. shallow/deep water, obstacles in the waterway).

Table 1. Pile Driving Type Unattenuated and Attenuated Sound Pressure Metrics

Pile Type	Hammer Type	Estimated Sound Pressure Level (dB Peak)		Estimated Pressure Level (dBRMS)		Estimated Single Strike Sound Exposure Level (dBsSEL)	
		Unattenuated	Attenuated	Unattenuated	Attenuated	Unattenuated	Attenuated
48-inch steel pipe pile[1]	Impact hammer	213	208	192	187	179	174
72-inch steel pipe pile[2]	Vibratory hammer	N/A	N/A	170	165	N/A	N/A
Sheet pile	Vibratory hammer	N/A	N/A	154	149	N/A	N/A

[1]42-inch pile size not available in NMFS Multi-species Pile Driving Calculator for impact driving. Numbers listed are conservative for 42-inch pipe pile.
[2]42-inch pile size not available in NMFS Multi-species Pile Driving Calculator for vibratory driving. Numbers listed are conservative for 42-inch pipe pile.

Table 2. Pile Driving Type and Sturgeon Disturbance and Injury Thresholds with Attenuation

Pile Type	Hammer Type	Distance (ft) to 206 dB Peak (Injury)	Distance (ft) to 187 dB SEL (Injury)	Distance (ft) to Behavioral Disturbance Threshold (150 dBRMS)
48-inch steel pipe pile[1]	Impact hammer	44.6	142.2	9,608.4
72-inch steel pipe pile[2]	Vibratory hammer	N/A	N/A	328.1
Sheet pile	Vibratory hammer	N/A	N/A	28.1

[1]42-inch pile size not available in NMFS Multi-species Pile Driving Calculator. Numbers listed are conservative for 42-inch pile.
[2]42-inch pile size not available in NMFS Multi-species Pile Driving Calculator for vibratory driving. Numbers listed are conservative for 42-inch pipe pile.

Underwater sound levels produced by hoe rams during demolition of two concrete piers were monitored for a bridge replacement project by Washington State Department of Transportation (Escude 2017). The monitoring indicated that two hoe rams working simultaneously at both concrete piers had peak underwater un-attenuated sound levels between 193 dB and 177dB and the cumulative sound exposure level measured 171 dBcSEL. Therefore, underwater sound generated by operation of a hoe ram to demolish the existing bridge piers is

expected to be below the 206 dBPeak and 187 dBcSEL thresholds for injury to sturgeon. Additionally, the hoe ram would generate lower noise levels than the levels assessed above for impact pile driving of the 42-inch steel pipe piles.

Vibratory driving is estimated to be 10 to 20 dB quieter than pile driving with an impact hammer (Illingworth and Rodkin, Inc. and Jones and Stokes 2015). Therefore, for the purpose of this consultation, since impact pile driving of the 42-inch steel pipe piles would generate the greatest noise levels and effects on sturgeon, the following analysis is done with the impact hammer numbers.

Impact driving 48-inch steel pipe piles would generate underwater noise levels as follows: unattenuated peak noise level of 213 dB; sound pressure level of 192 dB; and single strike sound exposure level of 179 dB (Table 1). Per the NMFS Multi-species Pile Driving Calculator (NMFS 2022a), for a sturgeon to be exposed to potentially injurious levels of noise during pile driving, it would need to be within a maximum of 45 feet of a single strike or within 142 feet of the pile being driven over a 24-hour period (when driving 48-inch steel pipe piles with an impact hammer). This is extremely unlikely to occur as it is expected that sturgeon would modify their behavior at 9,608 feet from impact pile driving and quickly move away from the ensonified area before cumulative injury levels are reached. The installation of the pipe piles within an air bubble-equipped casing would reduce noise transmission to surrounding waters compared to open-water pile driving by around 10 dB, but the NOAA Fisheries acoustics tool does not have a proxy project for this type of pile installation. Therefore, the threshold distances to sturgeon disturbance and injury from impact driving of steel pipe piles presented in Table 2 are conservative. Use of a soft start would give any sturgeon in the immediate area an opportunity to vacate the area before sound levels rise further, reducing potential noise exposure risk.

Per the NOAA Fisheries Multi-species Pile Driving Calculator (NMFS 2022a), vibratory driving sheet piles would produce peak sound pressure levels that do not exceed the threshold for sturgeon injury (206 re 1 µPa peak SPL). Vibratory sheet pile driving would generate a sound pressure level of 154 dB, with associated threshold distances for sturgeon behavioral disturbance extending out 60.6 feet from the sheet pile. The use of air bubble curtains to reduce the escapement of resuspended sediment would also function to reduce noise transmission to adjacent waters compared to open-water pile driving and would reduce noise levels by 5 dB, with associated threshold distances for sturgeon behavioral disturbance extending out 28.1 feet from the sheet pile (Table 2).

Behavioral effects, such as avoidance or disruption of foraging activities, may occur in sturgeon exposed to noise above 150 dB RMS. Considering all the pile driving activities, it is expected that underwater noise levels would be below 150 dB RMS for sturgeon at distances beyond a maximum of 9,608 feet during impact hammering. It is reasonable to assume that a sturgeon, upon detecting underwater noise levels at or above these thresholds, would modify its behavior such that it redirects its course of movement away from the ensonified area surrounding the activity. Given that the time to drive the piles will be short and the species that will be present are transient, the effects of underwater noise on ESA species would be too small to be meaningfully measured or detected and would be insignificant.

Acoustic Effects from Optional Isolation Casing for Pile-Driving

The optional isolation casing would need to be placed 5 to 10 feet below the mudline in the Bay. It will either be vibrated into the substrate or pushed and rotated until stable, depending upon the stability of the sediments at each pile location. Pushing and rotating will not generate noise levels that would affect sturgeon behavior. Vibratory driving to that depth range would last a few minutes and would conservatively generate 162 dB RMS for a 66-inch diameter steel shell, with associated threshold distances for sturgeon behavioral disturbance extending out 207 feet from the isolation casing shell. It is reasonable to assume that sturgeon would modify their behavior at 207 feet vibratory pile driving and quickly move away from the ensonified area. 162 dB RMS does not exceed the injury threshold for sturgeon. Given that the time to drive the piles will be short and the species that will be present are transient, the effects of underwater noise on ESA species would be too small to be meaningfully measured or detected and would be insignificant.

Acoustic Effects from Drilling

Drilling is not anticipated to be used for the installation of piles. Drilling maybe used to install steel casing for drilled shafts approximately 6 feet in diameter and larger. Drilling within the steel casing can be used at the leading bottom edge to facilitate vibrating or driving the casing into the soil. All drilled shaft casings will have soil removed (drilled out) using large drill augers. Drilling within the casing provides a relatively quiet operation to facilitate installing shafts for new piers. Noise at 98 feet from the drilling operation is anticipated to average 122 dB re 1µPa, which is below the levels thought to cause injury to sturgeon (HDR 2011). The anticipated noise level is also below the levels thought to cause behavioral avoidance by sturgeon (150 dB re 1µPa*RMS*). Therefore, noise effects to sturgeon from drilling activities will not be considered further.

Effects from Increased Vessel Traffic

The analysis considered three elements: (1) the existing baseline conditions, (2) the action and what it adds to existing baseline conditions, and (3) new baseline conditions (the existing baseline conditions and the action together). The analysis provides the basis to conclude that vessel traffic added to baseline conditions as a result of the project is not likely to adversely affect ESA-listed species for the following reasons.

Tugboats, spud barges, crew boats and other vessel types would be operating daily over a 7-day work week up to 10 years of construction and demolition. Vessel traffic associated with bridge construction and demolition would constitute the majority of vessel traffic in the action area, however the majority of construction and demolition would be performed via the temporary access trestle, thereby minimizing vessel use. Project vessels would be slow moving or stationary, with a very low likelihood of striking a sturgeon, especially considering the infrequent occurrence of sturgeon within the action area.

Adding project vessels to the existing baseline will increase the risk that any vessel in the area will strike an individual to such a small extent that the effect of the action (i.e., any increase in risk of a strike caused by the project) cannot be meaningfully measured or detected. The baseline risk of a vessel strike within the Newark Bay is unknown. The increase in traffic associated with the proposed project is small. The addition of a minimal number of project vessels will be intermittent, temporary, and restricted to a small portion of the overall action area on any given day. As such, any increased risk of a vessel strike caused by the project will be too small to be meaningfully measured or detected. As a result, the effect of the action on the increased risk of a vessel strike in the action area is insignificant.

Habitat Modification and Loss

There would be temporary loss of approximately 3.809 acres of the water column and benthic habitat in Newark Bay during project construction. These temporary impacts to tidal waters include approximately 2.676 acres for the placement of cofferdams around the new and existing bridge pier footings and fender system and approximately 0.523 acres for trestle piles. Also, approximately 0.61 acres of tidal wetland would be impacted for construction access. These impacts to Newark Bay would last for the duration of construction, up to 10 years, but would not be simultaneous because of construction sequencing. Sturgeon would be displaced from water column and potential benthic foraging habitat occupied by cofferdams and trestle piles for the duration of construction.

In the vicinity of the bridge, Newark Bay is approximately 4,300 feet wide. Of this width, approximately 1,548 feet of total temporary cofferdam is proposed during construction, allowing ample space for sturgeon to migrate and forage through the Bay. Additionally, the 550-foot-wide Navigation Channel would be accessible for fish movement throughout the duration of construction. It should be noted that 1,548 feet is a conservative number, as not all cofferdams will be in place at the same time, so this number represents the maximum potential displacement of Bay waters. Estimated width and total feet of proposed cofferdams across Newark Bay are outlined below:

- 50-foot-wide cofferdams for 10 pairs of separate new piers are proposed, totaling 500 feet.

- 100-foot-wide cofferdams for the two (2) proposed single piers on either side of the Navigation Channel, totaling 200 feet.
- 70-foot-wide cofferdams for two (2) additional single new piers, totaling 140 feet.
- 38-foot-wide cofferdams for the removal of 16 existing piers, totaling 608 feet.
- 50-foot-wide cofferdams for the removal of two (2) existing piers, totaling 100 feet.

Upon completion of bridge construction, all temporarily lost water column and benthic habitat would become available to sturgeon, as well as the benthic habitat gained from removal of footings of the existing bridge piers. Areas of pier removal would be backfilled to adjacent grades with sand and would become naturally recolonized over time. Substrates around the new bridge piers and in areas where the existing bridge piers were removed would be recolonized by mobile organisms via natural recruitment from adjacent unaffected areas. It was assumed 100% mortality for any sessile and infaunal benthic organisms present within the direct area of disturbance for installation of new and temporary structures. Recovery of the natural benthic assemblage to baseline conditions of abundance, biomass, and community composition should occur within 1-5 years in most disturbed areas where sediment type and hydrodynamics remain unchanged (Newell et al., 1998).

The new bridge piers and fenders would result in the permanent fill of approximately 3.342 acres of tidal waters, split between intertidal and subtidal shallows (1.078 acres) and tidal open water (3.808 acres). The removal of the existing bridge piers (except for the main span piers which would remain) would result in the gain of approximately 0.841 acres of tidal waters, for a net permanent habitat loss of about 4.045 acres. This loss is relatively small compared to available habitat within the action area. The proposed action is located in an area that has been previously modified during construction of the exiting bridge, and sturgeon are only expected to occur as occasional transients that may briefly forage in the area. Additionally, wetland mitigation will be implemented to offset losses (see *Wetland Mitigation*, below). Therefore, the effects of habitat modification due to loss of potential foraging habitat will be insignificant.

Effects on Water Quality

Urban estuaries such as Newark Bay frequently experience elevated turbidity from heavy rain events. Although the Proposed Action would increase impervious surfaces (roadway), it would improve the water quality of stormwater runoff over existing conditions. There would not be an increase in peak flows to any of the local storm sewer systems receiving runoff from the NB-HCE. Water quality would be improved by the construction of several new stormwater basins and hydrodynamic separator-type manufactured treatment devices to intercept and treat stormwater runoff. The storm water will not have a measurable effect on water temperature, water flow, salinity, or dissolved oxygen levels. Because the effluent will continue to be rapidly diluted to within minimum water quality standards or to non-detectable levels, the effects on water quality are extremely unlikely to occur.

The installation and removal of steel pipe piles and steel sheet piles and associated spud barge mooring and tugboat propeller wash in the relatively shallow waters of Newark Bay would disturb bottom sediments and cause temporary increases in suspended sediment in the construction area. However, total suspended solids (TSS) expected for pile driving (5.0 to 10.0 mg/L) are below those shown to have adverse effect on fish (typically up to 1,000.0 mg/L [Burton 1993) and benthic communities (390.0 mg/L (EPA 1986)). Additionally, all in-water construction activities would include measures to minimize disturbance of bottom sediments and reduce sediment resuspension: trestle piles would be driven within bubble curtains; steel sheet piles would be installed with vibratory hammers; drilled shafts would be advanced within turbidity barriers or bubble curtains; and bridge pier construction and demolition would be performed in dry conditions within cofferdams. These barriers would also exclude sturgeon from the area, and thus, would prevent them from exposure to turbidity plumes. Water within cofferdams would be pumped out to settling tanks before being discharged. Also, measures would be employed during demolition to prevent deposition of debris into Newark Bay. Any increases in turbidity caused by construction are expected to be short-lived, minor and local to the immediate area, and would be quickly dissipated by the swift currents within the Bay. Turbidity levels are not expected to reach

levels that are toxic to sturgeon or benthic communities that support them. Therefore, the effects on sturgeon due to turbidity during in-water construction activities will be insignificant.

During project construction, historic fill and otherwise contaminated soil and/or water could be encountered in places along the entirety of the project during clearing, excavation, grading, demolition, and the construction of piers and footings of the viaducts and bridges. To avoid contaminant release and transport into wetlands, open waters, or groundwater, the Authority has taken a systematic approach to identifying hazardous waste and site contamination during project development. Further investigations, including sampling of soil and groundwater, will occur during final design to identify measures to be undertaken during construction to avoid the spread of potential contaminants. For example, treatment of sediment-laden water may be required prior to discharging to surface water during cofferdam installations. BMPs will be implemented for in-water work when handling contaminated sediment. Because the treatment and discharge of groundwater to either a publicly owned treatment works or surface water body during dewatering activities may be warranted, additional measures will be considered while performing subsurface activities to prevent contaminant exposure to workers, the public, and the environment. These and other measures are discussed in further detail in a draft Environmental Assessment (USCG 2024) for the project. It is extremely unlikely that sturgeon would be exposed to a project-related contaminant release.

Effects Determination

Based on the analysis that all effects of the proposed action will be insignificant and/or extremely unlikely, it is the determination of the USCG that the project may affect but is not likely to adversely affect the Atlantic sturgeon and shortnose sturgeon. It is USCG's understanding that the best scientific and commercial data available was used by the Authority to complete this analysis. USCG requests NMFS's concurrence with this determination.

References

Bain. M.B. 1997. Atlantic and shortnose sturgeons of the Hudson River: common and divergent life history attributes. *Environmental Biology of Fishes* 48: 347-58.

Burton, W.H. 1993. Effects of bucket dredging on water quality in the Delaware River and the potential for effects on fisheries resources. Versar, Inc., 9200 Rumsey Road, Columbia, Maryland 21045.

EPA (Environmental Protection Agency). 1986. Quality Criteria for Water. EPA 440/5-86-001.

Escude, L. 2017. Concrete Pier Demolition Underwater Sound Levels: SR 520 East Approach Bridge Demolition. Washington State Department of Transportation. June 2017.

HDR. 2011. Noise Measurements of an Oscillator System for Drilled Shafts. Prepared for Knik Arm Bridge and Toll Authority. 30 pp.

Hudson River Foundation. 2018. The State of the Estuary 2018: Environmental Health And Trends Of The New York–New Jersey Harbor Estuary. New York - New Jersey Harbor & Estuary Program. Available at: https://www.hudsonriver.org/SOE_Brochure_AllPages_Final. Accessed September 8, 2023.

Illington and Rodkin, Inc. and Jones and Stokes. 2015. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared for California Department of Transportation.

National Ocean and Atmospheric Administration (NOAA) Greater Atlantic-Regional Fisheries Office (GARFO). 2022. ESA Section 7 Mapper. Version 2.1 updated August 2022. Available at: https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=a85c0313b68b44e0927b51928271422a.

NMFS (National Marine Fisheries Service). 2021. Personal Communication via email from E. Carson-Supino, Section 7 Fish Biologist at the National Marine Fisheries Service, to Dana Flynn, Wildlife Biologist at WSP, regarding "NJTA Newark Bay-Hudson County Extension Program – ESA Request for info." August 6, 2021.

_____. 2022a. Multi-Species Pile-Driving Calculator. Version 1.2. Section 7 Effects Analysis: Acoustics in the Greater Atlantic Region.

_____. 2022b. Endangered Species Act Section 7 Consultation Biological Opinion for New York and New Jersey Harbor Deepening Channel Improvements (HDCI) Navigation Study. Greater Atlantic Regional Fisheries Office. https://doi.org/10.25923/4n27-ra70. Accessed August 24, 2023.

_____. No Date. Results of a Biological and Hydrological Characterization of Newark Bay, New Jersey. May 1993-April 1994. NOAA James J. Howard Marine Sciences Lab., Highlands, New Jersey.

_____. 1998. Final Recovery Plan for the Shortnose Sturgeon (*Acipenser brevirostrum*).

Newell, R.C., L.J. Seiderer, and D.R. Hitchcock. 1998. The impact of dredging works in coastal waters: a review of the sensitivity to disturbance and subsequent recovery of biological resources on the sea bed. Annual Reviews in Oceanography and Marine Biology 36:127-178.

USACE (U.S. Army Corps of Engineers). 2022. New York and New Jersey Harbor Deepening Channel Improvements Navigation Study; Integrated Feasibility Report & Environmental Assessment, Appendix A1: Endangered Species Act Biological assessment. Available at

https://www.nan.usace.army.mil/Portals/37/UPDATED%20Appendix%20A1%20-%20ESA%20%28NMFS%20BA%20and%20BO%29.pdf. Accessed September 8, 2023.

_____. 2004. New York and New Jersey Harbor Deepening Project Essential Fish Habitat Assessment. U.S. Army Corps of Engineers, New York District. January 2004.

_____. No Date. Essential Fish Habitat Assessment for Newark Bay Maintenance Dredging; Newark Bay - Port Newark Channel, Port Newark Pierhead Channel, & Port Elizabeth Channel of Newark Bay, Hackensack & Passaic River Federal Navigation Project. Prepared by U.S. Army Corps of Engineers, Operations Division, New York, NY.

USCG (U.S. Coast Guard) 2024. Draft NEPA Environmental Assessment for New Jersey Turnpike Authority's Newark Bay – Hudson County Extension, Interchange 14 to Interchange 14A/Newark Bay Bridge Replacement and Associated Improvements.

Young, J.R., T.B. Hoff, W.P. Dey, and J.G. Hoff. 1988. Management recommendations for a Hudson River Atlantic sturgeon fishery based on an age-structured population model. In: C.L. Smith (ed.) Fisheries Research in the Hudson River. State of University of New York Press, Albany, New York. 407 pp.

ATTACHMENT A

AGENCY CORRESPONDENCE

From:	Edith Carson-Supino - NOAA Federal
To:	Flynn, Dana
Cc:	Pesesky, Lawrence; mmorgan; Campagnino, Marjorie M.; Jessie Murray - NOAA Federal
Subject:	Re: NJTA Newark Bay-Hudson County Extension Program - ESA request for info
Date:	Friday, August 6, 2021 11:55:49 AM
Attachments:	image003.png Incoming - USGSTopo.pdf

Ms. Flynn,

We received your email on August 5, 2021, regarding the proposed geotechnical borings in Newark Bay and adjacent tidal wetlands (attached). In your email, you requested any available information regarding the presence of federally listed threatened or endangered species within the vicinity of the site. Please note that you can also look up species presence in your project area by using our Mapper: http://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27

We offer the following comments.

Endangered Species Act

Atlantic Sturgeon

Atlantic sturgeon could be present in the waters of Newark Bay and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPS) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area. As young remain in their natal river/estuary until approximately age 2, and early life stages are not tolerant of saline waters, no eggs, larvae, or juvenile Atlantic sturgeon will occur within Newark Bay and its adjacent bays and tributaries.

Shortnose Sturgeon

Shortnose sturgeon could be present in the Newark Bay and could occur in its adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. As early life stages are not tolerant of saline water, no eggs, larvae, or juvenile shortnose sturgeon will occur within the saline waters of Newark Bay and its adjacent bays and tributaries.

As project details develop, we recommend you consider the following effects of the project on Atlantic and shortnose sturgeon:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- For activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	Injury	Behavioral Modification
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of sturgeon may occur within the vicinity of your proposed project. The federal action agency will be responsible for determining whether the proposed action may affect listed species. If they determine that

the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).

Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat

Recent changes to the Corps of Engineers' Nationwide Permits have removed the requirement that NOAA Fisheries be contacted for information on essential fish habitat and that applicants provide evidence of the contact and our resources. You now access the information on your own from our websites. The Habitat Conservation Division's website is: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/conserving-habitat-greater-atlantic-region. Information on essential fish habitat can be found there.

Thank you,

Edith

Edith Carson-Supino, M.Sc (she/her/hers)
Section 7 Fish Biologist, Greater Atlantic Regional Fisheries Office
NOAA Fisheries | U.S. Department of Commerce
Office: (978) 282-8490
For ESA Section 7 guidance please see:
https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region

On Thu, Aug 5, 2021 at 11:54 AM Flynn, Dana <dana.flynn@wsp.com> wrote:

> Good Morning Ms. Carson-Supino,
>
> On behalf of the New Jersey Turnpike Authority (Authority), Gannett Fleming, Inc. Design Team member WSP USA, Inc. (WSP) is preparing geotechnical boring permit applications to obtain state and federal approvals for activities associated with Newark Bay-Hudson County Extension (NB-HCE) Program. The NB-HCE Program (Program) limits extend from a point just east of Interchange 14 in Newark, Essex County, across the Newark Bay

Bridge, and through Bayonne, Hudson County to the eastern terminus of the Authority's jurisdiction at Jersey Avenue in Jersey City, Hudson County, New Jersey. The project consists of the NB-HCE corridor, including the Newark Bay Bridge, and abutting areas. The project area is shown on the attached USGS topographic map.

As part of preliminary design, geotechnical borings are proposed in Newark Bay and adjacent tidal wetlands. This email is requesting information regarding the presence of Endangered Species Act (ESA) listed threatened or endangered species under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS) within the subject project site. Should you require additional information, please do not hesitate to contact me at dana.flynn@wsp.com or 973-407-1475.

Thank you for your assistance,

Dana Flynn, CWB, CE

Senior Environmental Scientist

T+ 1 973.407.1475

M + 1 484.225.3650
WSP USA

412 Mount Kemble Avenue 5th Floor

Morristown, NJ 07960 USA

wsp.com

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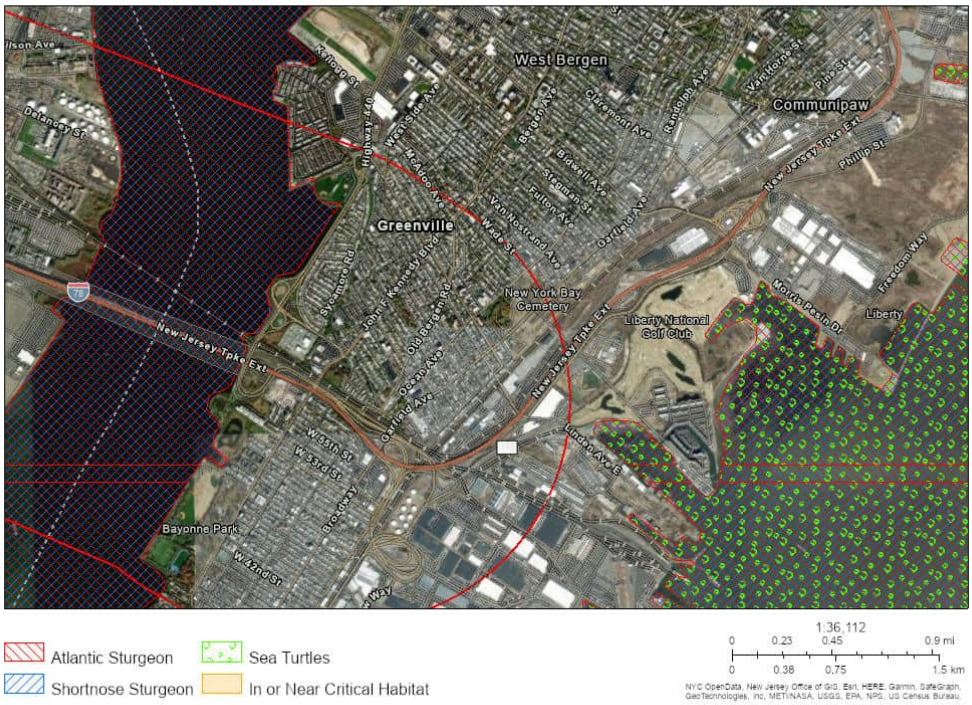
Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 5,187.15 acres

Jan 2 2024 11:29:14 Eastern Standard Time



Summ ry

Name	Count	Area(ac es)	Length(mi)
Atlantic Sturgeon	4	2,673.89	N/A
Shortnose Sturgeon	1	1,336.88	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

Atl ntic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(ac es)
1	ANS_C50_ SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	N/A	01/01	12/31	N/A	N/A	1,336.92
2	ANS_C50_ ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	N/A	01/01	12/31	N/A	N/A	1,336.97

Shortnose Sturgeon

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	SNS_C50_ ADU_MAF	Shortnose sturgeon	Adult	Migrating & Foraging	N/A	04/01	11/30	N/A	N/A	1,336.88

ATTACHMENT B

NMFS MULTI-SPECIES PILE DRIVING CALCULATOR REPORTS

IMPACT PILE DRIVING REPORT

VERSION 1.2-Multi-Species: 2022

PRINT IN LANDSCAPE TO CAPTURE ENTIRE SCREEN

(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

Example title

PROJECT INFORMATION	PEAK	SELss	RMS
Single strike level (dB)	208	174	187
Distance associated with single strike level (meters)	10	10	10
Transmission loss constant	15		
Number of piles per day	2		
Number of strikes per pile	90		
Number of strikes per day	180		
Cumulative SEL at measured distance	197		

OTHER INFO 0

NOTES 0

Attenuation 5

RESULTANT ISOPLETHS

(Range to Effects)

FISHES

	ONSET OF PHYSICAL INJURY			BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth		RMS Isopleth
		Fish ≥ 2 g	Fish < 2 g	
ISOPLETHS (meters)	13.6	43.3	80.1	2,928.6
Isopleth (feet)	44.6	142.2	262.7	9,608.4

Fishes present

SEA TURTLES

	PTS ONSET		BEHAVIOR
	Peak Isopleth	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	0.3	3.2	63.1
Isopleth (feet)	0.8	10.5	207.0

NO SEA TURTLES

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
PTS ONSET (Peak isopleth, meters)	1.8	0.3	25.1	2.2	0.3
PTS ONSET (Peak isopleth, feet)	6.1	1.1	82.4	7.1	0.8
PTS ONSET (SEL_{cum} isopleth, meters)	80.0	2.8	95.3	42.8	3.1
PTS ONSET (SEL_{cum} isopleth, feet)	262.4	9.3	312.5	140.4	10.2
	ALL MM	NO MF CET.	NO HF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	631.0	NO LF CET.			
Behavior (RMS isopleth, feet)	2,070.1				

***72-inch pipe pile

VIBRATORY PILE DRIVING REPORT

PRINT IN **LANDSCAPE** TO CAPTURE ENTIRE SCREEN

VERSION 1.2-Multi-Species: 2022

(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

Example title

PROJECT INFORMATION	RMS
Sound pressure level (dB)	165
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	2
Duration to drive pile (minutes)	120
Duration of sound production in day	14400
Cumulative SEL at measured distance	207

OTHER INFO 0

NOTES extra information

Attenuation 5

RESULTANT ISOPLETHS

(Range to Effects)

FISHES

	BEHAVIOR
Fishes present	RMS Isopleth
ISOPLETHS (meters)	100.0
ISOPLETHS (feet)	328.1

SEA TURTLES

	PTS ONSET	BEHAVIOR
NO SEA TURTLES	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	1.3	2.2
ISOPLETHS (feet)	4.2	7.1

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
PTS ONSET (SELcum isopleth, meters)	31.8	2.8	47.0	19.3	1.4
PTS ONSET (SELcum isopleth, feet)	104.3	9.2	154.3	63.4	4.5
	ALL MM	NO MF CET.	NO HF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	10,000.0	NO LF CET.			
Behavior (RMS isopleth, feet)	32,808.4				

Sheet Pile

VIBRATORY PILE DRIVING REPORT

PRINT IN **LANDSCAPE** TO CAPTURE ENTIRE SCREEN

VERSION 1.2-Multi-Species: 2022

(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

Example title

PROJECT INFORMATION	RMS
Sound pressure level (dB)	149
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	10
Duration to drive pile (minutes)	60
Duration of sound production in day	36000
Cumulative SEL at measured distance	195

OTHER INFO 0

NOTES extra information

Attenuation 5

RESULTANT ISOPLETHS

(Range to Effects)

FISHES

	BEHAVIOR
Fishes present	RMS Isopleth
ISOPLETHS (meters)	8.6
ISOPLETHS (feet)	28.1

SEA TURTLES

	PTS ONSET	BEHAVIOR
NO SEA TURTLES	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	0.2	0.2
ISOPLETHS (feet)	0.7	0.6

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
PTS ONSET (SELcum isopleth, meters)	5.0	0.4	7.4	3.1	0.2
PTS ONSET (SELcum isopleth, feet)	16.5	1.5	24.4	10.0	0.7
	ALL MM	NO MF CET.	NO HF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	857.7	NO LF CET.			
Behavior (RMS isopleth, feet)	2,814.0				

Estimate for 66-inch steel shell isolation casing

VIBRATORY PILE DRIVING REPORT

PRINT IN **LANDSCAPE** TO CAPTURE ENTIRE SCREEN

VERSION 1.2-Multi-Species: 2022

(if OTHER INFO or NOTES get cut-off, please include information elsewhere)

Example title

PROJECT INFORMATION	RMS
Sound pressure level (dB)	162
Distance associated with sound pressure level (meters)	10
Transmission loss constant	15
Number of piles per day	2
Duration to drive pile (minutes)	1
Duration of sound production in day	120
Cumulative SEL at measured distance	183

OTHER INFO 0

NOTES extra information

Attenuation 0

RESULTANT ISOPLETHS

(Range to Effects)

FISHES

	BEHAVIOR
Fishes present	RMS Isopleth
ISOPLETHS (meters)	63.1
ISOPLETHS (feet)	207.0

SEA TURTLES

	PTS ONSET	BEHAVIOR
NO SEA TURTLES	SEL_{cum} Isopleth	RMS Isopleth
ISOPLETHS (meters)	0.0	1.4
ISOPLETHS (feet)	0.1	4.5

MARINE MAMMALS

	LF Cetacean	MF Cetaceans	HF Cetaceans	PW Pinniped	OW Pinnipeds
PTS ONSET (SELcum isopleth, meters)	0.8	0.1	1.2	0.5	0.0
PTS ONSET (SELcum isopleth, feet)	2.7	0.2	4.0	1.6	0.1
	ALL MM	NO MF CET.	NO HF CET.	NO PHOCIDS	NO OTARIIDS
Behavior (RMS isopleth, meters)	6,309.6	NO LF CET.			
Behavior (RMS isopleth, feet)	20,700.7				

ATTACHMENT C

NJDEP LAND USE PERMIT

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERSHED & LAND MANAGEMENT
Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420
Telephone: (609) 777-0454 or Fax: (609) 777-3656
www.nj.gov/dep/landuse

PERMIT

In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the terms, conditions, and limitations listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition, or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.

Approval Date
April 3, 2024

Expiration Date
April 2, 2029

Permit Number(s):	**Type of Approval(s):**	**Governing Rule(s):**
0000-23-0012.2 LUP230001	WFD Individual Upland Permit WFD Individual In-Water Permit FHA Induvial Permit FWW Individual Permit Water Quality Certificate	N.J.A.C. 7:13-1.1(b) N.J.A.C. 7:7-1.1(a) N.J.A.C. 7:7A-1.1(a)

Permittee:
Lisa Navarro
NJ Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095

Site Location:
Block(s) & Lot(s): [5078, 90] [5078, 91] [5078.02, 87] [5078.03, 85] [5078.03, 92] [5082, 10] [5082, 16] [11, 1] [11, 2] [12, 1] [12, 2] [13, 1] [13, 15] [13, 16] [13, 18] [8, 1] [8, 2] [8, 3] [8, 4] [8, 5] [8, 6]
Municipality: Newark City, Bayonne City
County: Essex, Hudson

Description of Authorized Activities:

This document authorizes the New Jersey Turnpike Authority to reconstruct the Newark Bay Bridge (NBB) over the Newark Bay, between the Cities of Newark and Bayonne, Essex and Hudson Counties respectively. The approved project includes the replacement of the existing four-lane, multi-span structure with a new four-lane westbound structure in a parallel alignment north of the existing alignment, and a new eastbound four-lane multi span structure in the same approximate alignment as the existing NBB structure. The approval also includes roadway realignment and improvements on the east and westbound approach roadways, the construction of a trestle system to construct the new bridges, and various drainage and stormwater management improvements. This approval is in association with a linear development project on the parcel(s) referenced above and as shown on the approved plans cited at the end of this document.

This project is authorized under and in conditional compliance with the applicable Coastal Zone Management Rules (N.J.A.C. 7:7-1.1 et seq.) as amended through October 5, 2021, the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-1.1 et seq) as amended through November 7, 2022, and the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13-1.1 et seq.) as amended through July 17, 2023 provided that all conditions to follow are met.
This approval includes a Water Quality Certification (WQC).

The Department has determined that the herein approved activities meet the requirements of the (FHACA/CZM) rules. This approval does not obviate the local Floodplain Administrator's responsibility to ensure all development occurring within their community's Special Flood Hazard Area is compliant with the local Flood Damage Prevention Ordinance, and minimum NFIP standards, regardless of any state-issued permits. FEMA requires communities to review and permit all proposed construction or other development within their SFHA in order to participate in the NFIP.

Prepared by:
Matthew Resnick

Received and/or Recorded by County Clerk:

If the permittee undertakes any regulated activity, project, or development authorized under this permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the requirements of the permit and all conditions therein.

This permit is not valid unless authorizing signature appears on the last page.

STATEMENT OF AUTHORIZED IMPACTS:

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:13-2.18; N.J.A.C. 7:7-29; N.J.A.C. 7:7A-22.

FWW Individual Permit-Open Water (not SFH/Duplex)	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Freshwater wetlands	4.038	5.118
Transition areas	3.792	2.936
State open waters	0	0

Riparian Zone Vegetation	Area of riparian zone (Acres)
Permanent Disturbed	2.867
Temporary Disturbed	1.629

WFD IP-Commercial/Industrial/Public(Waterward)	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Tidal Open Waters	3.808	10.974
Intertidal subtidal shallows (ISS)	2.045	5.449

PRE-CONSTRUCTION CONDITIONS:

1. This permit is not valid until such time as you have obtained a Department of the Army authorization. You are advised to contact the Philadelphia District at 215-656-6728 if your project is located south of the Manasquan River or the New York District at 212-264-3912 if your project is located north of the Manasquan River.

2. In accordance with N.J.S.A. 12:5-3 and N.J.S.A. 13:1D-150-156, within 90 days of permit issuance or prior to pre-construction earth movement, site preparation and construction of the Bridge

Replacement, whichever is earlier, the Applicant shall submit a formal and complete public access project proposal, as outlined in the submitted addendum to the permit application entitled "**Waterfront Development Public Access Implementation Proposal New Jersey Turnpike Authority Newark Bay-Hudson County Extension Program Newark Bay Bridge Replacement NJDEP File No.: 0000-23-0012.2 Activity Number LUP23000**" for the City of Bayonne, Hudson County and for the City of Newark, Essex County, to this Division for review and approval.

3. Within 90 days of permit issuance and prior to any construction activities for the Bridge Replacement Project, whichever is earlier, the permittee shall also execute an escrow agreement with the Division for which the funds shall be held in trust in an attorney trust account of a licensed New Jersey attorney, to meet the public access requirements of the permit.

4. The permittee and/or respective municipalities shall secure all requisite permits and approvals for the agreed upon public access improvement projects in their respective municipalities prior to the start of any site disturbance, pre-construction earth movement or construction of the Bridge Replacement.

5. At least 90 days prior to any site disturbance, pre-construction earth movement, construction activities, the permittee shall deposit the $6,000,000 contribution towards the "Public Access Improvement Project" for the improvements in both respective municipalities identified in the escrow agreement. The permittee shall deposit such funds to be held in escrow in their attorney's trust account and shall comply with all other provisions outlined in the escrow agreement.

6. The permittee may deposit partial contributions in the attorney trust account in advance of site disturbance, pre-construction earth movement or construction of the Bridge Replacement Project, and, subject to the Division's approval, may request release and approval, and expend such funds needed for the purpose of the planning, engineering or permitting costs for the public access improvement projects other than for the actual construction of the public access improvements.

7. The Division approved public access improvements shall be constructed prior to, or concurrent with, the construction of the Bridge Replacement project within the respective municipality as authorized by this permit.

8. Prior to the construction of any structures and/or the placement of fill within any tidelands areas authorized under this permit, the permittee must apply to the Division's Bureau of Tidelands Management for a tidelands instrument (e.g., a license or lease) for the use and occupation of said tidelands. Tidelands staff will provide further guidance upon review for the timing of construction. All decisions concerning the issuance of any tidelands instrument is solely up to the Division's Bureau of Tidelands Management following the Tidelands Resource Council policy.

9. De-watering of cofferdams must include properly sized temporary sediment basins or other filtering methods to reduce turbidity. The stream area to receive return water discharged from cofferdams must be encompassed by a turbidity barrier. The turbidity barrier must be located parallel to the stream banks and anchored to the shoreline to maintain free flow of the stream center. In order to avoid obstruction of stream flows or fish passage, turbidity barriers must not be placed across the entire stream channel.

10. Prior to the commencement of site clearing, grading, or construction onsite, the permittee shall install a sediment barrier at the limits of disturbance authorized herein, which is sufficient to prevent the sedimentation of the remaining freshwater wetlands and transition areas and shall serve as a physical barrier protecting these areas from encroachment by construction vehicles or other soil-disturbing

activities. All sediment barriers and soil erosion control measures shall be kept in place and maintained throughout the duration of construction, until such time that the site is stabilized.

11. If a geodetic control reference marker is found on site and the position of the survey marker or monument cannot be protected, the applicant shall coordinate with the New Jersey Department of Transportation's Geodetic Survey and Survey Support Unit at least 60 days prior to disturbance to relocate the geodetic control marker to an appropriate location prior to construction. The impacted areas shall be restored to original grade and condition. The applicant shall contact NJGCS with any questions at (609) 963-1680.

HISTORIC PRESERVATION SPECIAL CONDITIONS:

1. Prior to the removal, demolition, or alteration of any components of the Newark Bay Bridge, the permittee, using the services of an Architectural Historian who meets the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in Architectural History, shall document the existing conditions of the bridge to Level III equivalent standards of the Historic American Engineering Record (HAER). In lieu of large format photography, the permittee shall include high-resolution digital photos that meet the National Park Service National Register Digital Photo Submission Standards. The standards can be found at the following web address:

   NR and NHL Consolidated and Updated Photograph Policy 2024 (nps.gov)

   The recordation shall include both archivally stable, 4-inch by 6-inch black and white prints and high-resolution digital RAW and/or TIFF files. A minimum of thirty (30) views of the bridge shall be produced as part of the recordation. Photography shall include, but not be limited to, documentation of the bridge and its setting.

   The permittee shall ensure that all documentation is completed and accepted by the Historic Preservation Office prior to any removal, demolition, or alteration of any components of the bridge or new construction. The permittee shall provide one original archival copy of the recordation to the HPO and duplicate copies, with original photographs, shall be provided to the appropriate repositories as identified in consultation with the Historic Preservation Office.

   The HAER documentation shall be submitted to the Historic Preservation Office within six (6) months of permit issuance.

2. The permittee, using the services of a qualified consultant meeting the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in History and/or Architectural History, shall develop and install interpretive signage regarding the history and significance of the Newark Bay Bridge, including the structure's involvement in the construction of the New Jersey Turnpike Newark Bay-Hudson County Extension and its design as a cantilevered truss bridge. The signage shall incorporate historic images of the bridge and shall be installed in a publicly accessible location near the bridge such as the Richard A. Rutkowski Park in the City of Bayonne. The applicant shall consult with the HPO on the design, layout, and content of interpretive signage, as well as its proposed location, within one (1) year of permit issuance. The signage shall be installed within six (6) months of the project completion, and the permittee shall submit photographs of the installed signage to the HPO within thirty (30) days of installation.

3. The permittee, using the services of a qualified consultant meeting the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in Architectural History, shall prepare a historic context study and inventory of the extant bridges at least 45 years of age (pre-1979) on the

New Jersey Turnpike owned by the New Jersey Turnpike Authority (NJTA). The study and inventory would serve as a planning tool to help the NJTA identify which structures may be historic and may feasibly be prioritized for preservation, while ensuring the long-term safety of each crossing. The study would detail the history of the NJTA and the development of the New Jersey Turnpike network and provide an inventory of all undergrade and overgrade bridges under the NJTA's ownership on the New Jersey Turnpike main stem, Newark Bay-Hudson County Extension, Western Extension/Spur, and Pearl Harbor Memorial Turnpike Extension. The inventory shall include NJHPO Survey Forms for each bridge to evaluate the individual NRHP eligibility of each structure. The draft context study and inventory shall be submitted to the HPO for review within eighteen (18) months of permit issuance. The final report and inventory, addressing any HPO comments, shall be submitted to the HPO within ninety (90) days of the issuance of HPO comments on the draft report. Quarterly reports shall be submitted to the HPO documenting the current status of all outstanding mitigation items.

4. The permittee shall conduct a Phase IB archaeological survey within the project's area of potential effects prior to construction to identify the presence or absence of archaeological deposits. The results of Phase IB archaeological survey shall be submitted to the Division of Land Resource Protection and the Historic Preservation Office for review and comment.

5. The permittee shall submit a Phase II archaeological survey to the Historic Preservation Office for review, if archaeological resources were identified during Phase I archaeological survey and cannot be avoided. The Phase II archeological survey work plan shall be submitted to the Historic Preservation Office for review and approval prior to the commencement of the Phase II fieldwork.

6. The permittee shall consult with the Historic Preservation Office upon completion of the Phase II archaeological survey to assess the effects of the proposed project on any resources identified as eligible for listing on the New Jersey and National Registers of Historic Places.

7. The permittee shall submit an avoidance and protection plan to the Historic Preservation Office and the Division of Land Resource Protection within 30 days of completion of the Phase II archaeological survey for any resources eligible for inclusion or listed on the New Jersey and National Registers of Historic Places will be avoided by project impacts.

8. The permittee shall submit an archaeological monitoring plan to the Historic Preservation Office and the Division of Land Resource Protection for approval prior to the start of construction. The approved archaeological monitoring plan shall be referenced in all project documents, plans, and bid proposals. Any failure to comply with the provisions of the archaeological monitoring plan shall be reported to the Historic Preservation Office and the Division of Land Resource Protection within 24 hours.

9. The permittee shall submit a minimization and/or Phase III mitigation plan to the Historic Preservation Office if impacts to resources eligible or listing on the New Jersey and National Registers of Historic Places that cannot be avoided. The minimization and/or mitigation plan(s) must be approved by the Historic Preservation Office prior to the commencement of on-site construction activities or any data recovery activities to ensure that the research designs, work plans, proposed archaeological buffer zones, data recovery plans and public outreach components are acceptable to the Historic Preservation Office.

10. The permittee shall ensure the Historic Preservation Office approved archaeological work plans for the Phase II and Phase III data recovery surveys are implemented.

11. The permittee shall not commence with any on-site construction activities until the Division of Land Resource Protection, in consultation with the Historic Preservation Office, has released the data recovery project site for construction once the fieldwork component of the data recovery is completed and the Historic Preservation Office has received A) an approved data recovery work plan with requirements for monthly updates and delivery schedules; B) notification of the completion of the data recovery fieldwork; and C) a Historic Preservation Office approved data recovery management summary of the data recovery field work.

12. The permittee shall ensure complete draft Phase II reports shall be submitted to the Historic Preservation Office for review and approval within three months after respective phases of fieldwork are completed. The project permittee shall ensure a complete draft Phase III report shall be submitted to the Historic Preservation Office for review and approval within six months after fieldwork is completed. Final reports for each phase of survey shall be submitted to the Historic Preservation Office within two months after comments are received on the respective draft reports. Other timelines (for example, for public outreach) shall be established in consultation with the Historic Preservation Office, as necessary, based on the findings of the archaeological survey.

13. The permittee shall notify the Historic Preservation Office within three days of the completion of each phase of archaeological fieldwork.

14. The Permittee shall ensure that all phases of the archaeological survey and reporting shall be in keeping with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and the archaeological survey and report rules at N.J.A.C. 7:4-8.4 through 8.5. Evaluations to determine the National Register eligibility of archaeological sites should be in keeping with the National Park Service's 2000 National Register Bulletin, Guidelines for Evaluating and Registering Archaeological Properties. The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation are available on the National Park Services web site: http://www.nps.gov/history/local-law/arch_stnds_0.htm)

15. The Permittee shall ensure that the individual(s) conducting the work meet the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Architecture (48 FR 44738-9).

16. The permittee shall ensure that all artifacts from State and National Register eligible archaeological sites will be analyzed, catalogued, and curated in accordance with the National Park Service Standards, codified as 36 CFR Part79.

17. The permittee shall ensure that within two months of the submission of the final Phase II report and any final Phase III data recovery report to Division of Land Resource Protection and the Historic Preservation Office, the artifacts, field records (including the artifact catalogue), and copies of all phases of survey from National Register eligible sites shall have been turned over to the New Jersey State Museum or other institution meeting the Secretary of the Interior's Standards for Curation. A copy of the New Jersey State Museum Deed of Gift Form (or a Deed of Gift Form from another suitable curation facility) shall be submitted to the Historic Preservation Office at that time as an indicator of the final transmission of the artifact collection. All archaeological reports shall identify the repository where the project records and artifacts will be located.

18. The project permittee shall ensure that work that does not meet the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the requirements of the Coastal Zone Management Rules and Freshwater Wetlands Protection Act Rules as determined by the

Historic Preservation Office in consultation with Division of Land Resource Protection, will be rectified by the project archaeological consultant(s).

19. The permittee shall immediately cease all ground disturbing activities and contact the Historic Preservation Office if potential human burials or human skeletal remains are encountered. The potential burials and/or human skeletal remains shall be left in place unless imminently threatened by human or natural displacement.

20. If, for any reason the Phase I identification survey, Phase II evaluation, Phase III data recovery, and/or architectural fieldwork is not accomplished prior to construction within the defined project area site limits, the project permittee shall be responsible for all investigation, evaluation, survey, salvage, and/or stabilization deemed necessary by the Historic Preservation Office, in consultation the Division of Land Resource Protection, pursuant to the implementing regulations. Information gathered from such investigation, evaluation, or survey shall be used by the Historic Preservation Office, in consultation with Division of Land Resource Protection, to determine the extent of damage, evaluate the resource, and direct any measures to mitigate impacts from project-related activities, including any actions on the part of the permittee's contractors. Should any archaeological or architectural site be partially or entirely destroyed by project-related activities before completion of any of the required phases of archaeological fieldwork are completed, the Historic Preservation Office, in consultation with Division of Land Resource Protection, shall determine other appropriate mitigation (e.g., alternative site excavation, alternative analysis, and/or public outreach activities) and enforcement, commensurate with the impacts which occurred.

FISH AND WILDLIFE SPECIAL CONDITIONS:

1. In order to protect anadromous species spawning runs within the Newark Bay and associated UNT tributaries, a timing restriction from **March 1 through June 30** is required for any in-water disturbance, sediment generating activities and pile driving activities. A separate timing restriction of **January 1 through May 31** is required to protect Winter Flounder species during migration and spawning in the area. This Winter Flounder species timing restriction period shall be applied to tidal waters ranging from near-shore (sub-tidal) to 20 ft. depths, in low to moderate tidal velocity areas, and in waters averaging between 10 - 32 ppt salinities. Furthermore, any activity outside the river, which would likely introduce sediment into the river and/or increase its turbidity, is also prohibited during this period. The Department reserves the right to suspend all regulated activities onsite should it be determined that the permittee has not taken proper precautions to ensure continuous compliance with this condition. If sediment control structures, cofferdams or other water isolation measures are installed prior to the timing restrictions stated above, construction activities behind the sediment control structures may proceed during the restricted period.

2. <u>For the Trestle construction</u>: Authorization is granted to the Permittee to conduct pile driving installation for trestle construction during the above referenced timing restriction period, by allowing for the use of bubble curtains, both with and without external confinement casings, provided that the applicant/contractor use the best management practices, as applicable, outlined below;
    - Use of noise attenuation and minimization measures during piles driving, such as:
    - Driving piles in the dry or during low water conditions for intertidal areas.
    - Use of vibratory hammers and construction phasing to minimize acoustic impacts.
    - Driving piles as deep as possible with a vibratory hammer prior to using an impact hammer.
    - Minimizing the number and size of temporary and permanent piles.
    - Limiting pile driving activities to no more than 12 hours per day.

- Providing a 12 hour quiet (recovery) period between pile driving days.
- Use of "soft start" or "ramping up" pile driving (e.g., driving does not begin at 100% energy).
- Use of cushion blocks when using an impact hammer.
- Using drilled shafts instead of hammered piles where appropriate.

3. Within 90 days of permit issuance and prior to any construction activities for the Bridge Replacement Project, whichever is earlier, a project schedule and plan is required to be developed and provided to the Division of Fish and Wildlife Services, attn: Kelly Davis at Kelly.Davis@dep.nj.gov for review. The project schedule and plan shall describe how the installation methods avoids or minimizes noise during sensitive life stages (migration and spawning) of ESA-listed species, federally-managed species, and other NOAA-trust resources such as anadromous fish.

THREATENED AND ENDANGERED SPECIES SPECIAL CONDITIONS:

1. To protect sensitive habitat for Peregrine Falcon (State-listed, endangered), the Permittee shall adhere to a seasonal restriction on all work, inclusive of project site preparation and storage of materials, from March 1 through July 31 of each calendar year.

2. Prior to the commencement of site preparation, inclusive of site clearing, project staging, onsite storage of materials, pre-construction earth movement, other site disturbance, and all authorized activities, and within 90 days of the issuance of this permit authorization, the Permittee **shall** submit to the NJDEP DLRP ETSU for review and written approval, an impact avoidance proposal designed to protect the identified Peregrine Falcon nesting habitat that exists at the project site. **To that end, the proposal must detail the construction of a nest structure suitable for use by Peregrine Falcons and all efforts that will be taken to ensure its occupation.**

    A. Guidance from NJ Fish & Wildlife supports installation of a replacement nest structure on Block 5708, Lot 91 and the City of Newark has confirmed that the NJTA is authorized to conduct mitigation efforts on this block and lot (Eric S. Pennington**,** City of Newark, April 1, 2024). The mitigation plan must propose an exact location of the proposed nest structure on Block 5708, Lot 91.

    B. The impact avoidance proposal must include the proposed project design and include four poles with a finished deck height of 25' to 30'. The deck should be approximately 10' x 10' and be made of wood or composite. The nest area should be made of an XL dog igloo, with no tunnel entrance. The applicant should include spikes on one pole for climber access to the nest structure.

    C. The impact avoidance proposal must detail all anticipated efforts to exclude peregrine falcons from the original nest location (i.e. exclusion netting over all suitable nest sites). If Peregrine Falcons are observed on or near the subject bridge, all authorized work shall cease immediately until the Permittee has coordinated with, and guidance on habitat management practices can be issued by, the NJ Department of Environmental Protection.

    D. The Permittee shall engage a qualified wildlife biologist, with sufficient knowledge of and experience with avian species, and particularly Peregrine Falcon behavior, to monitor the project area from March 1 through July 31 of the given calendar. The wildlife biologist shall document Peregrine Falcon usage of the newly installed nest structure and continued use of the bridge proposed for demolition. For the Department's review and approval, the

impact avoidance proposal must identify all contractors who plan to perform and assist with the Peregrine Falcon surveys and include a copy of their curriculum vitae, identifying their experience with avian survey. All State-listed (endangered, threatened, special concern) species observed must be reported to the NJDEP, Division of Fish and Wildlife, Endangered and Nongame Species Program.

E. The permittee must detail all efforts to exclude Peregrine Falcon from using the Newark Bay Bridge prior to construction as well as efforts to discourage Peregrine Falcon from nesting on the newly constructed Newark Bay Bridge.

F. The permittee must provide a detailed work schedule in relationship with measures to exclude Peregrine Falcon from nesting on the Newark Bay Bridge and construction of the alternate nest structure.

3. Prior to the commencement of site preparation, inclusive of site clearing, project staging, onsite storage of materials, pre-construction earth movement, other site disturbance, and all authorized activities, the Permittee shall demonstrate to NJDEP that the approved efforts to discourage Peregrine Falcon nesting on the Newark Bay Bridge and safe relocation of nesting to the alternate nest structure on Block 5708, Lot 91 have been successful. Once this has been confirmed, the proposed project can commence after concurrence from the NJDEP is issued.

FRESHWATER WETLAND MITIGATION CONDITIONS:

1. The permittee shall mitigate for the disturbance of **9.156** acres of herbaceous wetlands through an on-site or off-site creation, restoration or enhancement project or with the purchase of credits from a mitigation bank serving the appropriate watershed management area in accordance with the mitigation hierarchy. (N.J.A.C. 7:7A-11 et seq)

2. **At least 90 days prior to the initiation of regulated activities authorized by this permit**, the permittee shall submit a mitigation proposal to the Division of Watershed Protection and Restoration (Division) for review and approval. Activities authorized by this permit shall not begin until the permittee has obtained written approval of a mitigation plan from the Department (N.J.A.C. 7:7A-11.6(a)).

3. **All mitigation for permanent disturbances shall be conducted prior to or concurrent with the construction of the approved project** (N.J.A.C. 7:7A-11.3(a)). Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole. **All mitigation for temporary disturbances shall be conducted immediately following completion of the activity that caused the disturbance.**

4. If the permittee fails to perform mitigation within the applicable time-period the acreage of mitigation required shall be increased by 20 percent each year after the date mitigation was to begin (N.J.A.C. 7:7A-11.3(c)).

5. If the permittee is considering obtaining land to satisfy a mitigation requirement, the Department strongly recommends that the permittee obtain the Division's conceptual review and approval of any land being considered as a potential mitigation area.

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the

Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

7. If the permittee is considering conducting a creation, restoration or enhancement project, the following conditions shall apply:

    a. **Prior to the initiation of regulated activities** authorized by this permit the permittee shall submit a final design of the mitigation project for approval and include all of the items listed on the checklist entitled Checklist for Completeness: Creation, Restoration or Enhancement for a Freshwater Wetland Mitigation Proposal located at https://dep.nj.gov/wlm/forms/.

    b. **Prior to the completion of the mitigation project**, the permittee shall complete, sign and file with the County Clerk (the Registrar of Deeds and Mortgages in some counties), a conservation restriction that meets the requirements of N.J.A.C. 7:7A-12.1. The conservation restriction shall include the wetland and required transition area and conform to the format and content of the Wetlands Mitigation Area model conservation restriction that is available at: https://dep.nj.gov/wlm/forms/. The permittee is required to include a metes and bounds description shown on a map. Within 180 days of the issuance of the mitigation approval, the recorded conservation restriction shall be provided to the Mitigation Unit, Division of Watershed Management and Restoration for verification. (N.J.A.C. 7:7A-12.1 et. seq.)

    c. The permittee shall notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing **at least 30 days prior to the start of construction of the wetland mitigation project** to arrange an on-site pre-construction meeting among the permittee, the contractor, the consultant and the Division.

    d. To ensure the intent of the mitigation design and its predicted wetland hydrology is realized in the landscape, the mitigation designer shall be present on-site during all critical stages of mitigation construction and during the restoration of any temporarily impacted areas. Critical stages of construction include but are not limited to herbicide applications, earthmoving activities, planting, and inspections.

    e. The permittee shall be responsible for ensuring that best management practices are used throughout construction to control the spread and colonization of highly invasive plants. Specifically, all equipment, especially tracks and tires, must be thoroughly cleaned every time equipment or vehicles move from an area containing invasive plants or from off-site to the mitigation area. In addition, soil containing root fragments and above-ground vegetative material from invasive plants shall be carefully managed during earthmoving activities and disposed of at a suitable off-site location rather than mulched and reused or stockpiled elsewhere on the site.

    f. If changes to the mitigation design are necessary to ensure success of the project as a result of on-site conditions, the mitigation designer shall immediately notify the Division in writing and

submit an alternative plan which achieves the proposed wetland conditions. The Division shall review the plan in accordance with N.J.A.C. 7:7A-11.7. Any modifications to the plan that are reviewed and approved by the Division must be shown on a signed and sealed revised plan. The As-Built plans required as a part of the Construction Completion Report may serve as the signed and sealed revised plan required to be submitted as part of the construction modification process described above if time constraints warrant such action and have been approved by the Division in writing.

g. **Within 30 days of final grading of the mitigation site and prior to planting**, the permittee shall notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing to arrange a post-grading construction meeting among the permittee, contractor, consultant and the Division.

h. **Within 30 days following the final planting of the mitigation project**, the permittee shall submit a Construction Completion Report to the Division detailing as-built conditions (see below) and any changes to the approved mitigation plan that were made during construction (N.J.A.C. 7:7A-11.12). The Construction Completion Report shall contain, at a minimum, the following information:

    i. A completed Wetland Mitigation Project Completion of Construction Form. This form is located at https://dep.nj.gov/wlm/forms/ and certifies that the mitigation project has been constructed as designed and that the proposed area of wetland creation, restoration or enhancement has been accomplished;

    ii. As-Built plans which depict final grade elevations at one-foot contours and include a table of the species and quantities of vegetation that were planted including any grasses that may have been used for soil stabilization purposes; and

    iii. Photos of the constructed wetland mitigation project with a photo location map as well as the GPS waypoints in NJ state plane coordinates NAD 1983.

i. **Within 30 days following final planting of the mitigation project**, the permittee shall post the mitigation area with permanent signs which identify the site as a wetland mitigation project and that all-terrain vehicle use, motorbike use, mowing, dumping, draining, cutting and/or removal of plant materials is prohibited and that violators shall be prosecuted and fined to the fullest extent under the law. The signs must also state the name of the permittee, a contact name and phone number, and the Department's permit number.

j. The permittee shall monitor **all freshwater wetland and transition area projects** for a minimum of 5 years, unless otherwise stipulated within the approved mitigation proposal, beginning the first full growing season after the mitigation project has been completed. The permittee shall submit monitoring reports to the Division of Watershed Management and Restoration no later than December 31st of each full monitoring year (N.J.A.C. 7:7A-11.12(g)). All monitoring reports must include the standard items identified in the checklist entitled, "Wetland Mitigation Monitoring Project Checklist", which can be found at https://dep.nj.gov/wlm/forms/.

k. Once the required monitoring period has expired and the permittee has submitted the final monitoring report, the Division will make the finding that the mitigation project is either a success or a failure. This mitigation project will be considered successful if the permittee demonstrates all of the following:

i. That the goals of the wetland mitigation project, including acreage and the required transition area, as stated in the approved wetland mitigation proposal and the permit have been satisfied. The permittee shall submit a field wetland delineation of the wetland mitigation project based on the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1989) which shows the exact acreage of State open waters, emergent, scrub/shrub and/or forested wetlands in the mitigation area;

ii. The site has an 85 percent survival and 85 percent area coverage of the mitigation plantings or target hydrophytes, which are species native to the area and similar to ones identified on the mitigation planting plan. All plant species in the mitigation area must be healthy and thriving and all trees must be at least five feet in height;

iii. The site has less than 10 percent coverage by invasive or noxious species.

iv. The site contains hydric soils or there is evidence of reduction occurring in the soil; and,

v. The proposed hydrologic regime as specified in the mitigation proposal has been satisfied.

l. The permittee is responsible for assuming all liability for any corrective work necessary to meet the success criteria established above (N.J.A.C. 7:7A-11.12(i)). The Division will notify the permittee in writing if the mitigation project is considered a failure. Within 30 days of notification, the permittee shall submit a revised mitigation plan to meet the success criteria identified above for Division review and approval. The financial surety, if required, will not be released by the Division until such time that the permittee satisfies the success criteria as stipulated above.

INTERTIDAL AND SUBTIDAL SHALLOWS AND TIDAL WATER MITIGATION CONDITIONS:

1. **At least 90 days prior to commencing regulated activities authorized by this permit,** the permittee shall submit a mitigation proposal to mitigate for the loss of **2.045** acres of intertidal and subtidal shallows and **3.808** acres of tidal water to the Division of Watershed Protection and Restoration (Division) for review and approval.

2. **All mitigation shall be conducted prior to or concurrent with the construction of the approved project.** Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole.

3. The permittee shall mitigate for the loss of intertidal and subtidal shallows and tidal waters through the creation of intertidal and subtidal shallows and tidal waters, at a creation to loss ratio of 1:1, on the site where the filling occurred.

4. If mitigation for the filling of intertidal and subtidal shallows and tidal waters is not feasible onsite, then mitigation shall be performed offsite through the creation of intertidal and subtidal shallows and tidal waters at a ratio of 1:1 within the same estuary as the site of the filling or through the purchase of in-kind credits form a mitigation bank with a service area that includes the site of the filling.

5. If mitigation for the filling of intertidal and subtidal shallows is not feasible onsite or offsite, then mitigation shall be in the form of restoration, creation, or enhancement of a wetland within the same estuary as the site of the filling in accordance with N.J.A.C. 7:7-17.13 or through the purchase of out-of-kind wetland credits from a mitigation bank with a service area that includes the site of the filling.

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   As of the date of this permit, **there are no mitigation banks** with the appropriate credit types serving your project area. Additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

7. If mitigation for the filling of intertidal and subtidal shallows and tidal waters is not feasible, then mitigation shall be in the form of one or both of the following, as determined in consultation with the Department:

   a. Upland preservation in accordance with the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A-15.9; or

   b. In-lieu fee payment in accordance with N.J.A.C. 7:7-17.16.

8. If mitigation for the filling of intertidal and subtidal shallows and tidal waters as described above is not feasible, then mitigation shall be in the form of a land donation in accordance with the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A-15.19.

9. If the permittee is proposing to construct an on-site intertidal subtidal shallows and/or tidal waters creation project, (see N.J.A.C. 7:17.11(b)) one acre of creation must be performed for each acre disturbed. If the permittee is proposing to mitigate through off-site creation, restoration, or enhancement project, or by purchasing credits from a mitigation bank serving the area an enhancement or creation project, the ratio of disturbance to mitigation required shall be in accordance with N.J.A.C. 7:7-17.11(c) through (g). If proposing onsite or offsite mitigation, provide the following:

   a. At least 90 days prior to commencing regulated activities authorized by this permit, submit for review and approval, a conceptual plan showing the location and proposed hydrology of the mitigation site; and

   b. Within 30 days of receiving Division approval of the conceptual mitigation proposal, submit a final design of the mitigation project.

10. The following requirements will apply to an onsite or offsite intertidal subtidal shallows and tidal waters mitigation project:

    a. Complete, sign and file with the County Clerk (the Registrar of Deeds and Mortgages in some counties), a conservation restriction protecting the mitigation site that meets the requirements of N.J.A.C. 7:7-18.

b. Notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing at least 30 days prior to the start of construction of the wetland mitigation project to arrange an on-site pre-construction meeting among the permittee, the contractor, the consultant and the Division.

c. In accordance with N.J.A.C. 7:7-17.11(h), within 60 days following the completion of the mitigation project, submit a Construction Completion Report to the Division detailing as-built conditions (see below) and any changes to the approved mitigation plan that were made during construction (N.J.A.C. 7:7-17.11(h)). The Construction Completion Report shall contain, at a minimum, the following information:

i. A completed Wetland Mitigation Project Completion of Construction Form that certifies the mitigation project has been constructed as designed and that the proposed area of wetland creation, restoration or enhancement has been accomplished. This form is located at on the Division's website at: https://dep.nj.gov/wlm/forms/ in the Mitigation tab of Forms & Checklists.

ii. An as-built plan of the completed mitigation area showing grading and any structures included in the approved mitigation proposal;

iii. Photographs, both pre and post construction, of the intertidal and subtidal shallows and tidal waters mitigation project including a photo location map as well as the GPS waypoints in NJ state plane coordinates NAD 1983; and

(1) For ISS creation projects only, provide documentation that the mitigation site meets the definition of an intertidal and subtidal shallow as defined at N.J.A.C. 7:7-9.15; and

d. Monitor the mitigation site in accordance with N.J.A.C. 7:7-17.11(i), (j), and (k).

11. Once the required monitoring period has expired and the permittee has submitted the final monitoring report, the Division will make the finding that the mitigation project is either a success or a failure (see N.J.A.C. 7:7-17.11(k)). This mitigation project will be considered successful if the permittee demonstrates all of the following:

i. That the goals of the ISS and tidal waters mitigation project, including acreage as stated in the approved mitigation proposal and the permit, have been satisfied. The permittee shall submit a field delineation of the mitigation project which shows the exact acreage of ISS in the mitigation area;

ii. The mitigation site is an intertidal and subtidal shallows area, as defined at N.J.A.C. 7:7-9.15, or tidal water. The documentation shall include tidal data, topography for the spring high tide line, photographs, and field observation notes collected throughout the monitoring period;

iii. The mitigation meets all applicable requirements of Subchapter 17 of the Coastal Zone Management Rules (N.J.A.C. 7:7-17);

iv. The mitigator has executed and recorded a conservation restriction that meets the requirements of N.J.A.C. 7:17-18.

12. The permittee is responsible for assuming all liability for any corrective work necessary to meet the success criteria established above (N.J.A.C. 7:7-17.13(h)). The Division will notify the permittee in writing if the mitigation project is a failure and the permittee shall submit a revised mitigation plan or alternative mitigation proposal to satisfy the mitigation requirement. No financial surety will be released until such time that the permittee satisfies the success criteria.

RIPARIAN ZONE MITIGATION CONDITIONS:

1. **At least 90 days prior to commencing regulated activities authorized by this permit**, the permittee shall submit a proposal to mitigate the disturbance of **4.358** acres of herbaceous riparian zone vegetation. The proposal shall be designed in accordance with the standards at N.J.A.C. 7:13-13. Activities authorized by this permit shall not begin until the permittee has obtained written approval of a mitigation plan from the Department (N.J.A.C. 7:13-13.2(b)).

2. **All mitigation for permanent disturbances shall be conducted prior to or concurrent with the regulated activity that causes the disturbance.** Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole. **All mitigation for temporary disturbances shall be conducted immediately following completion of the activity that caused the disturbance.**

3. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase for mitigation credits from an approved riparian mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

   Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

4. If the permittee is considering conducting a creation, restoration or enhancement project, the following conditions shall apply:

   Prior to the initiation of regulated activities authorized by this permit, the permittee shall sign a Department approved conservation restriction to protect the mitigation area from future development that would remove the vegetation planted. (N.J.A.C. 7:13-13.2(g)). The conservation restriction shall conform to the format and content of the rules at N.J.A.C. 7:13-14 and the Riparian Zone Mitigation Area model located at https://dep.nj.gov/wlm/forms/. The restriction shall be included on the deed and recorded in the office of the County Clerk (the Registrar of Deeds and Mortgages in some counties) in the county wherein the lands of the mitigation project are located. A metes and bounds description shown on a map must be included within the recorded conservation restriction. Within 10 days of filing the conservation restriction, the permittee must send a copy of the conservation restriction to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

5. The permittee shall monitor the riparian project for at least 5 years beginning the year after the riparian zone mitigation project has been completed (N.J.A.C. 7:13-13.12(c)). **The permittee shall submit monitoring reports to the Division of Watershed Protection and Restoration, no later than December 31st of each full monitoring year**.

    a. All monitoring reports except the final one should include the requirements and goals of the mitigation proposal and a detailed explanation of the ways in which the mitigation has or has not achieved progress toward those goals. If mitigation has not achieved progress, the report shall also include a list of corrective actions to be implemented and a timeline for completion.

    b. The final monitoring report must include documentation and data demonstrating that:

        i. The goals of the riparian zone mitigation as stated in the approved riparian zone mitigation proposal and the permit conditions have been satisfied.

        ii. At least 85 percent of the mitigation plantings have survived and that at least 85 percent of the mitigation area is established with native species similar to ones identified on the mitigation planting plan. All plant species in the mitigation area must be healthy and thriving. All trees must be at least 5 feet in height; and

        iii. The site is less than 10 percent occupied by invasive or noxious species; and

        iv. The conservation restriction for the mitigation site has been executed and recorded.

6. If the riparian mitigation project does not meet the success criteria established above the project shall be considered a failure and the permittee shall submit a revised riparian mitigation plan. The revised plan shall be submitted within 60 days of receipt of notification from the Division indicating the riparian mitigation project was a failure.

7. If the Division determines that the riparian zone mitigation project is not constructed in conformance with the approved plan, the permittee will be notified in writing by the Department and will have 60 days to submit a proposal to indicate how the project will be corrected.

8. For preservation projects, the application shall provide documentation showing that the proposed preservation area will fully compensate in accordance with N.J.A.C. 7:13-13.13 for the loss of functions and values caused by the disturbance.

SPECIAL CONDITIONS:

1. This permit is issued subject to compliance with N.J.A.C. 7:7-27.2 Conditions that apply to all coastal permits.

2. This permit to conduct a regulated activity in a state open water includes the Division's approval of a Water Quality Certificate for these activities.

3. The authorized activities shall comply with the applicable conditions set forth under N.J.A.C. 7:7A-5.7, 9.3, and 20.2. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et. seq.). Any additional un-permitted disturbance of freshwater wetlands, State open waters, or transition areas besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules

unless the activity is exempt or a permit is obtained from the Department prior to the start of the disturbance.

4. This authorization for a Freshwater Wetlands Individual Permit, Waterfront Development Individual In-water and Upland Permit, and Flood Hazard Area Individual Permit is valid for a term not to exceed five years from the date of this permit. If the permittee wishes to continue an activity covered by the permit after the expiration date of the permit, the permittee must apply for and obtain a permit extension or a new permit, prior to the permit's expiration. If the term of the authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, or is not reissued, the applicant must comply with the requirements of the new regulations by applying for a new GP authorization or an Individual permit.

5. The Site Remediation Program Interest number associated with the project is No. G000008760. All activities shall conform to the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C), including Subchapter 16 regarding Linear Development Projects, and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E).

6. To minimize turbidity downstream of the project area and to maintain the water quality of Newark Bay and all associated unnamed tributaries, construction activities within the channel may only be performed in the dry or dewatered conditions.

7. Construction equipment shall not be stored, staged or driven within any channel, freshwater wetland or transition area, unless expressly approved by this permit and/or described on the approved plans.

8. Raw, unset, or tremie concrete shall not come in contact with any surface waters onsite, since such contact can be toxic to aquatic biota.

9. All excavated material shall be disposed of in a lawful manner. The material shall be placed outside of any flood hazard area, riparian zone, regulated water, freshwater/coastal wetlands and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.

10. Vegetation within 50 feet of the top of the bank shall only be disturbed in the areas specifically shown on the approved drawing(s). No other vegetation within 50 feet of the top of any stream bank onsite shall be disturbed for any reason. This condition applies to all channels onsite regardless of the contributory drainage area.

11. All riparian zone vegetation that is cleared, cut, and/or removed to conduct a regulated activity, access an area where regulated activities will be conducted, or otherwise accommodate a regulated activity shall be replanted immediately after completion of the regulated activity, unless prevented by seasonal weather, in which case the vegetation shall be replanted as soon as conditions permit. Portions of the riparian zone occupied by an authorized structure need not be replanted. The vegetation to be replanted shall:

i. Consist of vegetation of equal or greater ecological function and value as the vegetation that was cleared, cut, or removed. For example, herbaceous vegetation may be replaced with the same type of vegetation or with trees, but the trees in forested areas must be replaced with trees of equal or greater density and ecological function and value;

ii. Consist of native, non-invasive vegetation, except in an actively disturbed area. In an actively disturbed area, the vegetation may be replaced with the same type of vegetation that was cleared,

cut, or removed, or with another kind of vegetation typical of an actively disturbed area. For example, lawn grass may be replaced with garden plants or agricultural crops; and

iii. In cases where replanting would interfere with continued access to or maintenance of a structure that is required by Federal, State, or local law, the vegetation replanted shall meet the requirements to the extent feasible.

12. Any additional un-permitted disturbance of freshwater wetlands, transition areas, intertidal subtidal shallows, tidal open waters, and riparian zones besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules unless the activity is exempt or a permit is obtained from the Department prior to the start of the proposed disturbance.

13. Any pipes laid through wetlands, transition areas, or State open water must be properly sealed so as to prevent leaking or infiltration. Pipes and backfilled materials must be placed entirely beneath the pre-existing ground elevation.

14. The excavation for any pipes within the wetlands and transition area must be backfilled with the original soil material or suitable material to within 18 inches of the surface. The upper 18 inches must be backfilled with the original topsoil material to the preexisting elevation and replanted with indigenous species.

15. The Department has determined that this project meets the requirements of the Stormwater Management rules at N.J.A.C. 7:8. Any future expansion or alteration of the approved stormwater management system, which would affect water quality, increase the rate or volume of stormwater leaving the site, affect the infiltration capacity on the site, or alter the approved green infrastructure best management practices, shall be reviewed and approved by the Department by obtaining a modification or new permit as appropriate prior to construction. This includes any proposed changes to the discharge characteristics of any basin, the construction of new inlets or pipes that tie into the storm sewer network and/or the replacement of existing inlets or pipes with structures of different capacity.

16. The applicant must adhere to the operations and maintenance plan for the stormwater management measures incorporated into the design of this major development in accordance with N.J.A.C. 7:8-5.8. Guidance set forth in the New Jersey Stormwater Best Management Practices Manual should be followed to the maximum extent practicable.

17. Any new, reconstructed, enlarged, or elevated structure within a flood hazard area shall be secured to resist flotation, collapse, and displacement due to hydrostatic and hydrodynamic forces from floodwaters.

18. All foundations, slabs, footings and walls of the proposed structure/s shall be designed to resist uplift, flotation, collapse and displacement due to hydrostatic and hydrodynamic forces resulting from flooding up to an elevation of one foot above the flood hazard area design flood elevation. Furthermore, all structural components shall be designed to resist the same forces.

STANDARD CONDITIONS:

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.

2. The issuance of a permit does not convey any property rights or any exclusive privilege.

3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.

4. A permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District or designee having jurisdiction over the site.

5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.

6. The permittee shall immediately inform the Department of any unanticipated adverse effects on the environment not described in the application or in the conditions of the permit. The Department may, upon discovery of such unanticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit.

7. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (WARN DEP hotline) of any noncompliance that may endanger public health, safety, and welfare, or the environment. The permittee shall inform the Watershed & Land Management by telephone at (609) 777-0454 of any other noncompliance within two working days of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:

    i. A description of the noncompliance and its cause;

    ii. The period of noncompliance, including exact dates and times;

    iii. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and

    iv. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

8. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action, as well as, in the appropriate case, suspension and/or termination of the permit.

9. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.

10. The permittee shall employ appropriate measures to minimize noise where necessary during construction, as specified in N.J.S.A. 13:1G-1 et seq. and N.J.A.C. 7:29.

11. The issuance of a permit does not relinquish the State's tidelands ownership or claim to any portion of the subject property or adjacent properties.

12. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.

13. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

    i. Enter upon the permittee's premises where a regulated activity, project, or development is located or conducted, or where records must be kept under the conditions of the permit;

    ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

    iii. Inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action; and

    iv. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Federal Act, by the Freshwater Wetlands Protection Act, or by any rule or order issued pursuant thereto, any substances or parameters at any location.

14. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris or structures within or adjacent to the channel while the regulated activity, project, or development is being undertaken. Upon completion of the regulated activity, project, or development, the permittee shall remove and dispose of in a lawful manner all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.

15. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit.

16. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect, so long as the regulated activity, project, or development, or any portion thereof, is in existence, unless the permit is modified pursuant to the rules governing the herein approved permits.

17. The permittee shall perform any mitigation required under the permit in accordance with the rules governing the herein approved permits.

18. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.

19. Any permit condition that does not establish a specific timeframe within which the condition must be satisfied (for example, prior to commencement of construction) shall be satisfied within six months of the effective date of the permit.

20. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.

21. The permittee shall provide monitoring results to the Department at the intervals specified in the permit.

22. A permit shall be transferred to another person only in accordance with the rules governing the herein approved permits.

23. A permit can be modified, suspended, or terminated by the Department for cause.

24. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.

25. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.

26. The permittee shall submit email notification to the Bureau of Coastal & Land Use Compliance & Enforcement at CLU_tomsriver@dep.nj.gov at least 3 days prior to commencement of site preparation and/or regulated activities, whichever comes first. The notification shall include proof of completion of all pre-construction conditions, including proof of recording of permits, approved plans and/or conservation easements, if required. The permittee shall allow an authorized Bureau representative on the site to inspect to ensure compliance with this permit.

27. The permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to Watershed & Land Management through the DEP Online service. The uploaded documents will go directly into the Department's database, and staff will be notified that information has been received. The service can be found at: https://www.nj.gov/dep/landuse/epermit.html.

APPROVED PLAN(S):

The drawing(s) hereby approved consist of sixty nine (69) sheet(s) prepared by Micheal A. Morgan, P.E., of Gannet Fleming Inc., dated September 2023 unrevised, and entitled:

"NEW JERSEY TURNPIKE AUTHORITY NEW JERSEY TURNPIKE OPS NO. T3820, FRESHWATER WETLAND INDIVIDUAL PERMIT PLANS AND WATERFRONT DEVELOPMENT PERMIT PLANS, NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION NEWARK BAY BRIDGE REPLACEMENT, CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON"

- "LOCATION PLAN", sheet 1 of 23,
- "PLAN REFERENCE SHEET", sheet 2 of 23,
- "FRESHWATER WETLAND/WATEFRONT DEVELOPMENT PERMIT PLAN -1-" through "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -10-", sheets 3 through 12 of 23,
- "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -1-" through "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -9-", sheets 13 through 21 of 23,
- "PLANTING NOTES AND DETAILS" sheets 22 and 23 of 23.

And,

"NEW JERSEY TURNPIKE AUTHORITY NEW JERSEY TURNPIKE OPS NO. T3820, NJDEP FLOOD HAZARD AREA PERMIT PLANS, NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION NEWARK BAY BRIDGE REPLACEMENT, CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON"

- "LOCATION PLAN", sheet 1 of 38,
- "PLAN REFERENCE SHEET", sheet 4 of 38,
- "FLOOD HAZARD AREA PLAN -1-" through "FLOOD HAZARD AREA PLAN -10-", sheets 5 through 14 of 38,
- "STORMWATER MANAEMENT PLAN -1-" through "STORMWATER MANAGEMENT PLAN -10-", sheets 15 through 24, of 38,
- "BASIN GRADING PLAN -01-" through "BASIN GRADING PLAN -07-", sheets 25 through 31, of 38
- "CONSTRUCTION DETAILS -1-" through "CONSTRUCTION DEAILS -7-", sheets 32 through 38 of 38.

Additional drawing(s) hereby approved consist of eight (8) sheet(s) prepared by Gannett Fleming, INC, dated February 2023, unrevised, unless otherwise noted, and entitled:

"NEW JERSEY TURPINKE AUTHOIRTY NEW JERSEY TURNPIKE OPS NO. T3820 NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACMENTS AND CAPACITY ENHACEMENTS PROGRAM"

- "SECTION KEY PLAN"- Sheet No. 6 of 13,
- "SECTION S-01"- Sheet No. 7 of 13,
- "SECTION S-02"- Sheet No. 8 of 13,
- "SECTION S-03"- Sheet No. 9 of 13,
- "SECTION S-04 & SECTION S-05"- Sheet No. 10 of 13,
- "SECTION S-06"- Sheet No. 11 of 13,
- "SECTION S-07"- Sheet No. 12 of 13,
- "SECTION S-08"- Sheet No. 13 of 13.

APPEAL OF DECISION:

Any person who is aggrieved by this decision may submit an adjudicatory hearing request within 30 calendar days after public notice of the decision is published in the DEP Bulletin (available at www.nj.gov/dep/bulletin). If a person submits the hearing request after this time, the Department shall deny the request. The hearing request must include a completed copy of the Administrative Hearing Request Checklist (available at www.nj.gov/dep/landuse/forms.html). A person requesting an adjudicatory hearing shall submit the original hearing request to: NJDEP Office of Administrative Hearings and Dispute Resolution, Attention: Adjudicatory Hearing Requests, Mail Code 401-07A, P.O. Box 420, 401 East State Street, 7th Floor, Trenton, NJ 08625-0420. Additionally, a copy of the hearing request shall be submitted to the Director of Watershed & Land Management at the address listed on page one of this permit. In addition to your hearing request, you may file a request with the Office of Dispute

Resolution to engage in alternative dispute resolution. Please see www.nj.gov/dep/odr for more information on this process.

If you need clarification on any section of this permit or conditions, please contact Watershed & Land Management's Technical Support Call Center at (609) 777-0454.

Approved By:

Janet Stewart, Manager
Bureau of Coastal Permitting
Watershed & Land Management

c: Municipal Clerk, Newark City
Municipal Construction Official, Newark City
Agent (original) – Dana Flynn

ATTACHMENT D

NJDEP LAND USE PERMIT MITIGATION CORRECTION LETTER

State of New Jersey

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Watershed & Land Management Program
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

SHAWN M. LATOURETTE
Commissioner

June 7, 2024

Lisa Navarro
New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, New Jersey 07095

RE: Mitigation Conditions Correction Letter
File and Activity No.: 0000-23-0012.2 LUP230001
Project: Newark Bayonne Bridge

Block: 8	Lots: 1, 2, 3, 4, 5 and 6
Block: 11	Lots: 1 and 2
Block 12	Lots: 1 and 2
Block: 13	Lots: 1, 15, 16 and 18

City of Bayonne, Hudson County

Block: 5078	Lots: 90 and 91
Block: 5078.02	Lot: 87
Block: 5078.03	Lots: 85 and 92
Block: 5082	Lots: 10 and 16

City of Newark, Essex County

Dear Mr. Garofalo:

This letter serves to add an additional mitigation bank to the permit conditions of File No. 0000-23-0012.2 LUP230001, which is located on the above referenced blocks and lots in the City of Newark, Essex County and City of Bayonne, Hudson County.

The Freshwater Wetlands Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Freshwater Wetland Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following banks are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

   Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

Additionally, the Intertidal and Subtidal Shallows and Tidal Water Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   As of the date of this permit, **there are no mitigation banks** with the appropriate credit types serving your project area. Additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Intertidal and Subtidal Shallows and Tidal Waters Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

This correction letter has been appended to the original permit. All of the conditions of the original permit remain in effect unless identified in this letter.

If you have any questions regarding this letter, please contact Faelyn Meyers by email at faelyn.meyers@dep.nj.gov or by phone at (609) 940-5227. Please reference the Division's file number in all communication.

Sincerely,

Cathryn Schaffer, Manager
Bureau of Watershed Management
Division of Watershed Protection and Restoration

C: Matt Resnick, NJDEP, DLRP
Faelyn Meyers, NJDEP, DWPR

ATTACHMENT E

EVERGREEN ENVIRONMENTAL LETTER

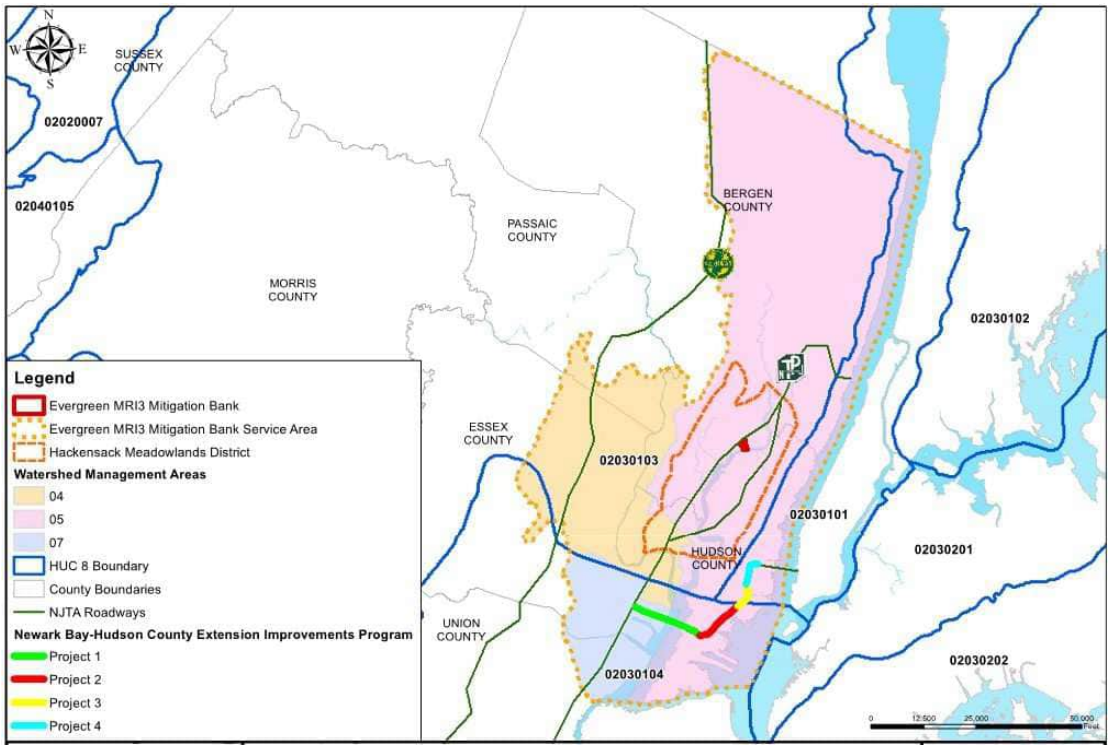
May 28, 2024

Lisa K. Navarro, P.E.
Supervising Engineer
New Jersey Turnpike Authority
1 Turnpike Plaza
PO Box 5042
Woodbridge, NJ 07095-5042

Re: Credit Availability - NBHCE - Evergreen 5-14-24

Dear Ms. Navarro:

Evergreen Environmental, LLC (Evergreen) is pleased to submit this letter of credit availability for the NJTA NBHEC project. Please note that our tidal and federal mitigation banks have service areas defined by HUC watershed units and not specifically WMAs. This is especially relevant to tidal wetland impacts as regulated by the Corps and NJDEP. For example, our Evergreen MRI3 Mitigation Bank serves several HUCs that encompass parts of WMAs 4, 5 and 7 (see below figure).



Here are the assets we have available that may service the project:

Evergreen MRI3 Mitigation Bank. Of the original 22.46 credits we have 0.5108 available for sale. In addition, we have two clients who purchased more mitigation credits than their projects needed. We have made formal written offers to repurchase them, which would make these credits available in addition to the 0.5108. These additional "repurchase credits" make up an additional 2.036 credits. These credits can be purchased or reserved by the Authority at any time. Until such time as the Authority is ready to purchase or reserve them, they are available to other permittees on a "first come, first served" basis.

In addition, we have three sites which we have been advancing as banks. Because of the drawn out credit release schedule mandated by the Corps and NJDEP, we cannot bring them on line in time to make them fully available to your project as bank credits. The most efficient way to make them available for the project is as Permittee Responsible Mitigation ("PRM") sites. We will use the term, "credit equivalents", below to describe the mitigation available in the three sites for your project, when they are used as PRM. The three sites are:

Evergreen Mill Creek Point Mitigation Site. Evergreen owns the right to record a conservation easement on this 22-acre site and will do so as soon as we find an interested permittee. The site is located in the HMD. The site has been thoroughly studied. The agencies offered us 6 credits. However, we have recently submitted an Evaluation of Planned Wetlands ("EPW") study which documents sufficient uplift to warrant 10 credits. We are engaged with the MIMAC in discussing the use of this method. We believe that if your team engaged with Evergreen to present Mill Creek Point as mitigation for the actual impacts of your project, a persuasive argument may be made for 10 credit equivalents. For now, we are confident that Mill Creek Point can deliver at least six (6) credits worth of mitigation and as many as ten (10) credit equivalents.

Evergreen Whale Creek Mitigation Site. Evergreen owns this 18-acre site in fee simple. It is located along Raritan Bay in the same HUC-8 as the Newark Bay. The agencies offered us three (3) credits for it. We believe the functional uplift (EPW) study will yield a more generous crediting. As with Evergreen Mill Creek Point, we are confident that Whale Creek can deliver a minimum of three (3) but possibly as many as five (5) credit equivalents.

Evergreen Raritan River Mitigation Site. We recently put this 30-acre site under a long term option and have begun detailed studies (title, survey and soil sampling are currently underway). It is located on the lower tidal portion of the Raritan River. We believe this site could yield a variety of credit types: riparian zone, forested freshwater wetland and tidal wetland mitigation. We are confident it will yield ten (10) credit equivalents and using a functional uplift analysis may yield as many as fifteen (15) credit equivalents.

As you know, the existing credits in MRI3 may be secured under an agreement for purchase and sale. We also have the ability to provide a purchase agreement that could include a provision providing a full refund in the event the Authority does not get a permit or decides not to proceed with the project. There are other provisions which could be included if useful to the Authority.

The PRM sites will probably require an RFP issued by the Authority in in order to procure. In case your team plans to advance an RFP for additional mitigation, and on behalf of other potential permittees in the HMD and Raritan Bay, we are continuing to aggressively advance the three PRM sites with the Corps and NJDEP. Note that we are

deliberately not mentioning your project to the regulators as a potential user of the sites' potential mitigation.

Best wishes with your continuing efforts to secure permits. We look forward to assisting the team in any way we can, including with the purchase of bank credits and "credit equivalents" from any of our three mitigation sites.

Please do not hesitate to contact me should you require further information at 973/356-7164.

Sincerely,
EVERGREEN ENVIRONMENTAL, LLC

Mark Renna
President

ATTACHMENT F

GREENVEST LETTER

GreenVest
VISION • PERFORMANCE • RESULTS

May 22, 2024

Lisa K. Navarro, P.E.
Supervising Engineer
New Jersey Turnpike Authority
1 Turnpike Plaza
PO Box 5042
Woodbridge, NJ 07095-5042

Re: Oradell Reservoir Mitigation Bank
Credit Availability

For: NJTA Newark Bay Bridge Reconstruction

Ms. Navarro,

As requested, below is a summary of credit availability for our Oradell Reservoir Mitigation Bank.

Current Credit Availability
Freshwater Wetland: 7.017
Riparian Zone: 0.356

Future Credit Release (Late 2024)
Freshwater Wetland: 2.64
Riparian Zone: 1.59

Total Credit Availability
Freshwater Wetland: 9.657
Riparian Zone: 1.946

Thank you for your interest in mitigation credits from Oradell Reservoir Mitigation Bank. If you have any questions do not hesitate to contact us.

Sincerely,

Douglas Lashley
Managing Member

CC: James D. Heeren, Dewberry

ATTACHMENT G

KANE MITIGATION BANK LETTER

Kane Mitigation, LLC
An EnviroFinance® Group Company
115 Wilcox Street, Suite 220
Castle Rock, CO 80104
P. 720 633-9676
F. 303 474-3131

May 31, 2024

New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095
Attn: Lisa K. Navarro. P.E.

RE: **Newark Bay Bridge Replacement Project**
Essex and Hudson Counties, New Jersey
NJDEP Permit No(s).:0000-23-0012.2 LUP230001
Dept. of the Army Permit No. NAN-2020-729

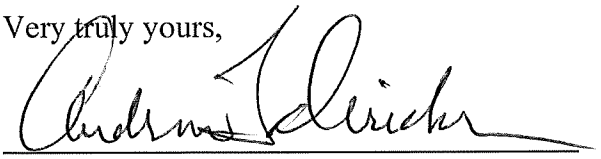
Dear Ms. Navarro:

The Richard P. Kane Wetland Mitigation Bank ("Kane Bank") was established to provide compensatory mitigation for wetland and other aquatic resource losses that result from authorized transportation-related activities, like the Newark Bay Bridge Replacement Project, conducted by the New Jersey Turnpike Authority ("NJTA"), New Jersey Department of Transportation, Port Authority of New and New Jersey and New Jersey Transit Corporation. The Kane Bank may provide such off-site compensatory mitigation associated with regulated activities occurring within the Hackensack Meadowlands District or with a component of the project within the District. The Interagency Review Team (also known as "MIMAC" within the Hackensack Meadowlands District) that oversees the establishment and management of the Kane Bank may authorize the sale and application of mitigation credits from the Kane Bank for use outside the primary service area of the Kane Bank under special circumstances like those that we believe exist with this project.

As the New York District of the U.S. Army Corps of Engineers ("ACOE") and the New Jersey Department of Environmental Protection ("NJDEP") are the lead agencies of MIMAC, we respectfully request and authorize NJTA to name the Kane Bank as a potential source of compensatory mitigation in any requests for modification of the NJDEP permit referenced above and the permit application being submitted to or reviewed by the ACOE for the Newark Bay Bridge Replacement Project. By submitting this letter to you, I do hereby certify on behalf of Kane Mitigation, LLC that **29.282 Wetland Mitigation Credits** remain authorized and currently available for purchase from the Kane Bank as of this date as reflected in the attached Official Credit Ledger.

Thank you for your prompt and courteous attention to this matter. If you should have any questions concerning this correspondence, please do not hesitate to contact the undersigned directly at (720) 633-9676.

Very truly yours,



Andrew L. Derickson
Sr. Vice President and General Counsel of
EnviroFinance Group, LLC and Affiliated
Companies; Project Manager for the Kane
Bank

Encls.

Cc: Chris Guddemi, Dewberry
James Heeren, Dewberry

Richard P. Kane Mitigation Bank

Official Credit Ledger

Date of Transaction	Permittee	Permit #	Permit Type	Locality	Type of impacted system (cowardin classification)	Amount of impacts	Debit / Credit Amount	USGS HUC Catalog Unit	Credit Amount Availability
7/30/2010	EarthMark NJ Kane, LLC	NAN-2009-00224	Credit Release				7.000		7.000
10/15/2010	New Jersey Turnpike Authority	NAN-2006-03095 and NAN 2007-01103; NJDEP Permit #0212-07-0001	Credit Debit		Wetland	2.44 acres	(1.500)	2030103180	5.500
11/22/2010	New Jersey Turnpike Authority	NAN-2006-03095 and NAN 2007-01104; NJDEP Permit #0212-07-0001	Credit Debit		Wetland	2.44 acres	(0.940)	2030103180	4.560
1/30/2012	New Jersey Department of Transportation (NJDOT)	NAN-2010-611; NJDEP Permit #0900-09-0002.1	Credit Debit		Wetland	1.365 acres	(1.365)	2030103180	3.195
2/7/2012	Kane Mitigation, LLC	NAN-2009-00224	Bank Sponsor Amendment				0.000		3.195
8/28/2012	New Jersey Transit Corporation	NAN-2012-00355; NJDEP Permit #0900-09-0005.4; FHA120001; FHA120002 & CDT120001	Credit Debit		Wetland	2.13 acres	(2.130)	2030103180	1.065
9/4/12 (3/27/12)	Kane Mitigation, LLC	NAN-2009-00224	Hydrology Credit Release				14.000		15.065
11/27/2012	Kane Mitigation, LLC	NAN-2009-00224	Planting Credit Release				7.000		22.065
12/17/2012	The Port Authority of New York and New Jersey	Various	Credit Debit		Wetland	Multiple	(22.000)		0.065
12/28/2015	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				14.000		14.065
6/29/2018	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				10.490		24.555
1/17/2019	New Jersey Transit Corporation	NAN-2009-01222-M1 NJDEP Permit #0900-09-0005.2 WFD 150001	Credit Debit		Wetland	4.246 acres	(4.246)	2030103180 2030103150	20.309
4/29/2019	New Jersey Department of Transportation (NJDOT)	NWP 33 NJDEP Permit #0000-15-0011.1; WFD 180001 and 180002; FHA 180001; FWW 180002	Credit Debit		Wetland	1.726 acres	(1.726)	2030103180	18.583
1/30/2020	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				17.490		36.073
5/17/2023	New Jersey Turnpike Authority	NJDEP Permit #0212-22-0005.1; LUP220001; CDT220001 NAN-2022-00927-WCO	Credit Debit		Wetland	.161 acres	(0.161)		35.912
3/1/2024	New Jersey Transit Corporation	NJDEP Permit #0900-08-0003.3 LUP200001 NAN-2020-00835	Credit Debit		Wetland	5.205 acres	(5.205)		30.707
5/17/2024	New Jersey Department of Transportation (NJDOT)	NJDEP Permit #0000-22-0018.1 LUP 220001	Credit Debit		Wetland	1.425 acres	(1.425)		29.282
									29.282
									29.282
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									29.282

Appendix F-3

NJDEP Correspondence

State of New Jersey
MAIL CODE 501-04
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF PARKS & FORESTRY
NEW JERSEY FOREST SERVICE
OFFICE OF NATURAL LANDS MANAGEMENT
P.O. BOX 420
TRENTON, NJ 08625-0420
Tel. (609) 984-1339 Fax (609) 984-0427

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

SHAWN M. LATOURETTE
Commissioner

July 2, 2021

Dana Flynn
WSP USA
412 Mount Kemble Avenue
Morristown, NJ 07962

Re: NJTA Newark Bay-Hudson County Extension Program
Bayonne and Jersey Cities, Hudson County
Newark City, Essex County

Dear Dana Flynn:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the map(s) submitted with the Natural Heritage Data Request Form into our GIS. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1 and 2 (attached) to determine if any priority sites are located on or in the immediate vicinity of the site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf.

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive web application at the following URL,

https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Robert J. Cartica
Administrator

c: NHP File No. 21-4007461-22351

Table 1: On Site Data Request Search Results (6 Possible Reports)

Report Name	**Included**	**Number of Pages**
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	2 page(s) included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
Aves								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Black-crowned Night-heron	Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Cattle Egret	Bubulcus ibis	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Glossy Ibis	Plegadis falcinellus	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Least Tern	Sternula antillarum	Foraging	4	NA	State Endangered	G4	S1B,S1N
	Little Blue Heron	Egretta caerulea	Foraging	2	NA	Special Concern	G5	S3B,S3N
	Northern Harrier	Circus cyaneus	Breeding Sighting	4	NA	State Endangered	G5	S1B,S3N
	Peregrine Falcon	Falco peregrinus	Urban Nest	4	NA	State Endangered	G4	S1B,S3N
	Snowy Egret	Egretta thula	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Tricolored Heron	Egretta tricolor	Foraging	2	NA	Special Concern	G5	S3B,S3N
Insecta								
	Checkered White	Pontia protodice	Breeding/Courtship	3	NA	State Threatened	G5	S2
Osteichthyes								
	Atlantic Sturgeon	Acipenser oxyrinchus	Migration Corridor - Adult Sighting	5	Federally Listed Endangered	State Endangered	G3	S1

Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
	Atlantic Sturgeon	Acipenser oxyrinchus	Migration Corridor - Juvenile Sighting	5	Federally Listed Endangered	State Endangered	G3	S1
	Shortnose Sturgeon	Acipenser brevirostrum	Migration Corridor - Adult Sighting	5	Federally Listed Endangered	State Endangered	G3	S1

Table 2: Vicinity Data Request Search Results (6 possible reports)

Report Name	Included	Number of Pages
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	2 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
Aves								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Black-crowned Night-heron	Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Bobolink	Dolichonyx oryzivorus	Non-breeding Sighting	2	NA	Special Concern	G5	S2B,S3N
	Cattle Egret	Bubulcus ibis	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Glossy Ibis	Plegadis falcinellus	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Least Tern	Sternula antillarum	Foraging	4	NA	State Endangered	G4	S1B,S1N
	Least Tern	Sternula antillarum	Nesting Colony	4	NA	State Endangered	G4	S1B,S1N
	Little Blue Heron	Egretta caerulea	Foraging	2	NA	Special Concern	G5	S3B,S3N
	Northern Harrier	Circus cyaneus	Breeding Sighting	4	NA	State Endangered	G5	S1B,S3N
	Peregrine Falcon	Falco peregrinus	Urban Nest	4	NA	State Endangered	G4	S1B,S3N
	Savannah Sparrow	Passerculus sandwichensis	Breeding Sighting	3	NA	State Threatened	G5	S2B,S4N
	Snowy Egret	Egretta thula	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Tricolored Heron	Egretta tricolor	Foraging	2	NA	Special Concern	G5	S3B,S3N

Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
	Upland Sandpiper	Bartramia longicauda	Breeding Sighting	4	NA	State Endangered	G5	S1B,S1N
Insecta								
	Checkered White	Pontia protodice	Breeding/Courtship	3	NA	State Threatened	G5	S2
Osteichthyes								
	Atlantic Sturgeon	Acipenser oxyrinchus	Migration Corridor - Adult Sighting	5	Federally Listed Endangered	State Endangered	G3	S1
	Atlantic Sturgeon	Acipenser oxyrinchus	Migration Corridor - Juvenile Sighting	5	Federally Listed Endangered	State Endangered	G3	S1
	Shortnose Sturgeon	Acipenser brevirostrum	Migration Corridor - Adult Sighting	5	Federally Listed Endangered	State Endangered	G3	S1

State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Office of Permitting & Project Navigation
Mail Code 401-07J
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/pcer

CATHERINE R. McCABE
Commissioner

May 14, 2021

Gannett Fleming
c/o Michael A. Morgan, PE
1 Centennial Avenue
Building C-Suite 201
Piscataway, NJ 08854

RE: EO-215 Environmental Assessment
NJTA Newark Bay-Hudson County Extension
City of Newark, Essex County
Bayonne and Jersey City, Hudson County

Dear Mr. Fleming:

The New Jersey Department of Environmental Protection's (NJDEP) Office of Permitting & Project Navigation (OPPN) received a Preliminary Design and Environmental Study on April 16, 2021, which was prepared pursuant to the environmental review requirements of New Jersey Executive Order No. 215 of 1989 (EO #215) for the proposed 4-phased roadway widening and improvement project to improve mobility and address roadway structural needs on the Authority's Newark Bay-Hudson County Extension (NB-HCE).

In response to your request for a determination as to whether the proposal will have any adverse impacts to land resources, historical or cultural resources, threatened and endangered species and migratory birds, or whether there are any impacts to Green Acres-encumbered parkland held by the State, local government units and/or nonprofit organizations, the Department offers the following comments for your consideration:

Land Resource Protection

The Division concurs with the submitted assessment that identified the need for both Inland and Upland Waterfront Development Permits and a Flood Hazard Area Permit. The Division recommends the applicant also apply for a Freshwater Wetlands Letter of Interpretation. Any proposed impacts to freshwater wetlands will require either a Freshwater Wetlands Statewide General Permits or a Freshwater Wetlands Individual Permit depending on the scope of impacts to wetlands, transition areas, and/or State open waters.

The Division recommends an eventual pre-application meeting to discuss the permitting requirements

If you have any additional questions, please contact Chris Jones at Christopher.Jones@dep.nj.gov for WFD/FWW or Christian Zografos at Christian.Zografos@dep.nj.gov for FHA/Stormwater, or both can be reached at 609-777-0454.

Historic and Cultural Resources:

The project is located within a historic setting containing multiple historic and archaeological resources, including the New Jersey and National Register of Historic Places-listed or eligible properties adjacent to, crossed-by, or in the vicinity of the NB-HCE corridor. These resources are primarily related to the area's rich transportation history. The submitted information correctly identifies the following historic properties in the corridor, most of which are in Projects 2 and 4: Lehigh Valley Railroad Historic District (SHPO Opinion 3/15/2002), Morris Canal Historic District (NR 10/1/1974; SR 11/26/1973), Hudson & Manhattan Railroad Transit (PATH) System (SHPO Opinion 3/4/2002), and the US Routes 1 & 9 Historic District (SHPO Opinion 3/8/1996). However, the identified Pennsylvania Railroad (PRR) Newark and New York Railroad Historic District does not appear on the HPO's identified properties list; this may be a misnomer for the PRR New York Bay Branch Historic District (SHPO Opinion 12/18/2019). Additionally, based on the HPO's understanding of the project limits, the Terminal Distribution Warehouses of Hudson County Historic District (SR 10/26/2015) does not appear to be within the likely area of potential effects (APE) for the project. The applicant's list of historic properties also includes the Greenville Yard Historic District, which has been determined not eligible for the New Jersey and National Registers (SHPO Opinion 7/22/2015). According to the applicant, the NB-HCE is also visible from the Statue of Liberty National Monument. The corridor also intersects with eight archaeological site grids.

The HPO notes that, based on the project limits, the above-referenced list of historic properties omits numerous historic buildings and districts in the area identified as Project 4, including but not limited to: the US Routes 1 & 9 Extension [Pulaski Skyway] (NR 8/12/2005; SR 6/13/2005); New Jersey Railroad Bergen Cut Historic District (SHPO Opinion 5/21/1999); PRR New York to Philadelphia Historic District (SHPO Opinion 1/14/2015); Italian Village Historic District (SHPO Opinion 5/13/2019); PRR Harsimus Branch Right-of-Way Historic District (SHPO Opinion 7/14/2017); and Erie Railroad Main Line Historic District (SHPO Opinion 2/20/2003).

The HPO recommends an intensive-level historic architectural survey for properties within the area of potential effects (APE) for the project. The survey must include an assessment of the eligibility of the Newark Bay Bridge. The HPO strongly recommends consultation with our office in order to define an APE and survey methodology for the project. The APE should on areas of direct impacts and areas where the roadway widening will result in increased visual, auditory, and atmospheric impacts from existing conditions. The survey methodology should focus on resources that are directly affected by the proposed construction and on resources constructed prior to the existing roadway (i.e., before c.1955). The intensive-level historic architectural survey must be prepared by an Architectural Historian who meets the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] and shall follow the Guidelines for Architectural Survey, published by our office and available on our website (https://www.nj.gov/dep/hpo/1identify/survarcht.htm), with reporting conforming to the guidelines at N.J.A.C. 7:4-8.6.

Further, the HPO recommends, based on the potential for maritime and terrestrial archaeological resources, that an initial Phase IA archaeological reconnaissance survey is conducted for the entire project alignment (Project's 1-4) so that specific areas of sensitivity and areas requiring additional archaeological and geotechnical investigations can be identified forming a management tool for this extensive and multi-phased roadway project. Depending on design, future archaeological investigations could be extensive and time consuming and will require consideration as part of any regulated activity. For examples for other multi-year archaeological investigations, see the information on Boston's replacement of I-93 (https://www.sec.state.ma.us/mhc/mhcpdf/Big_Dig_book.pdf) or the on-going I-95 expansion work through Philadelphia (https://diggingi95.com/).

If you have any additional questions, please contact Jennifer Leynes at Jennifer.Leynes@dep.nj.gov and Vincent Maresca at Vincent.Maresca@dep.nj.gov.

Fish & Wildlife

Marine Fisheries Administration (MFA)

Coastal Zone Management Rules relevant to marine fisheries which apply to this project:

- 9.5 Finfish migratory pathways
  NY/NJ Harbor Agreement timing restriction – February 1 – May 31

- 9.36 Endangered or threatened wildlife or plant species habitats
  Atlantic sturgeon: NY/NJ Harbor Agreement timing restriction – February 1 – May 31

- 12.6 Maintenance Dredging
  Winter flounder timing restriction – January 1 – May 31

Be aware, the work conducted in Project 1 to rebuild the NB-HCE bridge can disturb important fish habitat and disrupt migration of fish during Spring spawning runs through the Newark Bay area. Newark Bay and significant associated river systems (Passaic and Hackensack Rivers) support spawning runs of shad and river herring species, as well as striped bass. Shad and river herring are currently experiencing low population abundances coastwide, while striped bass stocks have recently been assessed as overfished and experiencing overfishing. Avoidance of interference with these and other Spring spawning runs is critical to reduce further detrimental impacts to these fish stocks. Atlantic Sturgeon use Newark Bay as foraging grounds which coincides with the New York Bight distinct population segment and are considered endangered under the Endangered Species Act. Therefore, the following Time of Year Restrictions of in-water work activities will be recommended for this project: NY/NJ Harbor Agreement: February 1 – May 31. Additionally, MFA recommends the use of Best Management Practices (BMPs) to reduce impacts of construction on migrating fish by monitoring and controlling turbidity, noise, and overall habitat disturbance.

If dredging is required for Project 1: MFA recommends all dredging and dredge material operations utilize specific operational procedures designed to minimize water quality impacts, resuspension of sediment, and percussive sound generation. Operations are recommended to deploy silt curtains at sites when plausible based on-site conditions. If it is determined the use of a silt curtain is infeasible at specific locations, dredging using closed watertight buckets or lateral digging buckets, or for a hydraulic dredge the removal of the cutter head, flushing of pipeline sections prior to disconnection, or limitations on depth of successive cuts is recommended.

The Southern New England/Mid-Atlantic winter flounder stock is near historic lows and the proposed work plans are in regions which have been determined to be Essential Fish Habitat for all life history stages of winter flounder. The dredging and development timing restrictions for winter flounder, which have been established to protect the spawning and vulnerable life history stages, in areas of 20- feet or less MLLW bathymetric contour, and an additional 500-foot buffer seaward of the 20- foot bathymetric contour, is recommended from January 1- May 31.

Threatened & Endangered Species

Species Occurrence Area (v12) and Landscape mapping (v3.3) indicates habitats valued for, and possible occurrences of, **Threatened / Endangered** (T / E) and "**Species of Concern"** within the expected area of impact for the following species: Bald Eagle, Peregrine Falcon, Northern Harrier, Least Tern, Atlantic & Short-nose Sturgeon, Black-crowned Night-heron, Cattle Egret, Checkered White, Snowy Egret, Glossy

Ibis, Little Blue Heron, Tricolored Heron, Northern Diamondback Terrapin. These species must be addressed in the Environmental Impact Statement (EIS).

Peregrine Falcon (State – E) nests are mapped on the Newark Bay Bridge (from 2012) and the rail bridge to the north (from 2009). If these nests still exist, consultation with the Endangered & Non-game Species Program will be required.

Northern Long-eared Bat, Little Brown Bat, Eastern Small-footed Myotis, and Tri-colored Bat, all of which are found state-wide and after review by Endangered and Non-game Species Program Biologists and the NJ Endangered and Nongame Advisory Committee, have a "Consensus Status" of "Endangered" in NJ, must be considered if tree clearing is required for this proposal

If you have any additional questions, please contact Kelly Davis at 609-292-9451 or Kelly.Davis@dep.nj.gov

Tidelands

If tidally claimed areas are proposed to be impacted for the project, the applicant must confirm whether there is a Tidelands Grant for these areas and if the Grant is still valid. If there is no Grant or it is no longer valid, then the applicant shall apply for a new Tidelands Instrument for work proposed within the claimed areas. Additionally, the construction of new in-water structures will require an application to the Bureau of Tidelands for a new Instrument.

If you have any additional questions, please contact Marty Mosen at 609-633-7900 or Martin.Mosen@dep.nj.gov

Green Acres

The applicant states that several parks may be impacted by this project and that they recognize a diversion application and State House Commission approval may be required unless the project can be routed in such a way as to avoid parkland. The applicant is advised to consult with Green Acres about the project design for assistance in identifying local parks that may be impacted and assistance in the diversion process. The Green Acres Bureau only handles county, municipal and nonprofit GA encumbered lands.

If you have any additional questions, please contact Maude Snyder at 609-292-0903 or Maude.Snyder@dep.nj.gov

State-owned Lands

If the project will impact NJDEP property, the applicant shall submit the following form: https://www.nj.gov/dep/greenacres/pdf/request_to_use_njdep_property.pdf
An alternatives analysis will need to be submitted that shows why the use of NJDEP property cannot be avoided, and if it cannot be avoided, how the use is being minimized.

If you have any additional questions, please contact Adria Wentzel at 609-984-0532 or Adria.Wentzel@dep.nj.gov

Site Remediation

The applicant is advised to consult the SRP linear construction technical guidance at:
https://www.state.nj.us/dep/srp/guidance/srra/lc_guidance.pdf

If you have any questions, please contact Steve Maybury at 609-633-1455 or Steve.Maybury@dep.nj.gov

Stormwater Management

Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) form their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEPonline portal system application. Applicants must then become a registered user for the DEPonline system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization.

If you have any additional questions, please contact Eleanor Krukowski at (609) 633-7021 or Eleanor.Krukowski@dep.nj.gov

RECOMMENDATIONS

Pursuant to Section 4(c)ii of EO #215, the NJDEP recommends a conditional approval for the project, provided that any NJDEP permits and approvals that may be required for the project are obtained by the applicant prior to commencement of any activity regulated by those required permits and approvals.

Section 5 of EO #215 requires that within thirty days of receiving our recommendation, the proposing agency provide the NJDEP a written response either accepting our recommendations or setting forth those issues remaining in dispute. Acceptance of our conditional approval and recommendations would conclude the EO #215 environmental review process. If a written response is not received in this time frame, it will be assumed that the proposing agency has accepted the NJDEP's recommendations listed above.

Thank you for giving the NJDEP the opportunity to comment on the provided information for the proposed project. Please contact Becky Mazzei at Becky.Mazzei@dep.nj.gov or (609) 292-3600 if you have any additional questions or concerns.

Sincerely,

Megan Brunatti

Megan Brunatti, Director
Office of Permitting & Project Navigation

Appendix F-4

Essential Fish Habitat Assessment

New Jersey Turnpike Authority
Newark Bay – Hudson County Extension
Interchange 14 to Interchange 14A

Essential Fish Habitat Assessment

January 2024

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1 Introduction

In compliance with Section 305(b) (2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act (SFA) of 1996 (Public Law 104-267), this Essential Fish Habitat (EFH) assessment is provided to evaluate the potential effects of constructing a replacement bridge for the Newark Bay Bridge (NBB) on EFH. This bridge crosses over Newark Bay for a distance of approximately 4,200 feet, connecting the cities of Newark and Bayonne in New Jersey. This assessment includes an analysis of the potential effects of the proposed project on habitat for those species and life stages for which EFH has been designated.

Potential impacts of the proposed bridge construction and demolition of the existing bridge were evaluated using information collected during previous aquatic sampling programs and relevant literature to evaluate species occurrence and existing habitat. Potential temporary and permanent impacts of the proposed project on the EFH were assessed in terms of the seasonal distribution, relative abundance, and habitat requirements of the designated species and life stages. The assessment addresses the physical and biological effects of the proposed in-water construction and operation activities on the 11 EFH-designated species and Habitat Areas of Particular Concern (HAPC) that may occur in the project area.

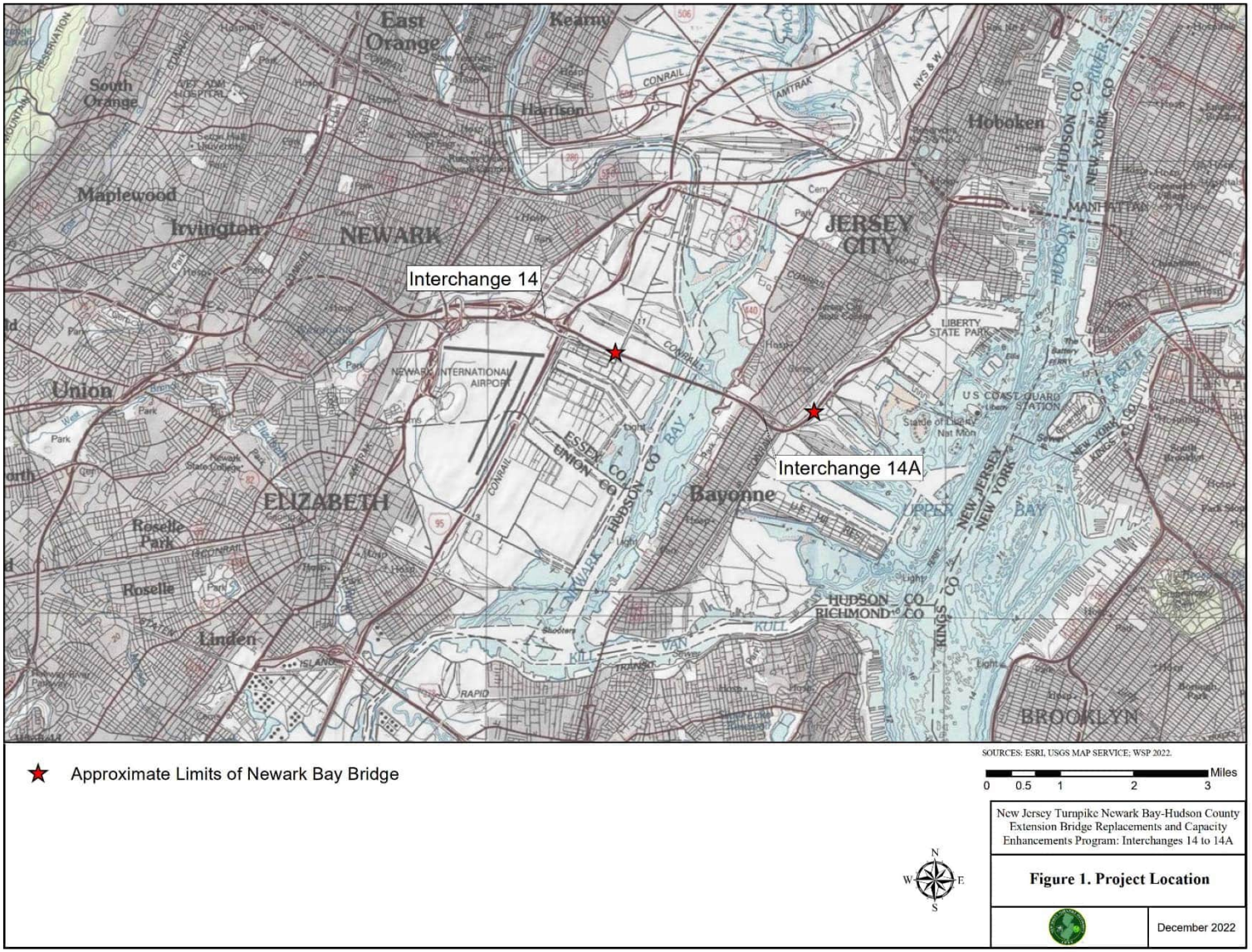
Also included in this EFH Assessment are four forage species, including bay anchovy (*Anchoa mitchelli*), Atlantic menhaden (*Brevoortia tyrannus*) and river herring (collectively blueback herring [*Alosa aestivalis*], and alewife [*Alosa pseudoharengus*]).

2 Project Site and Project Description

2.1 Site Description

Newark Bay is a shallow, 5.5 mile long tidal embayment located at the confluence of the Passaic and Hackensack Rivers (Figure 1). It is tidally connected to the Atlantic Ocean at its southern end via the Kill van Kull and Arthur Kill. Newark Bay has a width ranging from about 0.6 to 1.2 miles and is bordered to the east by the City of Bayonne and to the west by the City of Newark. In the project corridor, depths are generally less than eight feet, except for the Newark Bay Main Navigational Channel North Reach, which passes under the NBB, and has an authorized width of 500 feet and a depth of 35 feet. The shoreline along Newark Bay varies, consisting largely of riprap and bulkheads, with little natural shoreline remaining. Along the project corridor, the western shore of Newark Bay underneath the existing bridge is riprap with tidal wetlands immediately north and south. The eastern shore of Newark Bay in the project corridor is composed of riprap.

The project area has undergone intense development and urbanization. To the north of the NBB, the Lehigh Valley Railroad Bridge crosses Newark Bay and connects to a large railroad yard in Newark. The Port Newark shipping facility and manufacturing buildings comprise much of the land use to the west of the NBB, while the eastern side of Newark Bay is characterized by dense residential development and urban parks. A variety of urban, industrial inputs and development of the nearshore zone of Newark Bay has modified the area's hydrology, degraded water quality, and altered biotic communities. Over the years, most of the salt marsh wetlands that fringed Newark Bay have been degraded as a result of mosquito control measures and invasive vegetation, or lost through filling.


Interchange 14
Interchange 14A
East Orange
Kearny
South Orange
Harrison
Hoboken
Maplewood
Irvington
NEWARK
JERSEY CITY
Union
ELIZABETH
Bayonne
Roselle Park
Roselle
Linden
BROOKLYN
NEWARK INTERNATIONAL AIRPORT
LIBERTY STATE PARK
US COAST GUARD STATION
Statue of Liberty Nat Mon
Approximate Limits of Newark Bay Bridge
SOURCES: ESRI, USGS MAP SERVICE; WSP 2022.
0 0.5 1 2 3 Miles
N
W E
S
New Jersey Turnpike Newark Bay-Hudson County Extension Bridge Replacements and Capacity Enhancements Program: Interchanges 14 to 14A
Figure 1. Project Location
December 2022

Aquatic habitats in Newark Bay include deep navigation channels, expansive subtidal shallows, intertidal mudflats, and salt marshes. Substrates in the project corridor in Newark Bay consist predominately of silty sand and sandy silt (USACE 2012). Recent fish community studies conducted from 1993 to 2013 have identified 62 fish species occurring within Newark Bay (Tierra Solutions Inc. 2013), including federally-managed species for which EFH has been designated. A recent mid-water study of migratory finfish in the bay detailed use of the water column by pelagic species infrequently caught in bottom-trawl studies (USACE 2015). Ichthyoplankton studies conducted in Newark Bay from 1999-2006 identified early life stages (eggs, larvae, or juveniles) of federally-managed species for which EFH has been designated. A number of benthic invertebrate surveys have been conducted in Newark Bay since the mid-1980s. USACE found moderate benthic abundance, with the assemblage dominated by polychaetes, with softshell clam (*Mya arenaria*) also abundant (USACE 1987). NOAA conducted a benthic macroinvertebrate survey of Newark Bay during 1993-1994, finding a similar polychaete-dominated community that exhibited discernible shifts in species composition among seasons (NOAA 1994). The Port Authority of New York/New Jersey's 1995-1996 Newark Bay benthic sampling program corroborated the dominance by polychaetes, with additional common invertebrates including softshell clam, dwarf surf clam (*Mulina lateralis)*, the isopod *Cyathura polita*, and the cumacean (*Oxyurostylis smithiiz*) (LMS 1996).

Newark Bay is designated as "SE3" (N.J.A.C. 7:9B), indicating saline waters of estuaries. In all SE3 waters the designated uses are: (1) Secondary contact recreation; (2) Maintenance and migration of fish populations; (3) Migration of diadromous fish; (4) Maintenance of wildlife; and (5) Any other reasonable uses. The Draft 2018/2020 New Jersey Integrated Water Quality Assessment Report indicates that only 5 of the 19 water monitoring stations in Newark Bay fully supported general aquatic life use criteria. High nutrients, total phosphorus, and impairments associated with nutrient over-enrichment are the common cause of aquatic life impairments.

Water quality parameters of temperature, salinity and dissolved oxygen vary considerably within Newark Bay across the seasons. These variations reflect typical meteorological and hydrological conditions in Newark Bay and the waters that flow into it (Arthur Kill, Kill van Kull, Hackensack and Passaic rivers).

Annual low water temperatures of around 2° C occur in late December/January, and seasonally high temperatures up to 24° C occur June through August (USACE 1997). Salinity ranges from around 3 parts per thousand (ppt) to 21 ppt over the year, with salinities greater than 12ppt spring through fall and lower salinities in winter. Dissolved oxygen values in the summer are relatively low at 4 to 7 mg/L, with highs of 10 to 14 mg/L in the winter months.

Newark Bay is an Operable Unit (OU3) of the Diamond Alkali Superfund site. The historic manufacture of herbicides at a facility along the Lower Passaic River, upstream from Newark Bay, resulted in considerable contamination of area sediments by a variety of toxic substances including DDT and dioxin. The Newark Bay Study Area of the Diamond Alkali Superfund site includes Newark Bay and portions of the Hackensack River, Arthur Kill and Kill van Kull. As a result of this contamination, the state of New Jersey prohibits consuming shellfish and recommends very limited consumption of fish from Newark Bay (NJDEP/NJDOH, 2021). Newark Bay has not undergone Superfund remediation as of 2022.

2.2 Project Description

The New Jersey Turnpike Authority (Authority) proposes a modernization of the Newark Bay-Hudson County Extension (NB-HCE) between Interchange 14 in Newark, Essex County, and Interchange 14A in Bayonne and Jersey City, Hudson County, to meet current and future needs of patrons of the NB-HCE, current design standards, and the Authority's operational and maintenance needs (the Proposed Project). A major element of the Proposed Project is the replacement of the NBB, officially, the Vincent R. Casciano Memorial Bridge, which comprises nearly half of the total length of the NB-HCE between Interchanges 14 and 14A.

The new bridge piers will be constructed by the drilled shaft method. These piers will be accessed via a temporary construction trestle extending out from each shore to the new main span pier locations just outside of the navigation channel. The temporary access trestle for the new westbound bridge would be supported by 36" diameter steel pipe piles and is expected to be in place for a period of two years. Once the westbound bridge is completed, the existing NBB would be demolished, with all of the piers within Newark Bay removed to two feet below the mudline in accordance with Authority practice, except for the two main span piers which would remain to support the fendering system for the new bridges. Following demolition of the NBB, another temporary trestle would be constructed out from each shore to the new main span pier locations to support construction of the eastbound span within the footprint of the existing NBB and would be in place for a period of two years. Based on historic boring data, trestle pipe piles would be driven down about 40 feet with a vibratory hammer and then driven an additional 20 to 40 feet with an impact hammer. For in-water installation of the trestle piles, a larger 60" diameter 60" diameter casing will be set to the mudline and equipped with air compressor lines at the bottom of the casing which will create air bubbles in the annular space between pipe pile and casing to reduce underwater noise transmission during pile driving.

The drilled shafts for the bridge piers would likely be advanced in-water with turbidity barriers used to minimize sediment resuspension and reduce impacts to the aquatic community. Turbidity barriers would minimize disturbances but would not contain 100 percent of suspended sediments and would be susceptible to changing water conditions, such as wave action, wind seiches, and turbulent tidal currents. Bridge pier construction would then take place within steel sheetpile cofferdams. Demolition of the existing NBB bridge piers would also occur within sheetpile cofferdams. Following completion of bridge construction and demolition, cofferdams and trestle piles would be removed by vibratory extraction. All of this in-water construction activity requires considerable use of spud barges, tugboats and other support vessel types over a period of four years. The installation and removal of steel pipe piles and steel sheetpiles and associated spud barge mooring and tugboat propeller wash in the relatively shallow waters of Newark Bay will disturb bottom sediments and cause temporary increases in suspended sediment in the construction area.

Except for the construction of the temporary construction trestles and the drilled shafts, all in-water construction, and demolition would take place within cofferdams in order to minimize impacts to the aquatic community. Since sediments in the project area are composed of sand and silt, pilings and sheetpile cofferdams would be installed using vibratory hammers instead of impact hammers, thereby reducing potentially harmful noise generation. Turbidity barriers and/or bubble curtains are assumed to be required to protect the aquatic community from sediment resuspension during sheetpile driving. Following completion of bridge construction and demolition, cofferdams and trestle piles would be removed by vibratory extraction.

3 EFH Designations

EFH is defined under the MSFCMA, as amended by the SFA of 1996, as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The SFA requires that EFH be identified for those species actively managed under Federal Fishery Management Plans (FMPs). This includes species managed by the eight regional Fishery Management Councils (FMCs), established under the MSFCMA, as well as those managed by the National Oceanographic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) under FMPs developed by the Secretary of Commerce.

EFH includes both the water column (including its physical, chemical, and biological growth properties) and the underlying substrate (including sediment, hard bottom, and other submerged structures). Under the EFH definition, necessary habitat is that which is required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem. EFH is designated for a species' complete life cycle, including spawning, feeding, and growth to maturity, and may be specific for each life stage (e.g., eggs, larvae). EFH designations are based on various levels of information available for a species life stage distribution, abundance, and habitat-productivity relationships.

A summary of EFH-designated species in the project area is provided in Table 1. This information was obtained from the Essential Fish Habitat Mapper | NOAA Fisheries. This tool allows users to generate a report with supporting documentation describing where managed fish species spawn, grow, or live in a chosen location. The EFH Mapper Report generated for this project is attached as Appendix F-2.

EFH that is judged to be particularly important to the long-term productivity of populations of one or more managed species, or to be particularly vulnerable to degradation, may also be identified by Fisheries Management Councils (FMC) and NOAA Fisheries as habitat areas of particular concern (HAPC). Areas of EFH considered HAPC must be proven by NOAA Fisheries Service to be important to the ecological function provided by the habitat for managed species. The extent to which the habitat is sensitive to human-induced environmental degradation, including development activities that stress the habitat and the rarity of the habitat, are considered in designating HAPC (NMFS, 2003).

In the project area, the only managed species for which HAPC has been identified is summer flounder. NOAA Fisheries identifies HAPC for juvenile and adult summer flounder across its entire range as "all native species of macro-algae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH." Seagrasses are not present in Newark Bay, however, macroalgae occurs in shallow areas where hard substrate is present, and *Spartina alterniflora* marshes are present along the western shore in close proximity to the NBB. Therefore, HAPC for summer flounder is present in the vicinity of the proposed project.

Table 1. Summary of EFH-Designated Species in the Newark Bay Bridge Area.

Species	Eggs	Larvae	Juveniles	Adults
Winter flounder (*Pleuronectes americanus*)	X	X	X	X
Little skate (*Raja erinacea*)			X	X
Atlantic herring (*Clupea harengus*)		X	X	X
Red hake (*Urophycis tenuis*)	X	X	X	X
Windowpane flounder (*Scopthalmus aquosus*)	X	X	X	X
Winter skate (*Raja ocellata*)			X	X
Clearnose skate (*Raja eglanteria*)			X	X
Longfin inshore squid (*Doryteuthis pealeii*)	X			
Bluefish (*Pomatomus saltatrix*)			X	X
Atlantic butterfish (*Peprilus triacanthus*)		X		
Summer flounder (*Paralicthys dentatus*)		X	X	X

4 Potential Impacts to EFH-Designated Species

The EFH Assessment addresses the potential temporary and permanent impacts on individual species and their respective habitats. The species addressed include the 11 EFH-designated species which may occur in the project area (Table 1).

4.1 Potential Project Impacts

The EFH Assessment for the identified species is based on the potential impacts resulting from habitat alteration and/or loss due to bridge construction and demolition activities. The potential project impacts are evaluated on the basis of short-term and long-term effects on each of the EFH designated species, as they may occur temporarily during construction or permanently due to changes in turbidity, hydrodynamic patterns, loss of intertidal and subtidal habitats, noise and vibrations, loss of salt marsh wetlands, and a temporary loss of habitat from equipment and cofferdams.

Short-term effects on EFH resulting from the proposed action include: displacement of fish from available water column habitat in Newark Bay due to avoidance of areas of hydrological disturbance, noise and vibrations caused by construction; increased turbidity and levels of resuspended solids and contaminants, and temporary sediment disturbance and associated loss of the benthic community within cofferdams. Long-term effects on habitat include effects due with construction activities in Newark Bay and include: alteration of substrate types and benthic habitats; changes in water depth, hydrodynamics, and sedimentation rates; and permanent loss of water column and benthic habitats resulting from new bridge piers.

The National Marine Fisheries Service and Federal Highway Administration have developed Best Management Practices (BMPs) for in-water work (NMFS/FHWA 2018). These BMPs include time of year (TOY) restrictions for each state in the greater Atlantic region so that in-water work (i.e., turbidity producing activities) may be avoided during sensitive life stages of managed species (Table 2). These standard TOY restrictions consider the breeding, nursery, and migration stages of species which are especially vulnerable to in-water silt-producing activities, noise impacts, or activities which may encroach greater than 25% into a waterway interfering with migration.

Table 2. Time of Year Restrictions for New Jersey.

Species/Group	Time of Year Restriction
Winter Flounder	January 1 to May 31
Diadromous Fish	March 1 to June 30 and September 1 to November 30*
Submerged Aquatic Vegetation	April 15 to September 30
Overwintering Blue Crab and Striped Bass	November 15 to April 15

*Use the fall TOY restriction in cases where an action will substantially block the waterway in the fall.

4.2 Description of Data Sources

Previous biological investigations have characterized the seasonal distribution and composition of the fish community in various habitats and areas of NY/NJ Harbor, including Newark Bay. Several fish sampling studies have been conducted in the general vicinity of the proposed project area.

The U.S. Army Corps of Engineers, New York District (USACE-NYD) surveyed seasonal use patterns and distribution trends of finfish in NY/NJ Harbor from October 1998 through September 1999 (USACE 1999). Three stations were located within navigation channels within Newark Bay. Sampling was conducted bi-monthly using a 30 foot Wilcox flat bottom trawl and ichthyoplankton tows were made using a 0.5 meter net with 500 micron mesh netting mounted in a benthic sled. USACE (2002) provided supplemental data to the 1998-1999 surveys to obtain additional information on the distribution patterns of the egg and larval stages of demersal species with emphasis on winter flounder. Sampling was conducted from December 2000 through June 2001. During this program, three stations were located within navigational channels and three were located within shoal areas in Newark Bay. USACE (2003, 2004, 2005, 2006) documents the continuation of the USACE's monthly trawl and ichthyoplankton sampling program from December 2001 through July 2005.

During 1995-1996, The Port Authority of New York/New Jersey (PANY/NJ) conducted a fisheries sampling program in support of the Newark Bay Confined Disposal Facility Environmental Impact Statement. Monthly surveys, using a 30 foot Wilcox flat bottom trawl were conducted at four shallow water stations in Newark Bay, two channel stations in the Arthur Kill, and one in the Kill Van Kull (LMS, 1996).

USACE-NYD (2012) prepared a summary report focused on juvenile and adult spawning winter flounder occurrence and EFH utilization within the Harbor incorporating data collected as part of the Aquatic Biological Survey bottom trawl program (2002 – 2010) by the USACE-NYD during the Harbor Deepening Project. Six stations were located in channel and non-channel locations within Newark Bay.

The 2006 and 2011-2013 Migratory Finfish Surveys were conducted as part of the New York and New Jersey Harbor Deepening Project, a USACE-NYD and PANYNJ sponsored project to deepen navigation channels to 50 feet to accommodate larger commercial vessels. Six stations were located in channel and non-channel locations within Newark Bay.

The surveys described above were used to prepare a composite summary of the expected seasonal occurrence of EFH-designated species in the Newark Bay area (Tables 3 and 4). The data presented in this assessment were summarized and consolidated from the above mentioned sampling programs. The data are presented for the purpose of identifying general trends in species occurrence and relative abundance within the vicinity of the proposed project site.

Table 3. Ichthyoplankton Catch of EFH-Designated Species in Newark Bay 1999 to 2006.

EFH-Designated Species	Early Life Stage	1999	2000	2001	2002	2003	2004	2005	2006
Winter flounder	Egg	15			6	1	1	4	
	Larvae	34		230	537	626	721	198	97
	Juvenile					2		1	
Atlantic herring	Larvae	6		5		9	8		2
	Juvenile						1		
Windowpane flounder	Egg			396	551	77	256	13	
	Larvae	35		21	10	6	4	37	5
	Juvenile			1	1	3			
Atlantic butterfish	Larvae				1				
Summer flounder	Larvae		6	6	1				

Sources: USACE 2003, 2004, 2005, and 2006.

Table 4. EFH-Designated Species Monthly Finfish Catch Data from Newark Bay Fish Community Studies 1993-2013.

EFH-Designated Species	Average Percent Composition of Monthly Finfish Catch Data												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Overall
Winter flounder	3.2	2.6	5.8	5.4	0.8	3.5	4.2	1.7	0.9	2.1	7.1	7.4	3.72
Little skate	*0.0*	*0.0*	*0.0*	0.0	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0.0	*0.0*	0.01
Atlantic herring	0.0	*0.0*	0.0	6.7	39.4	10.4	*0.0*	*0.0*	*0.0*	0.0	0.3	0.1	4.75
Red hake	0.7	0.2	0.2	0.4	0.5	0.6	0.3	*0.0*	*0.0*	*0.0*	*0.0*	0.5	0.25
Windowpane flounder	0.4	0.4	0.1	0.5	0.1	0.2	0.0	0.8	0.0	0.3	0.4	0.3	0.25
Winter skate	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Clearnose skate	*0.0*	0.0	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	0.00
Bluefish	*0.0*	*0.0*	*0.0*	*0.0*	0.1	0.5	0.1	0.2	1.7	1.0	*0.0*	*0.0*	0.29

EFH-Designated Species	Average Percent Composition of Monthly Finfish Catch Data												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Overall
Atlantic butterfish	0.0	*0.0*	*0.0*	*0.0*	0.1	0.1	0.3	0.6	0.8	1.0	0.1	0.0	0.26
Summer flounder	*0.0*	*0.0*	*0.0*	0.2	0.5	1.6	2.0	0.3	0.2	0.1	*0.0*	*0.0*	0.42

Italicized numbers indicate none of this species were caught in this month across the survey period.
Sources: LMS 1996; NOAA 1994; USACE 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2013.

4.3 EFH-Designated Species Assessment

Of the eleven species for which EFH has been designated in the Newark Bay area, early life stages (eggs, larvae and juveniles) of five species (winter flounder, Atlantic herring, windowpane flounder, Atlantic butterfish and summer flounder) have been collected there (LMS, 1996; USACE 1999, 2002, 2003, 2003b, 2004, 2005, 2006) (Table 3). The presence of winter flounder and windowpane flounder eggs suggests possible spawning near the project area. Juveniles and/or adults of ten EFH-designated species (winter flounder, little skate, Atlantic herring, red hake, windowpane flounder, clearnose skate, bluefish, Atlantic butterfish, and summer flounder) have been caught in the project area during the various fish community studies performed in Newark Bay and the USACE's winter flounder and migratory finfish surveys conducted for the New York/New Jersey Harbor Deepening Program (USACE 1999, 2002, 2003, 2003b, 2004, 2005, 2006, 2012, 2015)(Table 4).

4.3.1 Winter Flounder

Newark Bay is designated as EFH for all life stages of winter flounder. Winter flounder is a commercially and recreationally important species that resides in NY/NJ Harbor waters. Spawning occurs between February and April in estuaries and bays of the Mid-Atlantic Bight, including NY/NJ Harbor. Adults spawn in late winter through spring, at water temperatures below 15°C, at salinity between 10 - 32 ppt over sand, mud and gravel substrate (< 6 meters deep) (Pereira et al. 1999). Winter flounder eggs are demersal, adhesive, and stick together in clusters. Eggs are typically found in water with temperatures less than 10°C and depths less than 5 meters over sand, muddy sand, mud, and gravel substrates. These substrates may provide EFH for winter flounder spawning adults, eggs, and larvae throughout the estuarine and marine portions of the NY/NJ Harbor. Larvae are non-buoyant and have a strong benthic orientation, often resting on the bottom between swimming efforts (Pearcy 1962). Winter flounder larvae prefer water temperatures less than 15°C, depths less than 6 meters, and a salinity range of 4 to 40 ppt. Juvenile winter flounder use habitats from 1 to 50 meters, at water temperatures below 25°C and at salinity between 10-33 ppt. During summer months, winter flounder adults reside in nearshore coastal waters, with the distance offshore dependent upon water temperature, i.e., the warmer the water temperature the further offshore adults move. Winter flounder adults are typically found on mud, sand, and gravel substrates, at water temperatures below 25°C, salinity between 15-33 ppt, and water depths between 1-100 meters.

Prey items for larval winter flounder include copepod nauplii, small polychaetes and invertebrate eggs (Pereira et al. 1999). Juvenile and adult winter flounder are opportunistic feeders, consuming mostly invertebrates (e.g., amphipods, bivalve siphons, polychaetes, anthozoans), and on rare occasions, small fishes.

Winter flounder adults and juveniles were collected during the PANY/NJ's 1995-1996 Newark Bay trawl survey from April through November, accounting for 2.5% of the total number of fish collected (LMS, 1996). Winter flounder eggs, larvae and juveniles were caught during ichthyoplankton studies performed in Newark Bay from 1999-2006, with larvae being the most abundant life stage caught (USACE 2003, 2004, 2005, 2006). Winter flounder larvae dominated ichthyoplankton connections from the Arthur Kill/Newark Bay area during February-March USACE (2003). Bottom trawl sampling from 2002 to 2010 in the NY/NJ harbor from the winter to early summer revealed winter flounder habitat use varied by size/age class (USACE 2012). Year-1

juvenile densities were significantly higher in the Arthur Kill/Newark Bay area and adult densities were significantly lower in this area compared to the Lower Bay and Upper Bay areas. Year-1 juveniles were most commonly collected in the early months of sampling (January to March) in the Arthur Kill/Newark Bay area. Ripe individuals were collected in February and March and spent individuals were collected thereafter.

Juvenile and adult winter flounder were caught during every month of the year during the various Newark Bay fish community studies from 1993 to 2013, accounting for 3.7% of the overall catch. Adult collections were highest in March and April.

Potential Project Effects on Winter Flounder EFH

All winter flounder life stages are expected to occur within the NBB area. Potential impacts to winter flounder EFH include temporary loss of approximately 15.823 acres of the intertidal and subtidal water column and bay bottom, which includes 1.532 acres from cofferdams around new bridge piers and fenders, 1.141 acres from cofferdams for existing bridge pier and fender removal, 12.529 acres from the construction trestle, and 0.621 acres from construction access and staging. During construction, these temporary impacts would displace all life stages of winter flounder from habitat required for spawning, foraging and growth to maturity. Increases in turbidity caused by spud barges, vessel propeller wash and scouring around cofferdams and trestle piles would disturb additional habitat and may cause burial of winter flounder eggs and newly- metamorphosed larvae through sediment deposition. Impacts also include disturbance and loss of the benthic and pelagic habitats of winter flounder prey organisms. Temporary loss or relocation of benthic prey species will cause winter flounder to move to other feeding habitats within the harbor. These impacts will be limited to the duration of the construction operations except for the area of permanent fill. Juveniles and adults that frequent the project area will actively avoid in-water construction, opting for other suitable habitat within the general vicinity of the project area.

The new bridge piers footings and fenders, and permanent access underneath the bridge structure for maintenance, inspections and security would result in the permanent fill of tidal waters in Newark Bay totaling approximately 5.853 acres (including 3.808 acres of tidal wetland fill). The removal of the existing NBB piers, except for the main span piers that would remain, would result in the gain of 0.817 acres of tidal open waters, and 0.034 acres of tidal wetlands, for a net permanent loss of 5.002 acres of intertidal and subtidal bay bottom. Adopting the NMFS/FHWA time of year restrictions for winter flounder and diadromous species (i.e., placement and removal of cofferdams and trestle piers between July 1 and December 31) would allow construction and demolition work to proceed year-round and would be protective of the sensitive early life stages of winter flounder. Potential long-term impacts may include minor alterations to local bathymetry and hydrodynamics in the area of the new bridge, but this area would still provide suitable depth and habitat substrate types for winter flounder.

Benthic invertebrate communities are expected to recolonize impacted areas following cessation of construction activities (Newell et al. 1998). Areas of temporary and permanent impacts resulting from bridge demolition and construction is a small fraction of the total benthic habitat available in Newark Bay. Impacts to winter flounder EFH from the project are expected to be primarily short-term and largely avoidable through the use of time of year restrictions and cofferdams for in-water work.

4.3.2 Little Skate

Newark Bay is designated as EFH for juvenile and adult stages of little skate (Attachment F-2). This species is typically found on sand or gravel bottoms but has also been reported from mud (Packer et al. 2003b). Little skates generally remain buried in depressions during the day and are more active at night. Juvenile and adult little skates can be found from shallow waters to 110 m in the Mid-Atlantic Bight. The temperature range of little skate is generally 1-21°C, although most are found between 2-15°C. Little skate can tolerate salinity ranges as low as 15-20 ppt but their preferred range is usually 29-33 ppt.

Little skate do not appear to migrate extensively, but they do move to shallow water during the summer and to deep water in fall or early winter. Little skate prey includes small fish, decapod crustaceans, amphipods and polychaetes (Packer et al. 2003b). Only two little skates were caught during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.01% of the overall catch.

Potential Project Effects on Little Skate EFH

Little skates prefer waters of relatively high salinity and relatively coarse substrates, so it is unlikely that this species will occur in the NBB project area. Potential impacts to little skate EFH could result from disturbance of benthic habitat and prey species. Little skates, if present, may avoid the area to forage in undisturbed habitat. These impacts would be temporary and limited to the area of bottom disturbance. Given the limited extent of the impact area and the relatively low likelihood of this species to be present in Newark Bay, impacts to little skate EFH from the proposed project are expected to be negligible.

4.3.3 Atlantic Herring

EFH for larval, juvenile, and adult stages of Atlantic herring has been designated in Newark Bay (Attachment F-2). Atlantic herring eggs are demersal, stick to the seabed or algae on the ocean floor, and hatch in 10 to 15 days (Reid et al. 1998). Atlantic herring larvae are pelagic and occur throughout the mid-Atlantic Bight at water temperatures below 16 °C, depths from 50 - 90 meters and salinities around 32 ppt. Juveniles and adults occur in schools in temperatures below 10°C at depths from 15 - 135 meters and at salinities from 26 - 32 ppt and above 28 ppt, respectively. Atlantic herring are primarily pelagic but may also be found in shallow, nearshore areas. Atlantic herring juveniles and adults of the George's Bank stock use the New York Bight as a wintering area between December and April, when they may occur in the Newark Bay area (Anthony 1982).

Small numbers of Atlantic herring larvae and one juvenile were caught during ichthyoplankton studies performed in Newark Bay from 1999-2006 and were most commonly collected during February and March (USACE 2003, 2004, 2005, 2006). Juvenile Atlantic herring was the third most caught fish in mid-water trawls in Newark Bay in the spring months but was uncommon or absent in summer or fall (USACE 2015). Overall, Atlantic herring comprised nearly five percent of the catch of the various Newark Bay fish community studies from 1993 to 2013.

Potential Project Effects on Atlantic Herring EFH

Atlantic herring is a schooling pelagic species, not generally associated with bottom habitats or nearshore areas. Atlantic herring larvae and juveniles may be seasonally present in the project area, although larvae prefer deeper water and higher salinities than occur in Newark Bay. Juveniles and adults also prefer deep, cool waters of high salinity. If present in the project area, short-term increases in turbidity caused by construction and demolition activities are not likely to affect this pelagic species. Potential impacts on Atlantic herring EFH from the proposed project are expected to be negligible.

4.3.4 Red Hake

Newark Bay is designated as EFH for egg, larval, juvenile and adult stages of red hake (Attachment F-2). Red hake make seasonal migrations in response to changing water temperatures, inhabiting shallow water in the spring and summer but moving to deep offshore water to over-winter. Eggs and larvae are pelagic and tend to be restricted to deeper marine areas over the inner continental shelf (Able and Fahay, 1998). Red hake eggs are typically found in surface waters with temperature less than 10°C and salinity less than 25 ppt while larvae are typically found in surface waters with temperatures below 19°C, depths less than 200 meters, and salinities greater than 0.5 ppt. Eggs and larvae are most often found throughout the mid-Atlantic Bight from May through December, and peak abundance is during June and October (Wilk et al. 1990). Larval red hake typically feed on copepods (Steimle et al. 1999).

Juveniles are pelagic until they reach approximately 25 mm total length (TL) or greater, at which time they become demersal, seeking shelter along the continental shelf bottom within depressions in the sediment or among live sea scallop beds (Steimle et al. 1999). Juveniles also may associate with other forms of shelter, including debris and artificial reefs (Steimle et al. 1999). Juveniles are typically found on shell substrates with water temperatures below 16°C, depths of less than 100 meters, and a salinity range of 31 to 33 ppt. Juveniles remain associated with sea scallop beds through their first fall and winter (until approximately 90-116 mm in length), and then occupy either estuarine or inshore marine waters over sand or mud substrate, prior to joining adults in the offshore migration during their second winter. Juvenile red hake typically feed on benthic and pelagic crustaceans such as decapod shrimp, mysids, euphausiids and amphipods (Steimle et al. 1999). Adult red hake are common on soft sediments and are usually found in depressions in soft sediments or shell beds. Adults occur in the Hudson-Raritan estuary during cooler seasons but are not abundant. Adult red hake are usually found at a salinity range of 20-33 ppt and DO concentrations greater than 6 mg/L in the Hudson-Raritan estuary (Steimle et al. 1999).

No red hake eggs or larvae were collected in Newark Bay during the USACE's ichthyoplankton sampling programs. Small numbers of juvenile red hake were caught from the months of December through July during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.25% of the overall catch. Two juvenile red hake were caught in mid-water trawls targeting pelagic species in Newark Bay (USACE 2015).

Potential Project Effects on Red Hake EFH

Red hake may be present within Newark Bay however, the frequency of their occurrence would be limited by water quality and habitat preferences. Because red hake eggs and larvae are pelagic and tend to be primarily occur in areas east and north of the Hudson River (Able and Fahay, 1998), impacts to EFH of these life stages from the project are not anticipated. The shelly substrate preferred by juveniles for shelter is lacking in the project area. Juveniles and adults are only likely to occur in the project area in low abundance and only during the colder months. Potential impacts to juvenile and adult EFH would be limited to disturbance of bottom habitat during construction and demolition activities. These activities would cause sediment resuspension, indirectly affecting red hake through a temporary loss of foraging habitat and benthic prey species. Any potential impact would be limited to winter and spring, when juveniles and adults are more likely to occur in the inshore waters of the Hudson-Raritan estuary. Because few red hake have been collected near the project area and no eggs or larval red hake have been reported, the proposed bridge construction and demolition is expected to have a negligible impact on EFH of this species.

4.3.5 Windowpane Flounder

Newark Bay is designated as EFH for all life stages of windowpane flounder (Attachment F-2). Windowpane flounder occur at all depths in estuaries of the Mid-Atlantic Bight, including the NY/NJ Harbor, with juveniles and adults seasonally most abundant in deeper channels occurring over mud or fine-grained sand (Chang et al. 1999). Spawning adults, eggs, and larvae are often observed from February to December, with a spring spawning event (peak in May) in the polyhaline portion of estuaries and a fall-spawning event (peak in October) in offshore waters of the continental shelf. Eggs and larvae are concentrated in the mid to upper water column, and juveniles and adults prefer bottom habitats of mud or fine-grained sand. Larvae are pelagic, settling to the bottom at approximately 10-20 mm TL, and occur in the brackish portion of the estuary, primarily in spring (Able and Fahay, 1998). Juveniles, adults and spawning adults are typically found on bottom habitats with water temperatures below 21°C, salinity between 5-36 ppt and water depths between 1-75 meters. Eggs and larvae are respectively found in surface and pelagic waters with temperatures below 20°C.

Windowpane flounder eggs, larvae and juveniles were caught during ichthyoplankton studies performed in Newark Bay from 1999-2006, with eggs being the most abundant life stage caught (USACE 2003, 2004, 2005, 2006). Small numbers of juvenile and adult windowpane flounder were caught in every month of the year during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.25% of the overall

catch. Five juvenile windowpane flounder were caught in mid-water trawls targeting pelagic species in Newark Bay (USACE 2015).

Potential Project Effects on Windowpane Flounder EFH

All windowpane flounder life stages are expected to occur within Newark Bay. Potential impacts to windowpane flounder EFH include the temporary loss of spawning and nursery habitat during the spring-spawning season from increased turbidity and displacement from cofferdam areas. As windowpane eggs and larvae are pelagic, they would not be expected to remain in the project area for very long. No significant impact to spawning habitat is expected because this species typically spawns in deeper areas of the Hudson-Raritan estuary such as the Lower Bay. Impacts to windowpane flounder juvenile and adult EFH include temporary foraging habitat loss and impaired sight-feeding resulting from turbidity and sedimentation increases due to cofferdam and trestle pile installation and removal, barge spuds and vessel propeller wash, though a significant portion of windowpane flounder's prey is pelagic and would be less affected. Windowpane flounder are highly mobile and would likely move to undisturbed areas during construction activities. Natural sedimentation and subsequent recolonization by benthic invertebrates and other prey are expected to occur within a year following bridge construction. Juveniles and adults would also permanently lose access to around 5.002 acres of intertidal and subtidal bay bottom. However, the area of impact is relatively small compared to the available intertidal and subtidal habitat in Newark Bay. Adopting the NMFS/FHWA time of year restrictions for winter flounder and diadromous species (i.e., placement and removal of cofferdams and trestle piers between July 1 and December 31) would allow construction and demolition work to proceed year-round and would be protective of the windowpane flounder spring spawning period. Impacts to windowpane flounder EFH from the proposed project are expected to be primarily temporary and minor.

4.3.6 Winter Skate

Newark Bay is designated as EFH for juvenile and adult winter skate (Attachment F-2). This species is typically found on sand or gravel bottoms, but has also been reported on mud bottoms (Packer et al. 2003a). Winter skates remain buried in depressions during the day and are more active at night. Winter skates can be found from shallow waters to 371 m in the Mid-Atlantic Bight, but are more abundant at depths less than 110 m. The temperature range of winter skate is generally -1 to 19°C. Winter skate can tolerate salinity ranges between 20-35 ppt but their preferred range is usually 23-32 ppt. Winter skates do not migrate extensively; however, they tend to be less abundant in the NY/NJ Harbor during summer months. Winter skate typically prey upon polychaetes, amphipods, decapods, isopods, bivalves and smaller fish such as alewives, blueback herring and butterfish (Packer et al. 2003a). Winter skate was not caught during the various Newark Bay fish community studies from 1993 to 2013.

Potential Project Effects on Winter Skate EFH

Winter skate prefer waters of relatively high salinity, so it is unlikely that this species will occur in the project area. Potential indirect impacts to winter skate EFH could result from disturbance of benthic habitat and prey species. Winter skates, if present, may avoid the area to forage in undisturbed habitat. These indirect impacts would be temporary and limited to the area of bottom disturbance. Given the limited extent of the impact area and the relatively low likelihood of winter skates to be present in Newark Bay, impacts to winter skate EFH from the proposed project are expected to be negligible.

4.3.7 Clearnose Skate

Newark Bay has been designated as EFH for juvenile and adult clearnose skate (Attachment F-2). Clearnose skates prefer soft bottom habitats, but can also be found on rocky or gravelly bottoms. Juveniles and adults are most abundant inshore in the summer months and less abundant in the cooler months of autumn, winter and spring. Bigelow and Schroeder (1953) reported clearnose skate occurring off New Jersey and New York from late April to November. In the Hudson Raritan Estuary, juveniles mostly occur at depths of 5 to 7 meters,

temperatures between 13 and 24°C, and salinities ranging from 21 to 31 ppt (Packer et al. 2003). Adults in the estuary mostly occur at depths of 5 to 8 meters, temperatures between 9 and 24°C, and salinities ranging from 25 to 30 ppt. Common prey items include polychaetes, amphipods, mysid shrimp, crab and fish including butterfish, scup (*Stenotomus chrysops*) and weakfish (*Cynoscion regalis*) (Bowman et al. 2000). Only one clearnose skate was caught during the various Newark Bay fish community studies from 1993 to 2013.

Potential Project Effects on Clearnose Skate EFH

Since clearnose skate prefer waters of relatively high salinity, it is unlikely that this species will occur in the project area. The average salinity of the project area is well below the preferred salinity range of this species in the Hudson Raritan Estuary. Clearnose skates, if present, may avoid the area to forage in undisturbed habitat during construction and demolition activities. Given the limited extent of the impact area and the relatively low likelihood of this species to be present in Newark Bay, impacts to clearnose skate EFH from the proposed project are expected to be negligible.

4.3.8 Longfin Inshore Squid

EFH has been designated for eggs of the longfin inshore squid in Newark Bay (Attachment F-2). The longfin inshore squid is a schooling molluscan species distributed in continental shelf and slope waters from Newfoundland to the Gulf of Venezuela and occurs in commercial abundance from southern Georges Bank to Cape Hatteras (Jacobson, 2005). Longfin inshore squid migrate offshore during late autumn and overwinter in warmer waters along the edge of the continental shelf, returning inshore during the spring and early summer. Spawning has been reported from late spring to early summer in the Middle Atlantic. Egg masses are commonly found attached to rocks and small boulders on sandy/muddy bottom and on aquatic vegetation, such as Fucus spp., *Ulva lactuca*, *Laminaria* spp. and *Porphyra* spp. The eggs are demersal, are generally laid in waters < 50 m and are found at temperatures of 10-23° C and salinities of 30-32 ppt Development time varies from 10 to 27 days, depending on water temperature. The larvae are pelagic near the surface and occur at temperatures of 10-26° C and salinities of 31.5-34.0 ppt.

One longfin inshore squid was caught in Newark Bay in a navigational channel in July 1993 during a USACE trawl survey (USACE 1997). Ichthyoplankton studies within Newark Bay have not caught the planktonic larval stage of this species.

Potential Project Effects on Longfin Inshore Squid EFH

The seaweeds *Fucus* spp., and *Ulva lactuca* occur in areas of hard substrate (riprap, bulkheads, debris) within Newark Bay and may provide habitat for egg mass attachment, however substrates in the NBB area are silt-sand dominant. The bridge piers themselves may support the appropriate aquatic vegetation for eggs, so bridge construction and demolition may potentially result in a temporary loss of egg habitat. However, the typical salinity ranges in Newark Bay are below 30 ppt, whereas the salinity ranges described in the EFH Source Document (Jacobson, 2005) for longfin inshore squid eggs and larvae are above 30ppt. Any impacts to longfin inshore squid from the project are expected to be negligible.

4.3.9 Bluefish

Newark Bay is designated as EFH for juvenile and adult stages of bluefish (Attachment F-2). Juveniles are pelagic, using estuaries as nursery areas, and can be found over sand, mud, silt, or clay substrates (Fahay et al. 1999). Juveniles typically inhabit estuaries from May to October, preferring temperatures between 19-24°C, and salinities between 23-36 ppt. Juveniles have been reported to intrude into waters with salinities as low as 3 ppt. Juvenile bluefish prey upon polychates, shrimp, and forage fish including bay anchovy, menhaden, and river herring.

Adults travel in pelagic schools and are generally not associated with bottom habitats. They prefer temperatures between 18-22 °C, and salinity above 25 ppt. Adults are highly migratory and seasonally occur in NY/NJ Harbor from April to October. Bluefish adults generally migrate in warm waters, moving north to the New York Bight and southern New England during the spring and summer and to the South Atlantic Bight and/or offshore during the fall and winter (Shepherd and Packer 2006). Adults feed on a wide variety of available forage fish, such as bay anchovy, menhaden and river herring (alewife and blueback herring).

Small numbers of bluefish were caught from May through October during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.29% of the overall catch, however as bluefish are pelagic, bottom trawling is not an effective means of sampling for this species. Bluefish was the sixteenth most common fish caught in USACE mid-water trawls in Newark Bay in the spring months, moving up to sixth most common fish caught in the summer and fall months (USACE 2015).

Potential Project Effects on Bluefish EFH

Relatively low abundance of bluefish in Newark Bay bottom trawl surveys is indicative of the pelagic lifestyle of this species. The seasonal occurrence and pelagic behavior of bluefish and their prey greatly limits bridge construction and demolition impacts on EFH. Adopting the NMFS/FHWA time of year restrictions for winter flounder and diadromous species (i.e., placement and removal of cofferdams and trestle piers between July 1 and December 31) would allow construction and demolition work to proceed year-round and would be protective of migrating river herring which are important forage species for juvenile and adult bluefish. Impacts on bluefish EFH from the proposed project are expected to be negligible.

4.3.10 Atlantic Butterfish

Newark Bay is designated as EFH for larval Atlantic butterfish (Attachment F-2). Butterfish range from Nova Scotia to Florida along the Atlantic coast and are euryhaline (5-32 ppt) and eurythermal (4-21°C) (Cross et al. 1999). Butterfish migrate seasonally between offshore waters in the southern part of their range during winter and coastal waters in the northern part of their range during the summer. Spawning occurs primarily over continental shelf waters in the Mid Atlantic Bight between May and October, although some eggs and larvae have been collected in coastal and estuarine waters (Able and Fahay, 1998).

Larvae are typically found at temperatures between 9-19 °C, depths greater than 10 meters, and salinity ranging between 6-37 ppt. Juveniles and adults are typically found over sandy and muddy substrates at temperatures between 3-28 °C, depths greater than 10 meters, and salinity ranging between 4-26 ppt.

Larval, juvenile, and adult butterfish are pelagic, occurring in the Hudson-Raritan estuary during warmer summer months in both shallow and deeper bay waters. Juveniles form loose schools often near the surface, and are found over a range of sand, mud and mixed fine grain substrates. During the summer, butterfish have been reported over shallow flats, in sheltered bays, estuaries, and the surf zone. Larger juveniles and adults may congregate near the bottom during the day and move upward at night. Prey species include small fishes and crustaceans such as copepods, amphipods, decapods and polychaetes (Cross et al. 1999).

Only one butterfish larva was caught during ichthyoplankton studies performed in Newark Bay from 1999-2006 (USACE 2003, 2004, 2005, 2006). Small numbers of butterfish were caught from May through December during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.26% of the overall catch, however as butterfish are pelagic, bottom trawling is not an effective means of sampling for this species. Juvenile and adult Atlantic butterfish was the ninth most common fish caught in mid-water trawls in Newark Bay in the spring months, moving up to the second most common fish caught in the summer months and moving down to tenth most common fish caught in the fall (USACE 2015).

Potential Project Effects on Atlantic Butterfish EFH

Water temperature and salinity ranges in Newark Bay are within the ranges preferred by larval Atlantic butterfish, however most of the bay is shallower than the 10+ meter depth preference of this life stage. Larvae have been virtually absent from ichthyoplankton collections in Newark Bay. Bridge construction and demolition will likely cause periods of increased turbidity and sedimentation as sheetpile cofferdams and trestle piles are installed and removed, but as larvae are pelagic and benthic organisms comprise only a portion of butterfish diets, potential impacts would be temporary and limited to areas of active construction. Therefore, any potential impacts to Atlantic butterfish EFH from the proposed project would be negligible.

4.3.11 Summer Flounder

Newark Bay is designated as EFH for larval, juvenile, and adult stages of summer flounder (Attachment F-2). The study area does contain some summer flounder HAPC, in the form of *Spartina alterniflora* marshes and the NBB bridge piers and other hard substrate likely support macroalgae. In the New York Bight, summer flounder usually occupy inshore regions during the warmer months and move offshore for the winter season. Summer flounder can camouflage themselves to match the surrounding substrate, to avoid predation and conceal themselves from prey. They feed by sight and are most active during daylight hours. Summer flounder larvae and juveniles are opportunistic feeders but primarily feed on microcrustaceans and small polychaetes (Packer et al. 1999). Adult prey includes shrimp, mysids, anchovies (Anchoa spp.) and Atlantic silversides.

The pelagic larvae are found over the inner and outer continental shelf, and are transported to estuarine nursery areas by currents. Larvae occur across a wide range of salinities, but are most often captured in the higher salinity portions of estuaries. Larvae are most abundant between 9 and 18°C and at depths from 10 to 70 meters in the Mid Atlantic Bight.

Juveniles move into shallow bays and estuaries for the spring, summer and autumn months, and are usually found in depths of 0.5 to 5.0 meters, using these areas as nursery habitat. Juveniles can be found on mud and sand substrates in flats, channels, salt marsh creeks, and eelgrass beds. Juvenile summer flounder are tolerant of the wide ranges of temperature and salinity of estuarine habitats, and can withstand temperatures from 3 to 27°C and salinities from 10 to 30 ppt (Packer et al. 1999).

Adult summer flounder are found offshore during colder months on the outer continental shelf. Adults usually return inshore to coastal waters of the New York Bight in April, and reach their peak abundance during the warm summer months of July and August (Packer et al. 1999). They are often found in the high salinity portions of estuaries, and have been reported as preferring sandy habitats, but can be found in a variety of habitats with both mud and sand substrates, including marsh creeks, seagrass beds, and sand flats. Similar to juveniles, adults can tolerate a wide range of temperatures.

Small numbers of summer flounder larvae were caught during ichthyoplankton studies performed in Newark Bay from 1999-2006 (USACE 2003, 2004, 2005, 2006). Small numbers of summer flounder were caught from May through December during the various Newark Bay fish community studies from 1993 to 2013, accounting for 0.42% of the overall catch.

Potential Project Effects on Summer Flounder EFH

As summer flounder larvae are pelagic, short-term increases in turbidity and sedimentation from bridge construction and demolition are not expected to significantly impact EFH of this life stage. Impacts to summer flounder juvenile and adult EFH include temporary foraging habitat loss and impaired sight-feeding resulting from turbidity and sedimentation increases due to cofferdam and trestle pile installation and removal, barge spuds and vessel propeller wash. However, summer flounder are highly mobile and would likely move to undisturbed areas during construction activities. Natural sedimentation and subsequent recolonization by benthic invertebrates and other prey are expected to occur within a year following bridge construction. Juveniles and adults would also permanently lose access to approximately 5.002 acres of intertidal and subtidal

bay bottom. The area of impact is relatively small compared to the available intertidal and subtidal habitat in Newark Bay. HAPC for summer flounder that is present in the NBB area includes macroalage in shallow areas of hard substrate and *Spartina alterniflora* marshes along the western shore that would be temporarily and permanently impacted by bridge construction and demolition. Temporary wetland losses in this area would be 0.185 acres due to cofferdam and trestle pile installation, and permanent losses would be 1.055 acres due two new pier footings and one fender, and permanent access underneath the bridge structure for maintenance, inspections and security. Wetland mitigation plans are only developed conceptually at this time via the purchase of credits from a wetland mitigation bank, but would mitigate for permanent impacts to wetlands as required under state and federal regulations. Taking into consideration the wetland mitigation, impacts to summer flounder EFH are expected to be primarily temporary and minor.

4.4 Forage Species

A number of forage species occur in Newark Bay and its tributaries. While EFH has not been designated for many forage species, impacts to these species can affect habitat for EFH-designated species which rely on them as a food source. In order to assess impacts to EFH through adverse effects on forage species, potential project impacts to four representative forage species commonly found in Newark Bay (i.e., bay anchovy, Atlantic menhaden, blueback herring and alewife) are discussed below. Figure 2 portrays the relative abundance of these migratory species from spring to fall in the Newark Bay area.

4.4.1 Bay Anchovy

The bay anchovy is a schooling species and is one of the most abundant species in Atlantic coast estuaries. As such, it is an extremely important prey resource for larger, predatory fishes. Bay anchovy are widely distributed throughout the lower Hudson River estuary and its tidal tributaries. Dovel (1981) collected bay anchovies within the Hudson River Estuary in water temperatures from 2 to 27 ºC and salinities ranging from 25-30 ppt. Bay anchovy was the second most common fish caught in mid-water trawls in Newark Bay in the spring, and the most commonly caught in the summer and fall months (USACE 2015). Bay anchovy accounted for 98% of all fish collected during the USACE migratory finfish survey and were collected during every season and from all New York/New Jersey harbor regions.

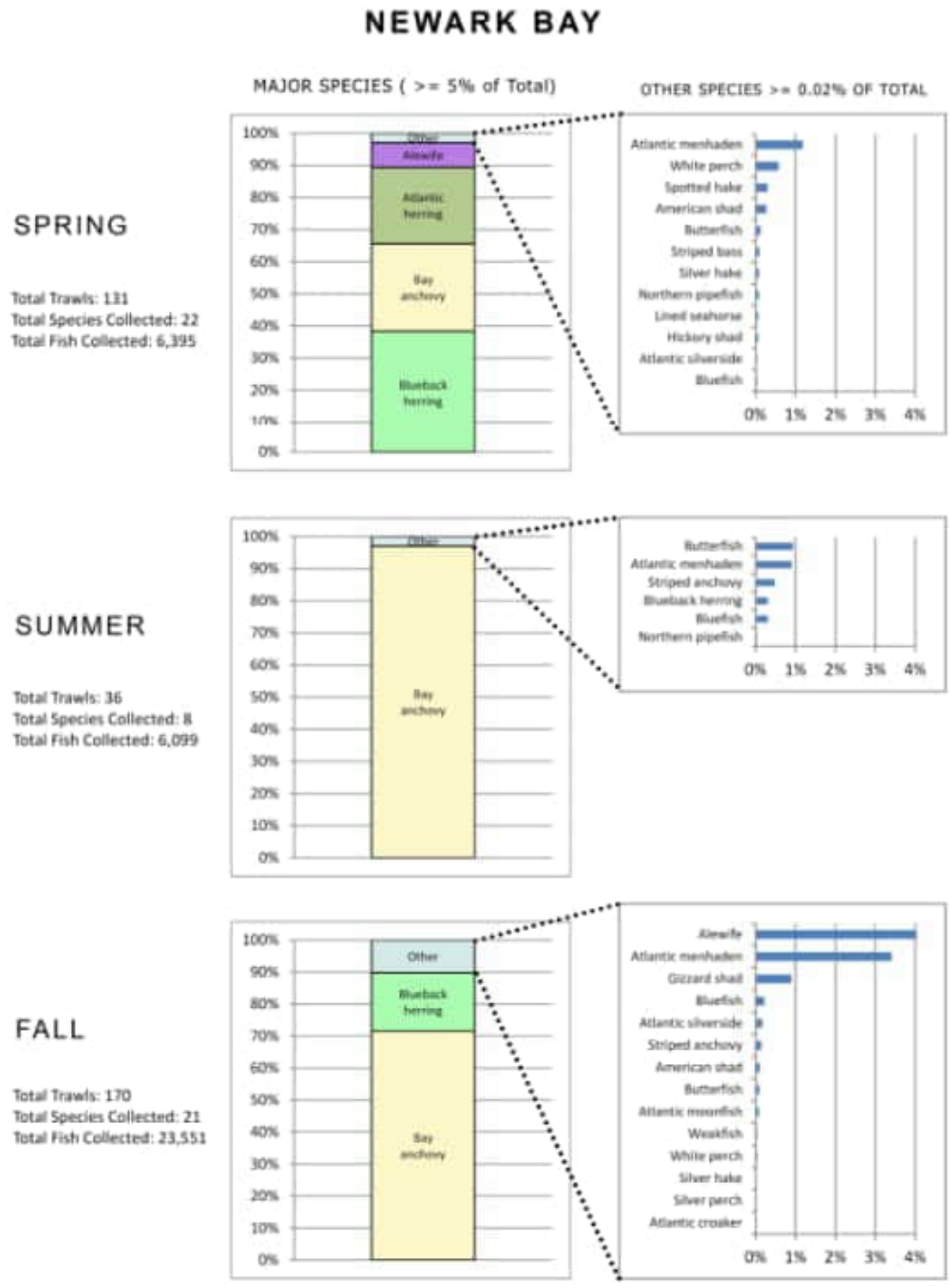


Figure 2. Mid-water finfish collections from the Newark Bay Harbor region 2006-2013 (USACE 2015)

Potential impacts to bay anchovy may result from increases in turbidity from cofferdam and trestle pile installation and removal. Bay anchovy are planktivorous and increased turbidity in the vicinity of construction could impair feeding efficiency. However, bay anchovy are highly mobile fish that occur in often turbid estuary habitats. Because of their pelagic nature, potential impacts to this forage species from the proposed project are expected to be short-term and minimal.

4.4.1 Atlantic Menhaden

The Atlantic menhaden, locally referred to as "bunker" is a seasonally abundant herring, occurring in large schools in coastal bays and estuaries. Atlantic menhaden migrate seasonally along the Atlantic coast, moving north through the mid-Atlantic Bight during Spring and south during Fall to overwinter in waters south of Cape Hatteras (Able and Fahay, 1998). Atlantic menhaden spawn in continental shelf waters and the lower reaches of estuaries and coastal bays along the U.S. Atlantic coast (Dovel, 1971). Large schools of juvenile menhaden use estuaries as nurseries during the summer before migrating offshore in the fall. Adult menhaden have a broad temperature range of 0 to 25°C, and a wide salinity range of <1 to 36 ppt (Ahrenholz et al. 1989). Adults are strictly filter feeders, grazing on phytoplankton and small zooplankton (Ahrenholz et al. 1987). Juvenile and adult Atlantic menhaden are seasonally abundant throughout NY/NJ Harbor and were the fifth most caught fish in Newark Bay in the spring, increasing to third most caught fish in summer, and fourth most caught species in fall in USACE's mid-water migratory fish surveys (USACE 2015).

Potential impacts to Atlantic menhaden may result from increases in turbidity from cofferdam and trestle pile installation and removal. This species is largely planktivorous and increased turbidity caused by construction could impair feeding efficiency. However, this highly mobile species regularly experiences the often turbid conditions of estuaries and can avoid areas of increased turbidity. Because of their pelagic nature, potential impacts to Atlantic menhaden from the proposed project are expected to be short-term and minimal.

4.4.2 River Herring

River herring (alewife and closely related blueback herring) are anadromous species with similar distributions, ecological roles and environmental requirements. The alewife, an anadromous species, inhabits waters from the Gulf of Saint Lawrence to South Carolina, occurring primarily between the Gulf of Maine and the Chesapeake Bay. Adult alewives enter the NY/NJ Harbor between late-February and mid-March moving upstream to spawn in freshwater tributaries in relatively shallow water with slow currents (Schmidt et al. 1988; Everly and Boreman 1999). Alewives typically spawn three to four weeks before blueback herring (Loesch 1987 in ASMFC 2009), when water temperatures rise to approximately 10°C. Alewife larvae and juveniles remain in their freshwater nurseries until late May or June before moving downstream as young-of-the-year into the lower estuary where they remain until moving into the ocean in November (Stone et al. 1994, Everly and Boreman 1999). It is generally accepted that juveniles join the adult population at sea within the first year of their lives and follow a north-south seasonal migration along the Atlantic coast, similar to that of American shad (Neves 1981). Alewife was the fourth most common fish caught in mid-water trawls in Newark Bay in the spring but was infrequently caught in summer after the spawning run had passed through the bay, and then were the third most caught fish in the fall in USACE's mid-water migratory fish surveys (USACE 2015).

Blueback herring inhabit coastal and estuarine waters from Nova Scotia to Florida, with concentrations in the Middle and South Atlantic Bight. In general, blueback herring have a more southern distribution than alewife (Mullen et al. 1986). Similar to alewife, blueback herring are present in coastal ocean waters prior to entering estuaries on their annual spawning runs during the spring (Schmidt et al. 1988). Prior to the spawning run, adult blueback herring stage in estuaries at the mouth of natal rivers in March and early April when water temperatures are approximately 4-9 °C (Loesch and Lund 1977, Able and Fahay 2010). Adult blueback herring enter the Hudson-Raritan Estuary in early March prior to their migration to spawning areas from May to July (Stone et al. 1994). Adult blueback herring swim at mid-water depths and have been documented to feed during their freshwater migration (Monroe 2000). The blueback herring spawning period usually begins about a month later than that of alewife (Loesch 1987) and they prefer deep freshwater habitats with swift currents over hard

gravel or sand substrates (Loesch and Lund 1977, Everly and Boreman 1999). After spawning, blueback herring move into the lower estuary and coastal ocean waters, although a few adults may remain in the estuary through winter (Stone et al. 1994). Juvenile blueback herring begin migrating downstream to the estuary at the end of summer, approximately a month after American shad and alewife (Marcy 1976, Monroe 2000 and references therein). By the end of November, juveniles have typically returned to the ocean, though some evidence of juvenile overwintering in estuaries has been reported in New Jersey and the lower Connecticut River (Monroe 2000 and references therein). Aside from a few juveniles overwintering within estuaries during their first year, researchers assume that most juveniles join the adult population at sea within the first year of their lives and follow a north-south seasonal migration along the Atlantic coast, where changes in temperature likely drive oceanic migration (Neves 1981). Blueback herring was the most common fish caught in mid-water trawls in Newark Bay in the spring, decreasing to fifth most common fish in summer and increasing to second most common fish caught in the fall months (USACE 2015).

Potential impacts to river herring may result from increases in turbidity from cofferdam and trestle pile installation and removal. River herring are planktivorous and do feed on their springtime upstream migration, so turbidity increases could impair feeding efficiency. Adopting the NMFS/FHWA time of year restrictions for winter flounder and diadromous species (i.e., placement and removal of cofferdams and trestle piers between July 1 and December 31) would allow construction and demolition work to proceed year-round and would be protective of springtime upstream migration of river herring. As cofferdams and trestle piles would not substantially block the waterway, the fall time of year restriction would not be warranted. Impacts to river herring from the proposed project are expected to be short-lived and negligible.

5 Assessment Conclusion

Review of the life histories of the EFH-designated species for the NBB project area and indicates that the habitat, water quality and other environmental conditions support most of these species and life stages. This is supported by fisheries surveys documenting most of the species and life stages that NOAA Fisheries designates Newark Bay as EFH for. Adults of the EFH-designated species winter flounder and windowpane flounder were caught in every month of the year in Newark Bay and eggs, larvae and juveniles of both species have been caught there. Summer flounder larvae, juveniles and adults have been caught on a seasonal basis. Little skate, Atlantic herring, red hake, clearnose skate, bluefish, and Atlantic butterfish are seasonally present in the Newark Bay area. Longfin inshore squid may be seasonally present in Newark Bay, but early life stages have not been caught.

Recent mid-water trawl surveys (USACE 2015) identified considerable presence of pelagic species that some EFH-designated species (i.e., bluefish) prey on. These pelagic forage species are poorly represented in bottom trawls more historically used to sample the Newark Bay fish community. Bay anchovy and Atlantic menhaden are seasonally abundant in Newark Bay and alewife and blueback herring annually pass through Newark Bay on their spring spawning runs.

5.1 Temporary Impacts

Temporary impacts to EFH would total approximately 15.823 acres of tidal waters and wetlands, split between 10.374 acres of subtidal shallows and open waters and 5.449 acres of tidal wetlands. This includes a tidal wetland connected via culvert to the east bank Newark Bay, which would experience temporary impacts of 0.224 acres for construction access, and 0.010 acres for the placement of cofferdams around new bridge piers; however, Wetland DFG is connected to the Newark Bay via culvert and does not likely provide suitable habitat for most species found in tidal water column and benthic habitats. Within Newark Bay, temporary impacts to surface waters include 2.02 acres for the placement of cofferdams around the new and existing bridge pier footings and fenders and 8.354 acres for the construction trestle. Within tidal wetlands of Newark Bay, temporary impacts would include 0.653 acres for the placement of cofferdams around the new and existing bridge pier footings and fenders 4.175 acres for the construction trestle, and 0.621 acres for construction access

and staging areas. These impacts to Newark Bay and its tidal wetlands would last for the for the duration of construction, or around seven years, but would not be simultaneous because of construction sequencing.

Additional temporary impacts would result from the installation and removal of cofferdam sheetpiles, construction trestle pipe piles, spud barge movements and associated vessel propeller wash in the shallow waters of Newark Bay. Small turbidity increases are expected to occur during construction from these activities which in turn may impact some EFH-designated species that are sensitive to water quality fluctuations. Flounder species are particularly susceptible to bay bottom disturbance because of their demersal habitat preference and dependence on benthic forage species. Winter flounder eggs, which are demersal, adhesive, and stick together in cluster are particularly susceptible to burial from sediment resuspension and deposition. However, turbidity in Newark Bay is naturally highly variable, depending on freshwater inflow, strong tidal currents, storms, and other factors.

Other EFH-designated species (little skate, Atlantic herring, red hake, clearnose skate, bluefish, and Atlantic butterfish) are less demersal or fully pelagic and are only seasonally present in the Newark Bay area. Pelagic species, including forage species of EFH-designated species are expected to resume use of temporarily lost portions of the water column following bridge construction and demolition. Any temporary impacts to pelagic species from the proposed project are expected to be negligible.

Upon completion of bridge construction, areas of water column and benthic habitat occupied by cofferdams and trestle piles will be available to all fish species. A total of 2.02 acres of benthic habitat temporarily lost due to cofferdam placement would be devoid of benthic forage species after cofferdam removal. Substrates around the new bridge piers and in areas where the existing NBB piers were removed would be recolonized by mobile organisms from adjacent unaffected areas and by natural recruitment. Recovery of the natural benthic assemblage to baseline conditions of abundance, biomass, and community composition should occur within 1-5 years in most cofferdam areas where sediment type and hydrodynamics are remains unchanged (Newell et al. 1998). The presence of the new bridge piers will alter hydrodynamics in the immediate area around each bridge pier, so sediments may be coarser adjacent to piers due to lack of settlement of silt particles and a different benthic community composition may result in these areas. Areas of pier removal would be backfilled to adjacent grades with sand and would become naturally recolonized over time. Areas of salt marsh temporarily impacted by construction trestles and cofferdams would be regraded to original elevations and replanted with native salt marsh species. Permit-mandated monitoring would ensure that restored salt marsh areas meet performance standards.

5.2 Permanent Impacts

Permanent impacts to EFH would total approximately 5.853 acres of tidal waters and wetlands, split between of 2.045 acres of subtidal shallows and open waters and 3.808 acres of tidal wetlands, and resulting from bridge piers footings and fenders, and permanent access underneath the bridge structure for maintenance, inspections and security. The removal of the existing NBB bridge footings will result in the gain of 0.817 acres of tidal waters, and 0.034 acres of tidal wetlands, for a net permanent habitat loss of 5.002 acres of intertidal and subtidal bay bottom. Flounder species would likely be the EFH-designated species most affected by the loss of bay bottom, as flounders are largely demersal and require this habitat for shelter and foraging. Winter flounder also require fine-grained bottom habitat for spawning. However, the area of loss is relatively small compared to the overall area of intertidal and subtidal shallows available in Newark Bay. The loss of bay bottom would be somewhat offset by the habitat functions provided by the new bridge piers. The intertidal and subtidal surfaces of the new bridge piers will provide hard substrate for the epibenthic fouling estuarine community, such as mussels, barnacles, and tunicates etc., and will likely support algae, and will function as fish habitat for pelagic and structure-oriented fish species.

5.3 Impact Avoidance, Minimization and Mitigation

Fisheries data for Newark Bay indicate considerable usage by all life stages of winter flounder and diadromous runs of blueback herring, alewife and other species. Observance of the NMFS/FHWA in-water Time of Year restrictions from January 1 to June 30 for New Jersey (Table 2) would minimize turbidity-related impacts to winter flounder spawning in the project area and river herring migration through Newark Bay to upstream freshwater spawning habitat. Work could proceed within cofferdams installed outside of this restriction period. Project construction would not substantially block Newark Bay in the fall, so the diadromous fish restriction from September to November 30 may not be warranted. Submerged aquatic vegetation is not present in Newark Bay. The overwintering blue crab and striped bass restriction period from November 15 to April 15 would be substantially protected by observing the winter flounder and diadromous fish restriction periods from January 1 to June 30.

BMPs will be used to avoid and minimize impacts to EFH as specified in the project permit requirements. These practices are expected to include the following: constructing and demolishing bridge piers within cofferdams to reduce sediment and contaminant resuspension; vibratory pile-driving of sheetpile cofferdams and use of turbidity booms and/or air bubble curtains to minimize noise generation and sediment resuspension and escapement; and installation of trestle piers within casings using compressed air to reduce noise transmission to surrounding waters. Potential soil stockpile erosion into Newark Bay will be minimized through the use of standard BMPs, including fabric lined silt fences or hay bales of hay.

Salt marsh adjacent to the NBB are designated as HAPC for summer flounder. Impacts to larvae could include loss of individuals during construction (direct impact), and increased turbidity and reduced water quality (indirect impacts) that would affect habitat condition and feeding. These impacts would be located along the western shoreline of Newark Bay where approximately 1.055 acres of permanent impacts would occur due two new pier footings and one fender, and permanent access underneath the bridge structure for maintenance, inspections and security, and 0.185 acres of temporary impacts would occur to tidal marsh habitat due to cofferdam and trestle pile installation to staging areas, cofferdam sheeting around pier footings, stormwater basin access buffers, and trestle piles.

However, there is no region-wide mapping of summer flounder EFH and GARFO indicates that local sources and on-site surveys may be needed to identify submerged aquatic vegetation beds (GARFO 2021). The tidal wetland connected to the eastern shore of Newark Bay via culvert the within the infield areas of Route 440 would not likely provide this habitat. However, due to its, Direct impacts within Newark Bay are expected to be minor because juvenile and adults are mobile and would likely move from the study area due to disruptions from construction. Thus, future surveys would be performed to delineate the extent of vegetated shallows within the limits of the Proposed Action identified on preliminary design plans. Following construction, temporarily impacted tidal wetlands would be graded to appropriate elevations, replanted with native salt marsh species and would be subjected to permit-mandated monitoring to ensure restoration success. Permanent losses of salt marsh would be mitigated at a 3:1 ratio through the restoration of these habitat types within the watershed.

6 Literature Cited

Able, K.W., and F.P. Fahay. 1998. The First Year in the Life of Estuarine Fishes in the Middle Atlantic Bight. Rutgers University Press, New Brunswick, NJ.

Able, K.W., and M.P. Fahay. 2010. Ecology of Estuarine Fishes: Temperate Waters of the Western North Atlantic. Johns Hopkins University Press. 566 pp.

Ahrenholz, D.W., W.R. Nelson, and S.P. Epperly. 1987. Population and fishery characteristics of Atlantic menhaden, *Brevoortia tyrannus*. Fishery Bulletin 85:569-600.

Ahrenholz, D.W, J.F. Guthrie, and C.W. Krouse. 1989. Results of abundance surveys of juvenile Atlantic and Gulf menhaden *Brevoortia tyrannus* and *B. patronus*. NOAA Technical Memorandum NMFS No. 84.

Anthony, V.C. 1982. Atlantic Herring, *Clupea harengus*. MESA (Mar. Ecosyst. Anal.) New York Bight Atlas Monographs 15:63-65.

ASMFC (Atlantic States Marine Fisheries Commission). 2009. Amendment 2 to the Interstate Management Plan for Shad and River Herring (River Herring Management).

Bowman, R.E., C.E. Stillwell, W.L. Michaels, and M.D. Grosslein. 2000. Food of northwest Atlantic fishes and two common species of squid. NOAA Technical Memorandum NMFS-F/NEC-45.

Chang S., P.L. Berrien, D.L. Johnson, and W.W. Morse. 1999. Essential Fish Habitat Source Document: Windowpane, *Scophthalmus aquosus*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-137.

Cross J.N., C.A. Zetlin, P.L. Berrien, D.L. Johnson, and C. McBride. 1999. Essential Fish Habitat Source Document: Butterfish, *Peprilus triacanthus*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-145.

Dovel, W.L. 1971. Fish eggs and larvae of the upper Chesapeake Bay. University of Maryland Natural Resources Institute Contribution No. 460, Special Science Report No. 4.

Dovel, W.L. 1981. Ichthyoplankton of the lower Hudson River Estuary, New York. New York Fish and Game Journal 28:21-39.

Everly, A.W., and J. Boreman. 1999. Habitat Use and Requirements of Important Fish Species Inhabiting the Hudson River Estuary: Availability of Information. NOAA Technical Memorandum NMFS-NE-121.

Fahay M.P., P.L. Berrien, D.L. Johnson, and W.W. Morse. 1999. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-144.

Jacobson, Larry D. 2005. Essential Fish Habitat Source Document: Longfin Inshore Squid, *Loligo pealeii*, Life History and Habitat Characteristics, Second Edition. NOAA Technical Memorandum NMFS-NE-193.

Lawler, Matusky, and Skelly Engineers (LMS). 1996. Biological Survey of Newark Bay Shoal Areas and Kill Van Kull and Arthur Kill Channels. Prepared for the Port Authority of New York and New Jersey, New York, NY.

Loesch, J.G., and W.A. Lund. 1977. A contribution to the life history of the blueback herring, *Alosa aestivalis*. Transactions of the American Fisheries Society 106:583-589.

Loesch, J.G. 1987. Overview of life history aspects of anadromous alewife and blueback herring in freshwater habitats. Pp. 89-103 in M. J. Dadswell, R. J. Klauda, C. M. Moffitt, and R. L. Saunders, eds. Common strategies of anadromous and catadromous fishes. American Fisheries Society Symposium 1. Bethesda, Maryland.

Marcy, B.C., Jr. 1976. Fishes of the lower Connecticut River and the effects of the Connecticut Yankee plant. Pp. 61-114 in D. Merriman, and L. M. Thorper, eds. The Connecticut River ecological study: The impact of a nuclear power plant. American Fisheries Society Monograph No. 1, Bethesda, Maryland.

Monroe, T.A. 2000. An Overview of the Biology, Ecology, and Fisheries of the Clupeoid Fishes Occurring in the Gulf of Maine. Northeast Fisheries Science Center Reference Document 00-02. March 2000.

Mullen, D.M., C.W. Fay, and J.R. Moring. 1986. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (North Atlantic) – alewife/blueback herring. U.S. Fish and Wildl. Serv. Biol. Rep. 82(11.56). U.S. Army Corps of Engineers, TR EL – 82-4. 21 pp.

Neves, R.J. 1981. Offshore distribution of alewife and blueback herring along the Atlantic coast. Fishery Bulletin 79: 473-485.

Newell, R.C., L.J. Seiderer, and D.R. Hitchcock. 1998. The impact of dredging works in coastal waters: a review of the sensitivity to disturbance and subsequent recovery of biological resources on the sea bed. Annual Reviews in Oceanography and Marine Biology 36:127-178.

New Jersey Department of Environmental Protection/New Jersey Department of Health (NJDEP/NJDOH), 2021. Fish Smart, Eat Smart - A Guide to Health Advisories for Eating Fish and Crabs Caught in New Jersey Waters. https://www.nj.gov/dep/dsr/fish-advisories.pdf

National Oceanic and Atmospheric Administration (NOAA). 1994. Results of a biological and hydrographical characterization of Newark Bay, New Jersey; May 1993 – April 1994. NOAA James J. Howard Maine Science Lab. Highlands, New Jersey.

NMFS/FHWA (National Marine Fisheries Service/Federal Highway Administration). 2018. Best Management Practices (BMPs) Manual for Transportation Actions in the Greater Atlantic Region. April 2018.

Packer, D.B., S.J. Griesbach, P.L. Berrien, C.A. Zetlin, D.L. Johnson, and W.W. Morse. 1999. Essential Fish Habitat Source Document: Summer Flounder, *Paralichthys dentatus*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-151.

Packer, D.B., C.A. Zetlin, and J.J. Vitaliano. 2003a. Essential Fish Habitat Source Document: Winter Skate, *Leucoroja ocellata*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-179.

Packer, D.B., C.A. Zetlin, and J.J Vitaliano. 2003b. Essential Fish Habitat Source Document: Little Skate, *Leucoroja erinacea*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-175.

Pearcy, W.G. 1962. Ecology of an estuarine population of Winter flounder, *Pseudopleuronectes americanus* (Walbaum). II Distribution and dynamics of larvae. Yale University Bulletin of the Bingham Oceanographic Collection 18:16-37.

Pereira, J.J., R. Goldberg, J.J. Ziskowski, P.L. Berrien, W.W. Morse, and D.L. Johnson. 1999. Winter Flounder, *Pseudopleuronectes americanus*, life history and habitat characteristics. NOAA Technical Memorandum NMFS-NE-138.

Reid, E., L. Cargnelli, S. Griesbach, and D. Parker. 1998. Essential Fish Habitat Source Document: Atlantic Herring, *Clupea harengus* L., Life History and Habitat Characteristics. Components of the Proposed Atlantic Herring Fishery Management Plan. New England Fishery Management Council (NEFMC).

Schmidt, R.E., R.J. Klauda, and J.M. Bartels. 1988. Distribution and movements of the early life stages of three species of Alosa in the Hudson River, with comments on Mechanisms to reduce interspecific competition. In C.L. Smith, ed., Fisheries Research in the Hudson River, The Hudson River Environmental Society. State University of New York Press, Albany, NY. 407 pp.

Shepherd, G.R., and D.B. Packer. 2006. Essential Fish Habitat Source Document: Bluefish, Pomatomus saltatrix, Life History and Habitat Characteristics. Second Edition. NOAA Technical Memorandum NMFS-NE-198.

Steimle, F., W. Morse, P. Berrien, and D. Johnson. 1998. Essential Fish Habitat Source Document: Red Hake, *Urophycis chuss*, Life History and Habitat Characteristics. Amendment #11 to the Northeast Multispecies Fishery Management Plan. New England Fishery Management Council (NEFMC).

Stone, S.L., T.A. Lowery, J.D. Field, S.H. Jury, D.M. Nelson, M.E. Monaco, C.D. Williams, and L. Andreasen. 1994. Distribution and abundance of fishes and invertebrates in Mid-Atlantic estuaries. ELMR Rep. No. 12. NOAA/NOS Strategic Environmental Assessments.

Tierra Solutions Inc. 2013. Newark Bay Study Area Problem Formulation – Baseline Human Health and Ecological Risk Assessment. June 2013.

USACE (U.S. Army Corps of Engineers). 1987. United States Army Corps of Engineers (USACE). 1987. Feasibility Report, Navigation Study on Improvements to Existing Navigation Channels. Technical Appendices. U.S. Army Corps of Engineers, New York District, New York, NY.

USACE. 1997. Final Environmental Impact Statement on the Newark Bay Confined Disposal Facility. U.S. Army Corps of Engineers, New York District, New York, New York. April.

USACE. 1999. New York and New Jersey Harbor Navigation Study - Biological Monitoring Program. Volume 1 of 2. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2002. New York and New Jersey Harbor Navigation Project – Supplemental Sampling Program 2000-2001. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2003. New York and New Jersey Harbor Navigation Project – Aquatic Biological Sampling Program Survey Report 2001-2002. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2004. New York and New Jersey Harbor Navigation Project – Aquatic Biological Survey Report 2002-2003. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2005. New York and New Jersey Harbor Navigation Project – Aquatic Biological Survey Report 2004. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2006. New York and New Jersey Harbor Navigation Project – Aquatic Biological Survey (DRAFT) Report 2005. U.S. Army Corps of Engineers - New York District, New York, NY.

USACE. 2007. Aquatic Biological Survey Report. New York and New Jersey Harbor Deepening Project. U.S. Army Corps of Engineers, New York District, New York, New York.

USACE. 2008. Aquatic Biological Survey Report. New York and New Jersey Harbor Deepening Project. U.S. Army Corps of Engineers, New York District, New York, New York.

USACE. 2009. Aquatic Biological Survey Report. New York and New Jersey Harbor Deepening Project. U.S. Army Corps of Engineers, New York District, New York, New York.

USACE. 2012. Application of Adult and Juvenile Winter Flounder Data to Habitat Uses in New York/New Jersey Harbor. November 2012.

USACE. 2015. New York and New Jersey Harbor Deepening Project – Migratory Finfish Survey Summary Report. 2015.

Wilk, S.J., W.W. Morse, and L.L. Stehlik. 1990. Annual cycles of gonad-somatic indices as indicators of spawning activity for selected species of finfish collected from the New York Bight. Fishery Bulletin 88:775-786.ARCH2, Inc. 2001.

NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet

August 2021 rev.

Authorities

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with NOAA Fisheries on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process.

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies consult with NOAA Fisheries when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that federal agencies consider the effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under the FWCA, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not federally managed and do not have designated EFH.

It is important to note that these consultations take place between NOAA Fisheries and federal action agencies. **As a result, EFH assessments, including this worksheet, must be provided to us by the federal agency, not by permit applicants or consultants.**

Use of the Worksheet

This worksheet can serve as an EFH assessment for **Abbreviated EFH Consultations**, and as a means to provide information on potential effects to other NOAA trust resources considered under the FWCA. An abbreviated consultation allows us to determine quickly whether, and to what degree, a federal action may adversely affect EFH. Abbreviated consultation procedures can be used when federal actions do not have the potential to cause substantial adverse effects on EFH and when adverse effects could be alleviated through minor modifications.

The intent of the EFH worksheet is to provide a guide for determining the information needed to fully assess the effects of a proposed action on EFH. In addition, the worksheet may be used as a tool to assist you in developing a more comprehensive EFH assessment for larger projects that may have more substantial adverse effects to EFH. However, for large, complex projects that have the potential for significant adverse effects, an **Expanded EFH Consultation** may be warranted and the use of this worksheet alone is not appropriate as your EFH assessment.

An **adverse effect** is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Consultation under the MSA is not required if there is no adverse effect on EFH or if no EFH has been designated in the project area. However, because the definition of "adverse effect" is very broad, most in-water work will result in some level of adverse effect requiring consultation with us, even if the impact is temporary or the overall result of the project is habitat restoration or enhancement. It is important to remember that an adverse effect determination is a trigger to consult with us. It does not mean that a project cannot proceed as proposed, or that project modifications are necessary. An adverse effect determination under the EFH provisions of the MSA simply means that the effects of the proposed action on EFH must be evaluated to determine if there are ways to avoid, minimize, or offset adverse effects. Additional details on EFH consultations, tools, and resources, including frequently asked questions can be found on our website.

Instructions

This worksheet should be used as your EFH assessment for **Abbreviated EFH Consultations** or as a guide to develop your EFH assessment. It is not appropriate to use this worksheet as your EFH assessment for large, complex projects, or those requiring an Expanded EFH Consultation.

When completed fully and with sufficient information to clearly describe the activities proposed, habitats affected, and project impacts, as well as the measures taken to avoid, minimize or offset any unavoidable adverse effects, this worksheet provides us with required components of an EFH assessment including:

1. A description of the proposed action.
2. An analysis of the potential adverse effects on EFH and the federally managed species.
3. The federal agency's conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable.

When completing this worksheet and submitting information to us, it is important to ensure that sufficient information is provided to clearly describe the proposed project and the activities proposed. At a minimum, this should include the public notice (if applicable) or project application and project plans showing:

- location map of the project site with area of impact.
- existing and proposed conditions.
- all in-water work and the location of all proposed structures and/or fill.
- all waters of the U.S. on the project site with mean low water (MLW), mean high water (MHW), high tide line (HTL), and water depths clearly marked.
- Habitat Areas of Particular Concern (HAPCs).
- sensitive habitats mapped, including special aquatic sites (submerged aquatic vegetation, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), hard bottom or natural rocky habitat areas, and shellfish beds.
- site photographs, if available.

Your analysis of effects **should focus on impacts that reduce the quality and/or quantity of the habitat or result in conversion to a different habitat type** for all life stages of species with designated EFH within the action area. Simply stating that fish will move away or that the project

will only affect a small percentage of the overall population is not a sufficient analysis of the effects of an action on EFH. Also, since the intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on EFH and to identify options to avoid, minimize or offset the adverse effects of that action, is it not appropriate to conclude that an impact is minimal just because the area affected is a small percentage of the total area of EFH designated. The focus of the consultation is to reduce impacts resulting from the activities evaluated in the assessment. Similarly, a large area of distribution or range of the fish species is also not appropriate rationale for concluding the impacts of a particular project are minimal.

Use the information on the our EFH consultation website and NOAA's EFH Mapper to complete this worksheet. The mapper is a useful tool for viewing the spatial distribution of designated EFH and HAPCs. Because summer flounder HAPC (defined as: " all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH") does not have region-wide mapping, local sources and on-site surveys may be needed to identify submerged aquatic vegetation beds within the project area. The full designations for each species may be viewed as PDF links provided for each species within the Mapper, or via our website links to the New England Fishery Management Councils Omnibus Habitat Amendment 2 (Omnibus EFH Amendment), the Mid-Atlantic Fishery Management Councils FMPs (MAMFC - Fish Habitat), or the Highly Migratory Species website. Additional information on species specific life histories can be found in the EFH source documents accessible through the Habitat and Ecosystem Services Division website. This information can be useful in evaluating the effects of a proposed action. Habitat and Ecosystem Services Division (HESD) staff have also developed a technical memorandum *Impacts to Marine Fisheries Habitat from Non-fishing Activities in the Northeastern United States,* NOAA Technical Memorandum NMFS-NE-209 to assist in evaluating the effects of non-fishing activities on EFH. If you have questions, please contact the HESD staff member in your area to assist you.

Federal agencies or their non-federal designated lead agency should email the completed worksheet and necessary attachments to the HESD New England (ME, NH, MA, CT, RI) or Mid- Atlantic (NY, NJ, PA, DE, MD, VA) Branch Chief and the regional biologist listed on the Contact Regional Office Staff section on our EFH consultation website and listed below.

We will provide our EFH conservation recommendations under the MSA, and recommendations under the FWCA, as appropriate, within 30 days of receipt of a **complete** EFH assessment for an abbreviated consultation. Please ensure that the EFH worksheet is completed in full and includes detail to minimize delays in completing the consultation. If we are unable to assess potential impacts based on the information provided, we may request additional information necessary to assess the effects of the proposed action on our trust resources before we can begin a consultation. If the worksheet is not completely filled out, it may be returned to you for completion. **The EFH consultation and our response clock does not begin until we have sufficient information upon which to consult**.

If this worksheet is not used, you should include all the information required to complete this worksheet in your EFH assessment. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. You may need to prepare a more detailed EFH assessment for more substantial or complex projects to fully characterize the effects of the project and the avoidance and minimization of impacts to EFH. The format of the EFH worksheet may not be sufficient to incorporate the extent of detail required for large-scale projects, and a separate EFH assessment may be required.

Regardless of the format, you should include an analysis as outlined in this worksheet for an expanded EFH assessment, along with any additional necessary information including:

- the results of on-site inspections to evaluate habitat and site-specific effects.
- the views of recognized experts on habitat or the species that may be affected.
- a review of pertinent literature and related information.
- an analysis of alternatives that could avoid or minimize adverse effects on EFH.

For these larger scale projects, interagency coordination meetings should be scheduled to discuss the contents of the EFH consultation and the site-specific information that may be needed in order to initiate the consultation.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or threatened and endangered species and the appropriate consultation procedures.

HESD Contacts*

New England - ME, NH, MA, RI, CT

Chris Boelke, Branch Chief	christopher.boelke@noaa.gov
Mike Johnson - ME, NH	mike.r.johnson@noaa.gov
Kaitlyn Shaw - ME, NH, MA	kaitlyn.shaw@noaa.gov
Sabrina Pereira -RI, CT	sabrina.pereira@noaa

Mid-Atlantic - NY, NJ, PA, MD, VA

Karen Greene, Branch Chief	karen.greene@noaa.gov
Jessie Murray - NY, Northern NJ (Monmouth Co. and north)	jessie.murray@noaa.gov
Keith Hanson - NJ (Ocean Co. and south), DE and PA, Mid-Altantic wind	keith.hanson@noaa.gov
Maggie Sager - NJ (Ocean Co. and south), DE and PA	lauren.m.sager@noaa.gov
Jonathan Watson - MD, DC	jonathan.watson@noaa.gov
David O'Brien - VA	david.l.obrien@noaa.gov

Ecosystem Management (Wind/Aquaculture)

Peter Burns, Branch Chief	peter.burns@noaa.gov
Alison Verkade (NE Wind)	alison.verkade@noaa.gov
Susan Tuxbury (wind coordinator)	susan.tuxbury@noaa.gov

***Please check for the most current staffing list on our contact us page prior to submitting your assessment.**

EFH Assessment Worksheet rev. August 2021

Please read and follow all of the directions provided when filling out this form.

1. General Project Information

Date Submitted: 12/01/2022

Project/Application Number:

Project Name: Newark Bay-Hudson County Extension Newark Bay Bridge Replacement

Project Sponsor/Applicant: New Jersey Turnpike Authority

Federal Action Agency (or state agency if the federal agency has provided written notice delegating the authority[1]): U.S. Coast Guard

Fast-41: Yes ☐ No ☐

Action Agency Contact Name:

Contact Phone: Contact Email:

Address, City/Town, State:

2. Project Description

[2]Latitude: 40.695387 Longitude: -74.118521

Body of Water (e.g., HUC 6 name): 020301

Project Purpose:

The project is the replacement of the New Jersey Turnpike Authority's Newark Bay Bridge which spans Newark Bay between Newark and Bayonne, NJ with two new bridges.

Project Description:

The Newark Bay Bridge was completed in 1956 and is now structurally deficient and functionally obsolete. The existing bridge will be replaced with two new bridges - a westbound span located north of the existing bridge and an eastbound span to be constructed in the existing bridge's approximate footprint after demolition. The new bridge piers will be constructed by the drilled shaft method and will be accessed via temporary construction trestles extending out from each shore to the new main span pier locations just outside of the navigation channel. The temporary access trestle for the new westbound bridge would be supported by 42-inch diameter steel pipe piles and is expected to be in place for a period of approximately 4 years. Once the new westbound bridge is completed, another temporary trestle would be constructed out from each shore alongside the eastbound bridge and used for both demolishing the existing NBB and constructing the new bridge within its existing footprint.

Anticipated Duration of In-Water Work including planned Start/End Dates and any seasonal restrictions proposed to be included in the schedule:

The NMFS/FHWA in-water Time of Year restrictions for New Jersey from January 1 to June 30 would be observed, which matches the USACE New Jersey Nationwide Permit Regional Conditions to protect winter flounder and diadromous fish. This would minimize turbidity-related impacts to winter flounder spawning in the project area and river herring migration through Newark Bay to upstream freshwater spawning habitat. Bridge construction is expected to occur from 2026 to 2036.

[1] A federal agency may designate a non-Federal representative to conduct an EFH consultation by giving written notice of such designation to NMFS. If a non-federal representative is used, the Federal action agency remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the Magnuson-Stevens Act. [2] Provide the decimal, or the degrees, minutes, seconds values for latitude and longitude using the World Geodetic System 1984 (WGS84) and negative degree values where applicable.

3. Site Description

EFH includes the biological, chemical, and physical components of the habitat. This includes the substrate and associated biological resources (e.g., benthic organisms, submerged aquatic vegetation, shellfish beds, salt marsh wetlands), the water column, and prey species.

Is the project in designated EFH[3]? ☑ Yes ☐ No

Is the project in designated HAPC? ☑ Yes ☐ No

Does the project contain any Special Aquatic Sites[4]? ☐ Yes ☑ No

Is this coordination under FWCA only? ☑ Yes ☐ No

Total area of impact to EFH (indicate sq ft or acres): 9.84 ac. (3.93 ac. temp + 5.91 ac. perm)

Total area of impact to HAPC (indicate sq ft or acres): 1.27 ac (0.22 ac. temp & 1.05 ac. perm)

Current range of water depths at MLW	Salinity range (PPT):	Water temperature range (°F):
0-35 feet	3-21	36-75

[3]Use the tables in Sections 5 and 6 to list species within designated EFH or the type of designated HAPC present. See the worksheet instructions to find out where EFH and HAPC designations can be found. [4] Special aquatic sites (SAS) are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. They include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle and pool complexes (40 CFR Subpart E). If the project area contains SAS (i.e. sanctuaries and refuges, wetlands, mudflats, vegetated shallows/SAV, coral reefs, and/or riffle and pool complexes, describe the SAS, species or habitat present, and area of impact.

4. Habitat Types

In the table below, select the location and type(s) for each habitat your project overlaps. For each habitat type selected, indicate the total area of expected impacts, then what portion of the total is expected to be temporary (less than 12 months) and what portion is expected to be permanent (habitat conversion), and if the portion of temporary impacts will be actively restored to pre- construction conditions by the project proponent or not. A project may overlap with multiple habitat types.

Habitat Location	Habitat Type	Total impacts ($lf/ft^2/ft^3$)	Temporary impacts ($lf/ft^2/ft^3$)	Permanent impacts ($lf/ft^2/ft^3$)	Restored to pre-existing conditions?*
Estuarine	Substrate (silt/mud)	338,436 ft2	148,856 ft2	189,579 ft2	Yes
Estuarine	Wetland (emergent)*	90,334 ft2	22,294 ft2	68,050 ft2	Yes
Select one	Select One				Select one
Select one	Select One				Select one
Select one	Select One				Select one
Select one	Select One				Select one
Select one	Select One				Select one
Select one	Select One				Select one

*Restored to pre-existing conditions means that as part of the project, the temporary impacts will be actively restored,such as restoring the project elevations to pre-existing conditions and replanting. It does not include natural restoration or compensatory mitigation.

Submerged Aquatic Vegetation (SAV) Present?:

Yes: ☐ No: ☑

If the project area contains SAV, or has historically contained SAV, list SAV species and provide survey results including plans showing its location, years present and densities if available. Refer to Section 12 below to determine if local SAV mapping resources are available for your project area.

Sediment Characteristics:

The level of detail required is dependent on your project – e.g., a grain size analysis may be necessary for dredging. In addition, if the project area contains rocky/hard bottom habitat [6](pebble, cobble, boulder, bedrock outcrop/ledge) identified as Rocky (coral/rock), Substrate (cobble/gravel), or Substrate (rock) above, describe the composition of the habitat using the following table.

Substrate Type* (grain size)	Present at Site? (Y/N)	Approximate Percentage of Total Substrate on Site
Silt/Mud (<0.063mm)	Yes	50
Sand (0.063-2mm)	No	50
Rocky: Pebble/Gravel /Cobble(2-256mm)**	Select one	
Rocky: Boulder (256-4096mm)**	Select one	
Rocky: Coral	Select one	
Bedrock**	Select one	

[6]The type(s) of rocky habitat will help you determine if the area is cod HAPC.

* Grain sizes are based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders.

** Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.

If no grain size analysis has been conducted, please provide a general description of the composition of the sediment. If available please attach images of the substrate.

Substrates in the project corridor in Newark Bay consist predominately of silty sand and sandy silt.

Diadromous Fish (migratory or spawning habitat- identify species under Section 10 below):

Yes: ☑ No: ☐

5. EFH and HAPC Designations

Within the Greater Atlantic Region, EFH has been designated by the New England, Mid-Atlantic, and South Atlantic Fisheries Management Councils and NOAA Fisheries. Use the EFH mapper to determine if EFH may be present in the project area and enter all species and life stages that have designated EFH. Optionally, you may review the EFH text descriptions linked to each species in the EFH mapper and use them to determine if the described habitat is present at your project site. If the habitat characteristics described in the text descriptions do not exist at your site, you may be able to exclude some species or life stages from additional consideration. For example, the water depths at your site are shallower that those described in the text description for a particular species or life stage. We recommend this for larger projects to help you determine what your impacts are.

Species Present	EFH is designated/mapped for:				What is the source of the EFH information included?
	EFH: eggs	EFH: larvae	EFH: juvenile	EFH: adults/ spawning adults	
winter flounder	✔	✔	✔	✔	EFH Mapper c
little skate			✔	✔	EFH Mapper c
Atlantic herring		✔	✔	✔	EFH Mapper c
red hake	✔	✔	✔	✔	EFH Mapper c
windowpane flounder	✔	✔	✔	✔	EFH Mapper c
winter skate			✔	✔	EFH Mapper c
clearnose skate			✔	✔	EFH Mapper c
long-finned squid	✔				EFH Mapper c
bluefish			✔	✔	EFH Mapper c
Atlantic butterfish		✔			EFH Mapper c
summer flounder		✔	✔	✔	EFH Mapper c

6. Habitat Areas of Particular Concern (HAPCs)

HAPCs are subsets of EFH that are important for long-term productivity of federally managed species. HAPCs merit special consideration based their ecological function (current or historic), sensitivity to human-induced degradation, stresses from development, and/or rarity of the habitat.While many HAPC designations have geographic boundaries, there are also habitat specific HAPC designations for certain species, see note below. Use the EFH mapper to identify HAPCs within your project area. Select all that apply.

☑	Summer flounder: SAV[7]	☐	Alvin & Atlantis Canyons
☐	Sandbar shark	☐	Baltimore Canyon
☐	Sand Tiger Shark (Delaware Bay)	☐	Bear Seamount
☐	Sand Tiger Shark (Plymouth-Duxbury-Kingston Bay)	☐	Heezen Canyon
☐	Inshore 20m Juvenile Cod[8]	☐	Hudson Canyon
☐	Great South Channel Juvenile Cod	☐	Hydrographer Canyon
☐	Northern Edge Juvenile Cod	☐	Jeffreys & Stellwagen
☐	Lydonia Canyon	☐	Lydonia, Gilbert & Oceanographer Canyons
☐	Norfolk Canyon (Mid-Atlantic)	☐	Norfolk Canyon (New England)
☐	Oceanographer Canyon	☐	Retriever Seamount
☐	Veatch Canyon (Mid-Atlantic)	☐	Toms, Middle Toms & Hendrickson Canyons
☐	Veatch Canyon (New England)	☐	Washington Canyon
☐	Cashes Ledge	☐	Wilmington Canyon
☐	Atlantic Salmon		

[7] Summer flounder HAPC is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. In locations where native species have been eliminated from an area, then exotic species are included. Use local information to determine the locations of HAPC.

[8] The purpose of this HAPC is to recognize the importance of inshore areas to juvenile Atlantic cod. The coastal areas of the Gulf of Maine and Southern New England contain structurally complex rocky-bottom habitat that supports a wide variety of emergent epifauna and benthic invertebrates. Although this habitat type is not rare in the coastal Gulf of Maine, it provides two key ecological functions for juvenile cod: protection from predation, and readily available prey. See EFH mapper for links to text descriptions for HAPCs.

7. Activity Details

Select all that apply	Project Type/Category
☐	Agriculture
☐	Aquaculture - List species here:
☐	Bank/shoreline stabilization (e.g., living shoreline, groin, breakwater, bulkhead)
☐	Beach renourishment
☐	Dredging/excavation
☐	Energy development/use e.g., hydropower, oil and gas, pipeline, transmission line, tidal or wave power, wind
☑	Fill
☐	Forestry
☑	Infrastructure/transportation (e.g., culvert construction, bridge repair, highway, port, railroad)
☐	Intake/outfall
☐	Military (e.g., acoustic testing, training exercises)
☐	Mining (e.g., sand, gravel)
☐	Overboard dredged material placement
☐	Piers, ramps, floats, and other structures
☐	Restoration or fish/wildlife enhancement (e.g., fish passage, wetlands, mitigation bank/ILF creation)
☐	Survey (e.g., geotechnical, geophysical, habitat, fisheries)
☐	Water quality (e.g., storm water drainage, NPDES, TMDL, wastewater, sediment remediation)
☐	Other:

8. Effects Evaluation

Select all that apply	Potential Stressors Caused by the Activity	Select all that apply and if temporary[9] or permanent		Habitat alterations caused by the activity
		Temp	Perm	
☑	Underwater noise	☐	☐	Water depth change
☑	Water quality/turbidity/ contaminant release	☐	☐	Tidal flow change
☑	Vessel traffic/barge grounding	☐	☑	Fill
☐	Impingement/entrainment	☐	☐	Habitat type conversion
☐	Prevent fish passage/spawning	☑	☑	Other: loss of bay bottom
☑	Benthic community disturbance	☑	☑	Other: loss of salt marsh
☑	Impacts to prey species			

[9] Temporary in this instance means during construction. [10] Entrainment is the voluntary or involuntary movement of aquatic organisms from a water body into a surface diversion or through, under, or around screens and results in the loss of the organisms from the population. Impingement is the involuntary contact and entrapment of aquatic organisms on the surface of intake screens caused when the approach velocity exceeds the swimming capability of the organism.

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Details - project impacts and mitigation

Briefly describe how the project would impact each of the habitat types selected above and the amount (i.e., acreage or sf) of each habitat impacted. Include temporary and permanent impact descriptions and direct and indirect impacts. For example, dredging has a direct impact on bottom sediments and associated benthic communities. The turbidity generated can result in a temporary impact to water quality which may have an indirect effect on some species and habitats such as winter flounder eggs, SAV or rocky habitats. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. Attach supplemental information if necessary.

Temporary losses of the tidal waters, including intertidal and subtidal shallows, would total approximately 3.81 acres split between 2.93 acres of subtidal shallows and open waters and 0.88 acres of tidal wetlands. These impacts to Newark Bay would result from cofferdams around bridge pier footings and fenders, trestle piles, and construction access; they would last for the for the duration of construction, or around seven years, but would not be simultaneous because of construction sequencing. Upon completion of bridge construction, areas of water column and benthic habitat occupied by cofferdams and trestle piles will be available to all fish species. Permanent impacts to tidal waters and wetlands would total approximately 5.859 acres, split between 4.352 acres of subtidal shallows and open waters and 1.507 acres of tidal wetlands. These impacts would result from bridge fenders and pier footings, and for permanent access within tidal wetlands on the west side of Newark Bay and within wetland DFG within the within the infield areas of Route 440 on the east side of the bay. Removal of the existing bridge pier footings would result in the gain of 0.851 acres of tidal waters, for a net permanent habitat loss of 5.008 acres. Flounder would likely be the EFH-designated species most affected by this habitat loss.

What specific measures will be used to avoid and minimize impacts, including project design, turbidity controls, acoustic controls, and time of year restrictions? If impacts cannot be avoided or minimized, why not?

Avoidance of in-work from January 1 to June 30 will minimize turbidity-related impacts to winter flounder spawning in the project area and river herring migration through Newark Bay. Bridge pier construction and demolition would be performed within cofferdams to reduce sediment and contaminant resuspension. Vibratory pile-driving of sheetpile cofferdams and use of turbidity booms and/or air bubble curtains will minimize noise generation and sediment resuspension. Trestle piles will be installed within air-bubble filled casings to reduce noise transmission to area waters.

Is compensatory mitigation proposed? Yes ☑ No ☐

If compensatory mitigation is not proposed, why not? If yes, describe plans for compensatory mitigation (e.g. permittee responsible, mitigation bank, in-lieu fee) and how this will offset impacts to EFH and other aquatic resources. Include a proposed compensatory mitigation and monitoring plan as applicable.

Compensatory mitigation for permanent impacts, inclusive of temporary impacts greater than 6 months in duration, will be provided through a combination of on-site restoration of temporarily impacted freshwater and tidal wetlands and open waters, restoration of tidal open water through the removal of the existing bridge piers, and purchasing mitigation credits from existing mitigation banks

9. Effects of Climate Change

Effects of climate change should be included in the EFH assessment if the effects of climate change may amplify or exacerbate the adverse effects of the proposed action on EFH. Use the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP) 8.5/high greenhouse gas emission scenario (IPCC 2014), at a minimum, to evaluate the future effects of climate change on the proposed projections. For sea level rise effects, use the intermediate-high and extreme scenario projections as defined in Sweet et al. (2017). For more information on climate change effects to species and habitats relative to NMFS trust resources, see Guidance for Integrating Climate Change Information in Greater Atlantic Region Habitat Conservation Division Consultation Processes.

1. Could species or habitats be adversely affected by the proposed action due to projected changes in the climate?If yes, please describe how:

As the majority of the project area is subtidal waters, only the tidal wetlands portion of the project may be affected by climate change. Sea level rise will be incorporated into the marsh restoration

2. Is the expected lifespan of the action greater than 10 years? If yes, please describe project lifespan:

The lifespan of the new bridge is expected to be 150 years.

3. Is climate change currently affecting vulnerable species or habitats, and would the effects of a proposed action be amplified by climate change? If yes, please describe how:

Sea level rise is affecting regional salt marsh habitats. Sea level rise would be incorporated into the design for the restored marsh habitat so that the marsh plain, when accretion is taken into effect,

4. Do the results of the assessment indicate the effects of the action on habitats and species will be amplified by climate change? If yes, please describe how:

No. Sea level rise will be taken into consideration in the design of the restored salt marsh habitat.

5. Can adaptive management strategies (AMS) be integrated into the action to avoid or minimize adverse effects of the proposed action as a result of climate? If yes, please describe how:

The restored marsh will be operated under an adaptive management plan to ensure optimal ecological functions are maintained across time.

10. Federal Agency Determination

Federal Action Agency's EFH determination (select one)	
☐	There is no adverse effect[7] on EFH or EFH is not designated at the project site. EFH Consultation is not required. This is a FWCA only request.
☑	The adverse effect[7] on EFH is not substantial. This means that the adverse effects are no more than minimal, temporary, or can be alleviated with minor project modifications or conservation recommendations. This is a request for an abbreviated EFH consultation.
☐	The adverse effect[7] on EFH is substantial. This is a request for an expanded EFH consultation. We will provide more detailed information, including an alternatives analysis and NEPA documents, if applicable.

[7] An adverse effect is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

11. Fish and Wildlife Coordination Act

Under the FWCA, federal agencies are required to consult with us if actions that the authorize, fund, or undertake will result in modifications to a natural stream or body of water. Federal agencies are required to consider the effects these modifications may have on fish and wildlife resources, as well as provide for the improvement of those resources. Under this authority, we consider the effects of actions on NOAA-trust resources, such as anadromous fish, shellfish, crustaceans, or their habitats, that are not managed under a federal fisheries management plan. Some examples of other NOAA-trust resources are listed below. Some of these species, including diadromous fishes, serve as prey for a number of federally-managed species and are therefore considered a component of EFH pursuant to the MSA. We will be considering the effects of your project on these species and their habitats as part of the EFH/FWCA consultation process and may make recommendations to avoid, minimize or offset and adverse effects concurrently with our EFH conservation recommendations.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or species listed under the Endangered Species Act and the appropriate consultation procedures.

Fish and Wildlife Coordination Act Resources

Species known to occur at site (list others that may apply)	Describe habitat impact type (i.e., physical, chemical, or biological disruption of spawning and/or egg development habitat, juvenile nursery and/or adult feeding or migration habitat). Please note, impacts to federally listed species of fish, sea turtles, and marine mammals must be coordinated with the GARFO Protected Resources Division.
alewife	Alewife annually migrate through Newark Bay to upstream freshwater spawning areas. Project impacts would be negligible, as in-water work would avoid the
American eel	American eel is present in Newark Bay. Project impacts would be negligible, as in-water work would avoid the the NMFS/FHWA Time of Year restrictions for
American shad	American shad have been collected in Newark Bay. Project impacts would be negligible, as in-water work would avoid the NMFS/FHWA Time of Year
Atlantic menhaden	Atlantic menhaden have been collected in Newark Bay. Project impacts would be negligible, as in-water work would avoid the the NMFS/FHWA Time of Year
blue crab	Blue crabs occur within Newark Bay. Project impacts would be negligible, as observance of the NMFS/FHWA Time of Year restriction for winter flounder and
blue mussel	
blueback herring	Blueback herring annually migrate through Newark Bay to upstream freshwater spawning areas. Project impacts would be negligible, as in-water work would
Eastern oyster	Eastern oysters occur on hard substrate (i.e. riprap, pilings) in Newark Bay. Impacts to this type of substrate, aside from removal of the existing bridge piers, are not expected. The new bridge piers would provide substrate for oysters.
horseshoe crab	
quahog	Quahogs occur within shallow subtidal areas in Newark Bay. Project impacts would be negligible, as bridge construction and demolition will result in only a
soft-shell clams	Soft shell clams occur within mudflats in Newark Bay. Bridge construction and demolition will result in a small (less than 1 acre) loss of intertidal habitats, which
striped bass	Striped bass occur within Newark Bay. Project impacts would be negligible, as observance of the NMFS/FHWA Time of Year restriction for winter flounder and
other species:	
other species:	
other species:	

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

July 19, 2024

Donna Leoce
U.S. Coast Guard
D1 Bridge Branch
Battery Park Bldg.
1 South Street, Rm 303
New York, NY 10004

RE: Replacement of Interchanges 14 to 14A and Newark Bay Bridge at Mile 3.8, Newark Bay;

Dear Ms. Leoce:

We have reviewed Public Notice D01-209-2024 for a U.S. Coast Guard (USCG) bridge permit application and a draft Environmental Assessment (dEA) for the replacement of the New Jersey Turnpike Hudson County Extension Interchanges 14 to 14A and the Newark Bay Bridge (NBB) across Newark Bay at Mile 3.8. The project is located in the City of Newark, Essex County, New Jersey and the City of Bayonne, Hudson County, New Jersey. The New Jersey Turnpike Authority (NJTA) prepared the dEA pursuant to the National Environmental Policy Act (NEPA) to analyze the potential environmental, cultural, and socioeconomic effects associated with the proposed activities. The U.S. Department of Homeland Security's USCG is the lead federal agency responsible for NEPA compliance and the NJTA is the non-federal representative. While our regulations also allow a federal agency (i.e., USCG) to designate a non-federal representative (i.e., NJTA) to conduct the required consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) through written notice of such designation to us, the USCG remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the MSA. To date, the essential fish habitat (EFH) consultation under the MSA has not been requested by either the USCG or the NJTA. As a result, we recommend that the USGC hold any decision on the authorization of the proposed project in abeyance until this consultation with us is completed.

Project Description
The proposed action includes the replacement of all roadway bridges and viaducts, including the NBB, while widening the roadway between Interchanges 14 and 14A from the existing two-way traffic lanes in each direction to carry four travel lanes in each direction. The existing NBB will be replaced with two bridges; one bridge carrying four travel lanes in the eastbound direction and the other bridge carrying four travel lanes in the westbound direction. The horizontal navigational clearance of 550-feet and vertical clearance of 135-feet Mean High Water (MHW) remain unchanged.

Approximately 15.823 acres of temporary impacts to EFH are proposed in tidal waters and wetlands, split between 10.374 acres of subtidal shallows and open waters and 5.449 acres of tidal wetlands due to construction access, staging, placement of cofferdams, and the construction

of a trestle. Permanent impacts to EFH include approximately 5.853 acres of tidal waters and wetlands, split between of 2.045 acres of subtidal shallows and open waters and 3.808 acres of tidal wetlands, and resulting from bridge piers footings and fenders, and permanent access underneath the bridge structure for maintenance, inspections and security. The removal of the existing NBB bridge footings will result in the gain of 0.817 acres of tidal waters, and 0.034 acres of tidal wetlands, for a net permanent habitat loss of 5.002 acres of intertidal and subtidal bay bottom. Following construction, temporarily impacted tidal wetlands will be graded to appropriate elevations, replanted with native salt marsh species and subjected to permit-mandated monitoring to ensure restoration success. Mitigation is proposed at a 3:1 ratio for the permanent losses of salt marsh. However, a plan for mitigation is currently lacking from the EFH assessment. Additionally, proposed impacts are currently assumed and may change once all habitats are properly delineated and included in detailed construction plans. Therefore, EFH consultation has not been initiated at this time.

In November 2023, you requested our participation as a cooperating agency on the NEPA process for this project. We requested additional information on the proposed action and the details of your request prior accepting your invitation. As a result, we did not formally accept your invitation until May 30, 2024. Cooperating agencies, due to their jurisdiction by law or special expertise with respect to any environmental issue, should be involved in the NEPA process at the earliest practicable time to allow for meaningful coordination and input into the development of the draft NEPA documents. In this instance, we did not receive a copy of the dEA for review and comment prior to its publication. In addition, the dEA states that "the Authority will perform its formal consultation with NMFS during its regulatory review of the Bridge Permit Application, pursuant to the Magnuson-Stevens Act Provisions for Federal Agency Consultation with the Secretary (50 CFR Part 600.920)." Although an EFH assessment, dated January 2024, was included in Appendix F-4 of the dEA, we have not yet received a request to initiate consultation with us under the MSA and the information contained within the Public Notice and dEA are not sufficient for the initiation of the consultation.

To initiate consultation, a revised EFH assessment that includes all of the mandatory components outlined in 50 CFR 600.920 (e)(2), must be provided to us. In accordance the EFH regulations, the EFH assessment should be provided to us at least 60 days before a final decision on an action is made, or at least 90 days if the action would result in substantial adverse impacts, regardless of whether it is contained in the dEA or a stand-alone document.

We offer the following technical assistance comments under the MSA and the Fish and Wildlife Coordination Act (FWCA) to assist you in the development of the EFH assessment as well as the final EA. As always, we are available to discuss this project, needed information and analysis, and the EFH consultation with you or your staff if you have any questions or require clarification on our comments.

Magnuson Stevens Fisheries Conservation and Management Act
The project area has been designated as EFH under the MSA for a number of federally managed species including winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scophthalmus aquosus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus*

saltatrix), Atlantic butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), several species of skates, and others. The Newark Bay is also a migratory corridor for anadromous fish such as American shad (*Alosa sapidissima*), alewife (*Alosa pseudoharengus*), and blueback herring (*Alosa aestivalis*) that spawn in the freshwater portions of the Passaic and Hackensack Rivers.

The MSA and the FWCA require federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure.

The EFH assessment in the dEA provides sufficient information on the potential project effects on EFH, such as sediment and noise generating activities from demolition, and construction. We appreciate that NJTA intends to implement best management practices for this project, including:

- constructing and demolishing bridge piers within cofferdams to reduce sediment and contaminant resuspension
- vibratory pile-driving of sheetpile cofferdams and use of turbidity booms and/or air bubble curtains to minimize noise generation and sediment resuspension and escapement
- installation of trestle piers within casings using compressed air to reduce noise transmission to surrounding waters

We also appreciate that the NJTA intends to incorporate seasonal timing restrictions to minimize impacts during construction to avoid sensitive life stages. Such timing restrictions include January 1 to June 30 to minimize turbidity-related impacts to winter flounder spawning in the project area and anadromous fish migration through Newark Bay. Our primary concerns with the proposed project and the EFH assessment are related to the lack of plans for compensatory mitigation for the permanent impacts to EFH, including wetlands in the project area and the uncertainty regarding the areal extent of the impacts to wetlands and open water habitats.

Wetlands

Tidal wetlands are essential for healthy fisheries, coastlines, and communities, and are an integral part of our economy and culture. Wetlands also provide essential food, refuge, and nursery habitat for federally managed and NOAA Trust species, including striped bass, alewife and blueback herring. Salt marshes provide habitat for fiddler crabs and other intertidal benthic species, and provide foraging grounds for wading birds, shorebirds, waterfowl, estuarine fishes, and blue crabs. Estuarine marsh grasses provide many ecological functions to the wetland and the adjacent waters, including a source of organic nutrients, stability of the sediments, and absorption of contaminants. The shallows provide nursery habitat for many species of fish including winter flounder and summer flounder. The primary production in wetlands forms the base of the food web that supports invertebrates and forage fish that are then prey species for larger fish such as bluefish. Surface water retention and detention and ground water recharge

provides flood control services to the surrounding community. Wetlands may help to moderate global climate change through carbon storage in wetland plant communities and soil.

Wetlands in the project area perform many important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge. The loss of wetlands as a result of this project could therefore adversely affect resources of concern to us through the loss of nursery, forage, and refuge habitat, the reduction of prey species and primary production, as well as water quality degradation from the reduction in sediment retention and pollution filtration. Vegetated wetlands are also considered to be special aquatic sites under the Clean Water Act. Because of their ecological value, impacts on these special aquatic sites should be avoided and minimized. While we appreciate that temporary impacted wetlands will be restored to existing conditions, we are concerned that details on compensatory mitigation for the permanent loss of wetlands is lacking.

Compensatory Mitigation
Compensatory mitigation should be provided for unavoidable adverse effects to wetlands and other aquatic habitats. As this time, project impacts are currently unclear due to the lack of construction plans. While your office has assumed compensatory mitigation needs for the permanent loss of wetlands, mitigation may also be warranted for impacts to other habitats (e.g., mudflats) once construction details are finalized. Although the EFH assessment worksheet included in the EFH Appendix F-4 of the dEA mentions the purchase of credits at the mitigation bank, the specific bank was not identified and it is not clear if there are credits available at the existing banks whose service area includes the project site. As the project moves forward, a mitigation plan should be developed in accordance with the federal final mitigation rules published in the Federal Register on April 10, 2008 (33 CFR Chapter 2 Part 332.4 (b)) and provided to us for review. The plan should explain how the proposed compensatory mitigation will offset the impacts to shallow open-water habitat, wetlands, and EFH. It should also include performance measures, success criteria, and a long-term monitoring and maintenance plan. The site protection mechanism and long-term land steward should also be identified. We are happy to work with your office for any questions related to the development of this plan.

Initial Recommendations
Because we have not yet received a complete EFH assessment, including construction plans and a mitigation plan, we offer the following comments to help guide project development and assist you in the preparation of a revised EFH assessment so that consultation with us under the MSA can be initiated:

- Submit project construction plans for our review and comment that depict all of the work proposed and the habitats affected. This should include:
    - Existing and proposed site conditions with contours (e.g., MHW, MLW) based on a geo-referenced tidal datum along with information regarding water depths, and existing tidal wetland delineations in the project vicinity.
    - The location of construction activities (e.g., cofferdams, trestle).
    - Cross sections.
    - Planting plan(s) for temporarily disturbed areas.

- Develop a compensatory mitigation plan in accordance with the 2008 Federal Mitigation Rule as well as the NOAA Mitigation Policy for Trust Resources for the permanent loss of habitats (e.g., wetlands)
    - Incorporate performance measures and success criteria.
    - Incorporate monitoring of tidal evidence (e.g., tidal gauge) to ensure the marsh plain surface is inundated and drained as designed.
    - Develop a monitoring, maintenance, and adaptive management plan for the project to document success, identify if corrective actions are needed, and to maintain the integrity and health of the restoration project.
    - Monitor the project area for a minimum of five years.
    - Provide us with a copy of the annual monitoring reports.

Endangered Species Act

Endangered species under the jurisdiction of NOAA Fisheries may be present in the project area. The federal action agency is responsible for determining whether the proposed action may affect these species. If you determine that the proposed action may affect a listed species, your determination of effects along with justification and a request for concurrence should be submitted to the Section 7 Program email account at nmfs.gar.esa.section7@noaa.gov. Guidance and tools to assist you in your effects determination are available on our website at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region. Please contact Edith Carson-Supino of our Protected Resources Division (Edith.Carson-Supino@noaa.gov) if you have any questions or to discuss your project and obligations under Section 7 of the Endangered Species Act.

Conclusion

We look forward to continued coordination with you as project plans are developed and the revised EFH assessment is provided. If you have any questions or need additional information, please do not hesitate to contact Jessie Murray in our Highlands, New Jersey field office at Jessie.Murray@noaa.gov or 732-872-3116.

Sincerely,

Karen M. Greene
Mid-Atlantic Branch Chief
Habitat and Ecosystem Services Division

cc:

GARFO PRD – E. Carson-Supino
ACOE New York District – S. Ryba, R. Miranda
NJDEP – G. Nickerson, K. Davis
USFWS – R. Conover
USEPA – M. Finocchiaro

August 30, 2024

Ms. Karen Greene
Mid-Atlantic Branch Chief
Habitat and Ecosystem Services Division
NOAA Fisheries
55 Great Republic Drive
Gloucester, MA 01930
via-email: karen.greene@noaa.gov

Re: Request for Essential Fish Habitat (EFH) Consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for the Proposed Replacement of the Newark Bay-Hudson County Extension between Interchanges 14 to14A including the Vincent R. Casciano Memorial, Newark Bay Bridge (NBB) across Newark Bay, Mile 3.8, between Newark, Essex County and Bayonne, Hudson County, New Jersey (Public Notice-D01-209-2024)

Dear Ms. Greene:

The U.S. Coast Guard (USCG) is in receipt of input from the National Oceanic and Atmospheric Administration (NOAA) Fisheries, Habitat and Ecosystem Services Division, dated July 19, 2024, in response to the subject Public Notice (PN). USCG appreciates NOAA Fisheries' prompt response to the PN, and the recommendations provided with the response. The PN and draft Environmental Assessment (draft EA) referenced in the PN describe activities proposed to occur within the waters and habitat of Newark Bay that would be authorized by USCG under the bridge permit for which the New Jersey Turnpike Authority (the Authority) has applied.

The USCG, as the federal action agency, hereby requests to initiate consultation with the National Marine Fisheries Service (NMFS) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The USCG acknowledges that NOAA has reviewed the essential fish habitat (EFH) consultation included in the draft EA and has provided a letter to the USCG dated July 19, 2024, with initial comments and recommendations. The USCG also acknowledges the following statement made by NOAA in the July 19, 2024, letter: "The EFH assessment in the draft EA provides sufficient information on the potential effects on EFH, such as sediment and noise generating activities from demolition, and construction." However, the USCG understands that NOAA expressed concerned with the lack of a compensatory mitigation plan for permanent impacts to EFH and that project impacts were unclear due to lack of construction plans. To address these concerns and to complete the EFH assessment, the USCG has attached to this letter: 1) construction plans; and 2) the proposed mitigation plan for the Proposed Action. These submittals are described further below.

1. We have enclosed for your review the permit plans for the Proposed Action submitted to the New Jersey Department of Environmental Protection (NJDEP) (Attachment A) and the U.S. Army Corps of Engineers (USACE) (Attachment B). The NJDEP permit plans (including restoration plans) were approved by NJDEP on April 3, 2024. The Authority continues to collaborate with USACE on the review of the Section 404/408 Clean Water Act applications. Both regulatory plan sets depict the Proposed Action including permanent and temporary

disturbances to regulated areas (freshwater wetlands, tidal wetlands, and tidal waters), mean high water/spring high water/mean low water lines, cross-sections (USACE set), and restoration/planting plans for temporarily disturbed areas. The only difference in impacts depicted between the NJDEP and USACE plan sets is regarding the temporary construction trestle, which is shown on the NJDEP plans as the entire trestle deck to account for temporary shading (pursuant to New Jersey regulations) as compared to the USACE set, which depicts only the trestle pilings (fill).

2. The Authority will acquire available wetland mitigation credits from existing mitigation banks with Service Areas that overlap Watershed Management Area (WMA) 5 (Hackensack River, Hudson River, and Pascack Brook Watersheds) and WMA 7 (Arthur Kill Watershed). Attachment C is a copy of a Mitigation Conditions Correction Letter from NJDEP dated June 7, 2024, adding an additional mitigation bank to the permit conditions of File No. 0000-23-0012.2. Attachments D, E, and F are three letters of credit availability from potential mitigation banks to provide compensatory tidal and freshwater credits. If necessary, the Authority will also pursue permittee-responsible mitigation to provide for the balance of the compensatory requirements not covered by available mitigation credits. The form and type of the additional mitigation activity will be coordinated with the regulatory agencies and may include third-party turnkey mitigation projects as well as publicly funded tidal wetland mitigation opportunities.

The USCG appreciates your review and consideration. Please direct any questions regarding this request to Donna Leoce, donna.d.leoce@uscg.mil.

Sincerely,

Donna A. Fisher
Bridge Program Manager
U.S. Coast Guard

Attachments
New Jersey Department of Environmental Protection Permit Plans
U.S. Army Corps of Engineers Permit Plans
NJDEP Mitigation Conditions Corrections Letter
Evergreen Letter of Credit Availability
GreenVest Letter of Credit Availability
Kane Mitigation Bank Letter of Credit Availability

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

October 22, 2024

Donna Leoce
U.S. Coast Guard
D1 Bridge Branch
Battery Park Bldg.
1 South Street, Rm 303
New York, NY 10004

RE: Replacement of Interchanges 14 to 14A and Newark Bay Bridge, Newark Bay;

Dear Ms. Leoce:

We have reviewed the supplemental information provided to us in response to our July 19, 2024, technical assistance letter related to the replacement of the New Jersey Turnpike Hudson County Extension Interchanges 14 to 14A and the Newark Bay Bridge (NBB) across Newark Bay. The project is located in the City of Newark, Essex County, New Jersey and the City of Bayonne, Hudson County, New Jersey. The U.S. Department of Homeland Security's U.S. Coast Guard (USCG) is the lead federal agency and the New Jersey Turnpike Authority (NJTA) is the non-federal representative for the purposes of environmental review of this project, including consultation with us under the Magnuson Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA).

The proposed action includes the replacement of all roadway bridges and viaducts, including the NBB, and widening the roadway between Interchanges 14 and 14A from the existing two-way traffic lanes in each direction to carry four travel lanes in each direction. Approximately 15.823 acres of temporary impacts and 5.853 acres of permanent impacts to essential fish habitat (EFH) are proposed in tidal waters and wetlands due to project activities. All temporary impacts will be restored to pre-existing conditions and credits will be purchased at a ratio of 3:1 from an approved wetland mitigation bank for the permanent loss of tidal wetlands. Project activities are anticipated to take up to five years to complete.

Magnuson Stevens Fisheries Conservation and Management Act
The MSA and the FWCA require federal agencies to consult with us on projects such as this, which may adversely affect EFH and/or result in modifications to a natural stream or body of water. In turn, we must provide recommendations to protect, conserve, and enhance EFH and other NOAA trust resources. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH and other NOAA trust resources resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure. While our regulations also allow a federal agency such as the USCG to designate a non-federal representative such as the NJTA to conduct the EFH consultation, it is

important to note that the USCG remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the MSA.

The project area has been designated as EFH under the MSA for a number of federally managed species including winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scophthalmus aquosus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), several species of skates, and others. The Newark Bay is also a migratory corridor for anadromous fish such as American shad (*Alosa sapidissima*), alewife (*Alosa pseudoharengus*), and blueback herring (*Alosa aestivalis*) that spawn in the freshwater portions of the Passaic and Hackensack Rivers.

Temporary impacts due to construction access, staging, placement of cofferdams, and the construction of a trestle include 15.823 acres; 10.374 acres of tidal waters and 5.449 acres of intertidal and subtidal shallows, including wetlands. Permanent impacts resulting from bridge piers footings and fenders, and permanent access underneath the bridge structure for maintenance, inspections and security include 5.853 acres; 2.045 acres of intertidal and subtidal shallows including wetlands, and 3.808 acres of tidal waters. We appreciate the full set of construction drawings provided in the August 30, 2024 supplementary materials that clearly show the described impacts.

As we previously discussed, the USCG and NJTA intend to incorporate best management practices to reduce turbidity and noise during construction. The project will also implement a schedule that limits in water work between January 1 and June 30 to avoid impacts to the early life stages of winter flounder (January 1 – May 31) and migrating river herring (March 1 – June 30). We appreciate that the USCG and NJTA intend to provide compensatory mitigation for the unavoidable permanent loss of tidal wetlands through the purchase of credits from an approved wetland mitigation bank. While formal bank credits have not yet been purchased, we expect that documentation of credit purchase will be provided to us prior to construction.

Essential Fish Habitat Conservation Recommendations
Pursuant to Section 305(b)(4)(A) of the MSA we request that you adopt the following EFH conservation recommendation to minimize or offset adverse impacts on EFH:

- Construction activities shall not start until compensatory mitigation is finalized either by demonstrating credits are available and providing proof of purchase or by having a final permittee-responsible mitigation plan with monitoring and adaptive management included.
    - If permittee responsible mitigation is selected, construction of the compensatory mitigation project shall be prior to or concurrent with the impacts to the aquatic environment and monitoring shall be for five years, providing annual reports to our office.
- Provide our office with copies of the annual monitoring reports associated with the restoration of temporarily disturbed wetlands.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that the USCG must explain the reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to final approval of this action. Please also note that further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above determination.

Conclusion

We look forward to your response to our EFH conservation recommendations on this project. As always, please do not hesitate to contact Jessie Murray in our Highlands, NJ field office at (732) 872-3116 or by email (Jessie.Murray@noaa.gov) if you have any questions or need assistance.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat and Ecosystem Services

cc:

GARFO PRD – E. Carson-Supino
GARFO HESD – K, Greene
ACOE New York District – S. Ryba, R. Miranda
NJDEP – M. Davis, K. Davis
USFWS – R. Conover, M. Ciappi
USEPA – M. Finocchiaro
MAFMC – C. Moore
NEFMC – C. O'Keefe
ASMFC – R. Beal

U.S. Department of Homeland Security
United States Coast Guard

Commander
First Coast Guard District

One South Street Battery
Park Bldg
New York, NY 10004-1466
Staff Symbol: D1 (dpb)
Phone: (571) 613-2415
Email: donna.d.leoce@uscg.mil

16591
8 November 2024

MEMORANDUM

From: Gregory P. Hitchen
Bridge Program Manager
First Cost Guard District (dpb)

Reply to: D. Leoce
U.S. Coast Guard

To: Ms. Jessie Murray
Habitat and Ecosystem Services Division
NOAA Fisheries, Greater Atlantic Regional Fisheries Office

Subj: ESSENTIAL FISH HABITAT (EFH) ASSESSMENT FOR THE PROPOSED REPLACEMENT OF THE NEWARK BAY-HUDSON COUNY EXTENSION BETWEEN INTERCHANGES 14 TO 14A, INCLUDING THE NEWARK BAY BRIDGE, NEWARK, ESSEX COUNTY AND BAYONNE, HUDSON COUNTY, NEW JERSEY

1. The U.S. Coast Guard (Coast Guard) requested consultation under the Magnuson-Stevens Fishery Conservation and Management Act and the Fish and Wildlife Coordination Act and provided supplemental information to the National Marine Fisheries Service (NMFS) on August 30, 2024, in response to the NMFS July 19, 2024, technical assistance letter related to the replacement of the New Jersey Turnpike Newark Bay – Hudson County Extension. NMFS responded on October 22, 2024, requesting the adoption of the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

- Construction activities shall not start until compensatory mitigation is finalized either by demonstrating credits are available and providing proof of purchase or by having a final permittee-responsible mitigation plan with monitoring and adaptive management included.

- If permittee-responsible mitigation is selected, construction of the compensatory mitigation project shall be prior to or concurrent with the impacts to the aquatic environment and monitoring shall be for five years, providing annual reports to the NMFS Highlands, New Jersey field office.

- Provide the NMFS Highlands, NJ office with copies of the annual monitoring reports associated with the restoration of temporarily disturbed wetlands.

2. This letter serves as a written response pursuant to Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) confirming that Coast Guard will adopt these conservation recommendations, and require the New Jersey Turnpike Authority (NJTA), as project sponsor, to implement the conservation recommendations. The project will mitigate permanent tidal wetland impacts through either a mitigation bank credit purchase, where one credit is equivalent to one acre of regulated area impact, or through permittee-responsible mitigation, where permanent tidal wetland impacts will be mitigated for at a 3:1 ratio. The NJTA has agreed to these terms.

3. The Coast Guard will notify NMFS if new information becomes available, or if the project is revised in such a manner that affects the basis for the above determination that the adverse effects of the project on EFH will not be substantial. If you have any questions, please feel free to contact James Heeren at JHeeren@dewberry.com or 973-576-0149 or me directly at Gregory.P.Hitchen @uscg.mil (571) 607-8154. Thank you for your ongoing consideration and cooperation.

#

Copy: Edith Carson-Supino, NOAA NMFS
Kristin Andrade, USACE
Lisa Navarro, NJTA
M. Davis, K. Davis NJDEP
M. Finocchiaro, USEPA
S. Ryba, R. Mirand, ACOE New York District

ATTACHMENT A

NJDEP PERMIT PLANS

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NEW JERSEY TURNPIKE AUTHORITY

DIANE GUTIERREZ-SCACCETTI, CHAIR
ULISES E. DIAZ, VICE CHAIR
MICHAEL R. DUPONT, TREASURER
RONALD GRAVINO, COMMISSIONER
JOHN D. MINELLA, COMMISSIONER
RAPHAEL SALERMO, COMMISSIONER
FRANCISCO MALDONADO-RAMIREZ, COMMISSIONER

NEW JERSEY TURNPIKE

OPS NO. T3820

FRESHWATER WETLAND INDIVIDUAL PERMIT PLANS AND WATERFRONT DEVELOPMENT PERMIT PLANS
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX,
CITY OF BAYONNE, COUNTY OF HUDSON

FWW/WFD TOTAL IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	4.038	175,843.85
	TEMPORARY IMPACTS	5.118	222,926.54
WETLAND TRANSITION AREA	PERMANENT IMPACTS	3.792	165,179.50
	TEMPORARY IMPACTS	2.936	127,928.25
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	8.138	354,484.22
	TEMPORARY IMPACTS	2.497	108,771.68
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	2.045	89,110.44
	TEMPORARY IMPACTS	5.449	237,371.22
TIDAL WATER	PERMANENT IMPACTS	3.808	165,876.50
	TEMPORARY IMPACTS	10.374	451,906.29

TOTAL TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	4.049	176,374.94
WETLAND TRANSITION AREA	2.936	127,928.25
ESTUARINE WETLAND	1.07	46,588.41
ESTUARINE WATERS	15.822	689,230.96
TOTAL STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0.0021	77.58
WETLAND TRANSITION AREA	0.044	1,899.18
ESTUARINE WATERS	0.840	36,568.93

LOCATION PLAN

SCALE: NTS

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN REFERENCE SHEET
3 - 12	FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLANS
13 - 21	FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLANS
22 - 23	PLANTING NOTES AND DETAILS

GENERAL NOTES:

1. WETLANDS AND WATERS WERE DELINEATED USING THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, 2012 NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT, AND THE 1989 INTERAGENCY FEDERAL MANUAL FOR DELINEATING JURISDICTIONAL WETLANDS. BOUNDARIES OF WETLANDS AND WATERS WERE MARKED IN THE FIELD BY SEQUENTIALLY NUMBERED FLAGS AND SUBSEQUENTLY LOCATED WITH A HAND-HELD TRIMBLE 7X GPS UNIT WITH SUB-METER ACCURACY. PORTIONS OF SOME WETLAND/WATERS AREAS LACK FIELD FLAGS AND WERE MAPPED VIA DESKTOP, AND THEREFORE, DO NOT CONTAIN FLAG NUMBERS. THESE AREAS WERE INACCESSIBLE DUE TO EXISTING FENCING, LACK OF PROPERTY ACCESS PERMISSIONS, OR UNSAFE CONDITIONS.
2. ALL TEMPORARY IMPACTS ARE ASSOCIATED WITH ACTIVITIES THAT WILL OCCUR FOR MORE THAN 6 MONTHS.
3. FRESHWATER WETLANDS/WATERS BOUNDARY LINE AS VERIFIED BY NJDEP FILE #0000-22-0003.1.

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201, PISCATAWAY, NJ 08854
WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960

RECOMMENDED: DocuSigned by: Michael A. Morgan — **DATE:** 10/18/2023
SIGNATURE
MICHAEL A. MORGAN
GANNETT FLEMING, INC.
DESIGN CONSULTANT
N.J. PROFESSIONAL ENGINEER
LICENSE NO. 24GE0379000
CERTIFICATE OF AUTHORIZATION NO. 24GA28032500

STATE OF NEW JERSEY · MICHAEL A. MORGAN · No. 24GE03790000 · LICENSED PROFESSIONAL ENGINEER

APPROVED BY: _____ **DATE:** _____

FILE NAME: T3820_WFD_00_Title.dgn

10/2/2023 11:00:13 AM USYL682665
pw://gfnet-pw.bentley.com:gfnet-pw-01/Documents/Projects/68280/DJTPUT/COMP_01/CIVIL/ROAD_WSP/NJDEP Permit Plans/T3820_WFD_00_T1+ix.dgn

DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK
CITY OF BAYONNE

COUNTY OF ESSEX
COUNTY OF HUDSON

N.J. STATE COORDINATE SYSTEM NAD83

DOREMUS AVE.

EXISTING NB HCE ℄

FIRMENICH WAY

E PORT ST.

WAREHOUSE PL.

CITY OF NEWARK
CITY OF BAYONNE

COUNTY OF ESSEX
COUNTY OF HUDSON

HEW ℄

HEW ROADWAY

HWE ℄

HWE ROADWAY

NJ ROUTE 440 NB
NJ ROUTE 440 SB

CITY OF JERSEY CITY
CITY OF BAYONNE

FRONTAGE RD.

CONRAIL

RAMP TO 440 SB ℄

W 57TH ST.

W 56TH ST.

KENNEDY BLVD.

JOHN F.

AVENUE C

AVENUE E

BROADWAY

| | | |

DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK

COUNTY OF ESSEX

WETLAND TSA

WETLAND DFB

WETLAND DFE

WETLAND TSC

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HWE ROADWAY

EXISTING NE-NCE "B"

PROPOSED BASIN

RIPRAP OUTLET PROTECTION

BASIN RIPRAP AREA

HWE "B"

SEE NOTE 1

TIDELANDS CLAIM

MATCH LINE PROPOSED HWE "B" STA. 5065+50
SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -2-

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.049 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.491 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.038 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.369 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.002 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.086 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.463 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.094 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.473 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.219 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.052 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.560 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.100 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.100 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.666 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.015 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.041 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.023 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.007 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.518 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.015 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.010 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.012 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.228 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.231 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.180 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.002 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.009 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.002 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.068 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.007 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.098 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.452 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.056 AC

NOTE:

1. DISTURBANCES WITHIN THE LIMIT OF THE PROPOSED STRUCTURE ARE CONSIDERED PERMANENT TO ACCOUNT FOR PERMANENT INSPECTION ACCESS POST-CONSTRUCTION. SEE SUBSEQUENT SHEETS.

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.468	20381.96
	TEMPORARY IMPACTS	1.273	55451.88
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0.687	29914.50
	TEMPORARY IMPACTS	0.994	43283.99
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	1.669	72722.26
	TEMPORARY IMPACTS	0.648	28215.45
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

WFD-1
WFD-10

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800

ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300
Robert J. Thiel
2023.10.18 12:32:37 -04'00'

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -1-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATE OF AUTHORIZATION NO. 24GA28002500
Digitally signed by Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'
DATE: OCTOBER 2023

3
23

FILE NAME: T3820_WFD_01.dgn

10/2/2023 1:00:58 AM USYL682665
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DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK

COUNTY OF ESSEX

N.J. State Plane Coordinate System NAD83

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -1- MATCH LINE PROPOSED HWE @ STA. 5065+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -3- MATCH LINE PROPOSED HWE @ STA. 5079+00

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.094 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.026 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.021 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.122 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.033 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.032 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.028 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.020 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.524 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.727 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.541 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.331 AC

TIDELANDS CLAIM

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.038 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.375 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.022 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.221 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.025 AC

RIPRAP OUTLET PROTECTION

WETLAND TSC

WETLAND TSD

WETLAND DFE

HEW ROADWAY

HWE ROADWAY

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW @

HWE @

BASIN RIPRAP AREA

PROPOSED BASIN

EXISTING NB-NCE @

DORELAN AVENUE

WARE HOUSE PLACE

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.009 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.087 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.003 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.004 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.002 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.018 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.016 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.719 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.310 AC

TIDELANDS CLAIM

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.534 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.005 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.015 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.039 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.091 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.029 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.043 AC

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

WFD-2
WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.441	19209.82
	TEMPORARY IMPACTS	1.197	52141.32
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0.441	19220.22
	TEMPORARY IMPACTS	0.555	24196.76
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	1.809	78800.04
	TEMPORARY IMPACTS	0.661	28793.38
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:33:59 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -2-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
RIZATION NO. 24GA28032500
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

4
23

FILE NAME: T3820_WFD_02.dgn

10/2/2023 11:01:16 AM USYL68265
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CITY OF NEWARK

COUNTY OF ESSEX

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -2- MATCH LINE PROPOSED HWE ℄ STA. 5079+00

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -4- MATCH LINE PROPOSED HWE ℄ STA. 5094+50

N.J. State Plane Coordinate System NAD83

WARE HOUSE PLACE

FIRMENCH WAY

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.676 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.008 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.004 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 2.003 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.008 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.008 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.271 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.779 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.004 AC

PROPOSED BASIN

RIPRAP OUTLET PROTECTION

BASIN RIPRAP AREA

BASIN RIPRAP AREA

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

EXISTING NB-NCE ℄

HEW ℄

HWE ℄

WETLAND TSD

TSD 18 TSD 19 TSD 20 TSD 21 TSD 22 TSD 23 TSD 24 TSD 25 TSD 26 TSD 27 TSD 28 TSD 29 TSD 30 TSD 31 TSD 32 TSD 33 TSD 34 TSD 35 TSD 36 TSD 37

TSD139 TSD138 TSD137 TSD136 TSD135 TSD134 TSD133 TSD132 TSD131 TSD130 TSD129 TSD128 TSD127 TSD126 TSD125 TSD124 TSD123 TSD122 TSD121 TSD120 TSD119 TSD118 TSD117 TSD116 TSD115 TSD114 TSD113 TSD112 TSD111 TSD110 TSD109 TSD108 TSD107 TSD106 TSD105 TSD104 TSD103

TSD140 TSD141 TSD142 TSD143 TSD144

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.019 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.022 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.021 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.022 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.109 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.019 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.020 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.011 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.018 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.002 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.076 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.182 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 1.289 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.085 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.998 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.196 AC

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

WFD-3
WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT
- WFD JURISDICTIONAL AREA
- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)
- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.689	30003.24
	TEMPORARY IMPACTS	1.312	57129.33
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0.779	33918.16
	TEMPORARY IMPACTS	0.666	29029.87
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	2.283	99431.53
	TEMPORARY IMPACTS	1.121	48847.79
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300
Robert J. Thiel
2023.10.18 12:34:18 -04'00'

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -3-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Docusigned by: Michael A. Morgan
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

5
23

FILE NAME: T3820_WFD_03.dgn

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pw://gfnet-pw.jacobs.com/gfnet-pw-01/Documents/Projects/68280/OUTPUT/COMP.01/CIVIL/ROAD.WSP/NJDEP Permit Plans/T3820_WFD_03.dgn

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CITY OF NEWARK

COUNTY OF ESSEX

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -3- MATCH LINE PROPOSED HWE @ STA. 5094+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -5- MATCH LINE PROPOSED HWE @ STA. 5110+50

U.S. NAD 83 (2011) New Jersey State Plane (US Feet)

SPRING HIGH TIDE LINE (3.61 FEET NAVD88)

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 1.420 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.624 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 1.120 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.004 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.152 AC

MEAN HIGH WATER LINE (2.38 FEET NAVD88)

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.033 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.014 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.003 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 1.926 AC

MEAN LOW WATER LINE (-2.84 FEET NAVD88)

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.054 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.022 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.004 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.071 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.451 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.008 AC

NEWARK BAY

WETLAND TSD

HEW ROADWAY

HEW @

4 FT BELOW MLW

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.377 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.180 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.004 AC

WETLAND TSE

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HWE ROADWAY

HWE @

EXISTING NB-NCE @

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.086 AC

NEWARK BAY

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.197 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.085 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.626 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.001 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.029 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 1.099 AC

MEAN HIGH WATER LINE (2.38 FEET NAVD88)

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.229 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.017 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.017 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.021 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.001 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.004 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.012 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.054 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.020 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.137 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.044 AC

SPRING HIGH TIDE LINE (3.61 FEET NAVD88)

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.034 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.039 AC

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

WFD-4
WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT
- WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	1.639	71387.68
	TEMPORARY IMPACTS	0.924	40244.57
WETLAND TRANSITION AREA	PERMANENT IMPACTS	1.351	58835.85
	TEMPORARY IMPACTS	0.102	4453.99
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	1.420	61843.47
	TEMPORARY IMPACTS	0.039	1695.38
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	1.246	54296.31
	TEMPORARY IMPACTS	2.411	105019.61
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0.090	3915.54

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800

Robert J. Thiel
2023.10.18 12:34:56 -04'00'

ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -4-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 204
PISCATAWAY, NEW JERSEY 08854

Docusigned by: Michael D. Morgan
EC3A3844D5145...

MICHAEL D. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

No. 24GE03790000
PROFESSIONAL ENGINEER
RIZATION NO. 24GA28033500

SCALE: 1"=50'

DATE: OCTOBER 2023

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FILE NAME: T3820_WFD_04.dgn

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CITY OF NEWARK

COUNTY OF ESSEX

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.043 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.022 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.002 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.025 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.088 AC

4 FT BELOW MLW

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.352 AC

AXIS OF EXIST. L.V.R.R. DRAW AND U.S. GOVT CHANNEL OPPOSITE PORT NEWARK

500'-0" USACE CHANNEL

℄ USACE CHANNEL

550'-0" NAVIGATIONAL OPENING

NEWARK BAY

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.027 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.088 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.371 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.022 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.054 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 1.980 AC

N.J. State Plane Coordinate System NAD83

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -4-
MATCH LINE PROPOSED HWE ℄ STA. 5110+50

MATCH LINE PROPOSED HWE ℄ STA. 5026+50
SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -6-

HEW ROADWAY

2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126

HEW ℄

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.895 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.078 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL = 0.371 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.400 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.235 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL = 0.074 AC

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

5111 5112 5113 5114 5115 5116 5117 5118 5119 5120 5121 5122 5123 5124 5125 5126

EXISTING NB-NCE ℄

HWE ℄

HWE ROADWAY

NEWARK BAY

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.488 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.020 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.005 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.019 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.077 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.011 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.008 AC

4 FT BELOW MLW

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.033 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.027 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.176 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.027 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.022 AC

PERMANENT IMPACT TO TIDAL WATER TOTAL 0.108 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.022 AC

TEMPORARY IMPACT TO TIDAL WATER EACH REMOVAL OF EXISTING FOOTING = 0.096 AC (TYP.) TOTAL = 0.192 AC

PERMANENT IMPACT TO TIDAL WATER EACH PROPOSED FOOTING = 0.079 AC (TYP.) TOTAL = 0.158 AC

TEMPORARY IMPACT TO TIDAL WATER EACH PROPOSED FOOTING = 0.031 AC (TYP.) TOTAL = 0.062 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL = 0.021 AC

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

WFD-5
WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT
- WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0.038	1670.40
	TEMPORARY IMPACTS	0.073	3196.21
TIDAL WATER	PERMANENT IMPACTS	2.855	124351.83
	TEMPORARY IMPACTS	3.637	158429.55

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel 2023.10.18 12:35:11 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -5-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
RIZATION NO. 24GA28029800
Digitally signed by Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

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23

FILE NAME: T3820_WFD_05.dgn

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DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK
CITY OF BAYONNE

CITY OF NEWARK
CITY OF BAYONNE

COUNTY OF ESSEX
COUNTY OF HUDSON

N.J. STATE PLANE COORDINATE SYSTEM
NAD83

NEWARK BAY

TEMPORARY IMPACT TO TIDAL WATER
TOTAL = 5.348 AC

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -5-
MATCH LINE PROPOSED HWE ℄ STA. 5126+50

MATCH LINE PROPOSED HWE ℄ STA. 5141+50
SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -7-

HEW ROADWAY
HEW ℄
EXISTING NB-NCE ℄
HWE ROADWAY
HWE ℄
NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141
5127 5128 5129 5130 5131 5132 5133 5134 5135 5136 5137 5138 5139 5140 5141

TEMPORARY IMPACT TO TIDAL WATER
EACH REMOVAL OF EXISTING FOOTIN
= 0.055 AC (TYP.) TOTAL = 0.444 AC

PERMANENT IMPACT TO TIDAL WATER
EACH PROPOSED FOOTING
= 0.079 AC (TYP.)
TOTAL = 0.953 AC

TEMPORARY IMPACT TO TIDAL WATER
EACH PROPOSED FOOTING
= 0.031 AC (TYP.)
TOTAL = 0.376 AC

TEMPORARY IMPACT TO TIDAL WATER
TOTAL = 0.036 AC

NEWARK BAY

COUNTY OF ESSEX
COUNTY OF HUDSON

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.953	41519.98
	TEMPORARY IMPACTS	6.204	270253.96

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

WFD-6
WFD-10

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:35:25 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -6-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

DocuSigned by:
Michael A. Morgan
C4C53A3A4E51421...
NEW JERSEY
No. 24GE03790000
PROFESSIONAL ENGINEER
IZATION NO. 24GA28032500

SCALE: 1"=50'
DATE: OCTOBER 2023

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23

FILE NAME: T3820_WFD_06.dgn

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DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF BAYONNE

COUNTY OF HUDSON

NEWARK BAY

N.J. State Plane Coordinate System NAD83

4 FT BELOW MLW

MEAN LOW WATER LINE (-2.84 FEET NAVD88)

MEAN HIGH WATER LINE (2.38 FEET NAVD88)

SPRING HIGH TIDE LINE (3.61 FEET NAVD88)

NJ ROUTE 440 NB

NJ ROUTE 440 SB

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 2.010 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.174 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.028 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.077

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.003 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.038 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.326 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.020 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.357 AC

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.023 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.024 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.253 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.349 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.326 AC

RIPRAP OUTLET PROTECTION

WETLAND DFG

HEW ROADWAY

HWE ROADWAY

EXISTING NB-NCE

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

BASIN RIPRAP AREA

PROPOSED BASIN

WETLAND DFI

WETLAND DFH

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.388 AC

TEMPORARY IMPACT TO TIDAL WATER TOTAL 0.055 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS EACH REMOVAL OF EXISTING FOOTING = 0.055 AC (TYP.) TOTAL = 0.164 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS EACH PROPOSED FOOTING = 0.079 AC (TYP.) TOTAL = 0.315 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS EACH PROPOSED FOOTING = 0.031 AC (TYP.) TOTAL = 0.125 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.017 AC

PERMANENT IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.020 AC

TEMPORARY IMPACT TO INTERTIDAL & SUBTIDAL SHALLOWS TOTAL 0.090 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.450 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.231 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.016 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.020 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.073 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.128 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.044 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.017 AC

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -6- MATCH LINE PROPOSED HWE ℄ STA. 5141+50

MATCH LINE PROPOSED HWE ℄ STA. 5156+50 SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -8-

MATCH LINE, SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -10-

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

WFD-7 WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.326	14190.07
	TEMPORARY IMPACTS	0.333	14505.48
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0.363	15812.28
	TEMPORARY IMPACTS	0.421	18338.76
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	0.523	22781.88
	TEMPORARY IMPACTS	0.026	1132.56
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0.761	33143.73
	TEMPORARY IMPACTS	2.965	129155.40
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0.443	19307.24

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A. INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel 2023.10.18 12:35:38 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -7-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

9/23

FILE NAME: T3820_WFD_07.dgn

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CITY OF BAYONNE

COUNTY OF HUDSON

TEMPORARY IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.002 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.032 AC

TEMPORARY IMPACT TO WETLAND TRANSITION AREA TOTAL 0.198 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.314 AC

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.061 AC

PERMANENT IMPACT TO WETLAND TRANSITION (IMPERVIOUS) AREA TOTAL 0.434 AC

RIPRAP OUTLET PROTECTION

NJ ROUTE 440 NB

NJ ROUTE 440 SB

WETLAND DFK

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HEW ℄

EXISTING NB-NCE ℄

HWE ROADWAY

HWE ℄

BASIN RIPRAP AREA

PROPOSED BASIN

PERMANENT IMPACT TO WETLAND TRANSITION AREA TOTAL 0.110 AC

PERMANENT IMPACT TO FRESHWATER WETLAND TOTAL 0.041 AC

TEMPORARY IMPACT TO FRESHWATER WETLAND TOTAL 0.040 AC

TIDELANDS CLAIM

WETLAND DFJ

JOHN F. KENNEDY BLVD.

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -7- MATCH LINE PROPOSED HWE ℄ STA. 5156+50

MATCH LINE PROPOSED HWE ℄ STA. 5169+50 SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -9-

MATCH LINE, SEE WATERFRONT DEVELOPMENT PERMIT PLAN -10-

N.J. State Plane Coordinate System NAD83

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT
- WFD JURISDICTIONAL AREA

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.355	15463.80
	TEMPORARY IMPACTS	0.072	3136.32
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0.171	7448.76
	TEMPORARY IMPACTS	0.198	8624.88
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	0.434	18905.04
	TEMPORARY IMPACTS	0.002	87.12
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

WFD-8
WFD-10

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:35:52 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -8-

REV.	DESCRIPTION	DATE	BY	CHK.

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
DocuSigned by: Michael A. Morgan
IZATION NO. 24GA28032500
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

10/23

FILE NAME: T3820_WFD_08.dgn

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CITY OF BAYONNE
CITY OF JERSEY CITY

COUNTY OF HUDSON

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -8- MATCH LINE PROPOSED HWE ℄ STA. 5169+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -10- MATCH LINE

CITY OF JERSEY CITY
CITY OF BAYONNE

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

HEW ℄

HWE ℄

EXISTING NB NCE ℄

NJ ROUTE 440 NB

NJ ROUTE 440 SB

AVENUE B

AVENUE C

W 57TH STREET

2170 2171 2172 2173 2174 2175

5170 5171 5172 5173 5174 5175

1261 1262 1263 1264 1265 1266 1267

N.J. State Coordinate System NAD83

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

WFD-9
WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)

WFD JURISDICTIONAL AREA

NO IMPACTS THIS SHEET

- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:36:11 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -9-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATE OF AUTHORIZATION NO. 24GA28031500
DocuSigned by:
Michael A. Morgan
5C3A3644825145...
AN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'
DATE: OCTOBER 2023

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23

FILE NAME: T3820_WFD_09.dgn

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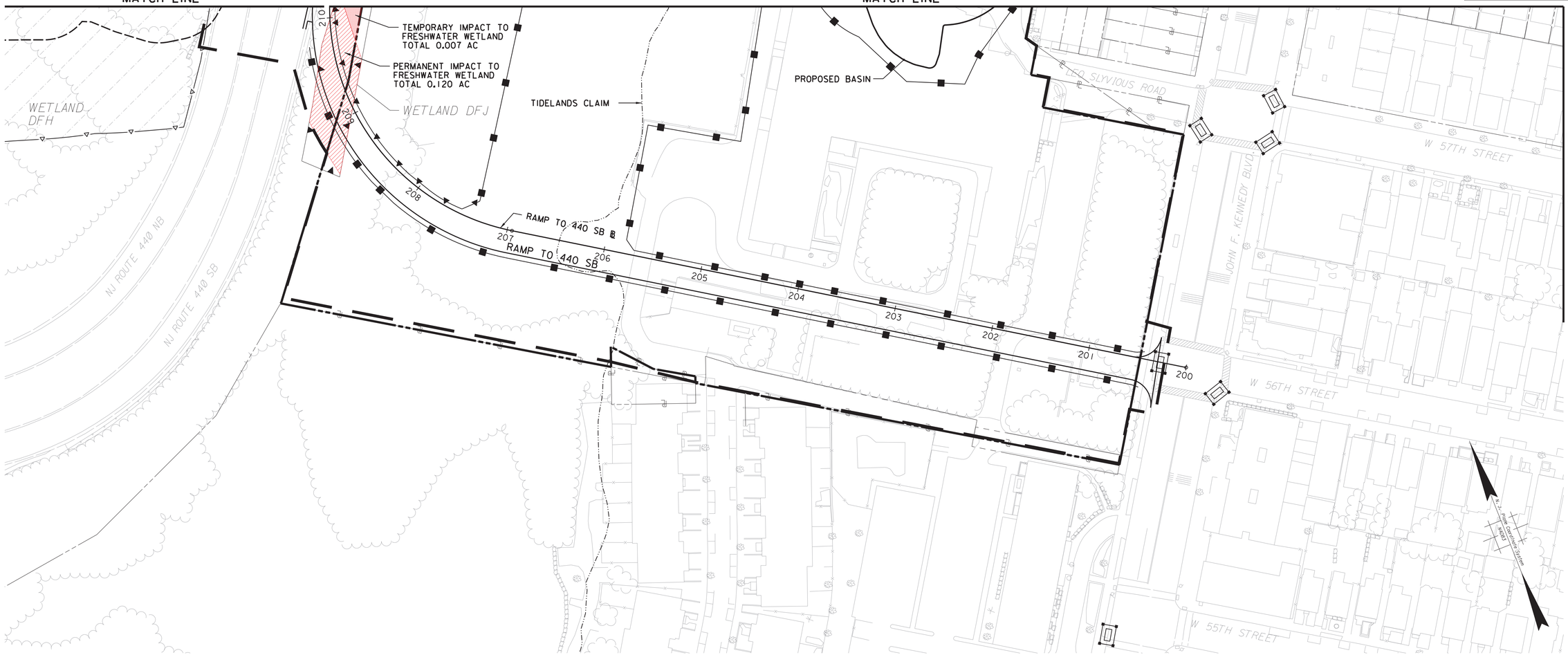
CITY OF BAYONNE

COUNTY OF HUDSON

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -7- MATCH LINE

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -8- MATCH LINE



MATCH LINE
SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -9-

WFD-10

WFD-10

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT
- WFD JURISDICTIONAL AREA
- FRESHWATER WETLAND PERMANENT IMPACTS
- FRESHWATER WETLAND TEMPORARY IMPACTS
- WETLAND TRANSITION AREA PERMANENT IMPACTS
- WETLAND TRANSITION AREA TEMPORARY IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA PERMANENT IMPACTS
- WETLAND TRANSITION (IMPERVIOUS) AREA TEMPORARY IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS PERMANENT IMPACTS
- INTERTIDAL & SUBTIDAL SHALLOWS TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- RESTORATION FROM STRUCTURE REMOVAL (SEE RESTORATION SHEETS)
- INLET FILTER
- HEAVY DUTY SILT FENCE, ORANGE
- ORGANGE SAFETY SCREEN, HEAVY DUTY SILT FENCE, BLACK
- FLOATING TURBIDITY BARRIER

IMPACTS		AC	SF
FRESHWATER WETLAND	PERMANENT IMPACTS	0.120	5207.28
	TEMPORARY IMPACTS	0.007	317.74
WETLAND TRANSITION AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
WETLAND TRANSITION (IMPERVIOUS) AREA	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
INTERTIDAL AND SUBTIDAL SHALLOWS	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
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ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -10-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

12
23

FILE NAME: T3820_WFD_10.dgn

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CITY OF NEWARK

COUNTY OF ESSEX

WETLAND TSA

WETLAND TRANSITION AREA RESTORATION TOTAL 0.086 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.463 AC

PROPOSED BASIN

WETLAND TRANSITION AREA RESTORATION TOTAL 0.015 AC

PROPOSED BASIN

WETLAND TRANSITION AREA RESTORATION TOTAL 0.002 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.002 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.068 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.180 AC

WETLAND TSB

WETLAND TSC

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

EXISTING NJ-NCF #

WETLAND DFB

WETLAND DFD

WETLAND DFE

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.491 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.369 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.041 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.098 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.452 AC

TIDELANDS CLAIM (TYP.)

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -2- MATCH LINE PROPOSED HWE ℄ STA. 5065+50

4.1' Prime Geodetic System NAD83

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	1.273	55451.88
WETLAND TRANSITION AREA	0.994	43283.99
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

FWR-1 / FWR-9

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel 2023.10.18 12:36:50 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -1-

REV.	DESCRIPTION	DATE	BY	CHK.

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
DocuSigned by: Michael A. Morgan
MICHAELA. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

13 / 23

FILE NAME: T3820_WFD_01.dgn

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DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK

COUNTY OF ESSEX

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -1- MATCH LINE PROPOSED HWE @ STA. 5065+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -3- MATCH LINE PROPOSED HWE @ STA. 5079+00

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.026 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.033 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.028 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.541 AC

TIDELANDS CLAIM

WETLAND TRANSITION AREA RESTORATION TOTAL 0.038 AC

N.J. Pure Waters System

DORELIA AVENUE

WARE HOUSE PLACE

WETLAND TSC

WETLAND TSD

WETLAND DFE

WETLAND DFF

HEW ROADWAY

HWE ROADWAY

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW @ 2072

HEW @ 2073

HEW @ 2076

HWE @ 5075

EXISTING NB-NCE @ 5075

PROPOSED BASIN

PROPOSED BASIN

WETLAND TRANSITION AREA RESTORATION TOTAL 0.087 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.003 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.002 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.534 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.016 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.310 AC

TIDELANDS CLAIM

WETLAND TRANSITION AREA RESTORATION TOTAL 0.015 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.091 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.029 AC

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	1.197	52141.32
WETLAND TRANSITION AREA	0.555	24196.76
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel 2023.10.18 12:37:12 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATION NO. 24GA28029500
Michael D. Morgan
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -2-

SCALE: 1"=50'

DATE: OCTOBER 2023

14
23

FWR-2
FWR-9

10/2/2023 11:40:54 AM USYL68265
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FILE NAME: T3820_WFD_02.dgn

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CITY OF NEWARK

COUNTY OF ESSEX

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -2-
MATCH LINE PROPOSED HWE ℄ STA. 5079+00

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -4-
MATCH LINE PROPOSED HWE ℄ STA. 5094+50

WARE HOUSE PLACE

FIRMENCH WAY

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.004 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.008 AC

PROPOSED BASIN

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.008 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.004 AC

WETLAND TSD

TSD 18 TSD 19 TSD 20 TSD 21 TSD 22 TSD 23 TSD 24 TSD 25 TSD 26 TSD 27 TSD 28 TSD 29 TSD 30 TSD 31 TSD 32 TSD 33 TSD 34 TSD 35 TSD 36 TSD 37

2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094

HEW ℄

EXISTING NB-NCE ℄

HWE ℄

HEW ROADWAY

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

U65 5079 U65 5080 U65 5081 U65 5082 U65 5083 U65 5084 U65 5085 U65 5086 U65 5087 U65 5088 U65 5089 U65 5090 U65 5091 U65 5092 U65 5093 U65 5094

TSD144 TSD145

HWE ROADWAY

TSD103

TSD143 TSD142 TSD141 TSD140 TSD139 TSD138 TSD137 TSD136 TSD135 TSD134 TSD133 TSD132 TSD131 TSD130 TSD129 TSD128 TSD127 TSD126 TSD125 TSD124 TSD123 TSD122 TSD121 TSD120 TSD119 TSD118 TSD117 TSD116 TSD115 TSD114 TSD113 TSD112 TSD111 TSD110 TSD109 TSD108 TSD107

WETLAND TSD

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.0001 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.076 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.182 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.085 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 1.289 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.109 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.002 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.196 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.018 AC

N.J. State Plane Coordinate System NAD83

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	1.313	57181.96
WETLAND TRANSITION AREA	0.666	29029.87
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0.0021	77.58
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300
Robert J. Thiel
2023.10.18 12:37:31 -04'00'

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -3-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Docusigned by: Michael A. Morgan
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

15
23

FWR-3
FWR-9

FILE NAME: T3820_WFD_03.dgn

10/2/2023 11:05:25 AM USYL682665
pw://gfnet-pw.bentley.com:gfnet-pw-01/Documents/Projects/68280/OUTPUT/COMP.01/CIVIL/ROAD.WSP/NJDEP Permit Plans/T3820_WFD_03.dgn

DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK

COUNTY OF ESSEX

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -3-
MATCH LINE PROPOSED HWE @ STA. 5094+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -5-
MATCH LINE PROPOSED HWE @ STA. 5110+50

SPRING HIGH TIDE LINE (3.61 FEET NAVD88)

MEAN HIGH WATER LINE (2.38 FEET NAVD88)

MEAN LOW WATER LINE (-2.84 FEET NAVD88)

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.004 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.008 AC

ESTUARINE WETLAND RESTORATION TOTAL 0.152 AC

ESTUARINE WATERS RESTORATION TOTAL 0.004 AC

ESTUARINE WETLAND RESTORATION TOTAL 0.033 AC

ESTUARINE WATERS RESTORATION TOTAL 0.014 AC

ESTUARINE WATERS RESTORATION TOTAL 2.012 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.003 AC

ESTUARINE WATERS RESTORATION TOTAL 0.022 AC

ESTUARINE WATERS RESTORATION TOTAL 0.110 AC

ESTUARINE WATERS RESTORATION TOTAL 0.106 AC

ESTUARINE WATERS RESTORATION TOTAL 0.074 AC

ESTUARINE WETLAND RESTORATION TOTAL 0.020 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.060 AC

ESTUARINE WATERS RESTORATION TOTAL 0.197 AC

ESTUARINE WETLAND RESTORATION TOTAL 0.620 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.011 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.029 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.017 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.012 AC

ESTUARINE WATERS RESTORATION TOTAL 0.004 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.001 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.011 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.044 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.010 AC

ESTUARINE WATERS RESTORATION TOTAL 0.063 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.034 AC

WETLAND TSD

WETLAND TSE

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

HEW ℄

HWE ℄

4 FT BELOW MLW

EXISTING NB-NCE ℄

NEWARK BAY

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.099	4312.44
WETLAND TRANSITION AREA	0.102	4453.99
ESTUARINE WETLAND	0.825	35916.21
ESTUARINE WATERS	2.501	108942.34
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0.044	1899.18
ESTUARINE WATERS	0.106	4595.89

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:37:47 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -4-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Doc Signed by: RIZATION NO. 24GA28031500
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

16
23

FWR-4
FWR-9

FILE NAME: T3820_WFD_04.dgn

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CITY OF NEWARK

COUNTY OF ESSEX

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

4 FT BELOW MLW

ESTUARINE WATERS RESTORATION TOTAL 0.007 AC

AXIS OF EXIST. L.V.R.R. DRAW AND U.S. GOVT CHANNEL OPPOSITE PORT NEWARK

500'-0" USACE CHANNEL

℄ USACE CHANNEL

550'-0" NAVIGATIONAL OPENING

NEWARK BAY

HEW ROADWAY

HEW ℄

ESTUARINE WATERS RESTORATION TOTAL 0.463 AC

ESTUARINE WATERS RESTORATION TOTAL 0.003 AC

ESTUARINE WATERS RESTORATION TOTAL 0.235 AC

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY

HWE ROADWAY

EXISTING NB-NCE ℄

HWE ℄

HWE ROADWAY

NEWARK BAY

4 FT BELOW MLW

ESTUARINE WATERS RESTORATION TOTAL 0.135 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

ESTUARINE WATERS RESTORATION TOTAL 0.012 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

ESTUARINE WATERS RESTORATION TOTAL 0.033 AC

ESTUARINE WATERS RESTORATION TOTAL 0.072 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

ESTUARINE WATERS RESTORATION TOTAL 0.022 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

ESTUARINE WATERS RESTORATION TOTAL 0.078 AC

ESTUARINE WATERS RESTORATION TOTAL 0.074 AC

ESTUARINE WATERS RESTORATION TOTAL 0.022 AC

ESTUARINE WATERS RESTORATION TOTAL 0.076 AC

ESTUARINE WATERS RESTORATION EACH PROPOSED FOOTING = 0.031 AC (TYP.) TOTAL = 0.062 AC

ESTUARINE WATERS RESTORATION TOTAL 0.021 AC

ESTUARINE WATERS RESTORATION TOTAL 0.371 AC

ESTUARINE WATERS RESTORATION TOTAL 0.022 AC

ESTUARINE WATERS RESTORATION TOTAL 1.980 AC

ESTUARINE WATERS RESTORATION EACH REMOVAL OF EXISTING FOOTING = 0.096 AC (TYP.) TOTAL = 0.192 AC

N.J. State Plane Coordinate System NAD83

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -4- MATCH LINE PROPOSED HWE ℄ STA. 5110+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -6- MATCH LINE PROPOSED HWE ℄ STA. 5026+50

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	3.710	161625.76
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0.305	13285.80

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

FWR-5 / FWR-9

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

REV.	DESCRIPTION	DATE	BY	CHK.

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:38:02 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -5-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Docusigned by: Michael A. Morgan
IZATION NO. 24GA28032500
SCSA844E251441...
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

17 / 23

FILE NAME: T3820_WFD_05.dgn

10/2/2023 1:06:25 AM USYL682665
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DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

CITY OF NEWARK
CITY OF BAYONNE

CITY OF NEWARK
CITY OF BAYONNE

COUNTY OF ESSEX
COUNTY OF HUDSON

N.J. PRINCIPAL MERIDIAN
NAD83

NEWARK BAY

ESTUARINE WATERS RESTORATION
TOTAL 5.348 AC

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -5-
MATCH LINE PROPOSED HWE ℄ STA. 5126+50

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -7-
MATCH LINE PROPOSED HWE ℄ STA. 5141+50

HEW ROADWAY

HEW ℄

2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141

EXISTING
NB-NCE ℄

HEW ROADWAY

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HWE ROADWAY

HWE ℄

5127 5128 5129 5130 5131 5132 5133 5134 5135 5136 5137 5138 5139 5140 5141

HWE ROADWAY

ESTUARINE WATERS RESTORATION
TOTAL 0.036 AC

ESTUARINE WATERS RESTORATION
TOTAL 0.0371 AC

ESTUARINE WATERS RESTORATION
EACH REMOVAL OF EXISTING FOOTING
= 0.055 AC (TYP.) TOTAL = 0.444 AC

ESTUARINE WATERS RESTORATION
EACH REMOVAL OF EXISTING FOOTING
= 0.033 AC (TYP.)
TOTAL = 0.264 AC

ESTUARINE WATERS RESTORATION
EACH PROPOSED FOOTING
= 0.031 AC (TYP.)
TOTAL = 0.376 AC

NEWARK BAY

COUNTY OF ESSEX
COUNTY OF HUDSON

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	6.204	270253.96
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0.301	13111.56

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

FWR-6
FWR-9

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:38:20 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -6-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
Certificate of Authorization No. 24GA28031500
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'
DATE: OCTOBER 2023

18
23

FILE NAME: T3820_WFD_06.dgn

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CITY OF BAYONNE

COUNTY OF HUDSON

NEWARK BAY

4 FT BELOW MLW

MEAN LOW WATER LINE (-2.84 FEET NAVD88)

MEAN HIGH WATER LINE (2.38 FEET NAVD88)

SPRING HIGH TIDE LINE (3.61 FEET NAVD88)

N.J. State Plane Coordinate System NAD83

ESTUARINE WATERS RESTORATION TOTAL 2.398 AC

ESTUARINE WATERS RESTORATION TOTAL 0.174 AC

ESTUARINE WATERS RESTORATION TOTAL 0.027 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.038 AC

ESTUARINE EMERGENT WETLAND RESTORATION TOTAL 0.020 AC

ESTUARINE WATERS RESTORATION TOTAL 0.357 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.024 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.028 AC

ESTUARINE EMERGENT WETLAND RESTORATION TOTAL 0.225 AC

NJ ROUTE 440 NB

NJ ROUTE 440 SB

WETLAND DFG

HEW ROADWAY

HWE ROADWAY

HEW ℄

HWE ℄

EXISTING NB-NCE ℄

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

PROPOSED BASIN

WETLAND DFH

WETLAND DFI

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.016 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.231 AC

WETLAND TRANSITION AREA RESTORATION TOTAL 0.128 AC

PALUSTRINE EMERGENT WETLAND RESTORATION TOTAL 0.044 AC

ESTUARINE WATERS RESTORATION EACH REMOVAL OF EXISTING FOOTING = 0.033 AC (TYP.) TOTAL = 0.128 AC

ESTUARINE WATERS RESTORATION EACH REMOVAL OF EXISTING FOOTING = 0.055 AC (TYP.) TOTAL = 0.219 AC

ESTUARINE WATERS RESTORATION EACH PROPOSED FOOTING = 0.031 AC (TYP.) TOTAL = 0.125 AC

ESTUARINE WATERS RESTORATION TOTAL 0.017 AC

ESTUARINE WATERS RESTORATION TOTAL 0.090 AC

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -6- MATCH LINE PROPOSED HWE ℄ STA. 5141+50

MATCH LINE PROPOSED HWE ℄ STA. 5156+50 SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -8-

MATCH LINE, SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -9-

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.088	3833.28
WETLAND TRANSITION AREA	0.421	18338.76
ESTUARINE WETLAND	0.245	10672.20
ESTUARINE WATERS	3.407	148408.90
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0.128	5575.68

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

FWR-7
FWR-9

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel 2023.10.18 12:38:35 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -7-

REV.	DESCRIPTION	DATE	BY	CHK.

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATE OF AUTHORIZATION NO. 24GA28032550
Document signed by: Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'
DATE: OCTOBER 2023

19
23

FILE NAME: T3820_WFD_07.dgn

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CITY OF BAYONNE

COUNTY OF HUDSON

N.J. HIGH OCCUPANCY STATION
MARKER

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -7-
MATCH LINE PROPOSED HWE ℄ STA. 5156+50

PALUSTRINE EMERGENT
WETLAND RESTORATION
TOTAL 0.032 AC

WETLAND TRANSITION
AREA RESTORATION
TOTAL 0.198 AC

NJ ROUTE 440 NB

NJ ROUTE 440 SB

WETLAND DFK

NEW JERSEY TURNPIKE HUDSON COUNTY EXTENSION

HEW ROADWAY
HEW ℄

EXISTING
NB-NCE ℄

HWE ROADWAY
HWE ℄

PROPOSED BASIN

PROPOSED BASIN

TIDELANDS CLAIM

PALUSTRINE EMERGENT
WETLAND RESTORATION
TOTAL 0.040 AC

WETLAND DFJ

JOHN F. KENNEDY BLVD.

MATCH LINE, SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -9-

LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.072	3136.32
WETLAND TRANSITION AREA	0.198	8624.88
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

FWR-8
FWR-9

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:38:53 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -8-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATE OF AUTHORIZATION NO. 24GA28032500
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'
DATE: OCTOBER 2023

20
23

FILE NAME: T3820_WFD_08.dgn

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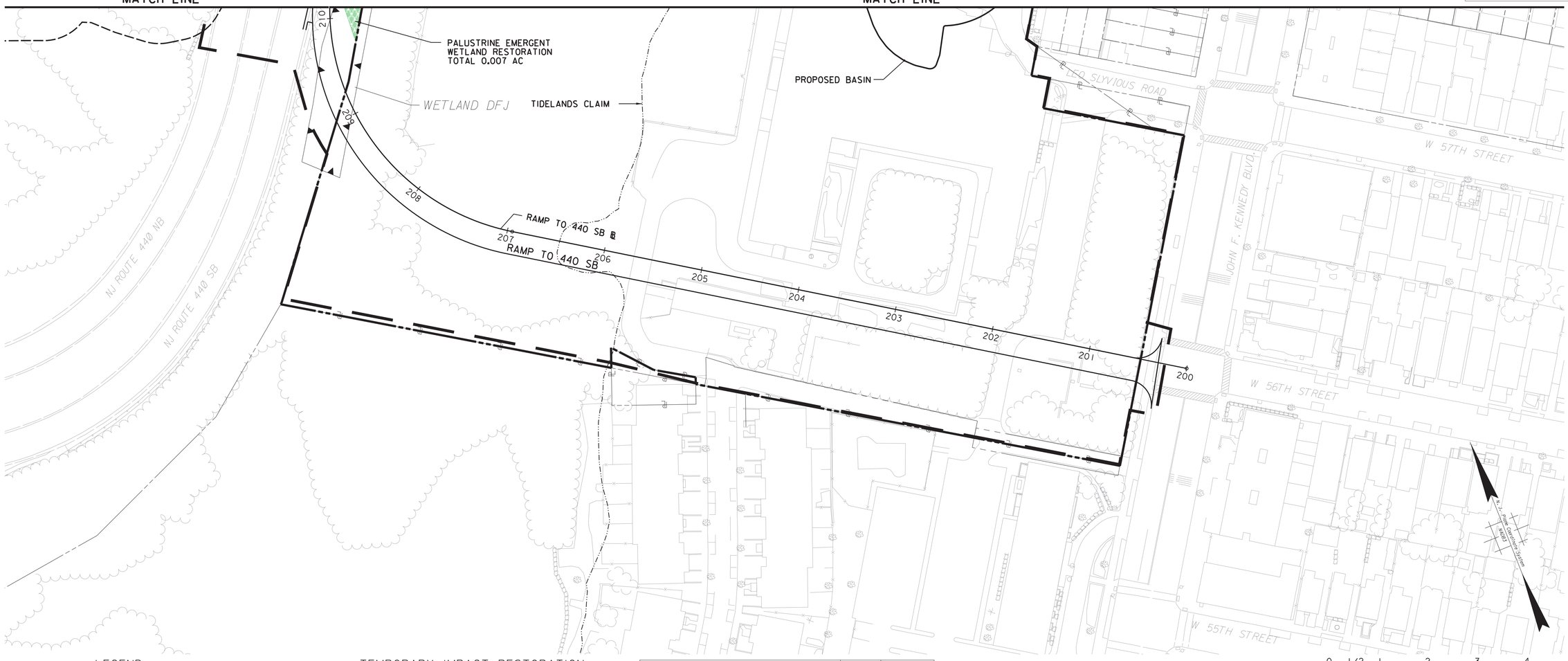
CITY OF BAYONNE

COUNTY OF HUDSON

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -7- MATCH LINE

SEE FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -8- MATCH LINE



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND DELINEATION
- WETLAND TRANSITION AREA
- MEAN LOW WATER LINE (-2.84 FEET NAVD88)
- MEAN HIGH WATER LINE (2.38 FEET NAVD88)
- SPRING HIGH TIDE LINE (3.61 FEET NAVD88)
- 50 FT RIPARIAN ZONE LIMIT
- WFD UPLANDS LIMIT

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- WETLAND TRANSITION AREA RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.007	317.740
WETLAND TRANSITION AREA	0	0
ESTUARINE WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
WETLAND TRANSITION AREA	0	0
ESTUARINE WATERS	0	0

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
2023.10.18 12:39:08 -04'00'
ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -9-

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
CERTIFICATE OF AUTHORIZATION NO. 24GA28031500
Michael A. Morgan
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: 1"=50'

DATE: OCTOBER 2023

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21/23

FILE NAME: T3820_WFD_10.dgn

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Planting List for Newark Bay Bridge Replacement Restoration Areas

Planting Zone	Total Planting Area (acres)	Species Name (Common Name)	% of Plantings in Planting Zone	Height	Root	Spacing	Units	Quantity
Estuarine Emergent Wetland (E2EM)	1.021	*Spartina alterniflora* (smooth cordgrass)	85%	6 IN Minimum	2 IN x 2 IN Minimum Plug	3 FT. On Center	Each	4,201
		Spartina cynosuroides (big cordgrass)	5%					248
		Disticulus spicata (saltgrass)	5%					248
		Juncus gerardii (saltmeadow rush)	5%					248
							Total	4,945
Palustrine Emergent Wetland/Freshwater Marsh (PEM)	3.284	Emergent Wetland Mix*	100%	N/A	N/A	12 Lbs of PLS/AC	Each	40
Coastal Scrub Shrub Habitat (As Directed by Engineer)	0.25	*Baccharis halimifolia* (Eastern Baccharis)	25%	24 IN - 36 IN Minimum	Container No. 2	10 FT. On Center	Each	30
		Myrica pensylvanica (Bayberry)	25%			10	Each	30
		Clethra alnifolia (Sweet Pepper Bush)	25%			10	Each	30
		Amorpha fruticosa (indigo bush)	25%			10	Each	30
Wetland Transition Area	1.638	Transition Area/Coastal Successional Field Mix*	100%	N/A	N/A	40 Lbs of PLS/AC	Pounds	66
Total Area	**6.193**							

N/A = Not Applicable

Note: TRANSITION AREA/COASTAL SUCCESSIONAL FIELD MIX WILL ALSO BE USED IN ANY UPLAND RIPARIAN RESTORATION AREAS THAT DO NOT ALREADY OVERLAP WITH WETLAND AND TRANSITION RESTORATION AREAS.

GENERAL PLANTING NOTES:

1 THE CONTRACTOR SHALL SUBMIT COPIES OF THE PLANT MATERIAL ORDER AT LEAST NINE MONTHS PRIOR TO THE PROPOSED PLANTING DATE TO THE ENGINEER. ALL PROPOSED CHANGES TO THE PLANTING PLAN SHALL BE MADE IN WRITING TO THE ENGINEER AT LEAST SIX MONTHS PRIOR TO PLANTING. ALL PROPOSED CHANGES MUST BE APPROVED IN WRITING. A COPY SHALL ALSO BE PROVIDED TO THE NJDEP.

2 THE MINIMUM CONTAINER SIZE FOR SHRUBS AND TREES SHALL BE NO. 2.

3 ALL PLANT STOCK WILL BE INSPECTED ON-SITE PRIOR TO INSTALLATION. PLANTING STOCK NOT MEETING SPECIFICATIONS SHALL NOT BE PLANTED AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4 THE HANDLING AND CARE OF ALL PLANT MATERIAL SHALL FOLLOW APPROPRIATE PROCEDURES TO PROTECT STEMS AND ROOT SYSTEMS FROM EXPOSURE TO FREEZING TEMPERATURES, EXCESSIVE HEAT, AND DESICCATION DUE TO SUN AND WIND. PLANT MATERIAL THAT IS NOT PROTECTED FROM THESE CONDITIONS SHALL BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

5 ALL SEEDING WORK SHALL BE COMPLETED DURING THE SPRING PRIOR TO THE INSTALLATION OF TREES, SHRUBS AND HERBACEOUS PLANTS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6 ALL PLANT MATERIAL SHALL BE INSTALLED WITHIN 48 HOURS OF DELIVERY TO SITE. PLANT MATERIAL NOT INSTALLED WITHIN THIS TIME FRAME MAY BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

7 THE SPRING ESTABLISHMENT PERIOD FOR CONTAINERIZED TREES AND SHRUBS IS FROM MARCH 15 TO MAY 15. THE ESTABLISHMENT PERIOD FOR HERBACEOUS PLANT MATERIAL IS FROM APRIL 15 TO JUNE 15. THE INSTALLATION OF TREES AND SHRUBS SHALL BE PERFORMED DURING THE SPRING. THE INSTALLATION OF HERBACEOUS PLANT MATERIAL SHALL BE PERFORMED DURING THE SPRING, OR AS DIRECTED BY THE ENGINEER. TIDAL HERBACEOUS PLANT PLUGS AND SHRUBS SHALL BE PLANTED IN ACCORADNCE WITH THE NOTES BELOW AND AT THE DIRECTION OF THE ENGINEER.

8 PLANT MATERIAL SHALL BE INSTALLED IN A NATURALIZED PATTERN AT APPROPRIATE SPACING TO MEET PLANTING DENSITY AS SHOWN ON PLAN. PLANTS INSTALLED IN STRAIGHT LINES SHALL NOT BE ACCEPTED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

9 NO AREA SHALL BE PLANTED UNTIL FINAL GRADES HAVE BEEN ACHIEVED, IT HAS BEEN CLEARED OF DEBRIS AND APPROVED BY THE ENGINEER.

TIDAL WETLANDS HERBACEOUS PLANTING NOTES:

EMERGENT PLANTINGS - PLUGS : LOW MARSH AND HIGH MARSH

1 THE LOW MARSH AND HIGH MARSH PLANTING WINDOW IS FROM APRIL 15 TO JUNE 15.

2 THE PLUGS SHALL BE PLANTED IN THE SOIL NO MORE THAN ONE INCH (1") DEEPER THAN GROWN IN THE NURSERY AND TO A DEPTH THAT WILL ENSURE THAT THE TOP OF THE ROOTSTOCK MASS LIES NO MORE THAN ONE INCH (1") BELOW THE SOIL SURFACE.

3 PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE (OSMOCOTE 18-6-12) AT THE RATE OF THIRTY (30) GRAMS PER PLANT. THE PLANTS SHALL THEN BE PLACED WITH THE ROOT SYSTEM ORIENTED DOWNWARD. WHILE THE PLANT IS IN THIS POSITION, THE PLANTING HOLE SHALL BE FULLY AND FIRMLY CLOSED. IF A SOIL DEPRESSION IS FORMED ABOVE OR IMMEDIATELY ADJACENT TO THE PLANTING LOCATION, ENOUGH SOIL SHALL BE SLOUGHED FROM THE SURROUNDING AREA AND FIRMLY TAMPED INTO THE DEPRESSION TO LEAVE THE PLANTING AREA AT THE SAME ELEVATION AS THE SURROUNDING SOIL OR SLIGHTLY HIGHER.

COASTAL SCRUB SHRUB PLANTING:

1 THE SHRUB PLANTING WINDOW IS MARCH 15 TO MAY 15.

2 ALL SHRUBS SHALL CONFORM TO THE MATERIAL SPECIFICATION REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (1986 OR LATER EDITION). THE BACCHARIS AND IVA SHALL CONFORM TO TYPE 4 STOCK, TWO- TO THREE-FOOT (2'-3') TALL, MINIMUM OF TWO CANES.

3 THE PLANT PITS SHALL BE DUG APPROXIMATELY FOUR INCHES (4") WIDER THAN THE STOCK SIZE. PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, A 20-GRAM FERTILIZER AGRIFORM TABLET (20-10-5 ANALYSIS) SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE. BACKFILL SOIL MATERIALS SHALL BE THE SAME AS EXCAVATED FOR THE PLANTING PITS.

4 THE PLANT SHALL BE INSTALLED IN AN UPRIGHT POSITION, AT A DEPTH NO MORE THAN TWO (2) INCHES BELOW THE SOIL SURFACE, WITH NO EXPOSED ROOTS, SOIL FIRMLY PRESSED AGAINST SIDES, WITH NO AIR POCKETS AROUND THE ROOT BALL.

SEED INSTALLATION NOTES:

1 A COPY OF THE SEED ORDERS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL A MINIMUM OF NINE MONTHS BEFORE THE ANTICIPATED SEEDING DATE. FOR SEED MIXTURE COMPOSITIONS, PLEASE REFER TO WRITTEN SPECIFICATIONS. APPROVAL OF FINAL GRADING AND GROUND PREPARATION BY THE ENGINEER IS REQUIRED PRIOR TO SEEDING.

2 ANY PROPOSED CHANGES TO THE SEED MIX MUST BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL AT LEAST SIX MONTHS BEFORE THE ANTICIPATED SEEDING DATE.

3 IN TEMPORARY STAGING AND CONSTRUCTION ACCESS AREAS, THE GROUND SURFACE SHALL BE PREPARED BEFORE SEEDING. AREAS TO BE SEEDED SHALL BE TILLED TO A DEPTH OF FOUR (4) INCHES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. COMPACTED SOILS, AS SOLELY DETERMINED BY THE ENGINEER, SHALL BE RIPPED TO A MINIMUM DEPTH OF EIGHT (8) INCHES USING TWO PASSES AT 90 DEGREE ANGLES. ALL SOIL SURFACES SHALL BE FREE OF ROCK OR DEBRIS PRIOR TO SEEDING.

4 SEEDING WITHIN UPLANDS AND WETLANDS MAY OCCUR BY EITHER DRILL SEEDING OR BROADCAST SEEDING. IMMEDIATELY FOLLOWING BROADCAST SEEDING, THE SEED SHALL BE INCORPORATED INTO THE SOIL TO A MAXIMUM DEPTH OF 1/4 INCH BY TRACKING WITH A LOW-GROUND PRESSURE DOZER OR USING RAKES.

5 THE SEED SHALL NOT BE MIXED WITH THE FERTILIZER PRIOR TO SEEDING. FERTILIZER SHALL BE PLACED AFTER THE SEED IS INCORPORATED INTO THE SOIL.

6 FOR FERTILIZER RATES AND COMPOSITION, REFER TO THE WRITTEN SPECIFICATION.

7 THE SPRING SEEDING WINDOW IS FROM MARCH 15 TO MAY 30. THE FALL SEEDING WINDOW IS FROM SEPTEMBER 15 TO OCTOBER 30. APPROVAL OF FINAL GRADING BY THE ENGINEER IS REQUIRED PRIOR TO SEEDING OF AREAS.

8 NO EARLIER THAN ONE-WEEK PRIOR TO THE SEEDING, THE SEEDED AREA SHALL BE DISKED TO A MINIMUM DEPTH OF FOUR INCHES (4") AND FIRMED TO FORM A GOOD SEED BED. IF DIRECTED BY THE ENGINEER, DISKING MAY BE OMITTED IN FAVOR OF A SHALLOW HARROW OPERATION PRIOR TO THE PLACEMENT OF THE SEED. FOLLOWING SEEDING, THE SEEDED AREA SHALL BE DRAGGED WITH A CHAIN OR TINE HARROW BY TRACKING WITH A LOW-GROUND PRESSURE DOZER TO COVER SEED IN SOIL NO MORE THAN 1/4-INCH DEEP AND FIRMED TO ENSURE GOOD SOIL TO SEED CONTACT.

9 NITROGEN FERTILIZER SHALL NOT BE APPLIED AT THE TIME OF THE SEEDING.

10 THE SEEDED AREAS IN UPLANDS SHALL BE MULCHED AT THE RATE OF 4,000 POUNDS OF STRAW MULCH PER ACRE. THE MULCH SHALL BE BOUND IN PLACE WITH AN APPROVED BINDER. IF THE SEED PLACEMENT BY HYDRO-SEEDER IS APPROVED BY THE ENGINEER, HYDRO-MULCH MAY BE USED. HYDRO-MULCH SHALL BE PLACED SEPARATELY FROM SEED.

11 COASTAL SCRUB SHRUB PLANTINGS SHALL OCCUR WITHIN TRANSITION ZONES BETWEEM TIDAL LOW MARSH AND TIDAL HIGH MARSH TRANSITION TO UPLANDS OR FRESHWATER MARSH, AS DIRECTED BY THE ENGINEER.

***Coastal Successional Field Mix**

Schizachyrium scoparium (Little Bluestem)	2.5 lbs of PLS/ac
Panicum amarum (Coastal Panicgrass)	2 lbs of PLS/ac
Sorghastrum nutans (Indiangrass)	2 lbs of PLS/ac
Danthonia spicata (Poverty oatgrass)	1 lbs of PLS/ac
Chamaecrista fasciculata (Partridge pea)	2 lbs of PLS/ac
Panicum virgatum (Switchgrass)	2.5 lbs of PLS/ac
Elymus virginicus (Virginia wild rye)	5 lbs of PLS/ac
Perrenial Wildflowers	23 lbs of PLS/ac
Total Seeding Rate PLS/Acre	40

Perennial Wildflowers		PLS Lbs/Acre
Asclepias amplexicaulis	clasping milkweed	0.03
Asclepias exaltata	poke milkweed	0.03
Asclepias syriaca	common milkweed	0.03
Asclepias verticillata	whoried milkweed	0.03
Asclepias tuberosa	butterfly milkweed	0.03
Symphyotrichum prenanthoides	crooked stem aster	0.02
Symphyotrichum novae-angliae	New England aster	0.02
Symphyotrichum novi-belgii	New York aster	0.02
Leucanthemum vulgare	oxeye daisy	0.12
Centrosema virginianum	spurred butterfly pea	0.02
Coreopsis lanceolata	lance-leaf coreopsis	0.13
Conoclinium coelestinum	blue mistflower	0.1
Heliopsis helianthoides	smooth oxeye	0.12
Heterotheca subaxillaris	camphorweed	0.03
Lupinus perennis	wild lupine	0.04
Oenothera speciosa	pinkladies	0.02
Penstemon digitalis	foxglove beardtongue	0.1
Phlox paniculata	fall phlox	0.1
Solidago altissima	tall goldenrod	0.03
Solidago rugosa	wrinkle-leaf goldenrod	0.01
Solidago sempervirens	seaside goldenrod	0.03
Strophostyles helvola	amberique-bean	0.02
TOTAL		**1.08**

***Emergent Wetland Mix**

Andropogon gerardii (Broomsedge)	2.5 lbs of PLS/ac
Panicum virgatum (Switchgrass)	2.5 lbs of PLS/ac
Panicum amarum (Coastal Panicgrass)	0.5 lbs of PLS/ac
Leersia oryzoides (rice cutgrass)	0.5 lbs of PLS/ac
Echinocloa walterii (saltmarsh cockspur)	1 lbs of PLS/ac
Native Forbs and Sedges	5 lbs of PLS/ac
Total Seeding Rate PLS/Acre	12

Native Forb and Sedge Species		PLS Lbs/Acre
Bidens cernua	nodding beggar-ticks	0.5
Bidens laevis	bur-marigold	0.3
Bolboschoenus maritimus	*seaside/cosmopolitan bulrush*	0.25
Helenium autumnale	sneezeweed	0.05
Hibiscus moscheutos	rose mallow	0.2
Juncus gerardii	saltmeadow rush	0.03
Juncus effusus	soft rush	0.005
Limonium carolinianum	sea lavender, marsh	0.1
Sabatia stellaris	marsh pink	0.2
Schoenoplectus tabernaemontani	softstem bulrush	0.02
Schoenoplectus americanus	Oleny threesquare	0.3
Scirpus cyperinus	woolgrass	0.005
Scirpus robustus	*saltmarsh bulrush*	0.5
Scirpus pungens	*common threesquare*	0.4
Solidago sempervirens	*seaside goldenrod*	0.09
Symphyotrichum tenuifolium	perennial saltmarsh aster	0.05
TOTAL		**3**

0 1/2 1 2 3 4

ORIGINAL SIZE IN INCHES

DTL-1 / DTL-2

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800

Robert J. Thiel
2023.10.18 12:39:26 -04'00'

ROBERT J. THIEL
NEW JERSEY PROFESSIONAL ENGINEER NO. 24GE04226300

REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY

NEW JERSEY TURNPIKE

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

PLANTING NOTES AND DETAILS

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
AUTHORIZATION NO. 24GA28032500

Michael A. Morgan
DocuSigned by: 5C53A3644B2B1451...

MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: N.T.S.

DATE: OCTOBER 2023

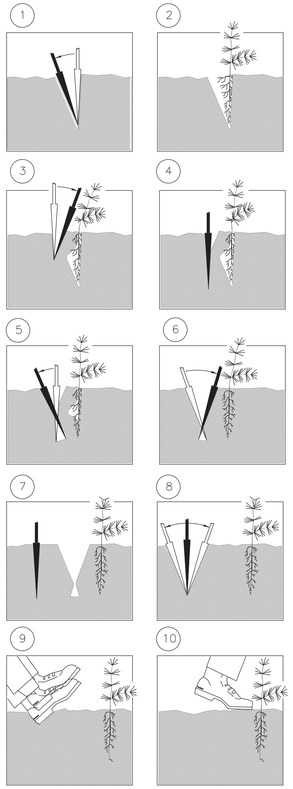
22
23

FILE NAME: T3820_WFD_Planting Details.dgn

10/2/2023 11:08:08 AM USYL682655
pw:/gfnet-pwclient-pw-01/Documents/Projects/68280/OUTPUT/COMP.01/CIVIL/ROAD,WSP-NJDEP Permit Plans/T3820_WFD_Planting Details

DocuSign Envelope ID: 3C61BBBB-6A68-45E3-B67D-0963AC03A29A

PLANTING PROCEDURE WITH KBC/OST BAR (DIBBLE BAR)



1 INSERT THE PLANTING BAR STRAIGHT DOWN INTO THE SOIL TO THE FULL DEPTH OF THE BLADE AND PULL BACK ON THE HANDLE TO OPEN THE PLANTING HOLE. (DO NOT ROCK THE PLANTING BAR BACK AND FORTH AS THIS CAUSES SOIL IN THE PLANTING HOLE TO BE COMPACTED, INHIBITING GROWTH.)

2. REMOVE THE PLANTING BAR AND PUSH THE TREE ROOTS DEEP INTO THE PLANTING HOLE. PULL THE TREE BACK UP TO THE CORRECT PLANTING DEPTH. GENTLY SHAKE THE TREE TO ALLOW THE ROOT TO STRAIGHTEN OUT. DO NOT TWIST OR SPIN THE TREE OR LEAVE THE ROOTS BENT (J-ROOTED).

3. INSERT THE PLANTING BAR SEVERAL INCHES IN FRONT OF THE TREE AND PUSH THE BLADE HALFWAY INTO THE SOIL. TWIST AND PUSH THE HANDLE FORWARD TO CLOSE THE TOP OF THE SLIT TO HOLD THE TREE IN PLACE.

4. PUSH THE PLANTING BAR DOWN TO THE FULL DEPTH OF THE BLADE.

5. PULL BACK ON THE HANDLE TO CLOSE THE BOTTOM OF THE PLANTING HOLE.

6. PUSH FORWARD ON THE HANDLE TO FIRM SOIL ON TOP OF ROOTS AND TO ELIMINATE AIR/WATER POCKETS AROUND THE ROOT.

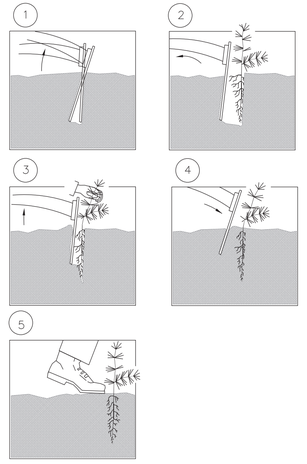
7. INSERT PLANTING BAR 2 INCHES FROM LAST HOLE.

8. PUSH FORWARD, THEN PULL BACKWARD TO FILL PREVIOUS HOLE.

9. REMOVE THE PLANTING BAR AND FIRM UP THE OPENING WITH THE HEEL.

10. FIRM THE SOIL AROUND THE TREE WITH THE FOOT. BE CAREFUL TO AVOID DAMAGING THE TREE.

PLANTING PROCEDURE WITH HOEDAD



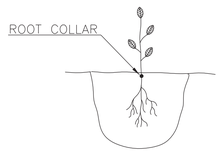
1. STRIKE BLADE ALMOST VERTICALLY, FULL DEPTH OF BLADE, INTO THE SOIL. PULL UP ON THE HANDLE TO BREAK THE SOIL LOOSE AT THE BOTTOM OF THE HOLE. CAUTION - AVOID RAISING THE HANDLE MORE THAN A FEW CENTIMETERS. OTHERWISE, THE HOLE WILL FILL WITH SOIL AND THE TREE WILL BE SHALLOW ROOTED.

2. SLIDE HAND DOWN HANDLE ALMOST TO THE BLADE. PULL BACK AND DOWN ON THE HANDLE TO FORM A POCKET ON THE FAR SIDE OF THE BLADE. WITH THE OTHER HAND, IMMEDIATELY PLACE THE TREE ROOTS INTO THE POCKET TO THE FULL DEPTH OF THE HOLE.

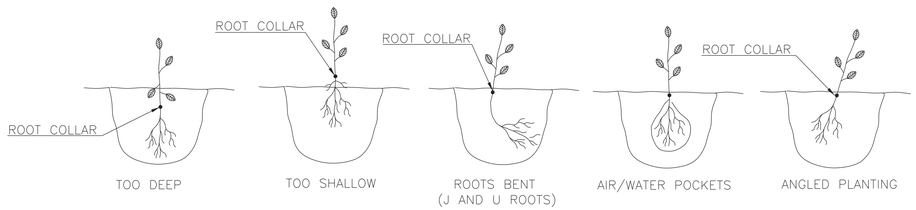
3. HOLD TREE IN PLACE WHILE SLIDING THE HOEDAD BLADE OUT OF THE HOLE. LOOSE SOIL SHOULD FALL INTO THE HOLE, HOLDING TREE IN PLACE.

4. PULL BLADE COMPLETELY OUT OF THE HOLE AND PUSH SOIL AGAINST PLANTED TREE WITH THE TIP OF THE BLADE.

5. USE FOOT TO FIRM THE SOIL AGAINST THE TREE. DO NOT STEP ON OR BRUISE TREE WITH YOUR FOOT.



PROPER PLANTING
N.T.S.



UNACCEPTABLE PLANTING
N.T.S.

0 1/2 1 2 3 4
ORIGINAL SIZE IN INCHES

DTL-2
DTL-2

	BY	DATE
MADE:		
TRACED:		
CHECKED:		
SUPERVISED:		

WSP U.S.A., INC.
350 MOUNT KEMBLE AVENUE, SUITE 200, MORRISTOWN, NJ 07960
CERTIFICATE OF AUTHORIZATION NO. 24GA28029800
Robert J. Thiel
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ROBERT J. THIEL
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REV.	DESCRIPTION	DATE	BY	CHK.

NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE
OPS NO. T3820
NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION
BRIDGE REPLACEMENTS AND CAPACITY ENHANCEMENTS PROGRAM

PLANTING NOTES AND DETAILS

GANNETT FLEMING, INC.
ONE CENTENNIAL AVENUE, SUITE 201
PISCATAWAY, NEW JERSEY 08854
RIZATION NO. 24GA28032550
DocuSigned by:
Michael A. Morgan
5C53A6A6251457...
MICHAEL A. MORGAN
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0379000

SCALE: N.T.S.
DATE: OCTOBER 2023

23
23

FILE NAME: T3820_WFD_Planting Details.dgn

10/2/2023 11:08:14 AM USY1682655
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ATTACHMENT B

USACE PERMIT PLANS

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

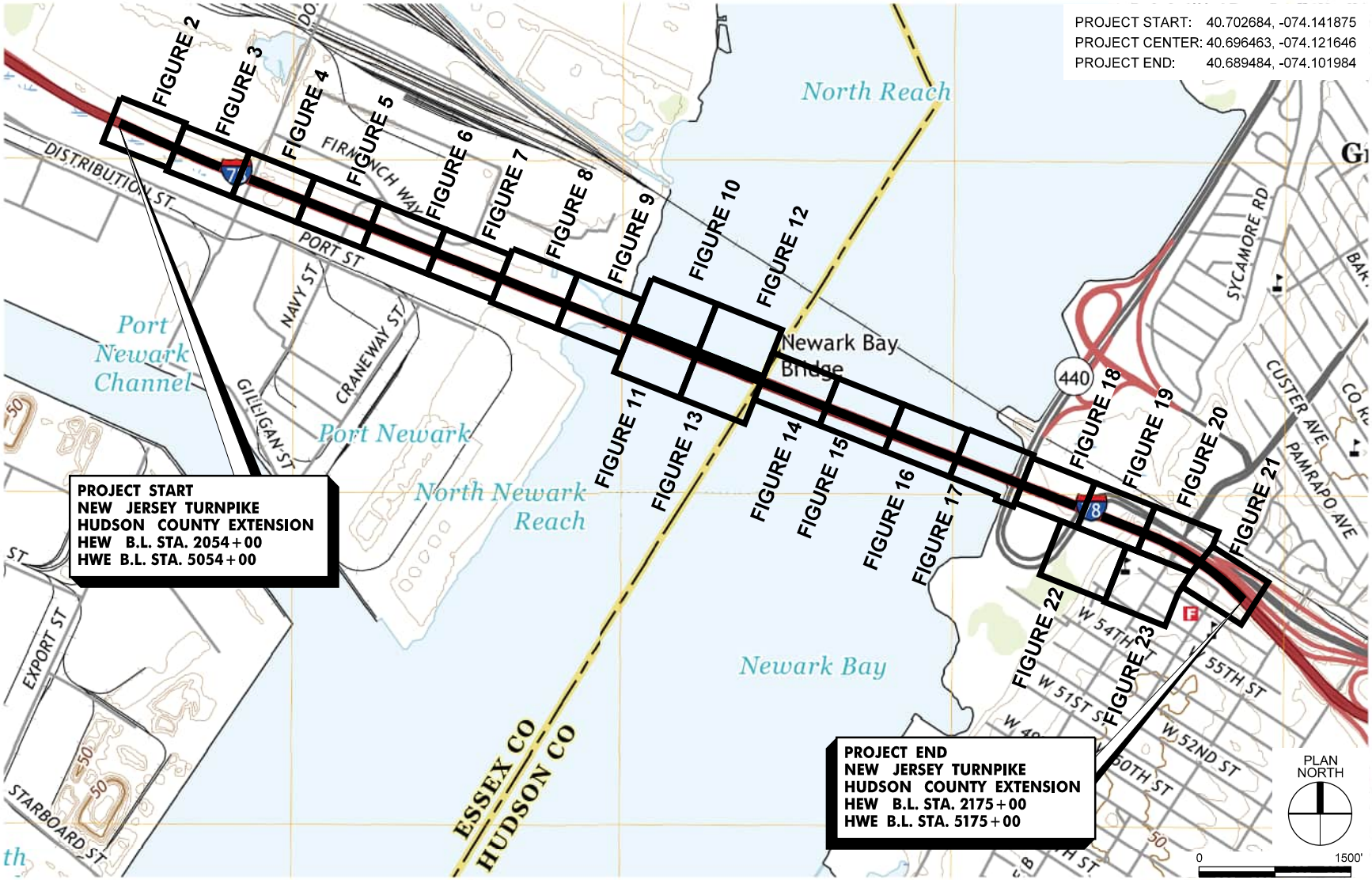
DRAWING NO.
FIGURE 1
SHEET 1 OF 48

NEW JERSEY TURNPIKE
NEWARK BAY - HUDSON COUNTY EXTENSION
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX

CITY OF BAYONNE, COUNTY OF HUDSON

PROJECT START: 40.702684, -074.141875
PROJECT CENTER: 40.696463, -074.121646
PROJECT END: 40.689484, -074.101984



USGS TOPO ELIZABETH & JERSEY CITY, NJ 2019

TOTAL IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	4.038	175,838.07
	TEMPORARY IMPACTS	4.324	188,388.32
TIDAL WETLAND	PERMANENT IMPACTS	1.507	65,623.92
	TEMPORARY IMPACTS	0.883	38,492.23
TIDAL WATER	PERMANENT IMPACTS	4.352	189,579.12
	TEMPORARY IMPACTS	2.926	127,442.56

GENERAL NOTE:

1. WETLANDS AND WATERS WERE DELINEATED USING THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, 2012 NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT. BOUNDARIES OF WETLANDS AND WATERS WERE MARKED IN THE FIELD BY SEQUENTIALLY NUMBERED FLAGS AND SUBSEQUENTLY LOCATED WITH A HAND-HELD TRIMBLE 7X GPS UNIT WITH SUB-METER ACCURACY. PORTIONS OF SOME WETLAND/WATERS AREAS LACK FIELD FLAGS AND WERE MAPPED VIA DESKTOP, AND THEREFORE, DO NOT CONTAIN FLAG NUMBERS. THESE AREAS WERE INACCESSIBLE DUE TO EXISTING FENCING, LACK OF PROPERTY ACCESS PERMISSIONS, OR UNSAFE CONDITIONS.

2. ALL TEMPORARY IMPACTS ARE ASSOCIATED WITH ACTIVITIES THAT WILL OCCUR FOR MORE THAN 6 MONTHS.

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

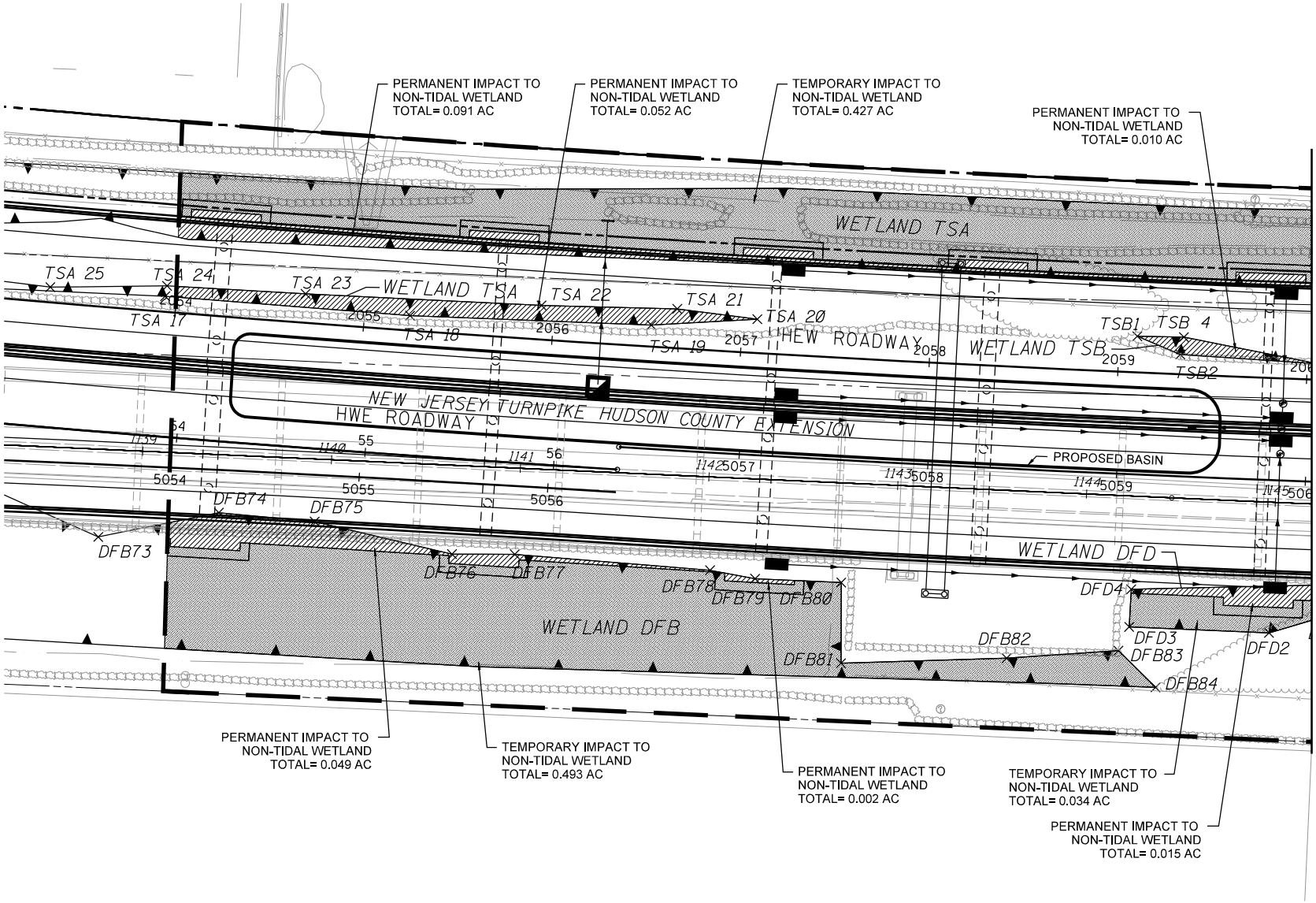
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 2

SHEET 2 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.219	9548.26
	TEMPORARY IMPACTS	0.954	41584.17
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

PLAN NORTH

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

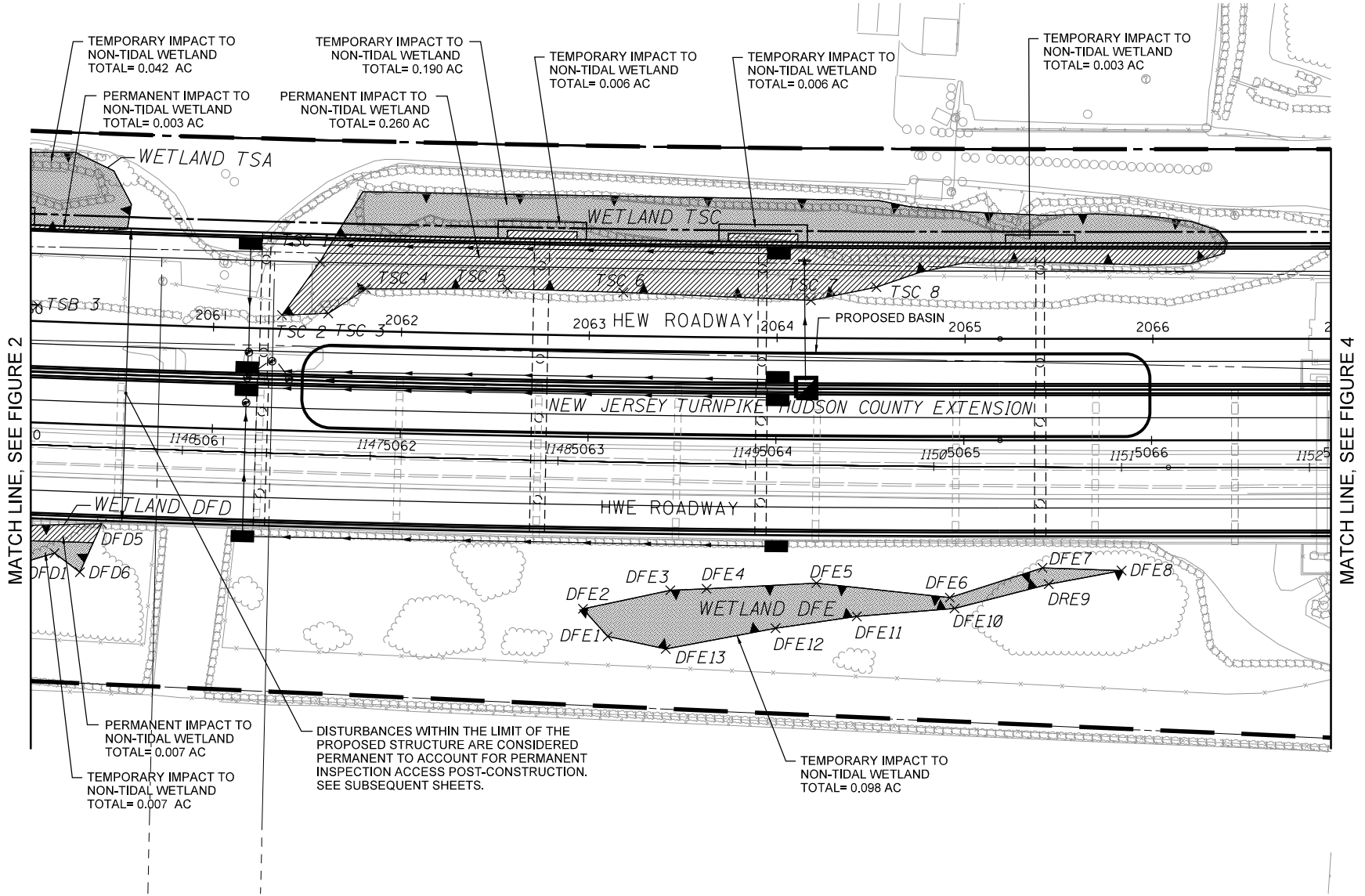
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 3



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
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- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.270	11762.69
	TEMPORARY IMPACTS	0.352	15351.16
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

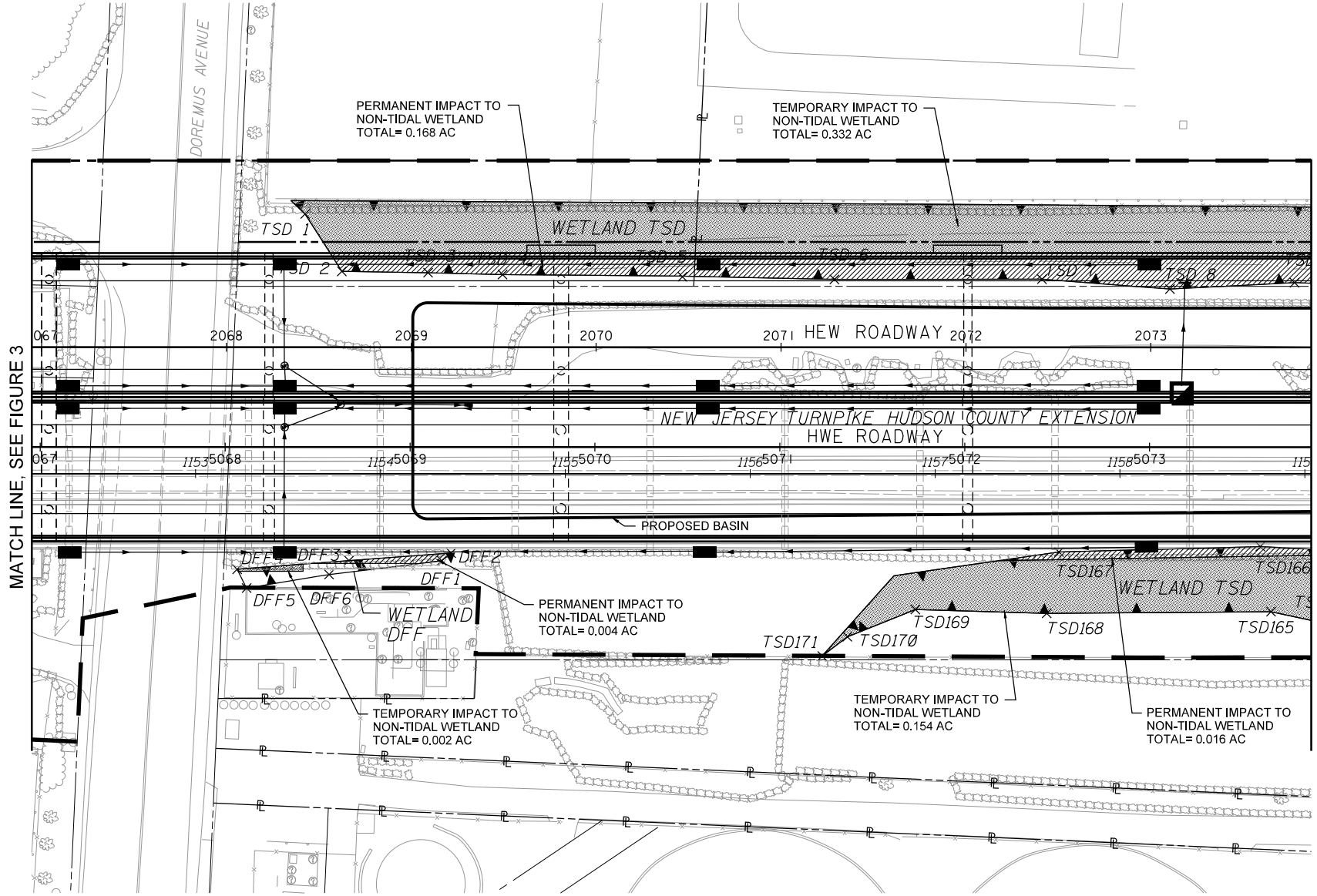
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 4



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.188	8180.42
	TEMPORARY IMPACTS	0.488	21264.72
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

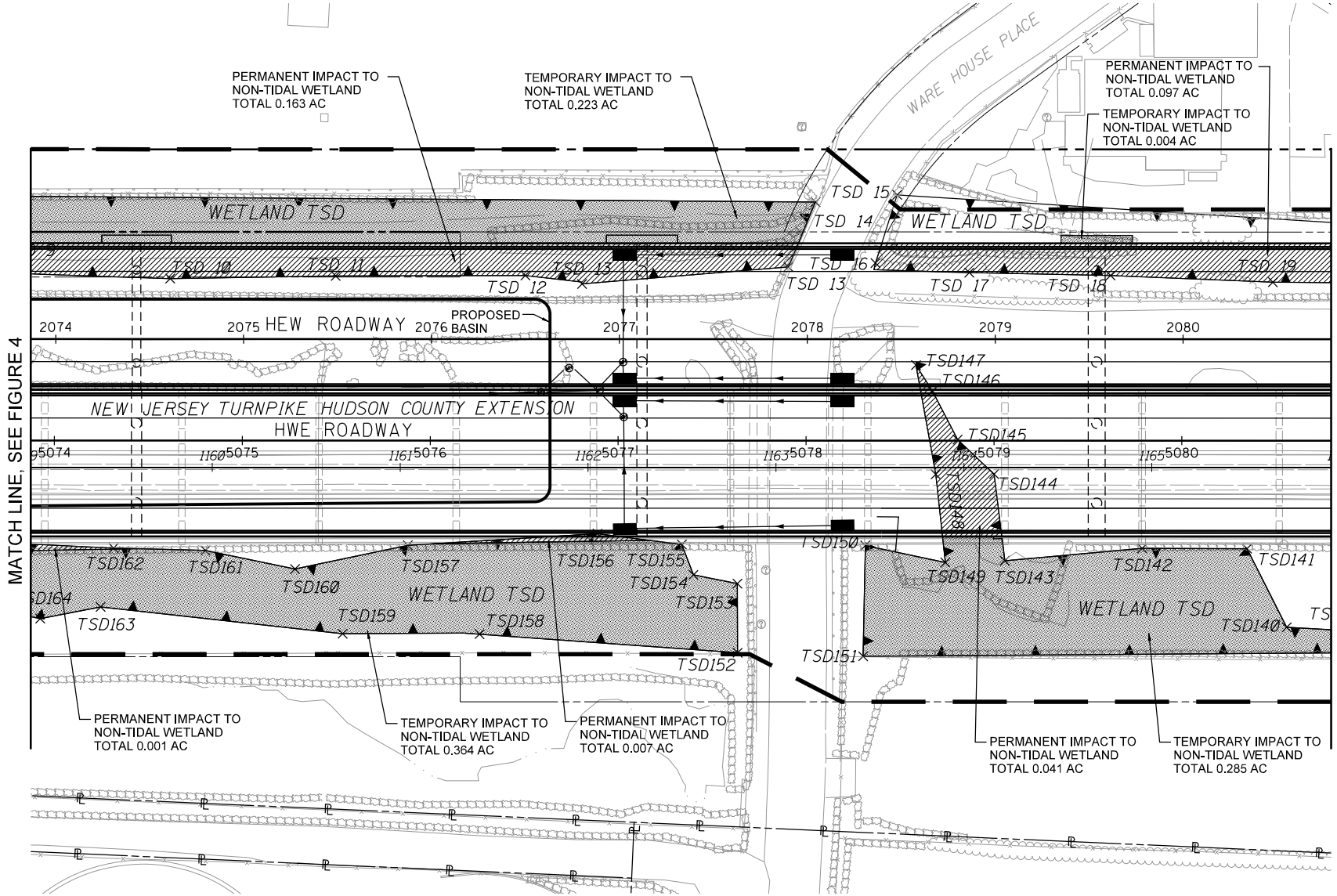
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 5



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
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- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.309	13465.66
	TEMPORARY IMPACTS	0.876	38153.62
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

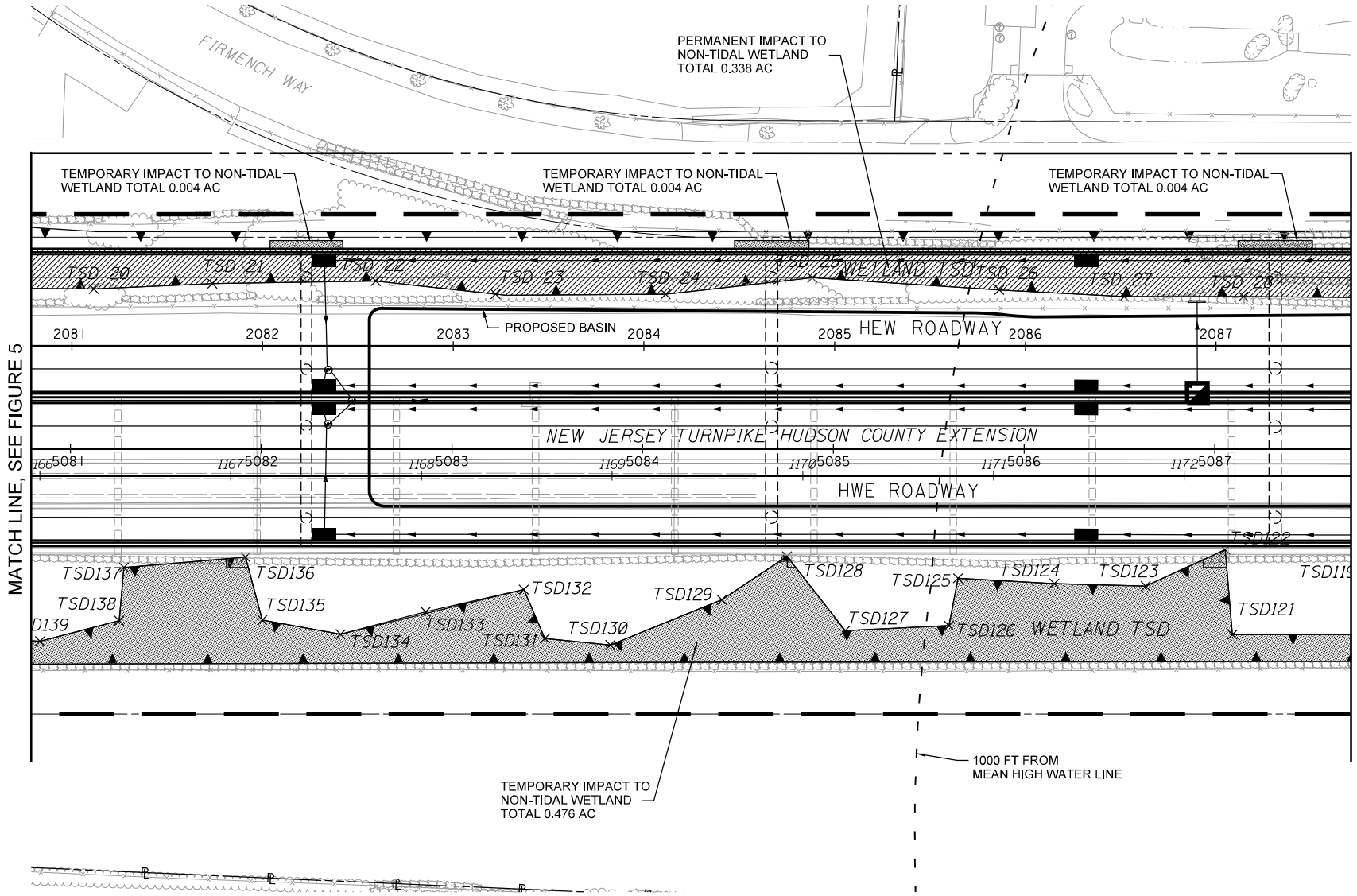
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 6

SHEET 6 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
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- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.338	14701.27
	TEMPORARY IMPACTS	0.488	21248.91
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

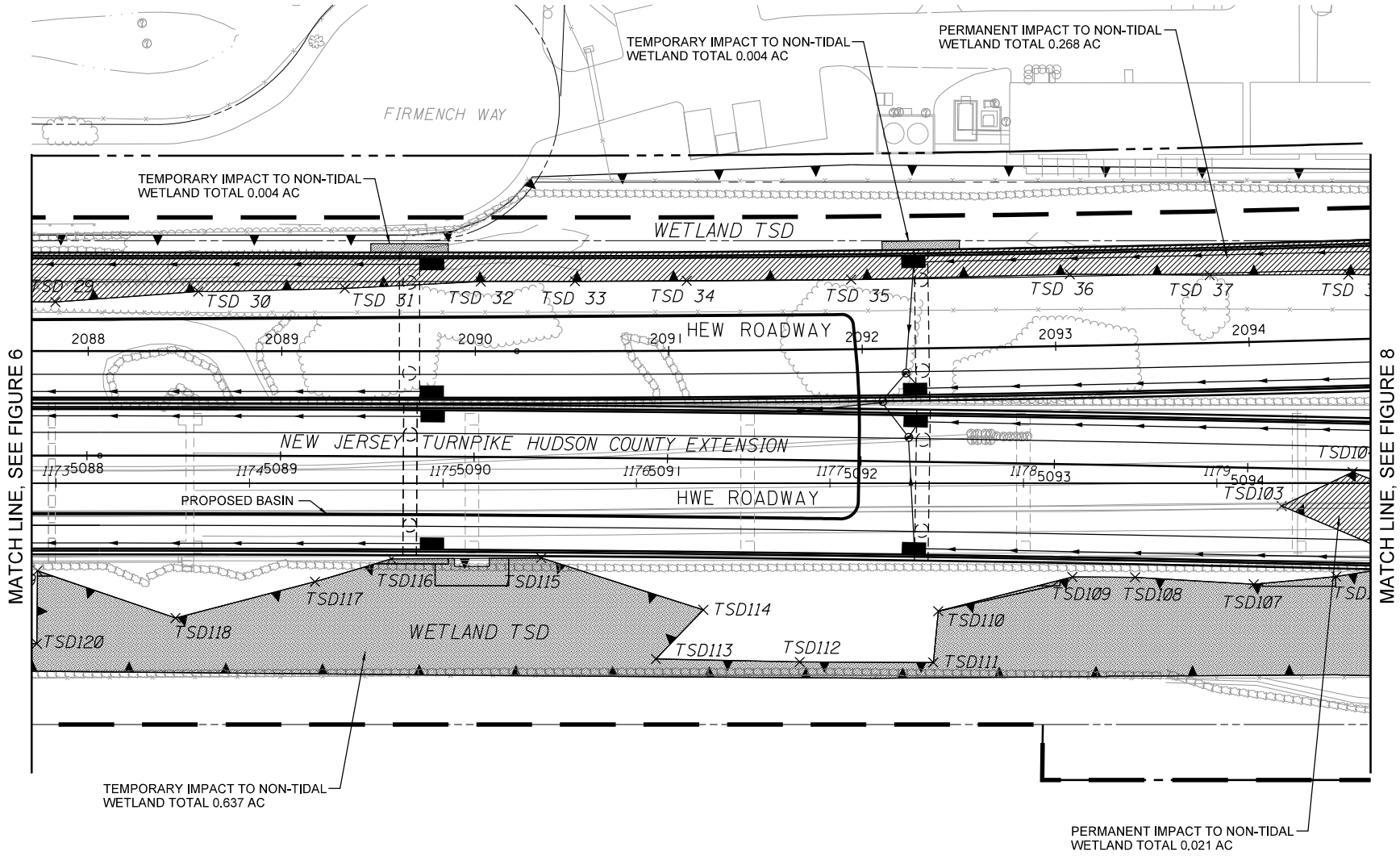
CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 7



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.289	12584.64
	TEMPORARY IMPACTS	0.645	28112.15
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

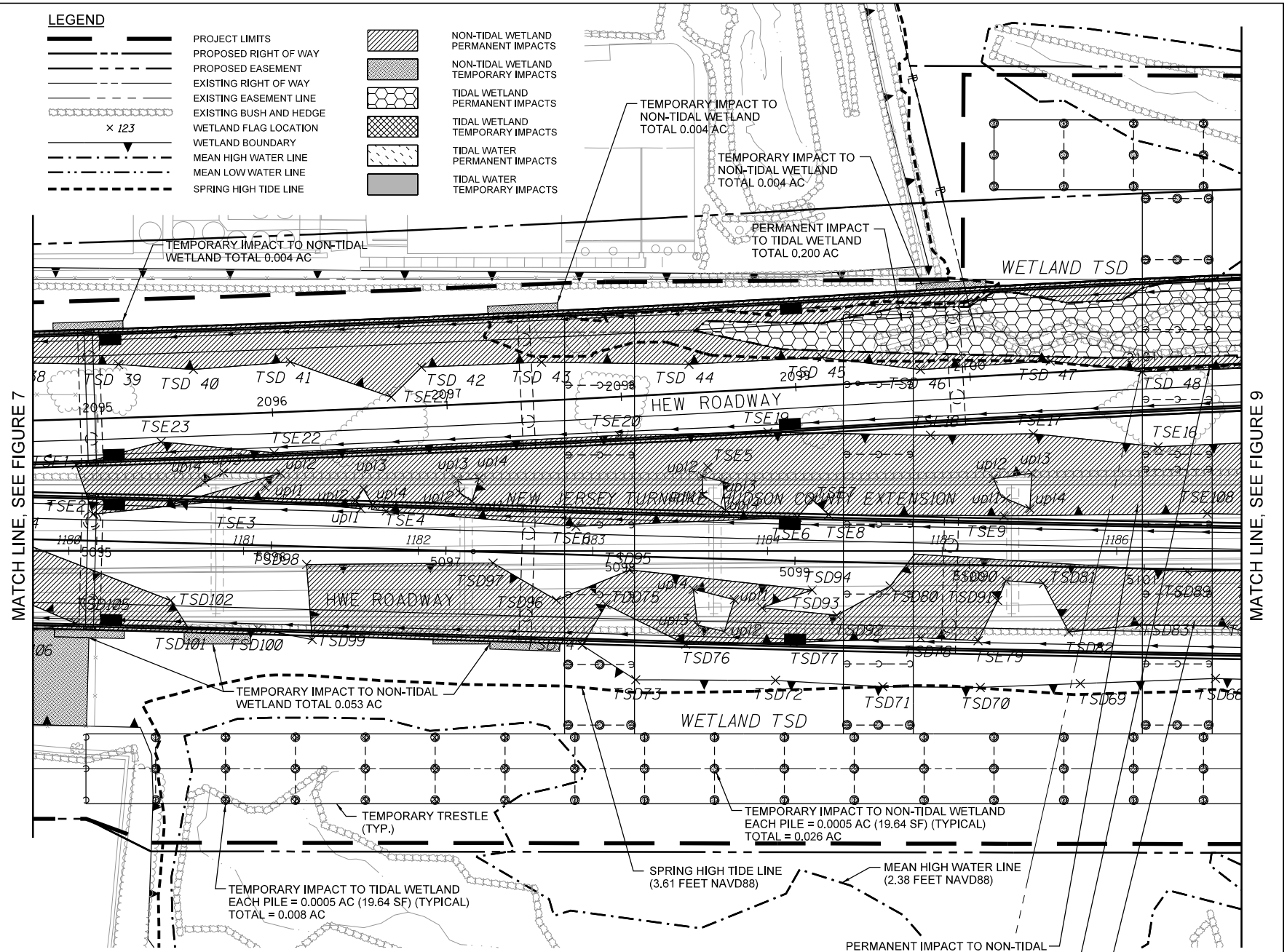
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 8

SHEET 8 OF 48



IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	1.435	62503.39
	TEMPORARY IMPACTS	0.091	3940.67
TIDAL WETLAND	PERMANENT IMPACTS	0.200	8694.94
	TEMPORARY IMPACTS	0.008	367.80
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

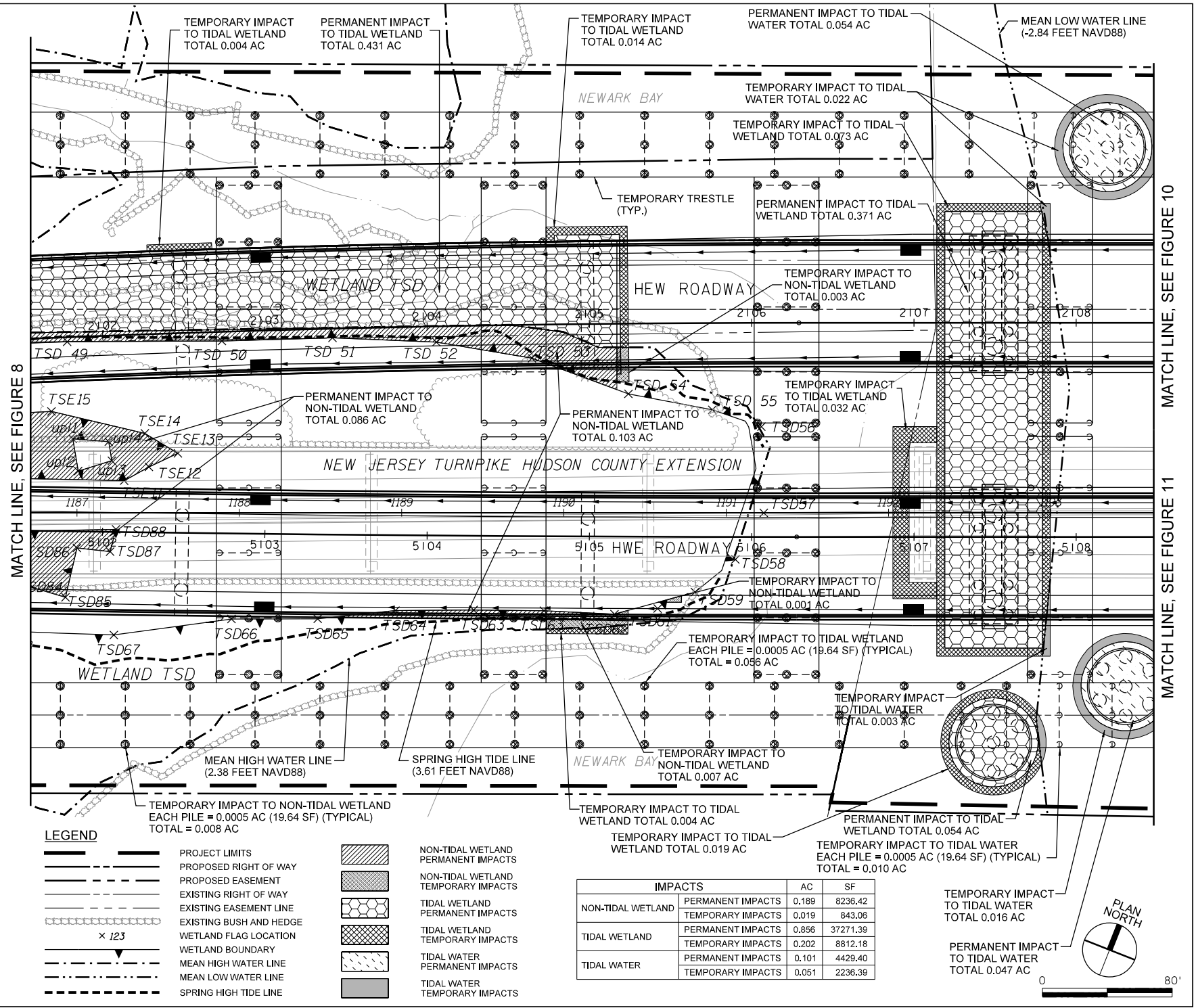
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 9



IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.189	8236.42
	TEMPORARY IMPACTS	0.019	843.06
TIDAL WETLAND	PERMANENT IMPACTS	0.856	37271.39
	TEMPORARY IMPACTS	0.202	8812.18
TIDAL WATER	PERMANENT IMPACTS	0.101	4429.40
	TEMPORARY IMPACTS	0.051	2236.39

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

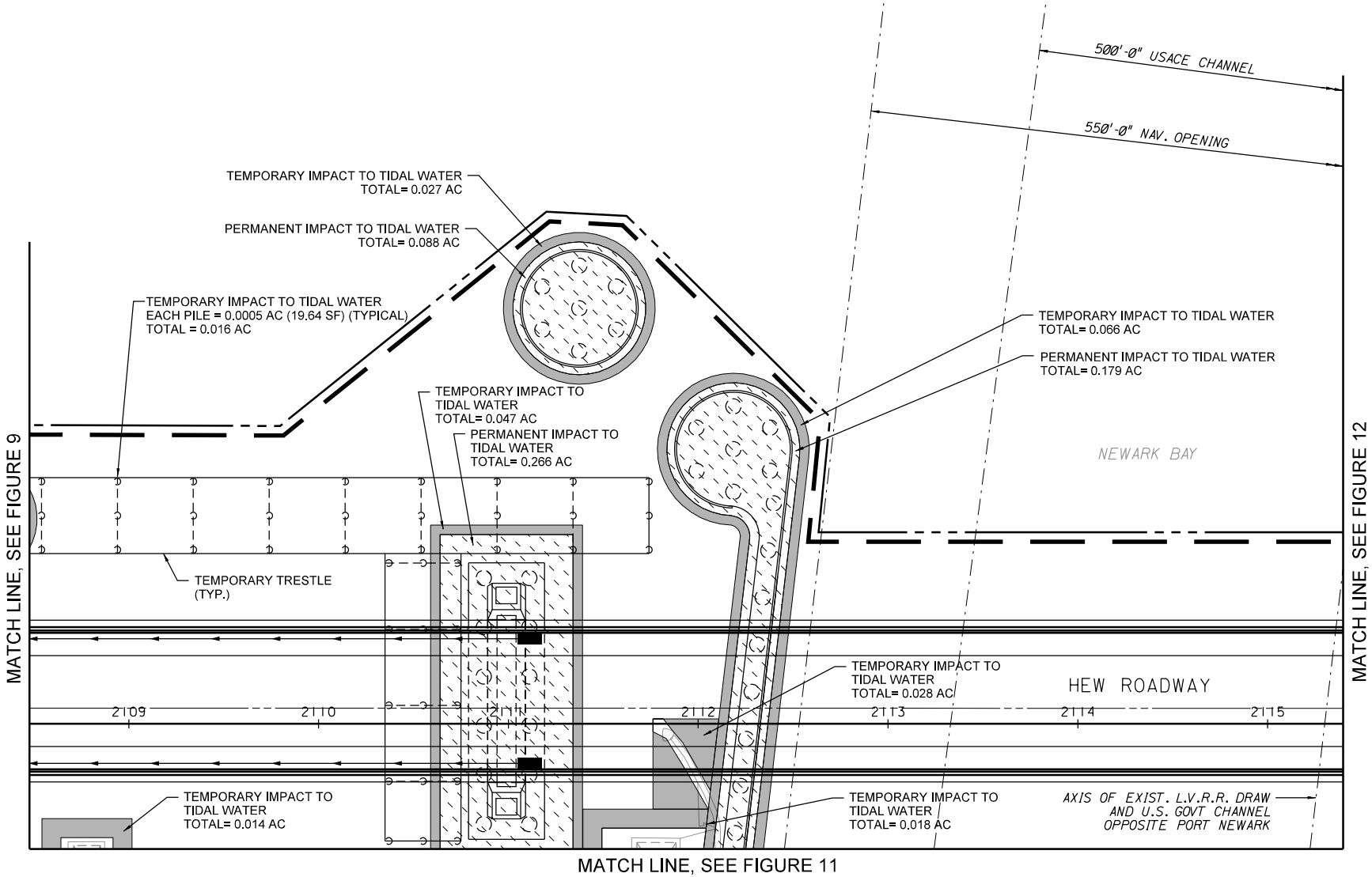
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 10



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.533	23223.77
	TEMPORARY IMPACTS	0.216	9437.19

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

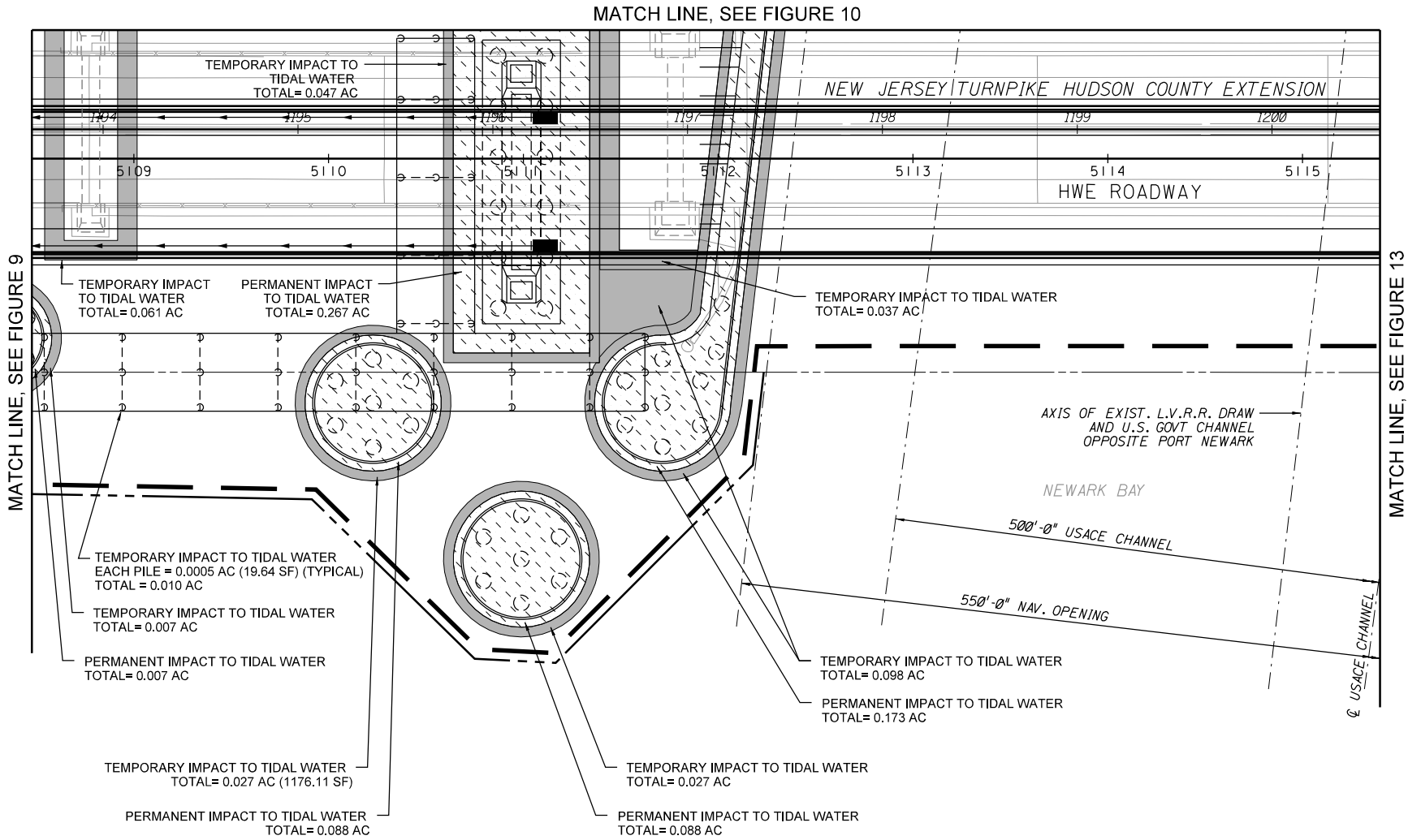
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 11



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.623	27113.78
	TEMPORARY IMPACTS	0.314	13693.29

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

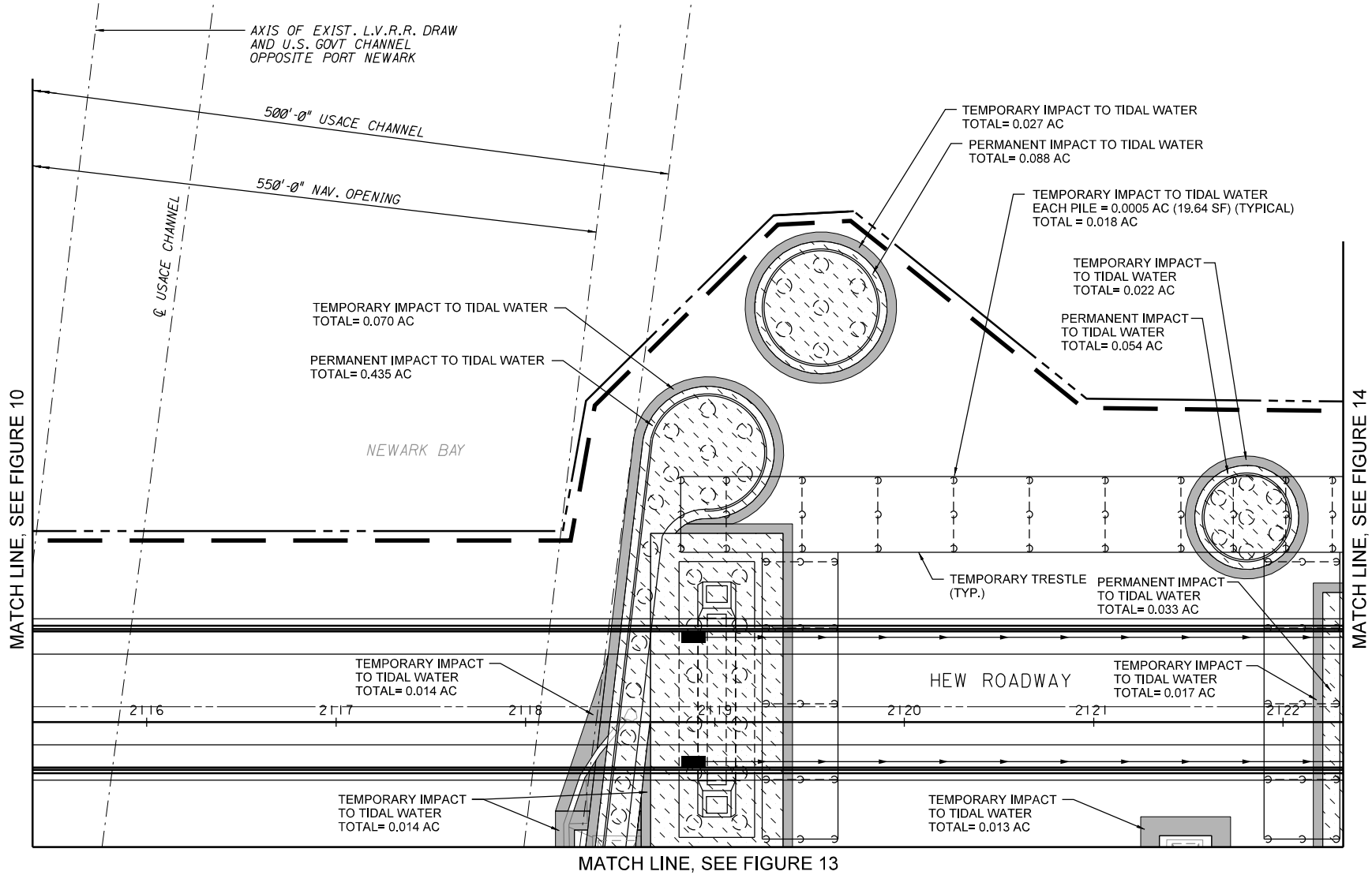
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 12



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.610	26573.24
	TEMPORARY IMPACTS	0.195	8491.77

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

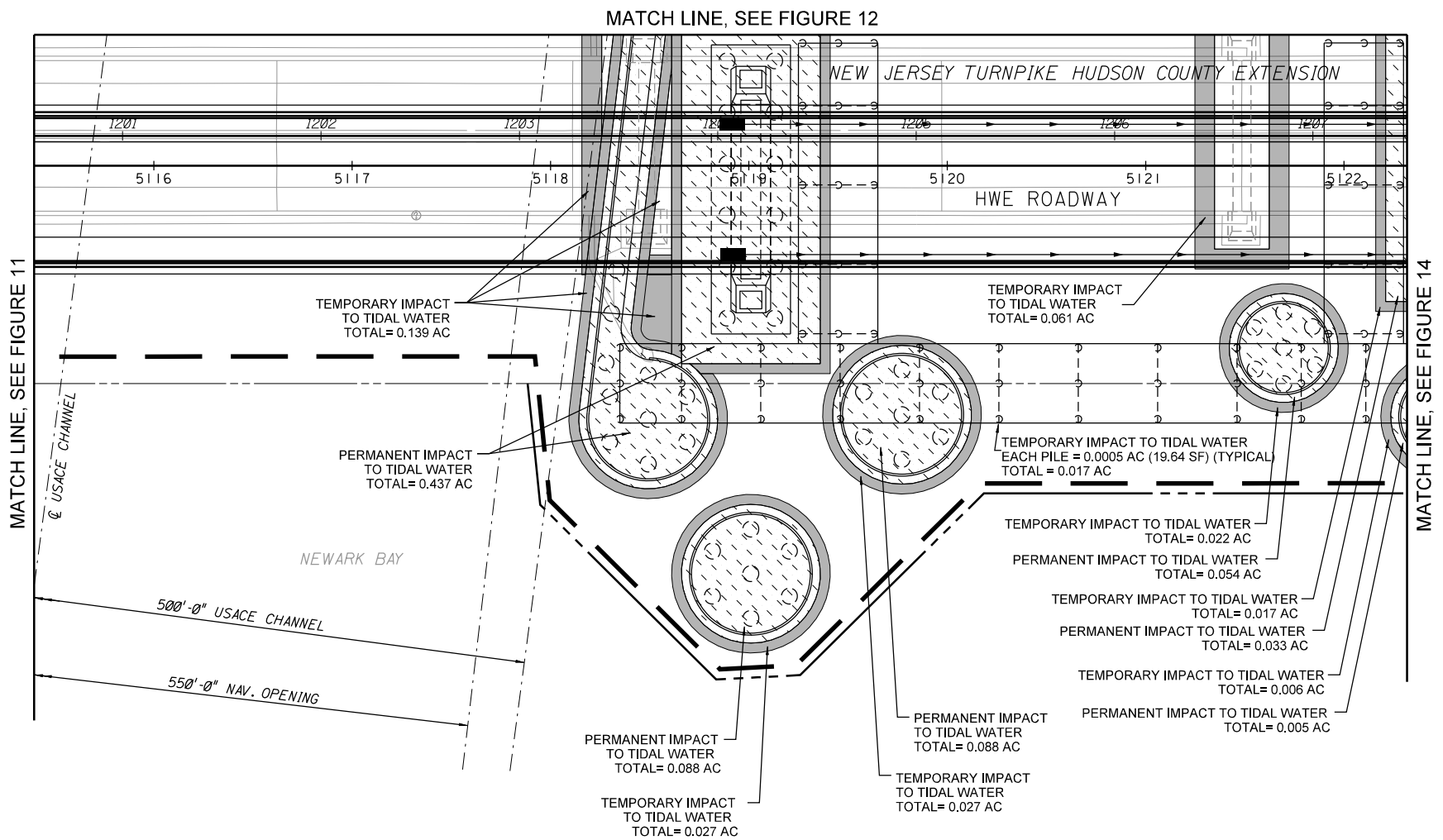
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 13



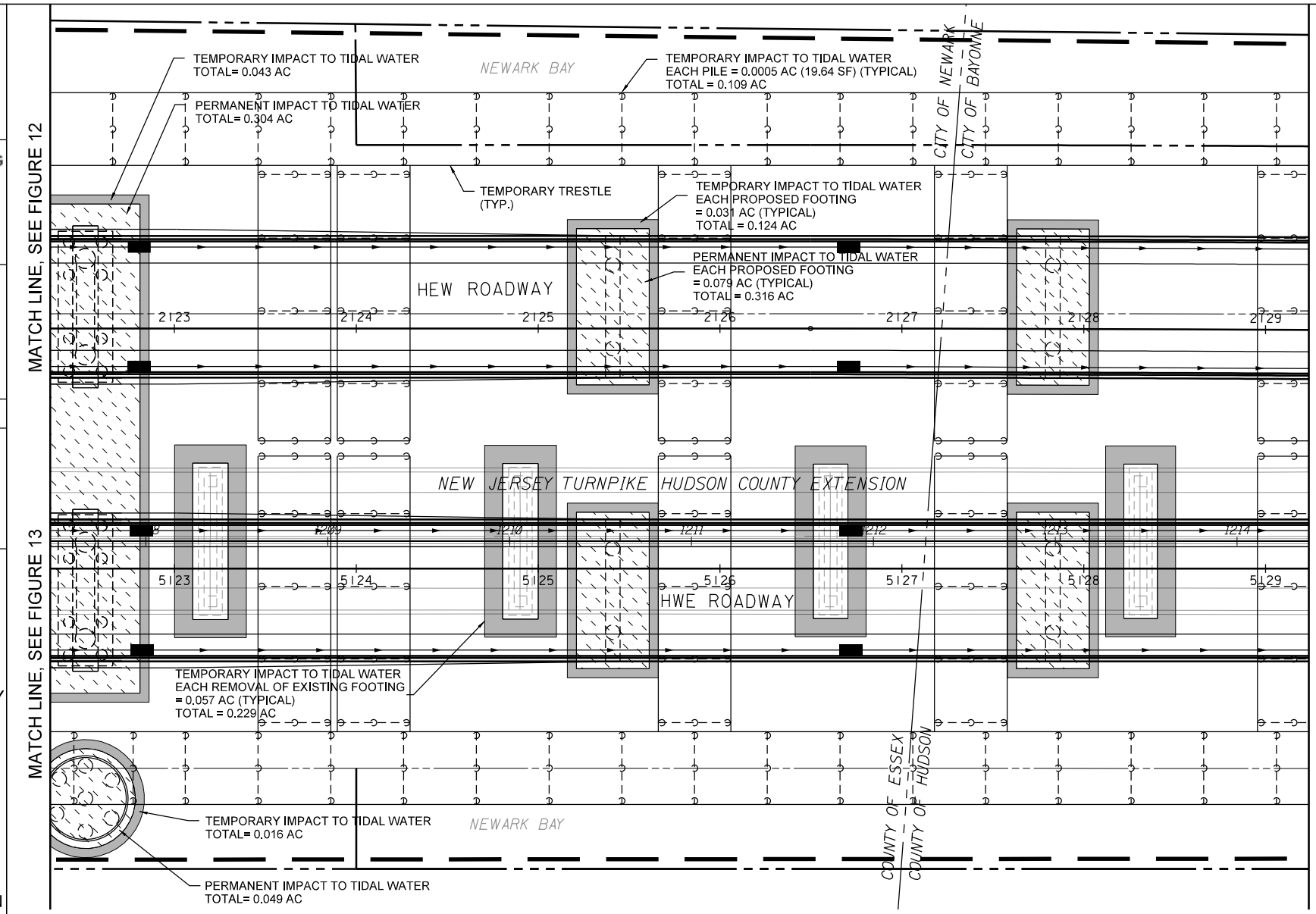
LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.705	30726.37
	TEMPORARY IMPACTS	0.315	13676.47

PLAN NORTH

0 80'



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.670	29165.58
	TEMPORARY IMPACTS	0.521	22684.42

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 14

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PROJECT
OPS NO. T3820

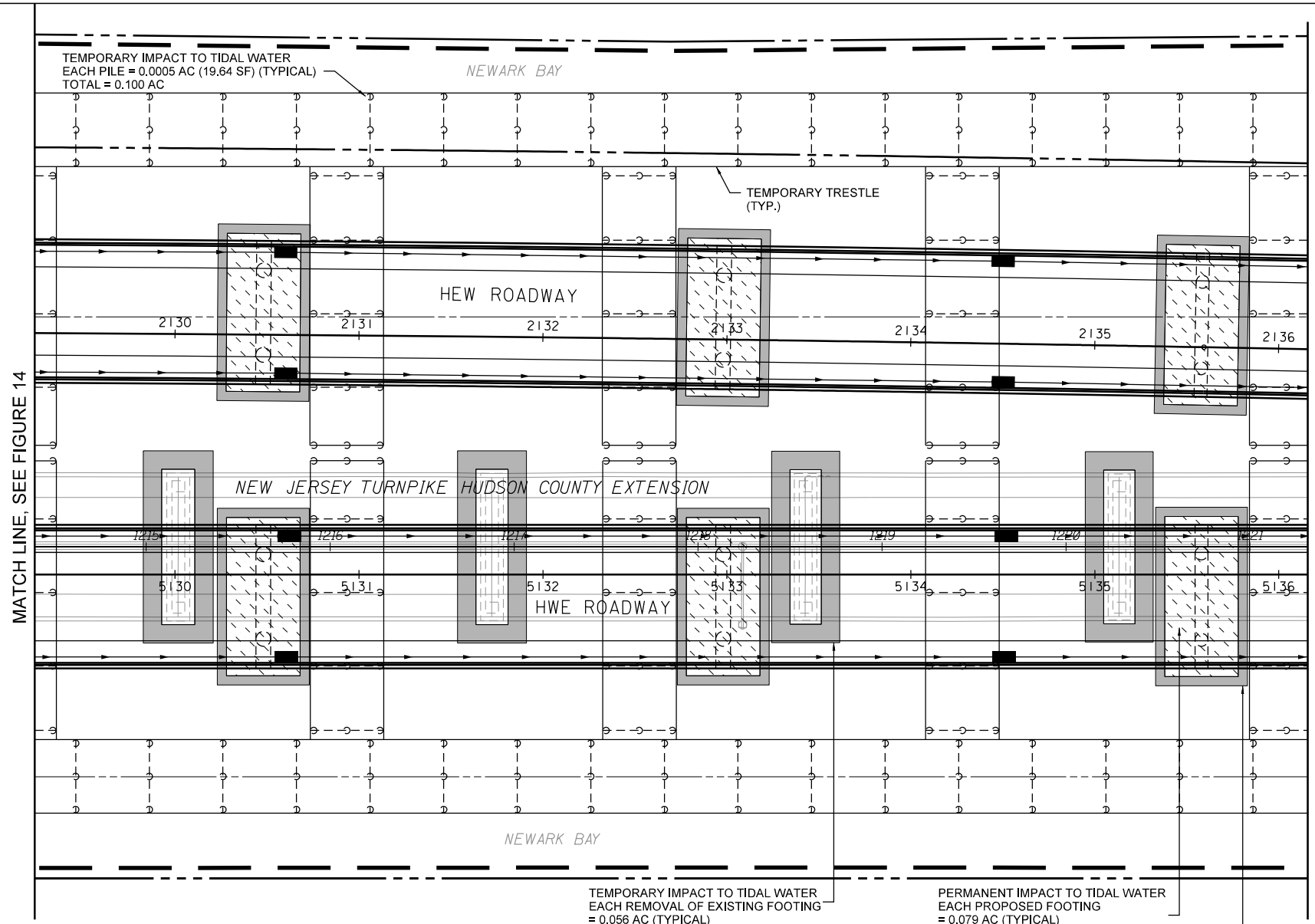
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 15



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.476	20719.95
	TEMPORARY IMPACTS	0.511	22244.35

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NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

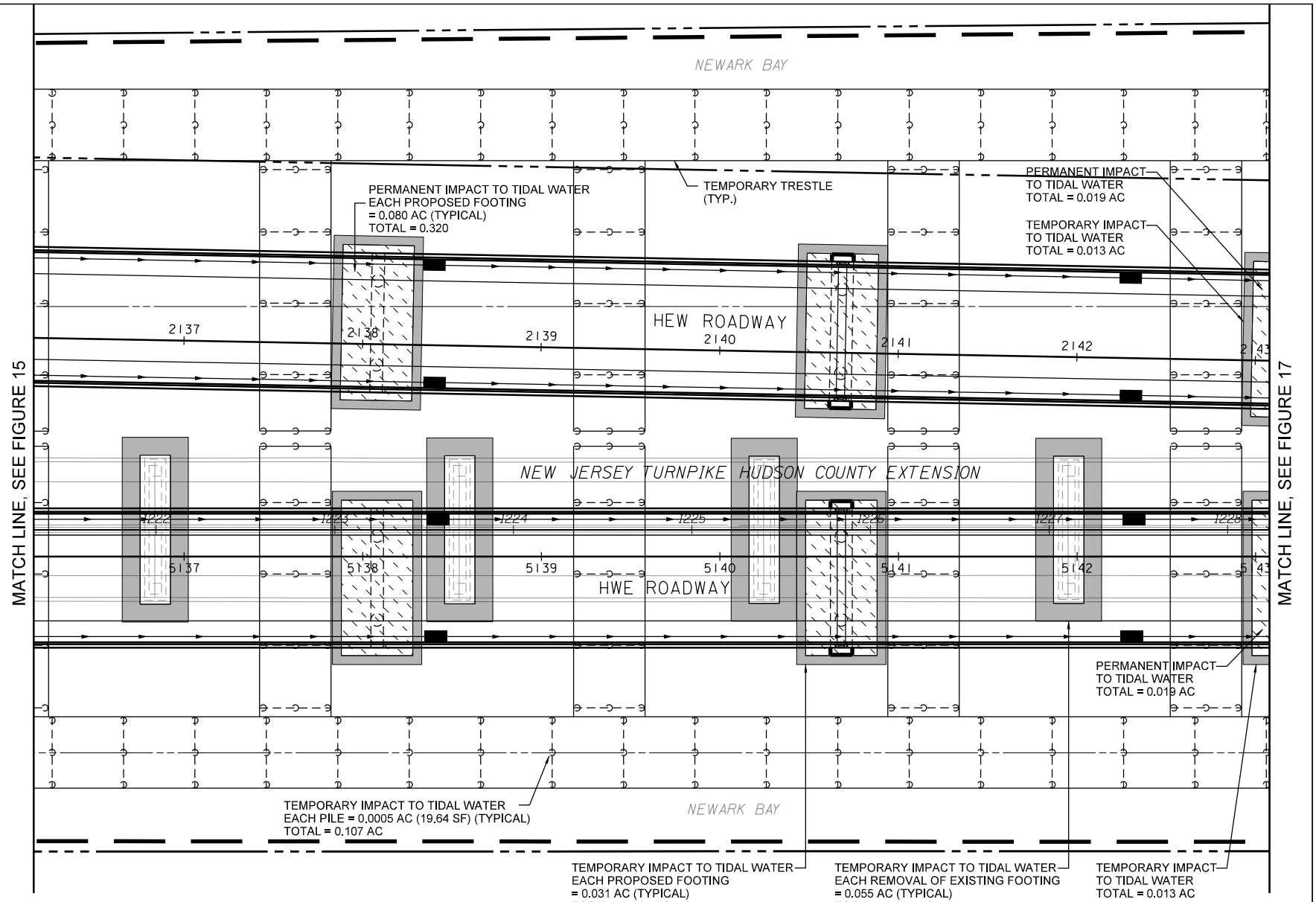
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 16

SHEET 16 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0.358	15604.57
	TEMPORARY IMPACTS	0.477	20778.12

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NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

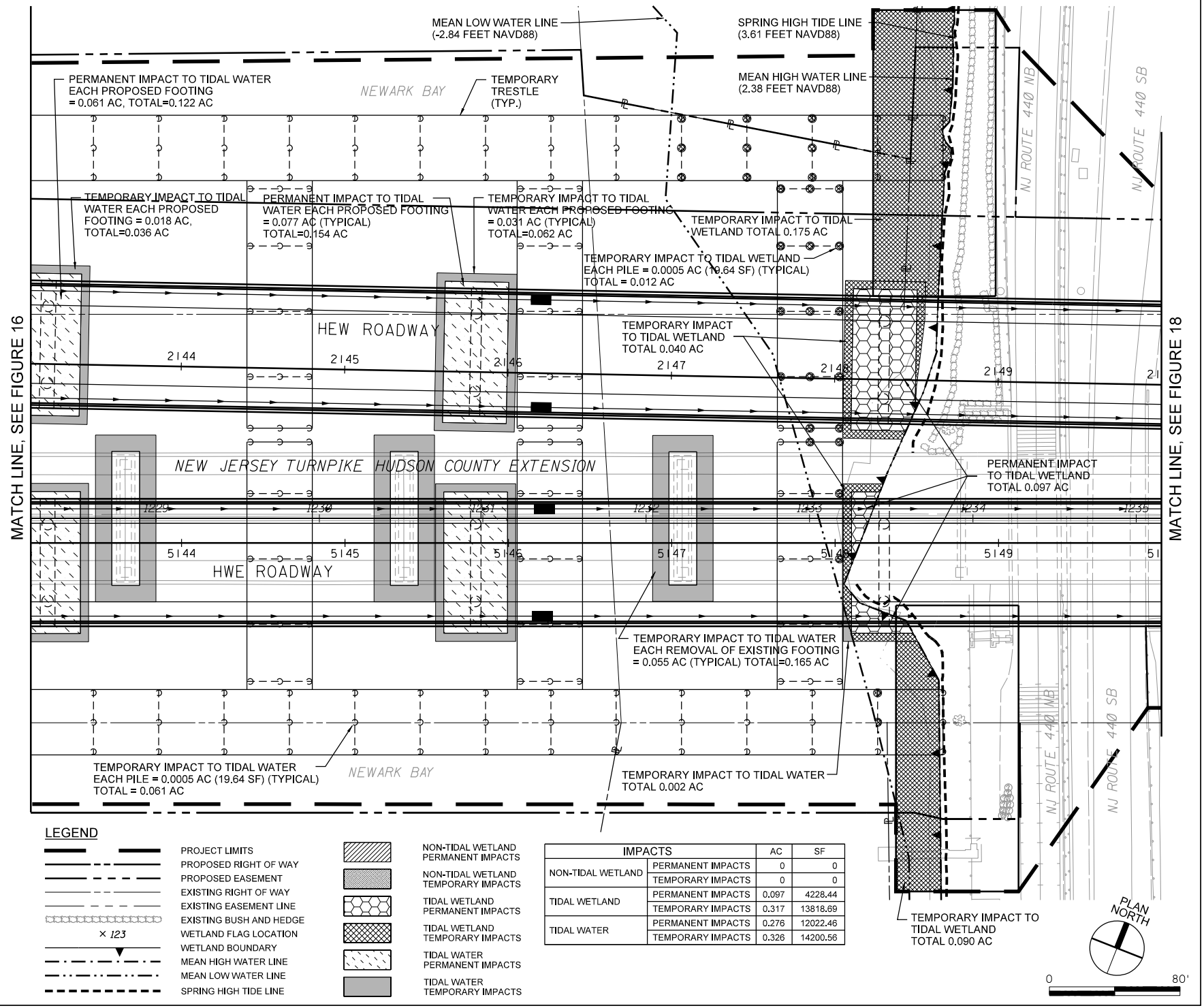
CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 17



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WETLAND	PERMANENT IMPACTS	0.097	4228.44
	TEMPORARY IMPACTS	0.317	13818.69
TIDAL WATER	PERMANENT IMPACTS	0.276	12022.46
	TEMPORARY IMPACTS	0.326	14200.56

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

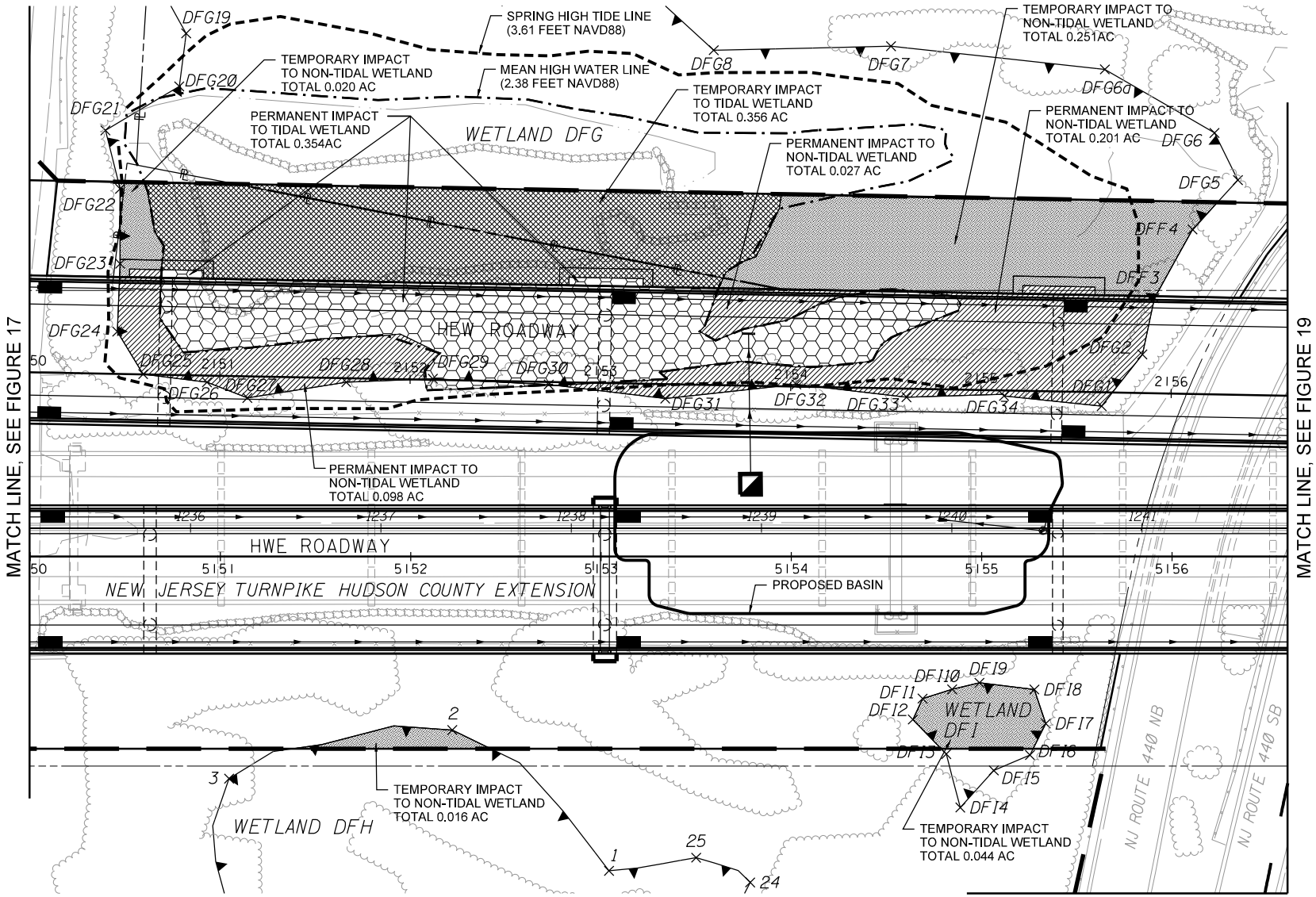
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 18



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.326	14190.13
	TEMPORARY IMPACTS	0.331	14405.26
TIDAL WETLAND	PERMANENT IMPACTS	0.354	15429.15
	TEMPORARY IMPACTS	0.356	15493.56
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

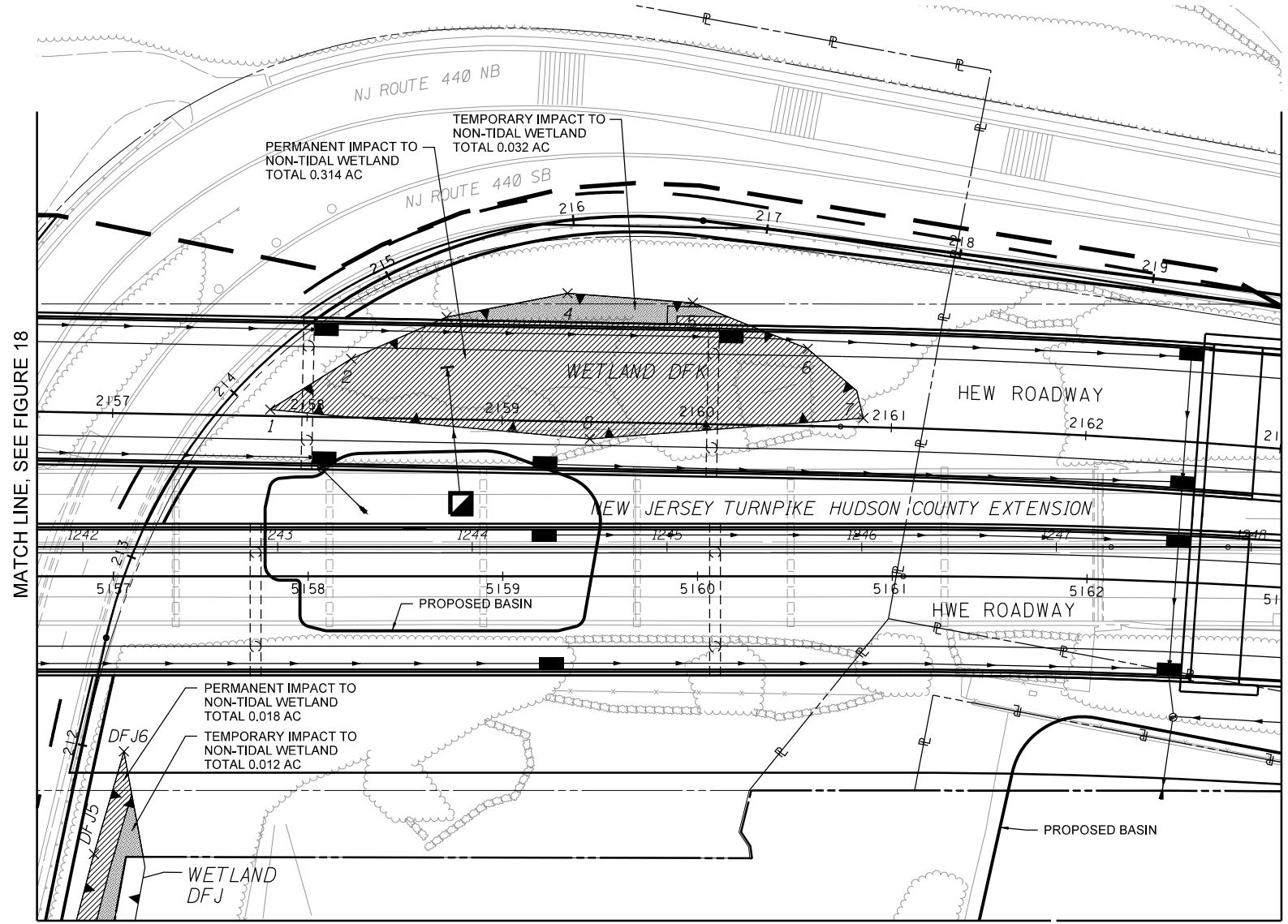
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 19

SHEET 19 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.332	14452.22
	TEMPORARY IMPACTS	0.044	1916.64
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0

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APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

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NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

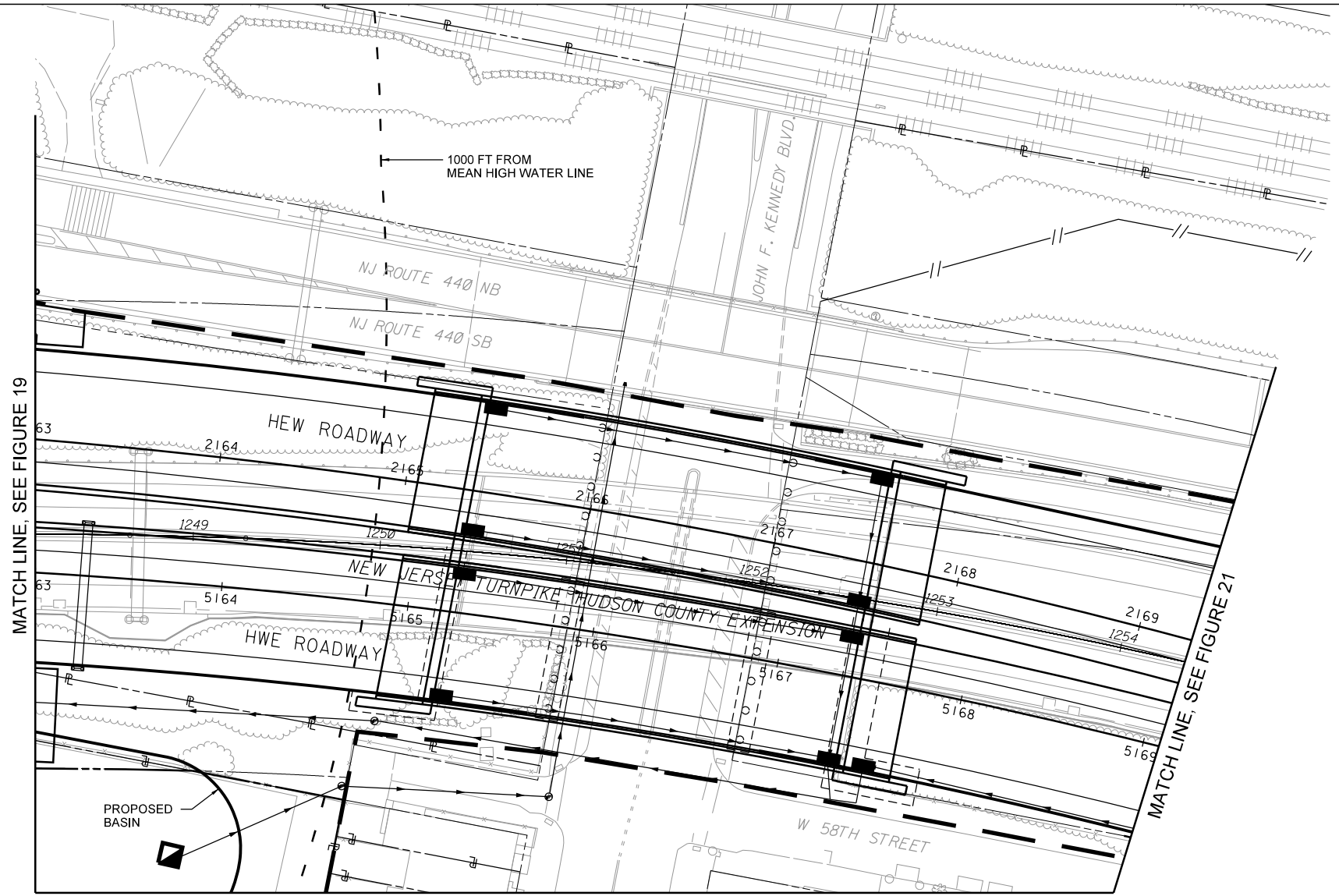
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 20

SHEET 20 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

No Impacts to jurisdictional wetlands/waters this sheet

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

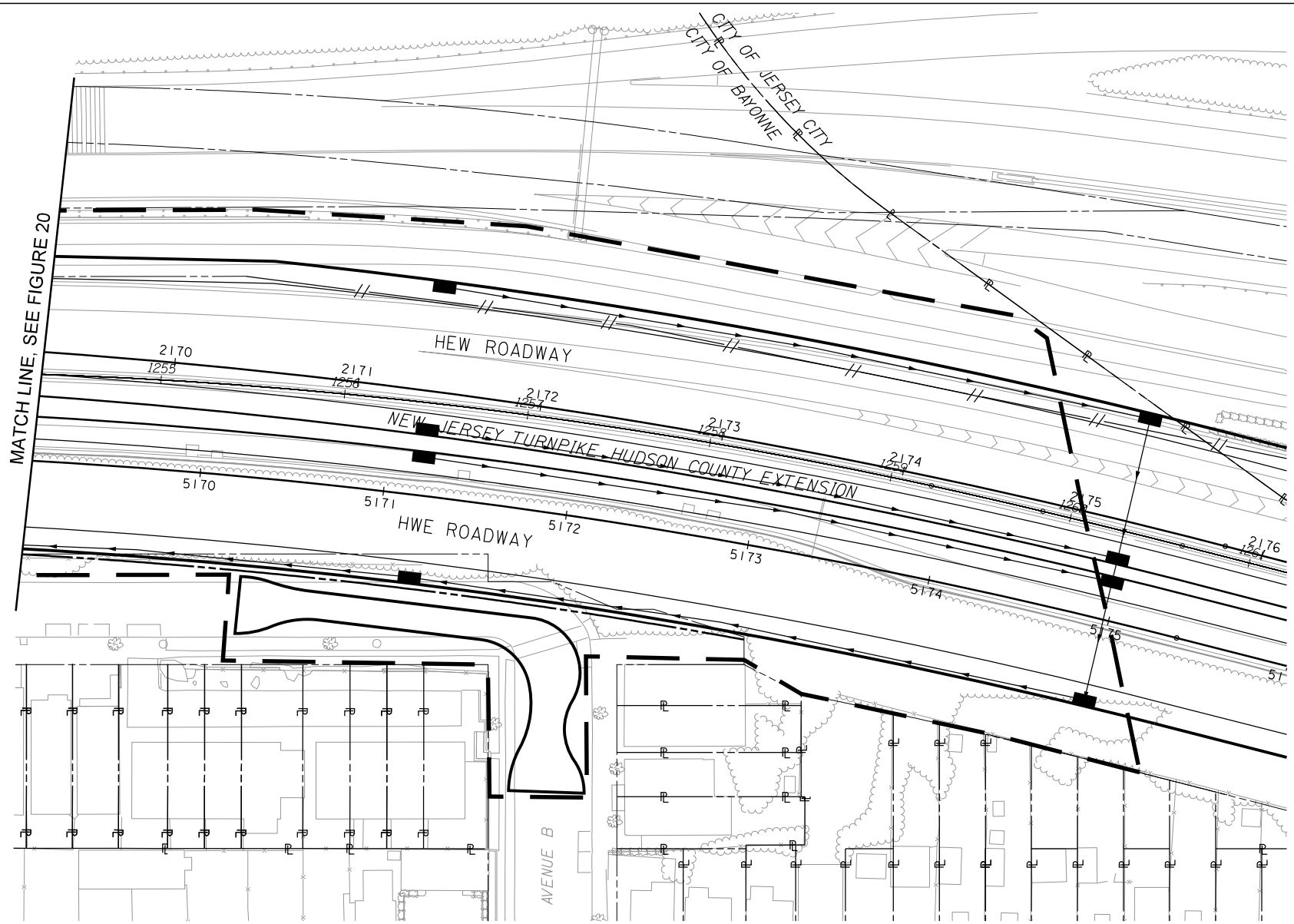
SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 21

SHEET 21 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

No Impacts to jurisdictional wetlands/waters this sheet

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

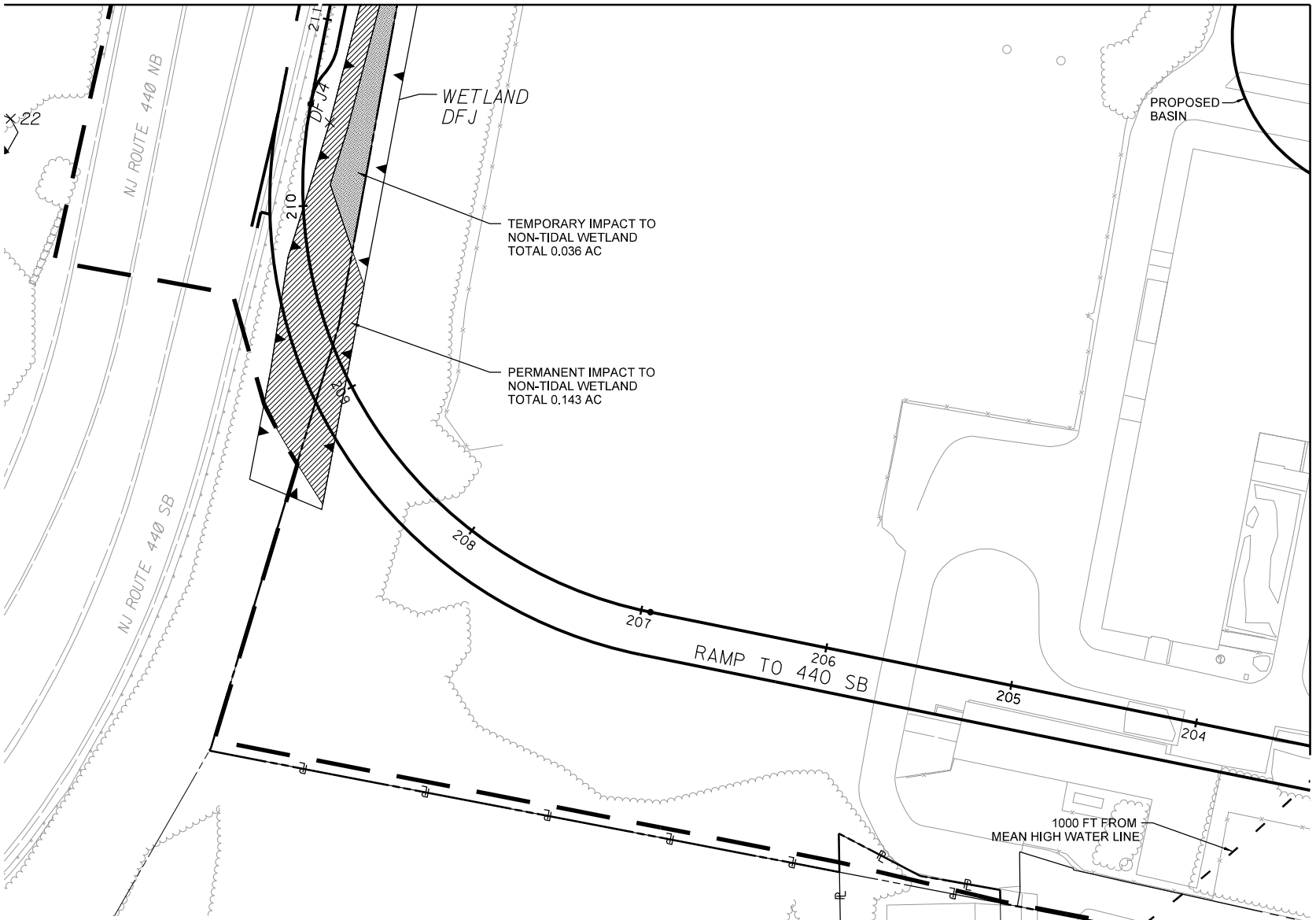
DRAWING NO.
FIGURE 22

SHEET 22 OF 48

MATCH LINE, SEE FIGURE 18

MATCH LINE, SEE FIGURE 19

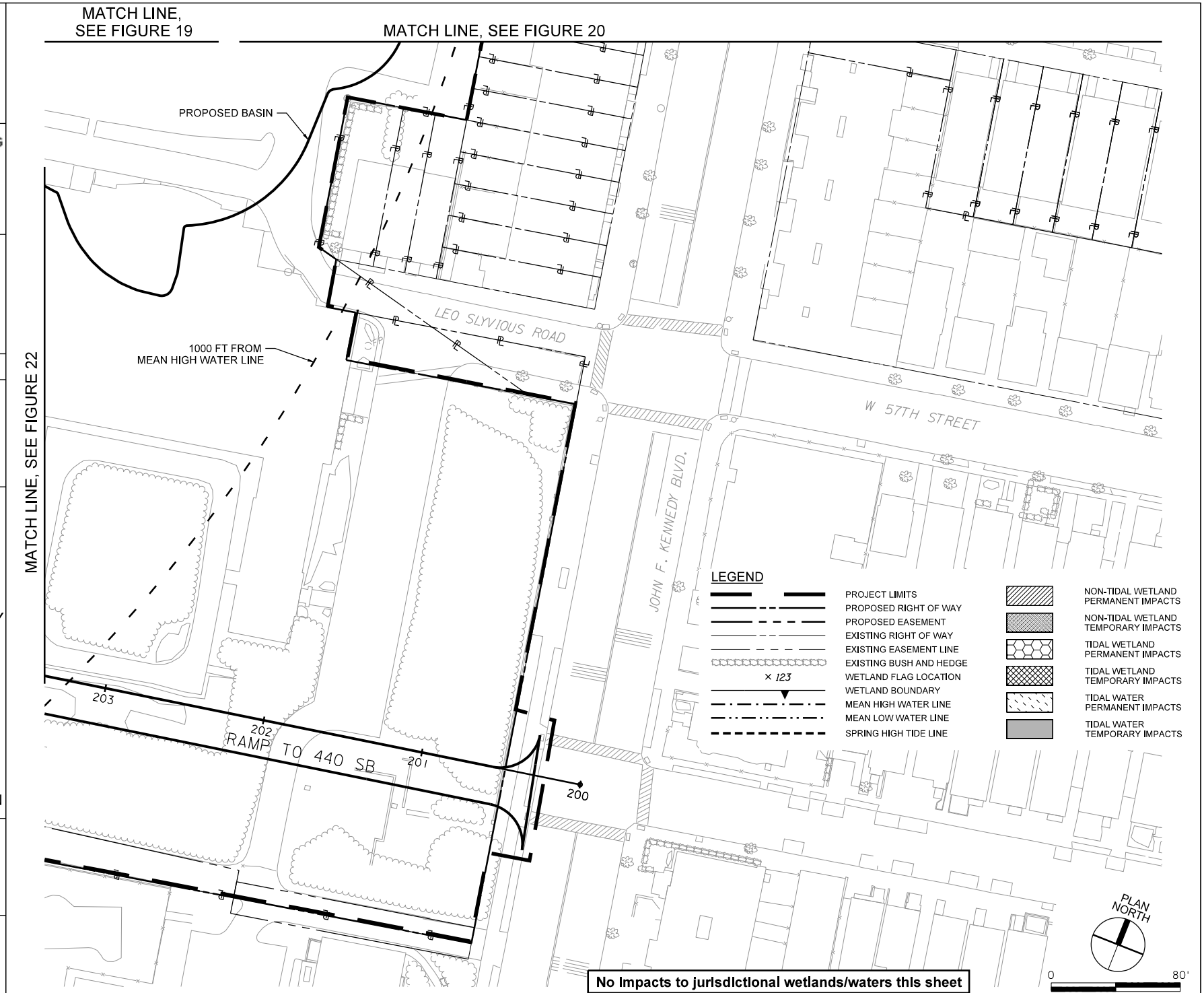
MATCH LINE, SEE FIGURE 23



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE
- NON-TIDAL WETLAND PERMANENT IMPACTS
- NON-TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WETLAND PERMANENT IMPACTS
- TIDAL WETLAND TEMPORARY IMPACTS
- TIDAL WATER PERMANENT IMPACTS
- TIDAL WATER TEMPORARY IMPACTS

IMPACTS		AC	SF
NON-TIDAL WETLAND	PERMANENT IMPACTS	0.143	6212.97
	TEMPORARY IMPACTS	0.036	1567.96
TIDAL WETLAND	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0
TIDAL WATER	PERMANENT IMPACTS	0	0
	TEMPORARY IMPACTS	0	0



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OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLANS

DRAWING NO.
FIGURE 23

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DATE: May 2024

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NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

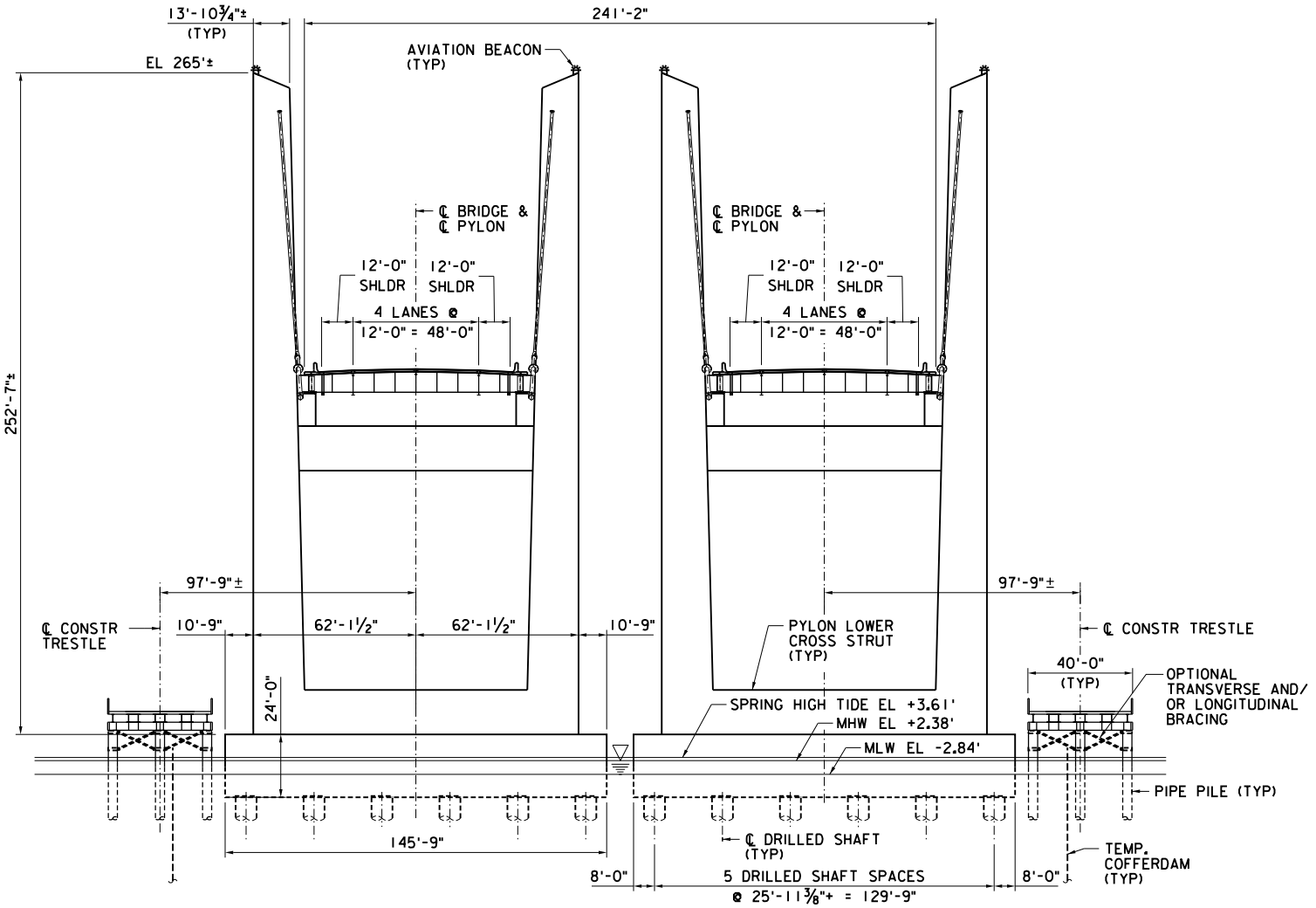
CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 24



TYPICAL SECTION - MAIN SPAN

1/32" = 1'-0"

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

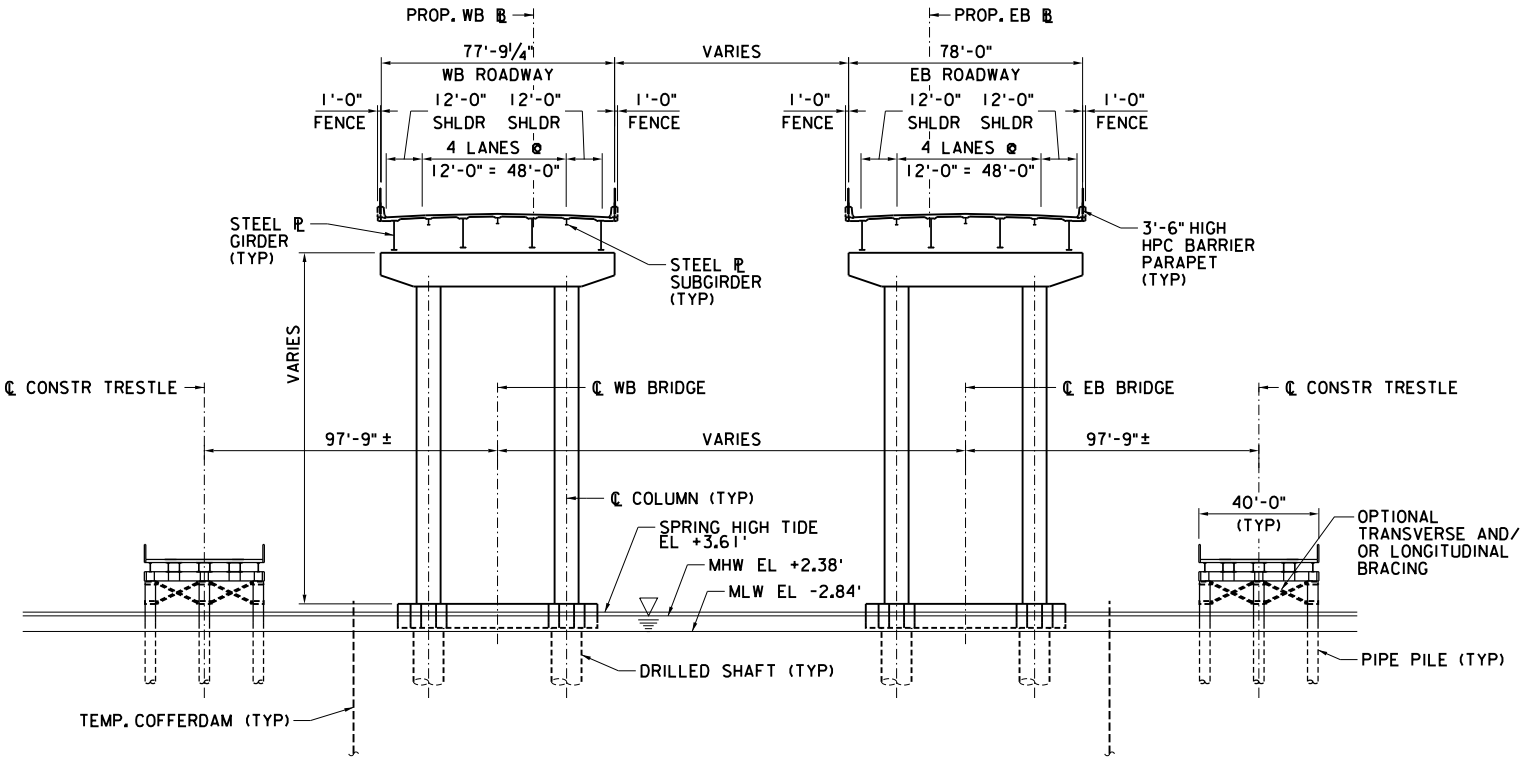
CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLANS

DRAWING NO.

FIGURE 25



TYPICAL SECTION - APPROACH SPANS

(STA 5125+50, LOOKING EAST)
1/32" = 1'-0"

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 26

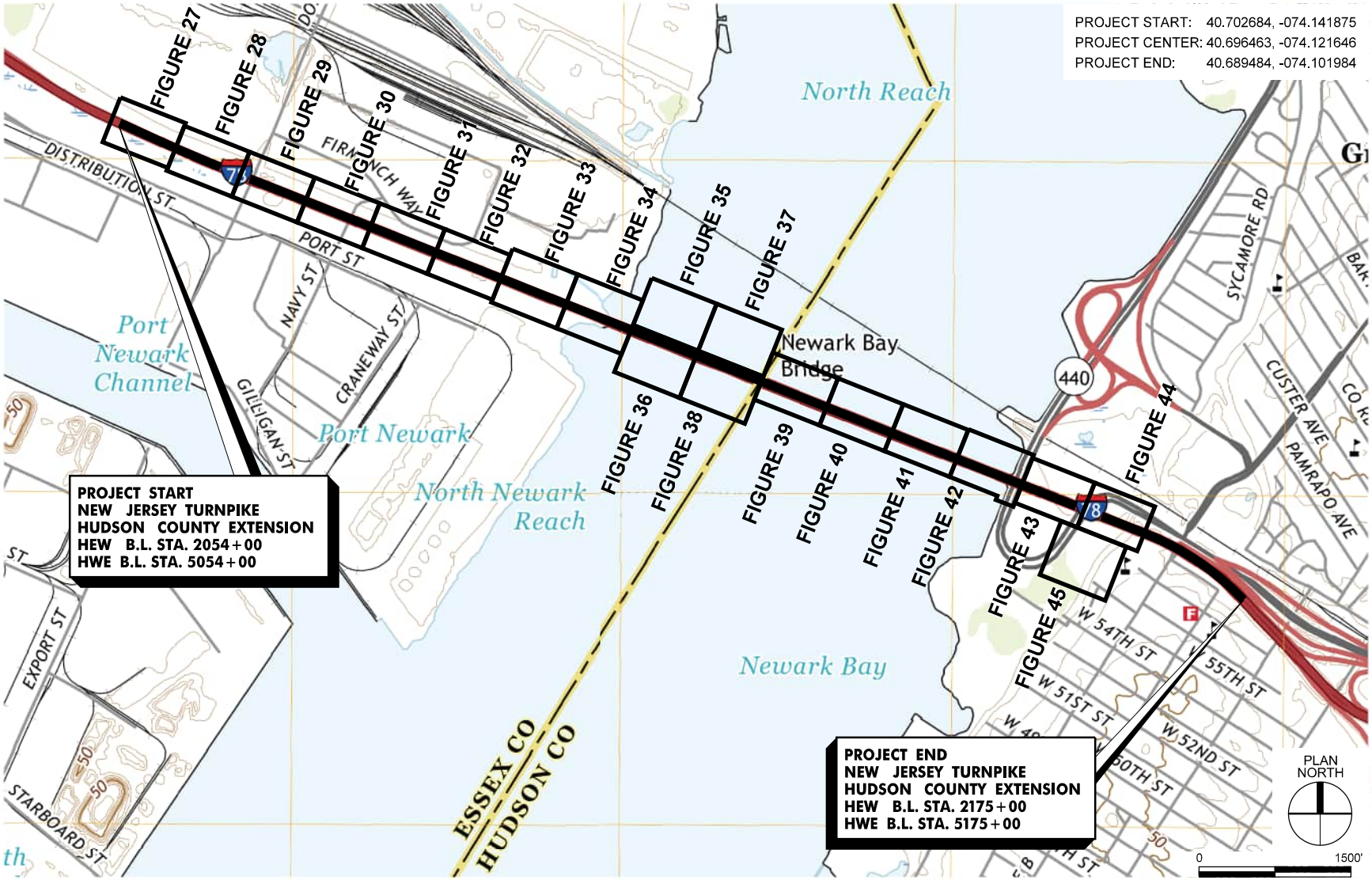
SHEET 26 OF 48

NEW JERSEY TURNPIKE
NEWARK BAY - HUDSON COUNTY EXTENSION
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX

CITY OF BAYONNE, COUNTY OF HUDSON

PROJECT START: 40.702684, -074.141875
PROJECT CENTER: 40.696463, -074.121646
PROJECT END: 40.689484, -074.101984



USGS TOPO ELIZABETH & JERSEY CITY, NJ 2019

TOTAL TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	4.322	188,282.19
ESTUARINE EMERGENT WETLAND	0.151	6,614.15
ESTUARINE WATERS	3.657	159,298.90
TOTAL STRUCTURE REMOVAL RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.002	77.58
ESTUARINE WATERS	0.851	36,942.49

GENERAL NOTE:

1. WETLANDS AND WATERS WERE DELINEATED USING THE 1987 CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, 2012 NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT. BOUNDARIES OF WETLANDS AND WATERS WERE MARKED IN THE FIELD BY SEQUENTIALLY NUMBERED FLAGS AND SUBSEQUENTLY LOCATED WITH A HAND-HELD TRIMBLE 7X GPS UNIT WITH SUB-METER ACCURACY. PORTIONS OF SOME WETLAND/WATERS AREAS LACK FIELD FLAGS AND WERE MAPPED VIA DESKTOP, AND THEREFORE, DO NOT CONTAIN FLAG NUMBERS. THESE AREAS WERE INACCESSIBLE DUE TO EXISTING FENCING, LACK OF PROPERTY ACCESS PERMISSIONS, OR UNSAFE CONDITIONS.
2. ALL TEMPORARY IMPACTS ARE ASSOCIATED WITH ACTIVITIES THAT WILL OCCUR FOR MORE THAN 6 MONTHS.

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

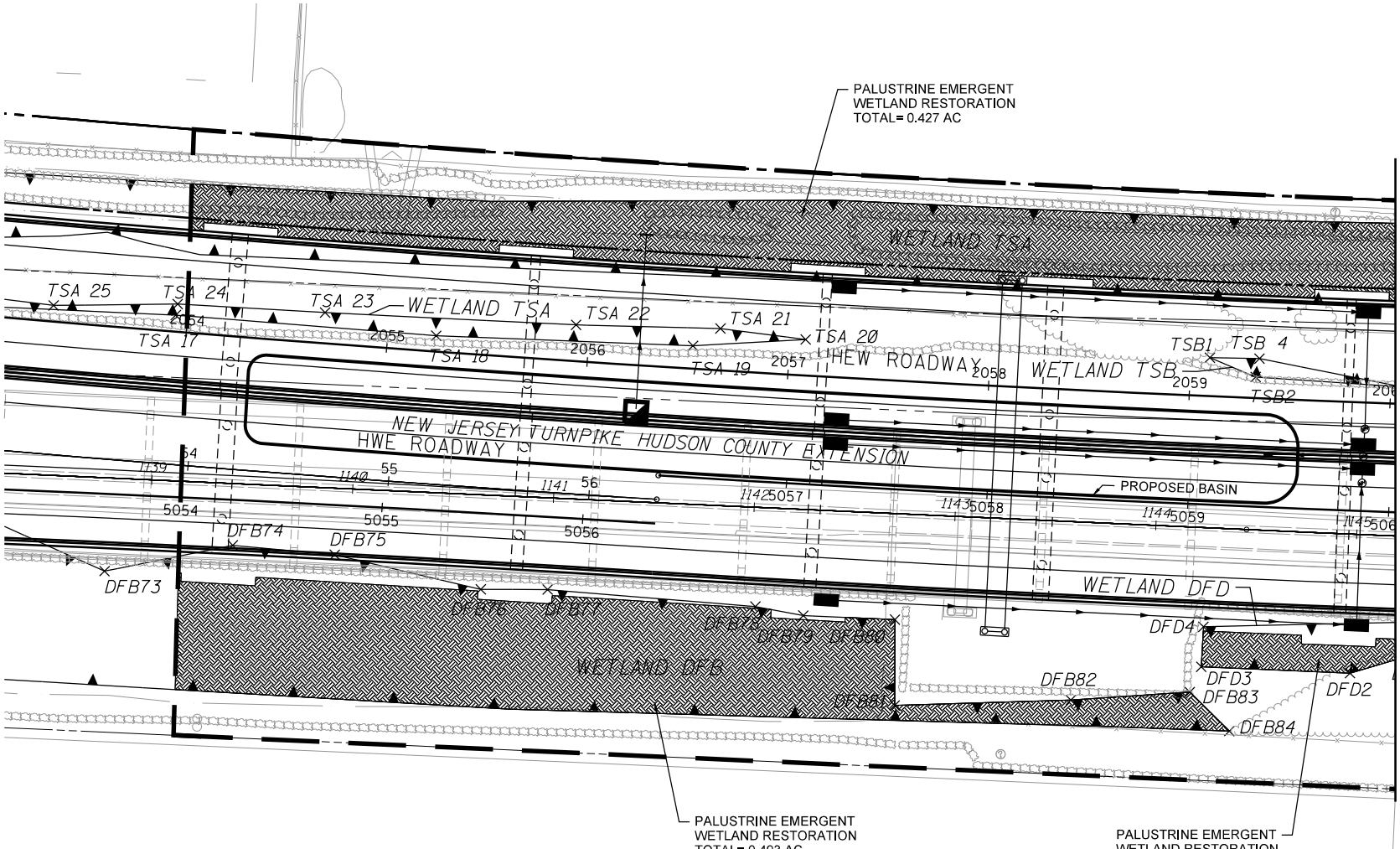
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 27

SHEET 27 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.954	41584.17
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

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PROJECT
OPS NO. T3820

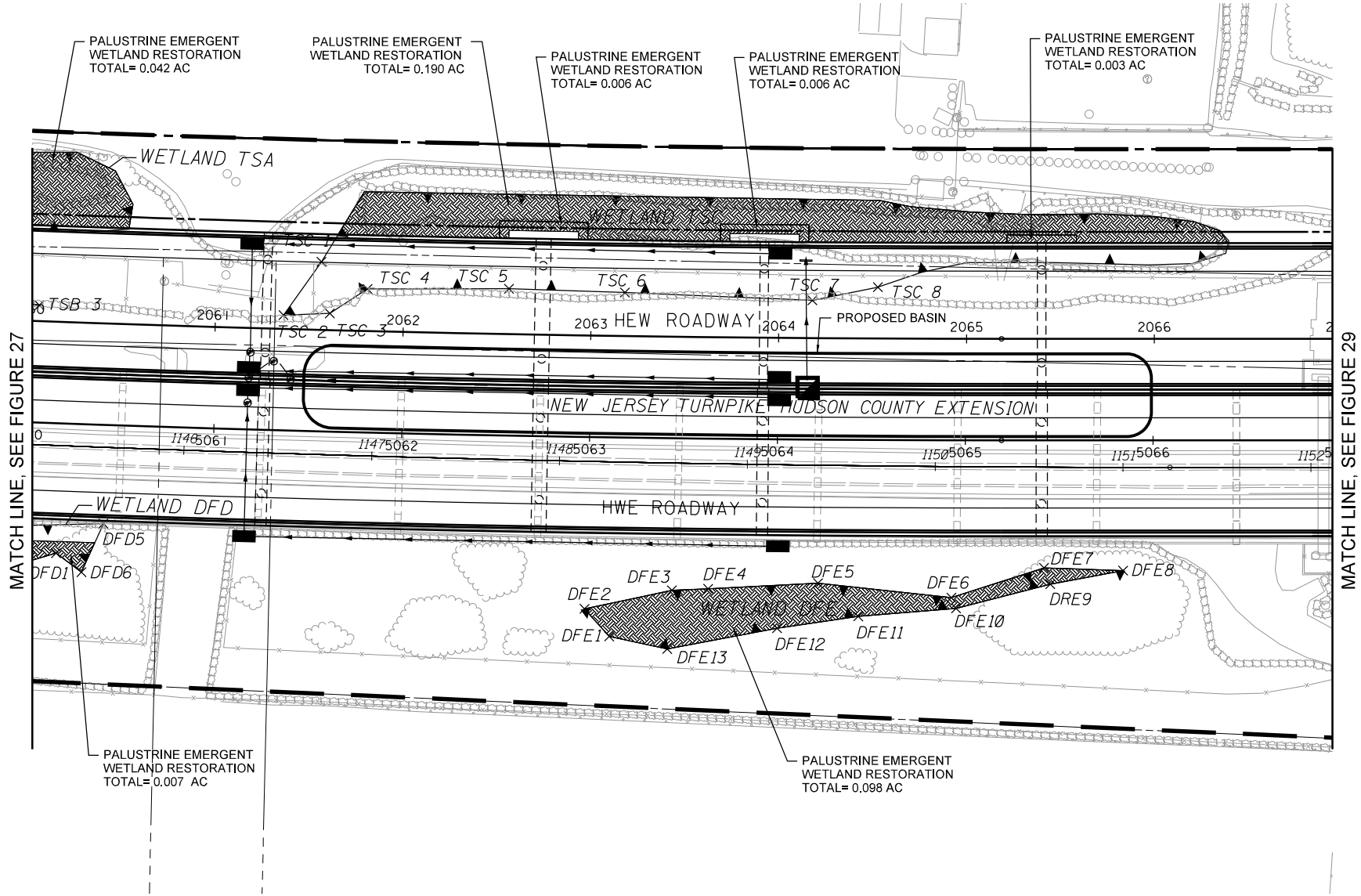
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 28



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.352	15351.16
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

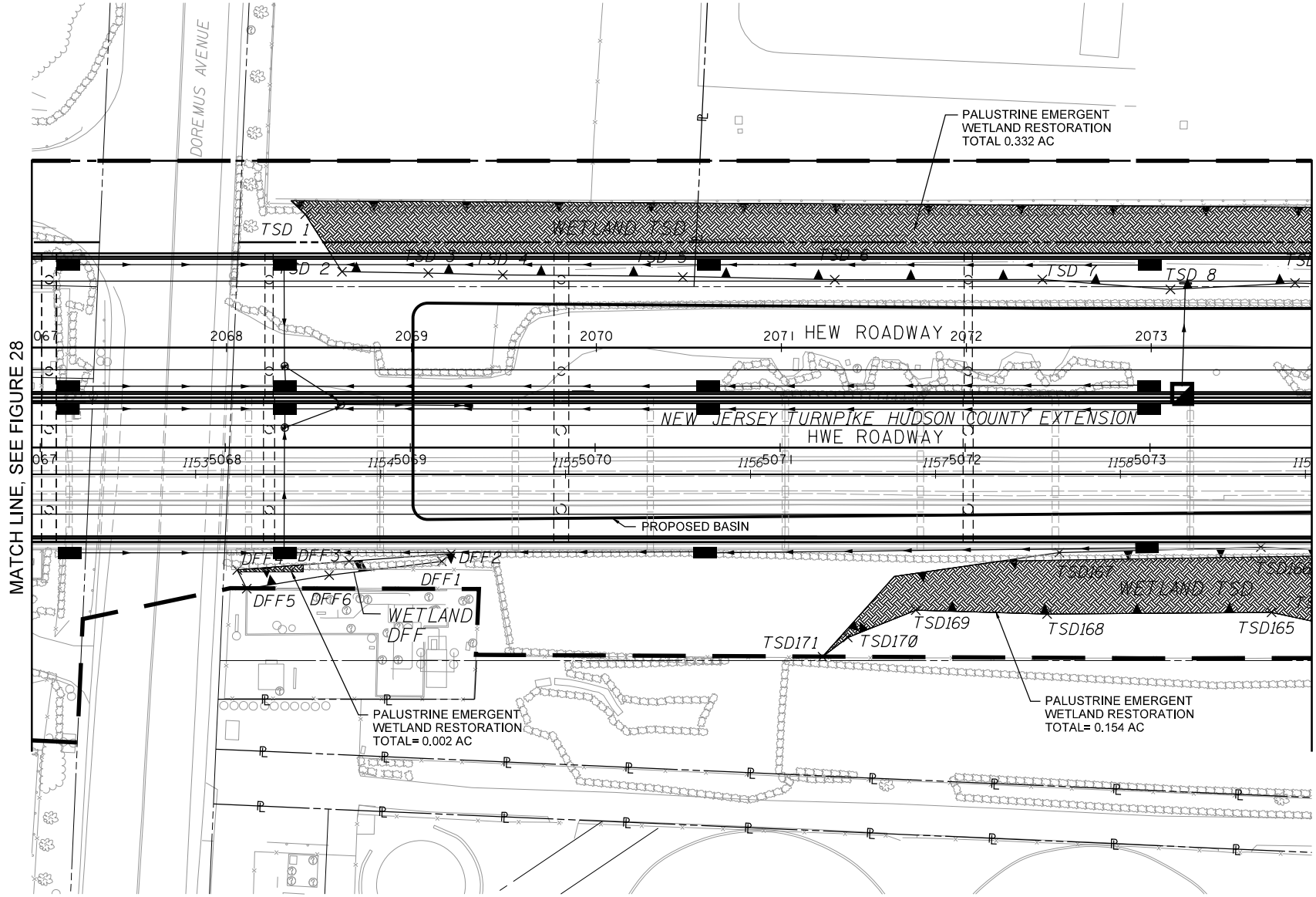
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 29

SHEET 29 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.488	21264.72
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

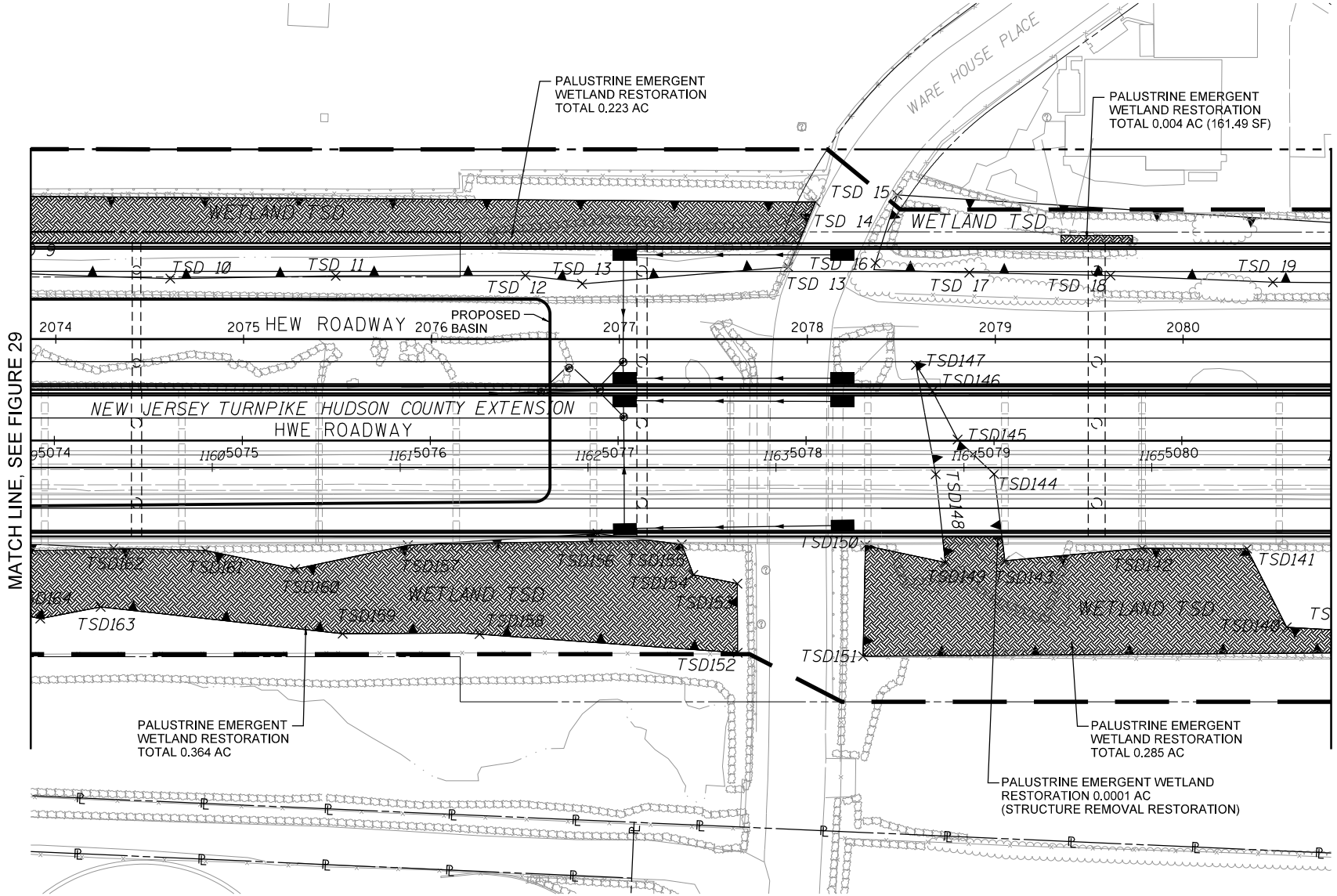
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 30

SHEET 30 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.876	38153.62
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0.0001	3.82
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

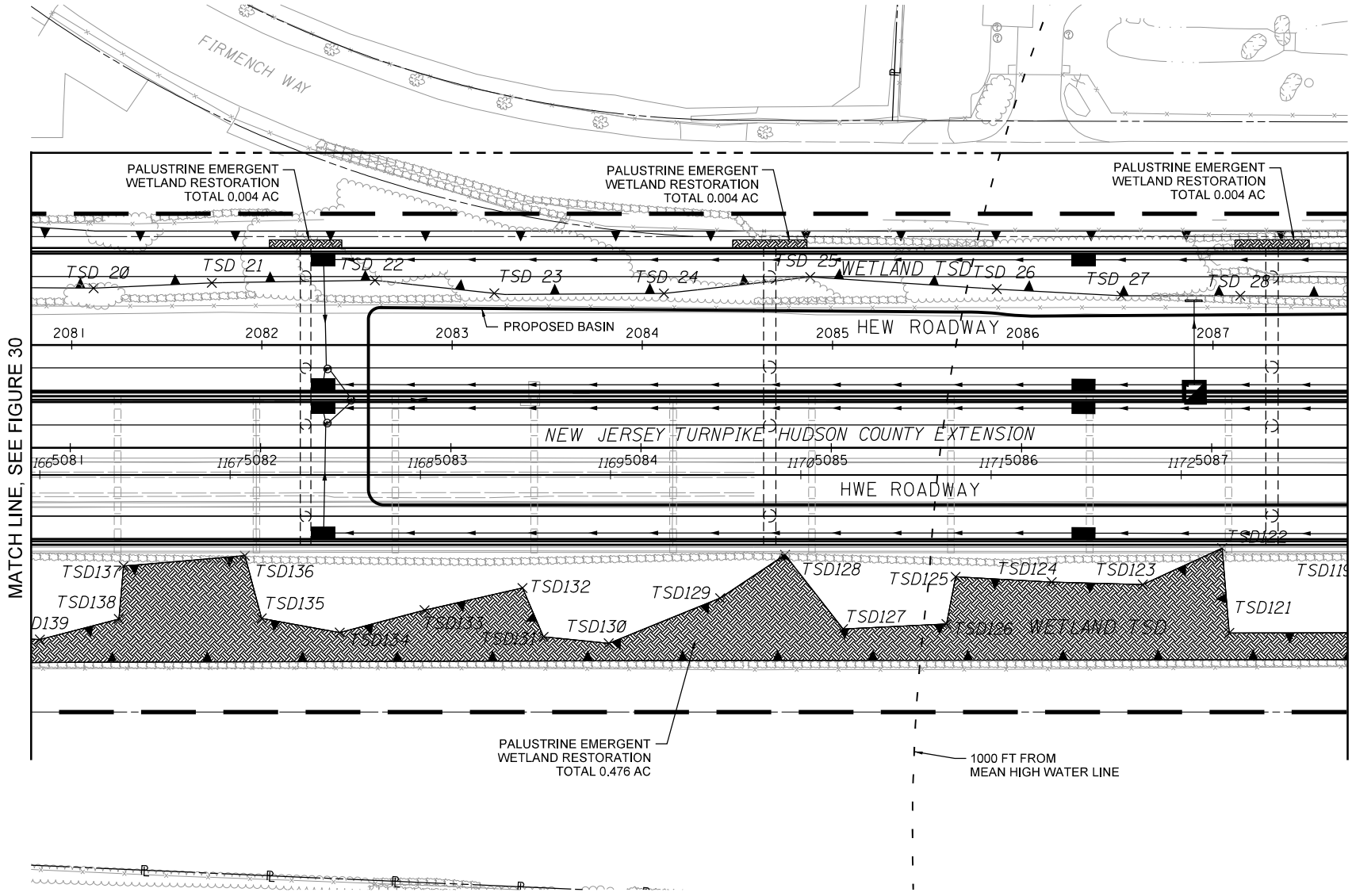
SHEET TITLE

NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.

FIGURE 31

SHEET 31 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.488	21248.91
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

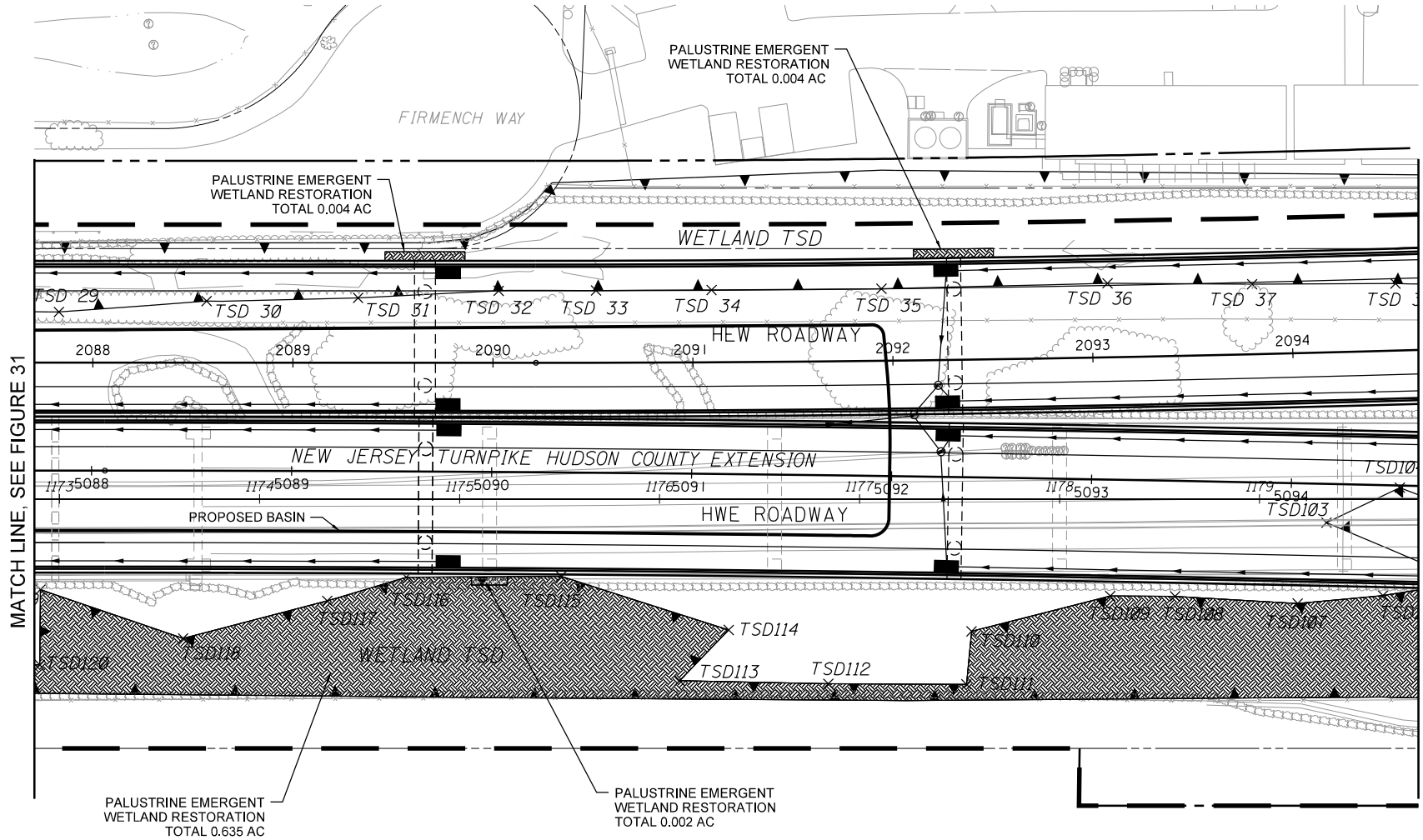
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 32

SHEET 32 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.643	28009.08
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0.002	73.76
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.

FIGURE 33

SHEET 33 OF 48

LEGEND

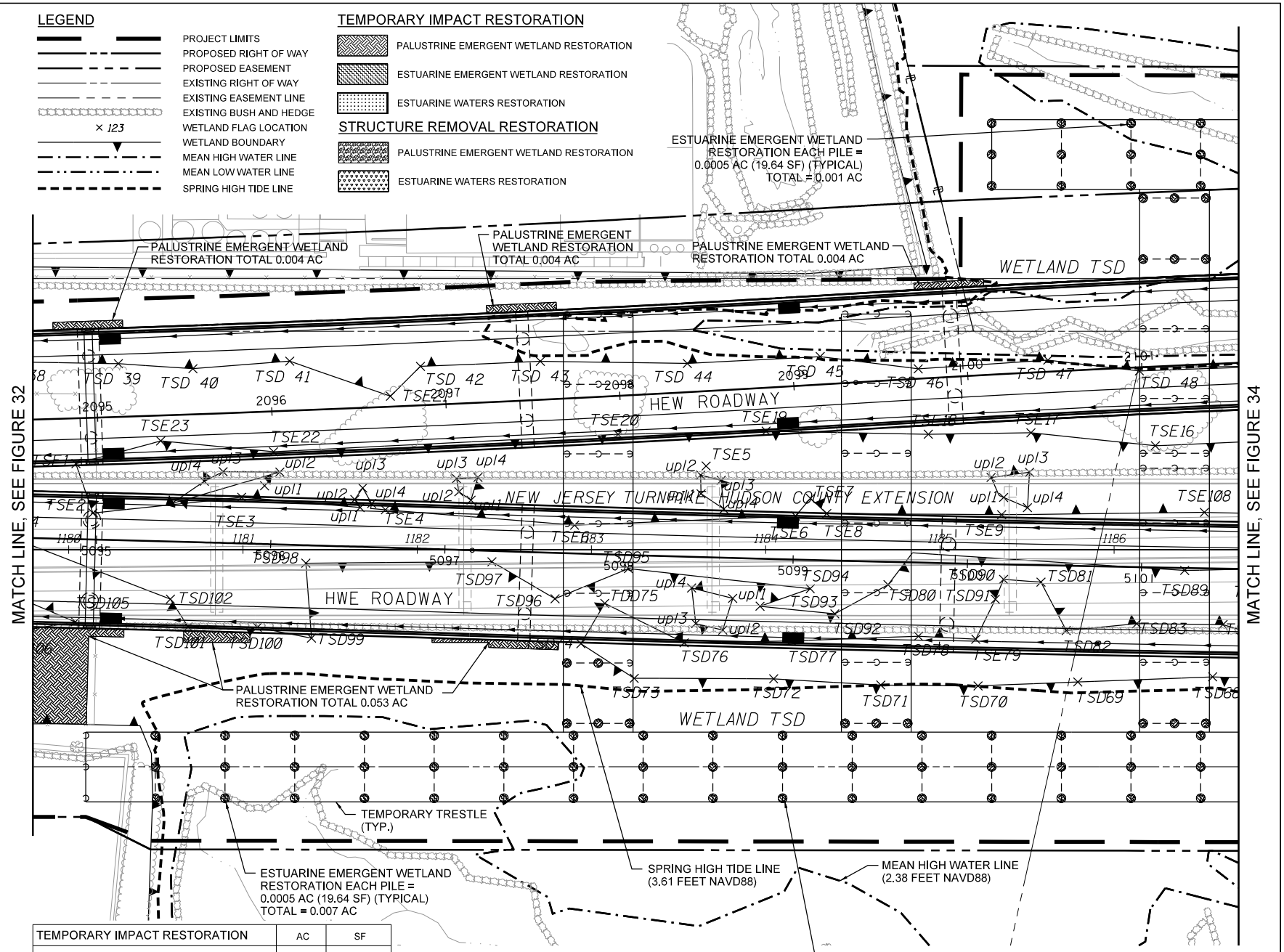
- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION



TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.091	3940.67
ESTUARINE EMERGENT WETLAND	0.008	367.80
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

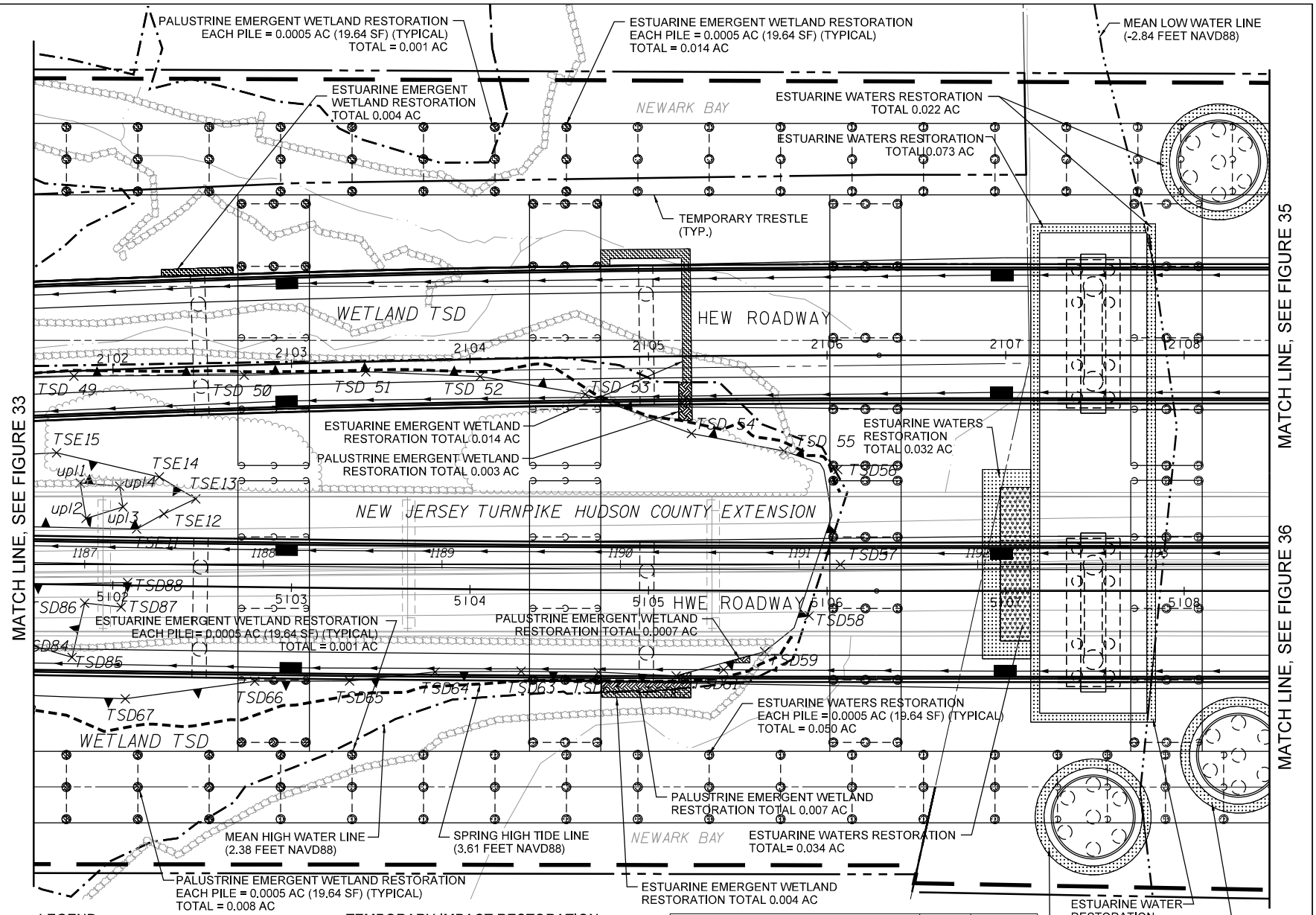
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 34



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.019	840.00
ESTUARINE EMERGENT WETLAND	0.037	1628.99
ESTUARINE WATERS	0.215	9365.40
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.034	1399.75

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

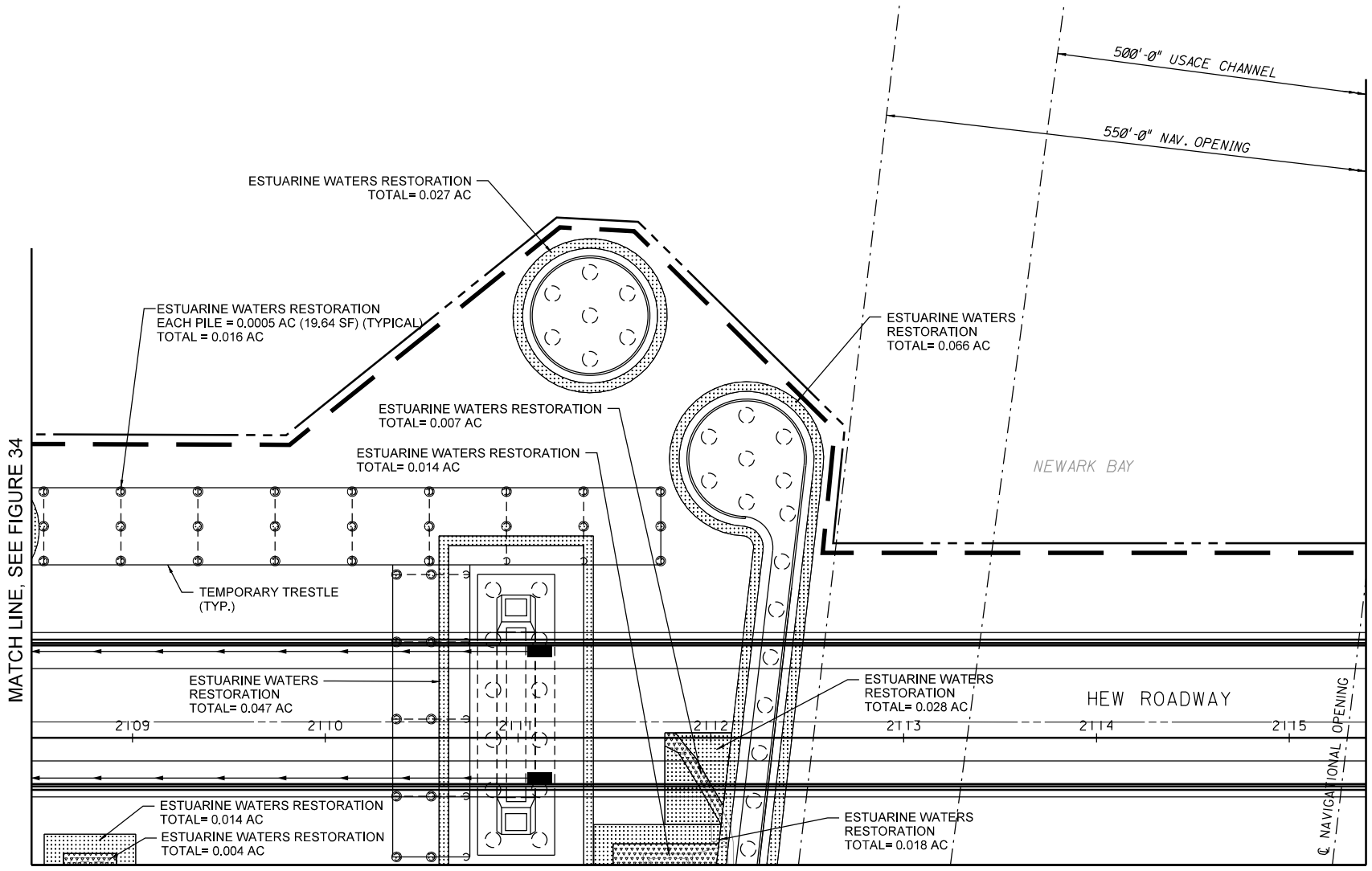
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 35

SHEET 35 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.216	9437.19
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.025	1075.03

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

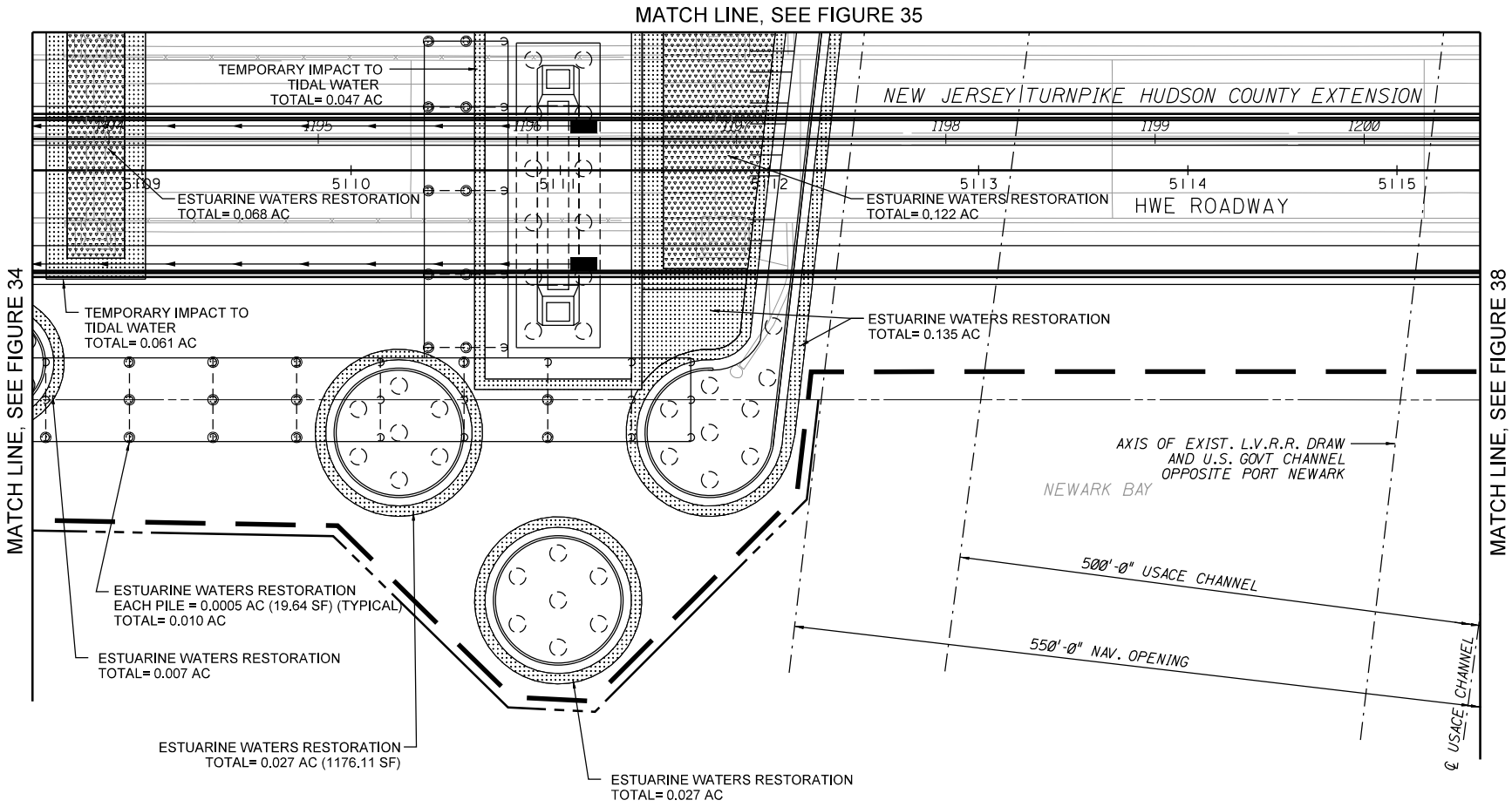
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 36



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.314	13693.29
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.190	8273.61

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APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

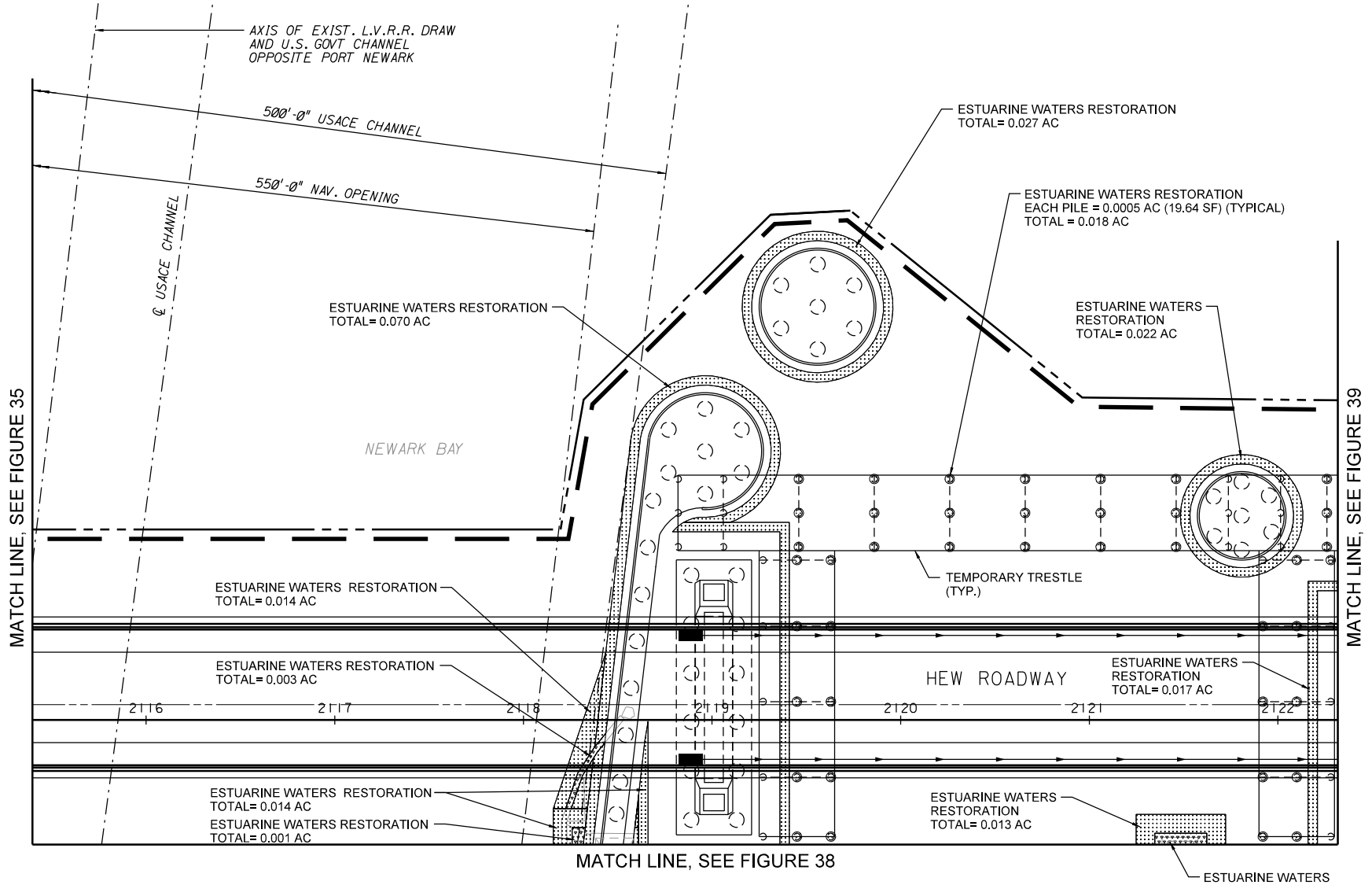
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 37

SHEET 37 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.195	8491.77
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.008	361.97

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

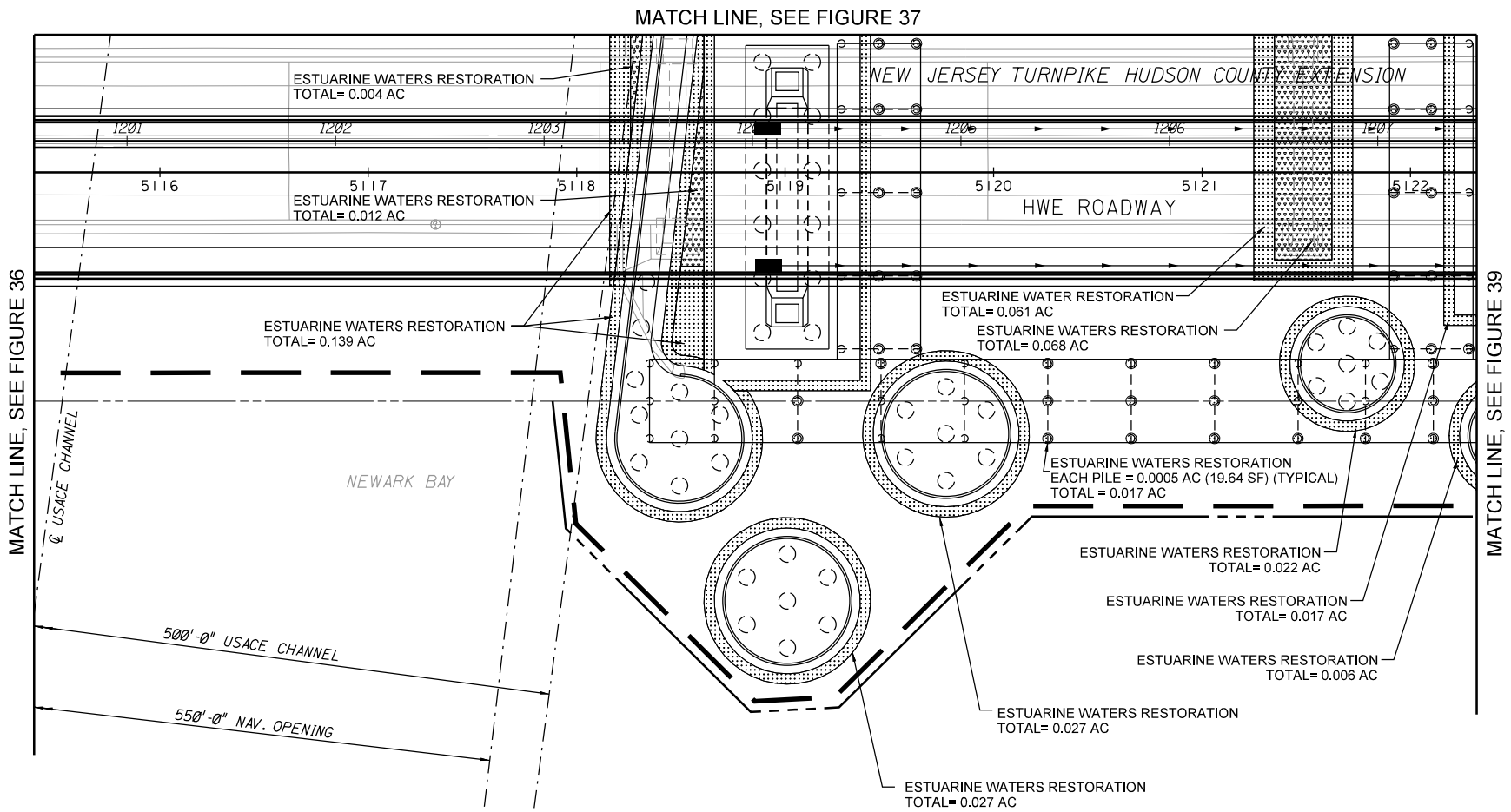
NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 38



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.315	13676.47
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.084	3644.10

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

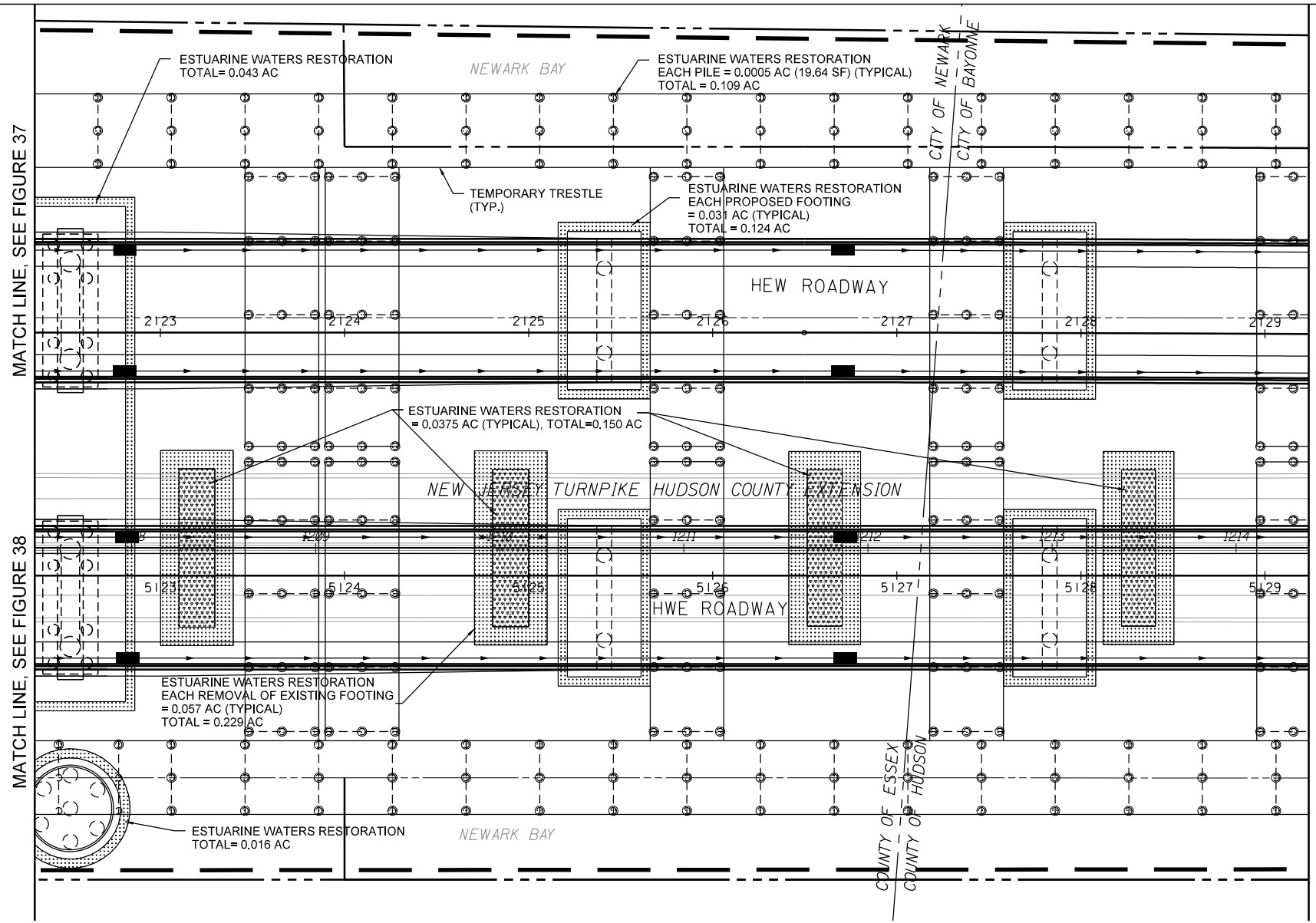
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 39

SHEET 39 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.521	22684.42
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.150	6531.77

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DATE: May 2024

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NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

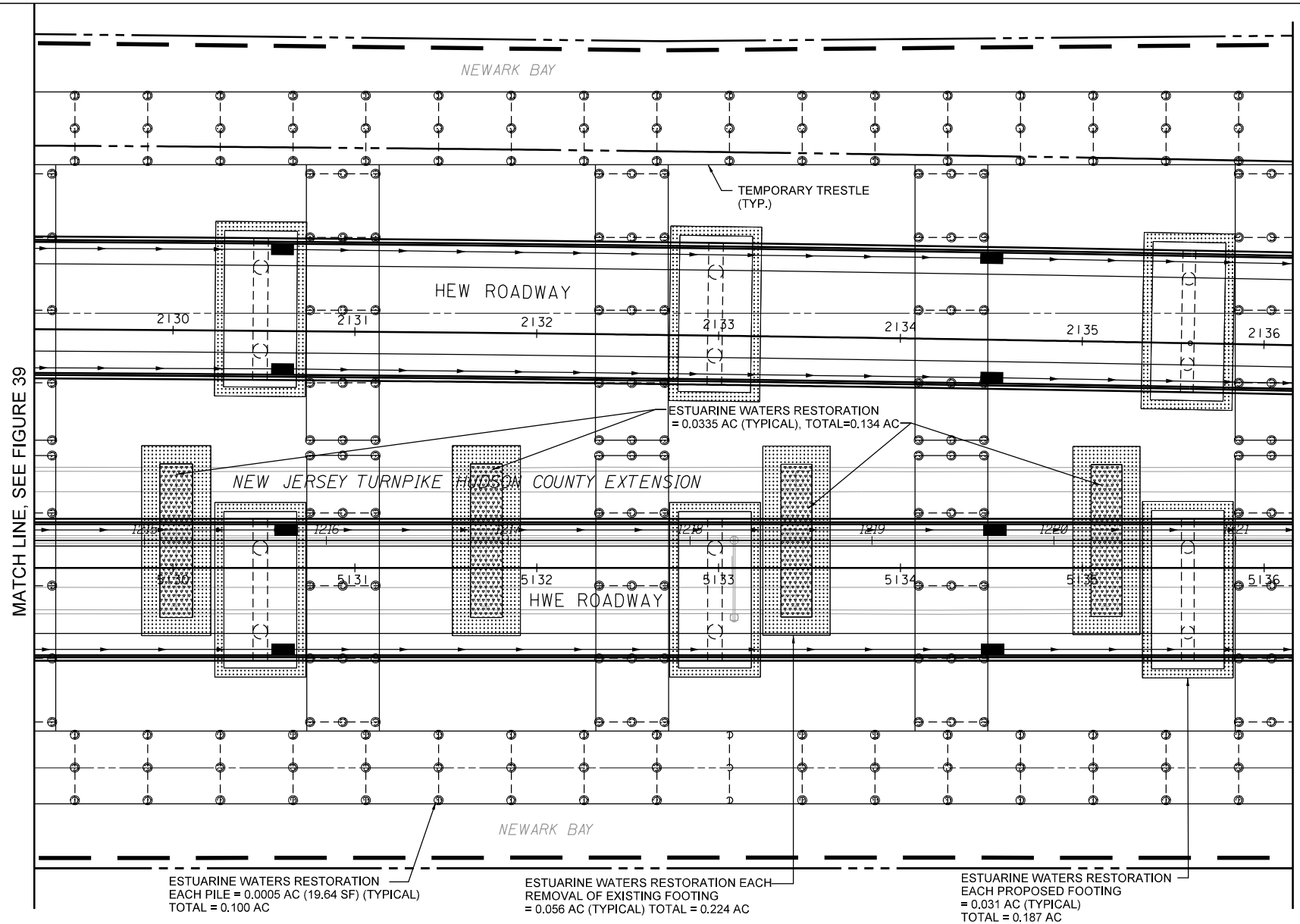
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 40

SHEET 40 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.511	22244.35
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.134	5847.26

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

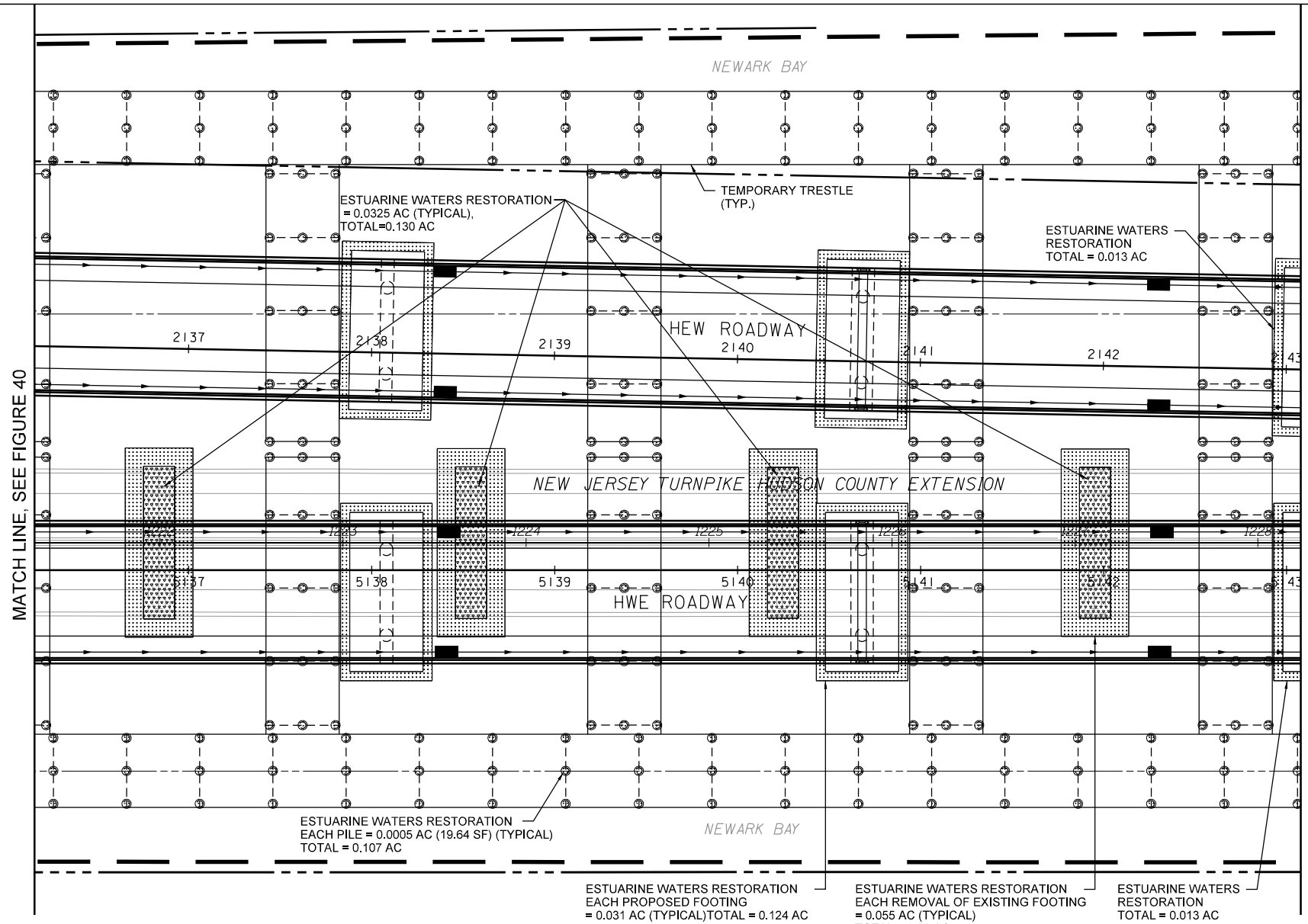
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 41

SHEET 41 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.477	20778.12
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.130	5635.51

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

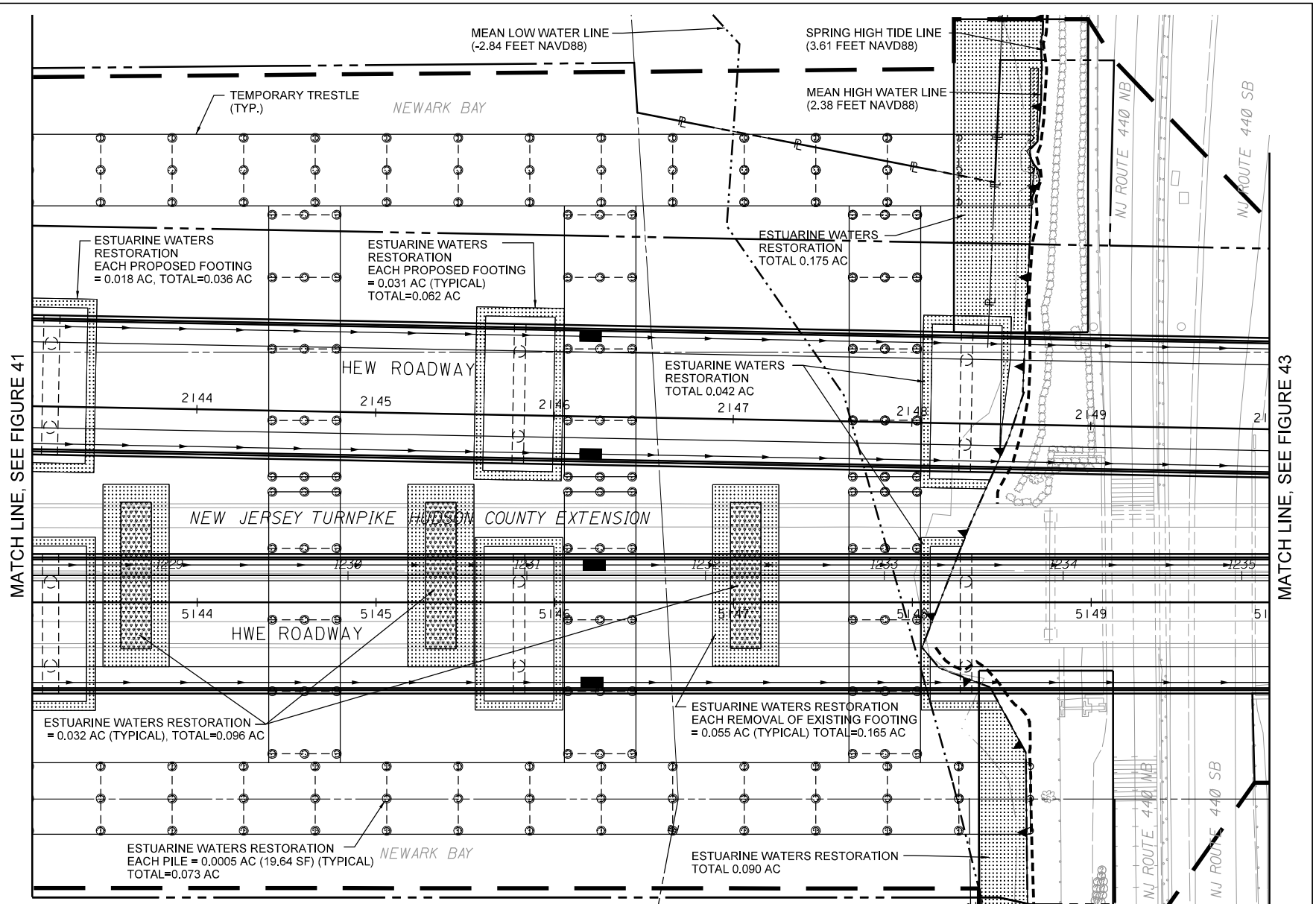
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 42

SHEET 42 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.643	28009.08

STRUCTURE REMOVAL RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0.096	4173.49

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

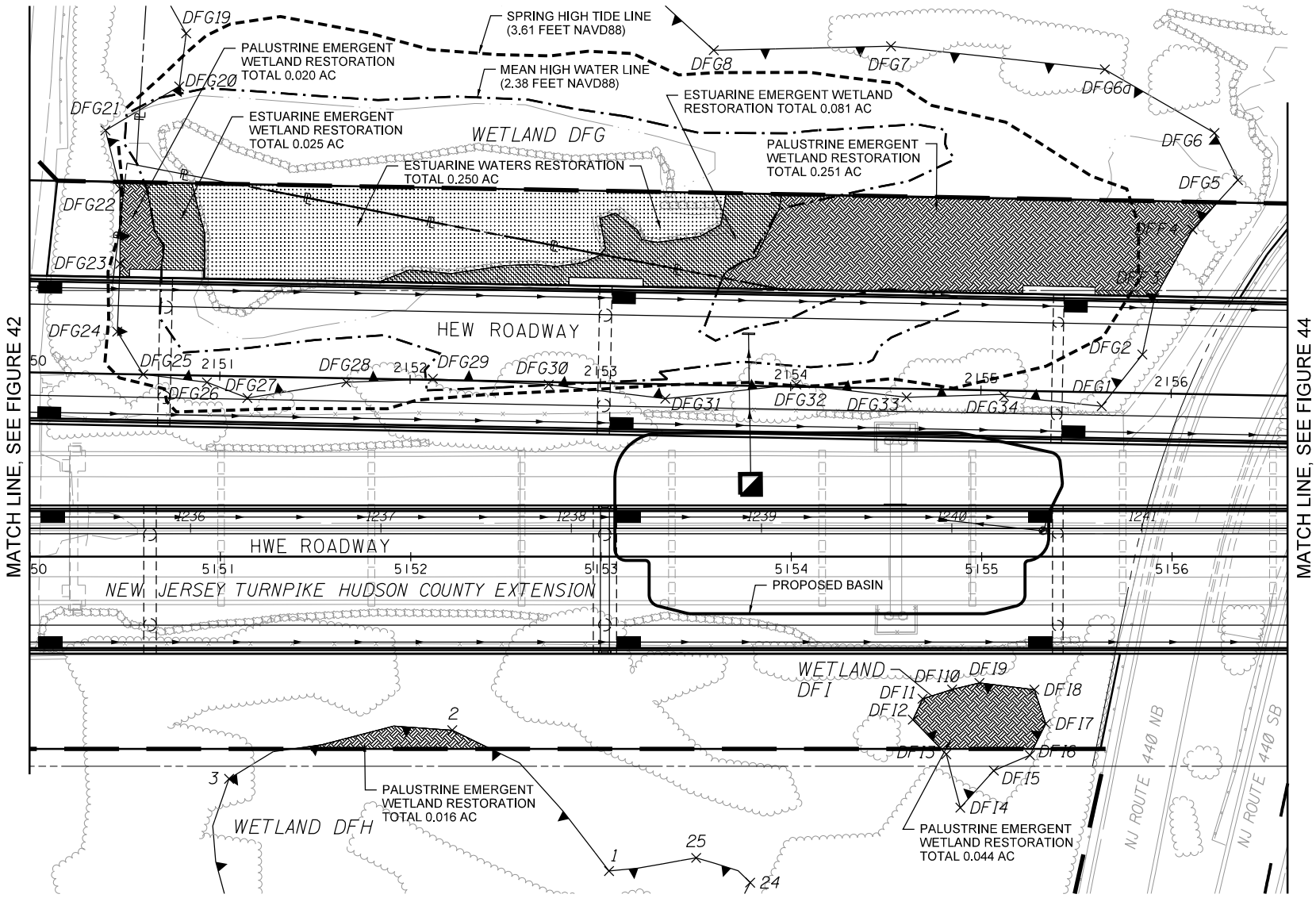
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 43

SHEET 43 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.331	14405.26
ESTUARINE EMERGENT WETLAND	0.106	4617.36
ESTUARINE WATERS	0.250	10890.00
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

PLAN NORTH

0 80'

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

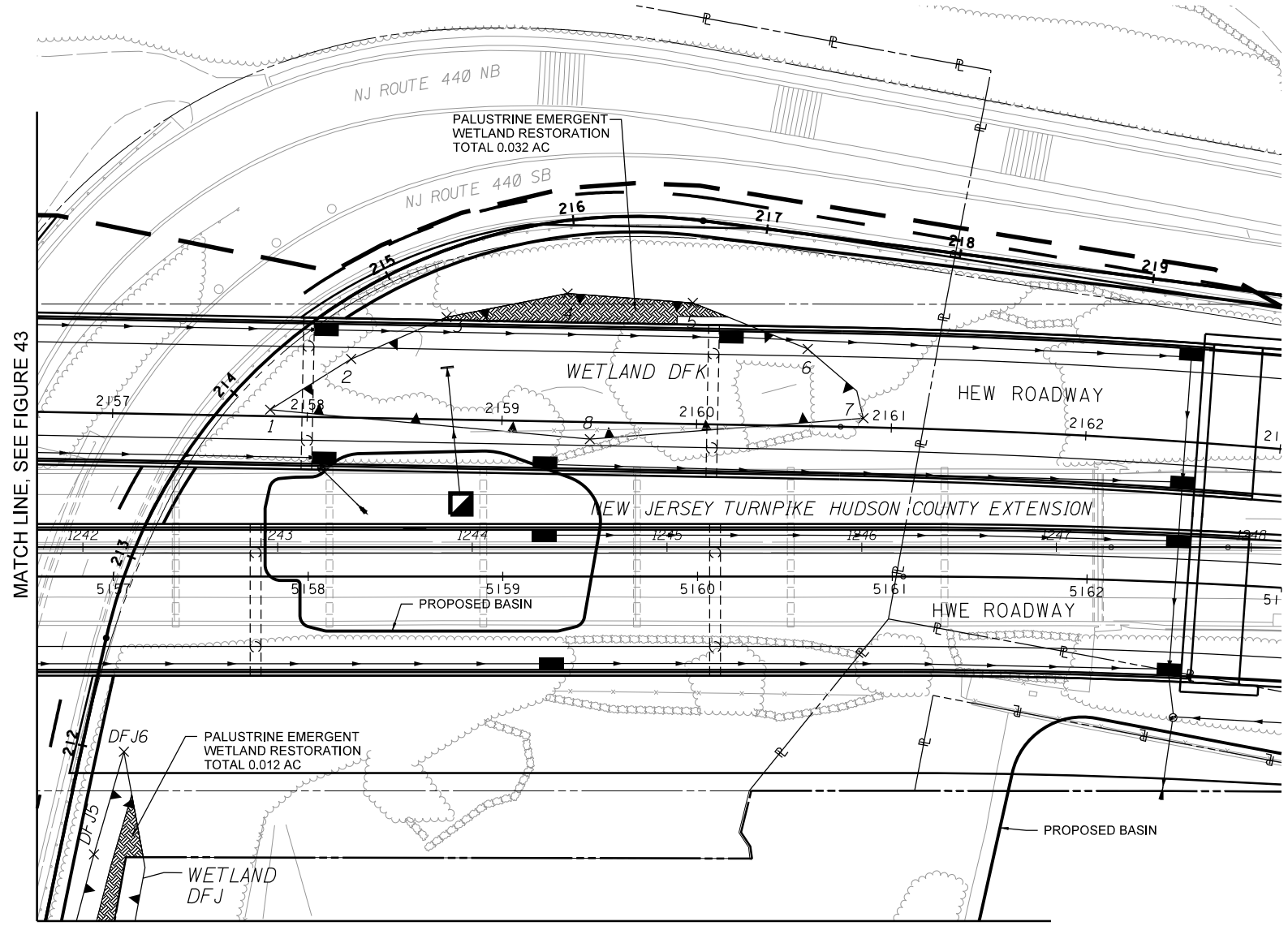
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 44

SHEET 44 OF 48



LEGEND

- PROJECT LIMITS
- PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT LINE
- EXISTING BUSH AND HEDGE
- × 123 WETLAND FLAG LOCATION
- WETLAND BOUNDARY
- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- SPRING HIGH TIDE LINE

TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.044	1916.64
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0
STRUCTURE REMOVAL RESTORATION	**AC**	**SF**
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

PLAN NORTH

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PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

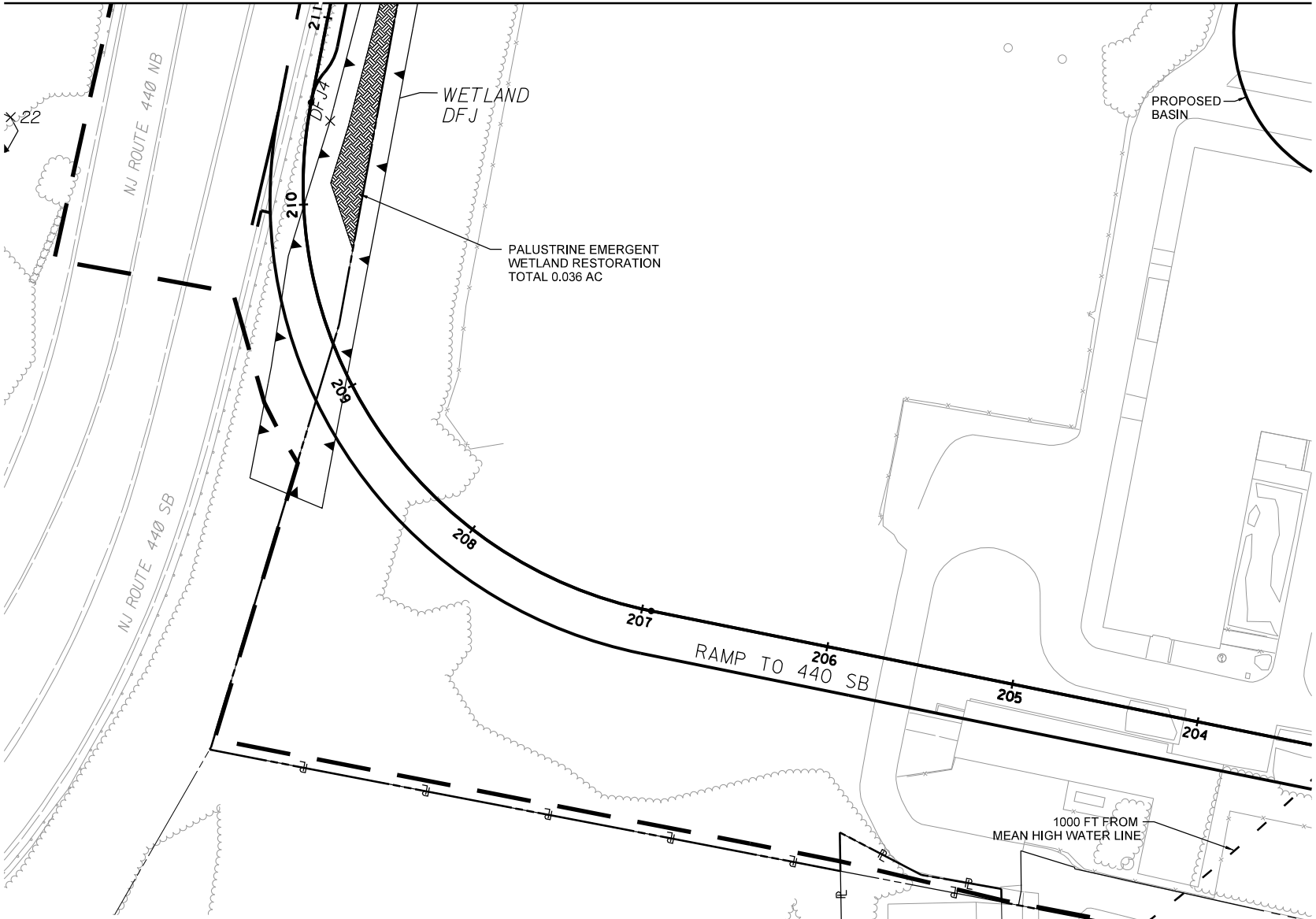
SHEET TITLE
NATIONWIDE PERMIT RESTORATION PLAN

DRAWING NO.
FIGURE 45

SHEET 45 OF 48

MATCH LINE, SEE FIGURE 43

MATCH LINE, SEE FIGURE 44



LEGEND

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TEMPORARY IMPACT RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

STRUCTURE REMOVAL RESTORATION

- PALUSTRINE EMERGENT WETLAND RESTORATION
- ESTUARINE WATERS RESTORATION

TEMPORARY IMPACT RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0.036	1567.96
ESTUARINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

STRUCTURE REMOVAL RESTORATION	AC	SF
PALUSTRINE EMERGENT WETLAND	0	0
ESTUARINE WATERS	0	0

PLAN NORTH

0 80'

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DATE: May 2024

APPLICANT

NEW JERSEY TURNPIKE AUTHORITY

PROJECT

OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE

NATIONWIDE PERMIT PLAN NOTES

DRAWING NO.

FIGURE 46

GENERAL PLANTING NOTES:

1 THE CONTRACTOR SHALL SUBMIT COPIES OF THE PLANT MATERIAL ORDER AT LEAST NINE MONTHS PRIOR TO THE PROPOSED PLANTING DATE TO THE ENGINEER. ALL PROPOSED CHANGES TO THE PLANTING PLAN SHALL BE MADE IN WRITING TO THE ENGINEER AT LEAST SIX MONTHS PRIOR TO PLANTING. ALL PROPOSED CHANGES MUST BE APPROVED IN WRITING. A COPY SHALL ALSO BE PROVIDED TO THE NJDEP.

2 THE MINIMUM CONTAINER SIZE FOR SHRUBS AND TREES SHALL BE NO. 2.

3 ALL PLANT STOCK WILL BE INSPECTED ON-SITE PRIOR TO INSTALLATION. PLANTING STOCK NOT MEETING SPECIFICATIONS SHALL NOT BE PLANTED AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

4 THE HANDLING AND CARE OF ALL PLANT MATERIAL SHALL FOLLOW APPROPRIATE PROCEDURES TO PROTECT STEMS AND ROOT SYSTEMS FROM EXPOSURE TO FREEZING TEMPERATURES, EXCESSIVE HEAT, AND DESICCATION DUE TO SUN AND WIND. PLANT MATERIAL THAT IS NOT PROTECTED FROM THESE CONDITIONS SHALL BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

5 ALL SEEDING WORK SHALL BE COMPLETED DURING THE SPRING PRIOR TO THE INSTALLATION OF TREES, SHRUBS AND HERBACEOUS PLANTS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6 ALL PLANT MATERIAL SHALL BE INSTALLED WITHIN 48 HOURS OF DELIVERY TO SITE. PLANT MATERIAL NOT INSTALLED WITHIN THIS TIME FRAME MAY BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

7 THE SPRING ESTABLISHMENT PERIOD FOR CONTAINERIZED TREES AND SHRUBS IS FROM MARCH 15 TO MAY 15. THE ESTABLISHMENT PERIOD FOR HERBACEOUS PLANT MATERIAL IS FROM APRIL 15 TO JUNE 15. THE INSTALLATION OF TREES AND SHRUBS SHALL BE PERFORMED DURING THE SPRING. THE INSTALLATION OF HERBACEOUS PLANT MATERIAL SHALL BE PERFORMED DURING THE SPRING, OR AS DIRECTED BY THE ENGINEER. TIDAL HERBACEOUS PLANT PLUGS AND SHRUBS SHALL BE PLANTED IN ACCORADNCE WITH THE NOTES BELOW AND AT THE DIRECTION OF THE ENGINEER.

8 PLANT MATERIAL SHALL BE INSTALLED IN A NATURALIZED PATTERN AT APPROPRIATE SPACING TO MEET PLANTING DENSITY AS SHOWN ON PLAN. PLANTS INSTALLED IN STRAIGHT LINES SHALL NOT BE ACCEPTED AND CORRECTED AT THE CONTRACTOR'S EXPENSE.

9 NO AREA SHALL BE PLANTED UNTIL FINAL GRADES HAVE BEEN ACHIEVED, IT HAS BEEN CLEARED OF DEBRIS AND APPROVED BY THE ENGINEER.

TIDAL WETLANDS HERBACEOUS PLANTING NOTES:

EMERGENT PLANTINGS - PLUGS : LOW MARSH AND HIGH MARSH

1 THE LOW MARSH AND HIGH MARSH PLANTING WINDOW IS FROM APRIL 15 TO JUNE 15.

2 THE PLUGS SHALL BE PLANTED IN THE SOIL NO MORE THAN ONE INCH (1") DEEPER THAN GROWN IN THE NURSERY AND TO A DEPTH THAT WILL ENSURE THAT THE TOP OF THE ROOTSTOCK MASS LIES NO MORE THAN ONE INCH (1") BELOW THE SOIL SURFACE.

3 PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE (OSMOCOTE 18-6-12) AT THE RATE OF THIRTY (30) GRAMS PER PLANT. THE PLANTS SHALL THEN BE PLACED WITH THE ROOT SYSTEM ORIENTED DOWNWARD. WHILE THE PLANT IS IN THIS POSITION, THE PLANTING HOLE SHALL BE FULLY AND FIRMLY CLOSED. IF A SOIL DEPRESSION IS FORMED ABOVE OR IMMEDIATELY ADJACENT TO THE PLANTING LOCATION, ENOUGH SOIL SHALL BE SLOUGHED FROM THE SURROUNDING AREA AND FIRMLY TAMPED INTO THE DEPRESSION TO LEAVE THE PLANTING AREA AT THE SAME ELEVATION AS THE SURROUNDING SOIL OR SLIGHTLY HIGHER.

COASTAL SCRUB SHRUB PLANTING:

1 THE SHRUB PLANTING WINDOW IS MARCH 15 TO MAY 15.

2 ALL SHRUBS SHALL CONFORM TO THE MATERIAL SPECIFICATION REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (1986 OR LATER EDITION). THE BACCHARIS AND IVA SHALL CONFORM TO TYPE 4 STOCK, TWO- TO THREE-FOOT (2'-3') TALL, MINIMUM OF TWO CANES.

3 THE PLANT PITS SHALL BE DUG APPROXIMATELY FOUR INCHES (4") WIDER THAN THE STOCK SIZE. PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, A 20-GRAM FERTILIZER AGRIFORM TABLET (20-10-5 ANALYSIS) SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE. BACKFILL SOIL MATERIALS SHALL BE THE SAME AS EXCAVATED FOR THE PLANTING PITS.

4 THE PLANT SHALL BE INSTALLED IN AN UPRIGHT POSITION, AT A DEPTH NO MORE THAN TWO (2) INCHES BELOW THE SOIL SURFACE, WITH NO EXPOSED ROOTS, SOIL FIRMLY PRESSED AGAINST SIDES, WITH NO AIR POCKETS AROUND THE ROOT BALL.

SEED INSTALLATION NOTES:

1 A COPY OF THE SEED ORDERS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL A MINIMUM OF NINE MONTHS BEFORE THE ANTICIPATED SEEDING DATE. FOR SEED MIXTURE COMPOSITIONS, PLEASE REFER TO WRITTEN SPECIFICATIONS. APPROVAL OF FINAL GRADING AND GROUND PREPARATION BY THE ENGINEER IS REQUIRED PRIOR TO SEEDING.

2 ANY PROPOSED CHANGES TO THE SEED MIX MUST BE SUBMITTED IN WRITING TO THE ENGINEER FOR APPROVAL AT LEAST SIX MONTHS BEFORE THE ANTICIPATED SEEDING DATE.

3 IN TEMPORARY STAGING AND CONSTRUCTION ACCESS AREAS, THE GROUND SURFACE SHALL BE PREPARED BEFORE SEEDING. AREAS TO BE SEEDED SHALL BE TILLED TO A DEPTH OF FOUR (4) INCHES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. COMPACTED SOILS, AS SOLELY DETERMINED BY THE ENGINEER, SHALL BE RIPPED TO A MINIMUM DEPTH OF EIGHT (8) INCHES USING TWO PASSES AT 90 DEGREE ANGLES. ALL SOIL SURFACES SHALL BE FREE OF ROCK OR DEBRIS PRIOR TO SEEDING.

4 SEEDING WITHIN UPLANDS AND WETLANDS MAY OCCUR BY EITHER DRILL SEEDING OR BROADCAST SEEDING. IMMEDIATELY FOLLOWING BROADCAST SEEDING, THE SEED SHALL BE INCORPORATED INTO THE SOIL TO A MAXIMUM DEPTH OF 1/4 INCH BY TRACKING WITH A LOW-GROUND PRESSURE DOZER OR USING RAKES.

5 THE SEED SHALL NOT BE MIXED WITH THE FERTILIZER PRIOR TO SEEDING. FERTILIZER SHALL BE PLACED AFTER THE SEED IS INCORPORATED INTO THE SOIL.

6 FOR FERTILIZER RATES AND COMPOSITION, REFER TO THE WRITTEN SPECIFICATION.

7 THE SPRING SEEDING WINDOW IS FROM MARCH 15 TO MAY 30. THE FALL SEEDING WINDOW IS FROM SEPTEMBER 15 TO OCTOBER 30. APPROVAL OF FINAL GRADING BY THE ENGINEER IS REQUIRED PRIOR TO SEEDING OF AREAS.

8 NO EARLIER THAN ONE-WEEK PRIOR TO THE SEEDING, THE SEEDED AREA SHALL BE DISKED TO A MINIMUM DEPTH OF FOUR INCHES (4") AND FIRMED TO FORM A GOOD SEED BED. IF DIRECTED BY THE ENGINEER, DISKING MAY BE OMITTED IN FAVOR OF A SHALLOW HARROW OPERATION PRIOR TO THE PLACEMENT OF THE SEED. FOLLOWING SEEDING, THE SEEDED AREA SHALL BE DRAGGED WITH A CHAIN OR TINE HARROW BY TRACKING WITH A LOW-GROUND PRESSURE DOZER TO COVER SEED IN SOIL NO MORE THAN 1/4-INCH DEEP AND FIRMED TO ENSURE GOOD SOIL TO SEED CONTACT.

9 NITROGEN FERTILIZER SHALL NOT BE APPLIED AT THE TIME OF THE SEEDING.

10 THE SEEDED AREAS IN UPLANDS SHALL BE MULCHED AT THE RATE OF 4,000 POUNDS OF STRAW MULCH PER ACRE. THE MULCH SHALL BE BOUND IN PLACE WITH AN APPROVED BINDER. IF THE SEED PLACEMENT BY HYDRO-SEEDER IS APPROVED BY THE ENGINEER, HYDRO-MULCH MAY BE USED. HYDRO-MULCH SHALL BE PLACED SEPARATELY FROM SEED.

11 COASTAL SCRUB SHRUB PLANTINGS SHALL OCCUR WITHIN TRANSITION ZONES BETWEEM TIDAL LOW MARSH AND TIDAL HIGH MARSH TRANSITION TO UPLANDS OR FRESHWATER MARSH, AS DIRECTED BY THE ENGINEER.

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

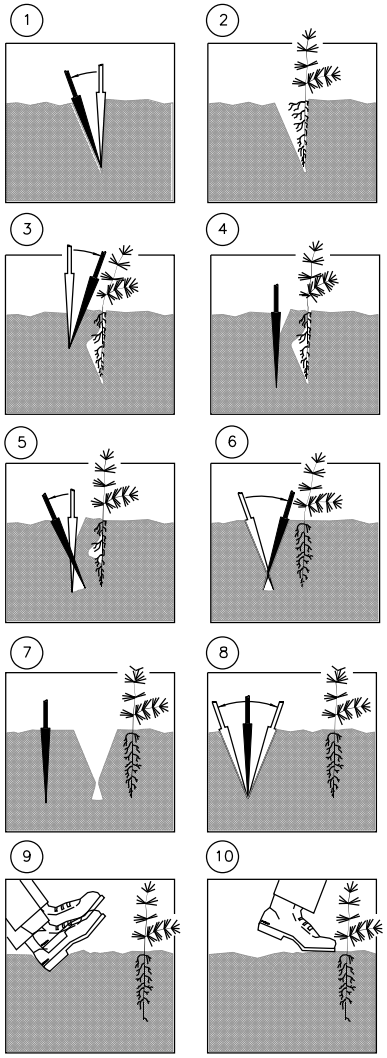
NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLAN NOTES

DRAWING NO.
FIGURE 47

PLANTING PROCEDURE WITH KBC/OST BAR (DIBBLE BAR)



1 INSERT THE PLANTING BAR STRAIGHT DOWN INTO THE SOIL TO THE FULL DEPTH OF THE BLADE AND PULL BACK ON THE HANDLE TO OPEN THE PLANTING HOLE. (DO NOT ROCK THE PLANTING BAR BACK AND FORTH AS THIS CAUSES SOIL IN THE PLANTING HOLE TO BE COMPACTED, INHIBITING GROWTH.)

2. REMOVE THE PLANTING BAR AND PUSH THE TREE ROOTS DEEP INTO THE PLANTING HOLE. PULL THE TREE BACK UP TO THE CORRECT PLANTING DEPTH. GENTLY SHAKE THE TREE TO ALLOW THE ROOT TO STRAIGHTEN OUT. DO NOT TWIST OR SPIN THE TREE OR LEAVE THE ROOTS BENT (J-ROOTED).

3. INSERT THE PLANTING BAR SEVERAL INCHES IN FRONT OF THE TREE AND PUSH THE BLADE HALFWAY INTO THE SOIL. TWIST AND PUSH THE HANDLE FORWARD TO CLOSE THE TOP OF THE SLIT TO HOLD THE TREE IN PLACE.

4. PUSH THE PLANTING BAR DOWN TO THE FULL DEPTH OF THE BLADE.

5. PULL BACK ON THE HANDLE TO CLOSE THE BOTTOM OF THE PLANTING HOLE.

6. PUSH FORWARD ON THE HANDLE TO FIRM SOIL ON TOP OF ROOTS AND TO ELIMINATE AIR/WATER POCKETS AROUND THE ROOT.

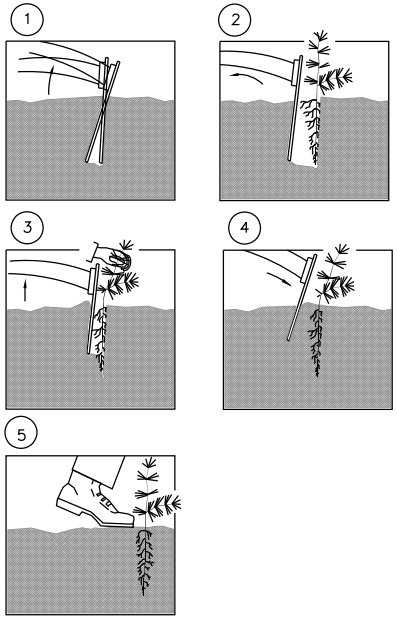
7. INSERT PLANTING BAR 2 INCHES FROM LAST HOLE.

8. PUSH FORWARD, THEN PULL BACKWARD TO FILL PREVIOUS HOLE.

9. REMOVE THE PLANTING BAR AND FIRM UP THE OPENING WITH THE HEEL.

10. FIRM THE SOIL AROUND THE TREE WITH THE FOOT. BE CAREFUL TO AVOID DAMAGING THE TREE.

PLANTING PROCEDURE WITH HOEDAD



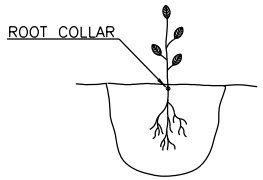
1. STRIKE BLADE ALMOST VERTICALLY, FULL DEPTH OF BLADE, INTO THE SOIL. PULL UP ON THE HANDLE TO BREAK THE SOIL LOOSE AT THE BOTTOM OF THE HOLE. CAUTION - AVOID RAISING THE HANDLE MORE THAN A FEW CENTIMETERS. OTHERWISE, THE HOLE WILL FILL WITH SOIL AND THE TREE WILL BE SHALLOW ROOTED.

2. SLIDE HAND DOWN HANDLE ALMOST TO THE BLADE. PULL BACK AND DOWN ON THE HANDLE TO FORM A POCKET ON THE FAR SIDE OF THE BLADE. WITH THE OTHER HAND, IMMEDIATELY PLACE THE TREE ROOTS INTO THE POCKET TO THE FULL DEPTH OF THE HOLE.

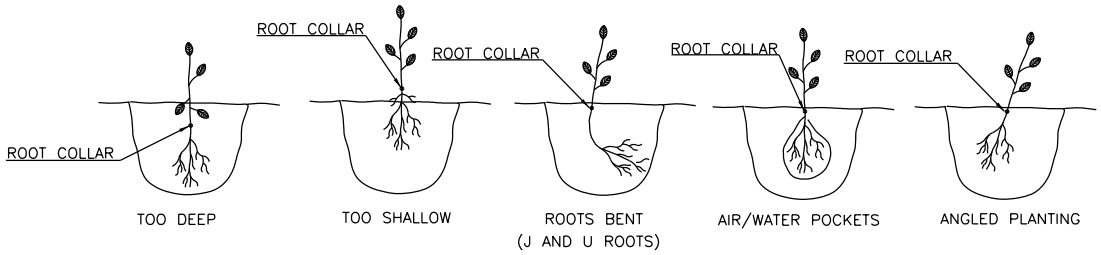
3. HOLD TREE IN PLACE WHILE SLIDING THE HOEDAD BLADE OUT OF THE HOLE. LOOSE SOIL SHOULD FALL INTO THE HOLE, HOLDING TREE IN PLACE.

4. PULL BLADE COMPLETELY OUT OF THE HOLE AND PUSH SOIL AGAINST PLANTED TREE WITH THE TIP OF THE BLADE.

5. USE FOOT TO FIRM THE SOIL AGAINST THE TREE. DO NOT STEP ON OR BRUISE TREE WITH YOUR FOOT.



PROPER PLANTING
N.T.S.



UNACCEPTABLE PLANTING
N.T.S.

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DATE: May 2024

APPLICANT
NEW JERSEY TURNPIKE AUTHORITY

PROJECT
OPS NO. T3820

NEW JERSEY TURNPIKE NEWARK BAY - HUDSON COUNTY EXTENSION

NEWARK BAY BRIDGE REPLACEMENT

CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON

SHEET TITLE
NATIONWIDE PERMIT PLAN NOTES

DRAWING NO.
FIGURE 48

Planting List for Newark Bay Bridge Replacement Restoration Areas

Planting Zone	Total Planting Area (acres)	Species Name (Common Name)	% of Plantings in Planting Zone	Height	Root	Spacing	Units	Quantity
Tidal Low Marsh (E2EM)	0.108	*Spartina alterniflora* (smooth cordgrass)	85%	6 IN Minimum	2 IN x 2 IN Minimum Plug	3 FT. On Center	Each	445
		Spartina cynosuroides (big cordgrass)	5%					27
		Disticulus spicata (saltgrass)	5%					27
		Juncus gerardii (saltmeadow rush)	5%					27
Total Wetland Area	**0.108**						**Total**	526
Freshwater Marsh (PEM)	2.33	Coastal Successional Field Mix*	100%	N/A	N/A	12 Lbs of PLS/AC	Each	28
Coastal Scrub Shrub Habitat (As Directed by Engineer)	0.25	*Baccharis halimifolia* (Eastern Baccharis)	25%	24 IN - 36 IN Minimum	Container No. 2	10 FT. On Center	Each	30
		Myrica pensylvanica (Bayberry)	20%			11	Each	20
		Clethra alnifolia (Sweet Pepper Bush)	30%			8	Each	55
		Amorpha fruticosa (indigo bush)	25%			10	Each	30
		Coastal Successional Field Mix*	100%	N/A	N/A	40 Lbs of PLS/AC	Pounds	10
Total Area	**2.58**							

N/A = not applicable

***Coastal Successional Field Mix**

Schizachyrium scoparium (Little Bluestem)	2.5 lbs of PLS/ac
Panicum amarum (Coastal Panicgrass)	2 lbs of PLS/ac
Sorghastrum nutans (Indiangrass)	2 lbs of PLS/ac
Danthonia spicata (Poverty oatgrass)	1 lbs of PLS/ac
Chamaecrista fasciculata (Partridge pea)	2 lbs of PLS/ac
Panicum virgatum (Switchgrass)	2.5 lbs of PLS/ac
Elymus virginicus (Virginia wild rye)	5 lbs of PLS/ac
Perrenial Wildflowers	23 lbs of PLS/ac
Total Seeding Rate PLS/Acre	40

Perennial Wildflowers		PLS Lbs/Acre
Asclepias amplexicaulis	clasping milkweed	0.03
Asclepias exaltata	poke milkweed	0.03
Asclepias syriaca	common milkweed	0.03
Asclepias verticillata	whorled milkweed	0.03
Asclepias tuberosa	butterfly milkweed	0.03
Symphyotrichum prenanthoides	crooked stem aster	0.02
Symphyotrichum novae-angliae	New England aster	0.02
Symphyotrichum novi-belgii	New York aster	0.02
Leucanthemum vulgare	oxeye daisy	0.12
Centrosema virginianum	spurred butterfly pea	0.02
Coreopsis lanceolata	lance-leaf coreopsis	0.13
Conoclinium coelestinum	blue mistflower	0.1
Heliopsis helianthoides	smooth oxeye	0.12
Heterotheca subaxillaris	camphorweed	0.03
Lupinus perennis	wild lupine	0.04
Oenothera speciosa	pinkladies	0.02
Penstemon digitalis	foxglove beardtongue	0.1
Phlox paniculata	fall phlox	0.1
Solidago altissima	tall goldenrod	0.03
Solidago rugosa	wrinkle-leaf goldenrod	0.01
Solidago sempervirens	seaside goldenrod	0.03
Strophostyles helvola	amberique-bean	0.02
TOTAL		1.08

***Emergent Wetland Mix**

Andropogon gerardii (Broomsedge)	2.5 lbs of PLS/ac
Panicum virgatum (Switchgrass)	2.5 lbs of PLS/ac
Panicum amarum (Coastal Panicgrass)	0.5 lbs of PLS/ac
Leersia oryzoides (rice cutgrass)	0.5 lbs of PLS/ac
Echinocloa walteri (saltmarsh cockspur)	1 lbs of PLS/ac
Native Forbs and Sedges	5 lbs of PLS/ac
Total Seeding Rate PLS/Acre	12

Native Forb and Sedge Species		PLS Lbs/Acre
Bidens cernua	nodding beggar-ticks	0.5
Bidens laevis	bur-marigold	0.3
Bolboschoenus maritimus	*seaside/cosmopolitan bulrush*	0.25
Helenium autumnale	sneezeweed	0.05
Hibiscus moscheutos	rose mallow	0.2
Juncus gerardii	saltmeadow rush	0.03
Juncus effusus	soft rush	0.005
Limonium carolinianum	sea lavender, marsh	0.1
Sabatia stellaris	marsh pink	0.2
Schoenoplectus tabernaemontani	softstem bulrush	0.02
Schoenoplectus americanus	Olney threesquare	0.3
Scirpus cyperinus	woolgrass	0.005
Scirpus robustus	*saltmarsh bulrush*	0.5
Scirpus pungens	*common threesquare*	0.4
Solidago sempervirens	*seaside goldenrod*	0.09
Symphyotrichum tenuifolium	perennial saltmarsh aster	0.05
TOTAL		3

ATTACHMENT C

NJDEP MITIGATION CONDITIONS CORRECTIONS LETTER

State of New Jersey

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Watershed & Land Management Program
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

SHAWN M. LATOURETTE
Commissioner

June 7, 2024

Lisa Navarro
New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, New Jersey 07095

RE: Mitigation Conditions Correction Letter
File and Activity No.: 0000-23-0012.2 LUP230001
Project: Newark Bayonne Bridge

Block: 8	Lots: 1, 2, 3, 4, 5 and 6
Block: 11	Lots: 1 and 2
Block 12	Lots: 1 and 2
Block: 13	Lots: 1, 15, 16 and 18

City of Bayonne, Hudson County

Block: 5078	Lots: 90 and 91
Block: 5078.02	Lot: 87
Block: 5078.03	Lots: 85 and 92
Block: 5082	Lots: 10 and 16

City of Newark, Essex County

Dear Mr. Garofalo:

This letter serves to add an additional mitigation bank to the permit conditions of File No. 0000-23-0012.2 LUP230001, which is located on the above referenced blocks and lots in the City of Newark, Essex County and City of Bayonne, Hudson County.

The Freshwater Wetlands Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Freshwater Wetland Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following banks are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

   Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

Additionally, the Intertidal and Subtidal Shallows and Tidal Water Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   As of the date of this permit, **there are no mitigation banks** with the appropriate credit types serving your project area. Additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Intertidal and Subtidal Shallows and Tidal Waters Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

This correction letter has been appended to the original permit. All of the conditions of the original permit remain in effect unless identified in this letter.

If you have any questions regarding this letter, please contact Faelyn Meyers by email at faelyn.meyers@dep.nj.gov or by phone at (609) 940-5227. Please reference the Division's file number in all communication.

Sincerely,

Cathryn Schaffer, Manager
Bureau of Watershed Management
Division of Watershed Protection and Restoration

C: Matt Resnick, NJDEP, DLRP
Faelyn Meyers, NJDEP, DWPR

ATTACHMENT D

EVERGREEN LETTER OF CREDIT AVAILABILITY

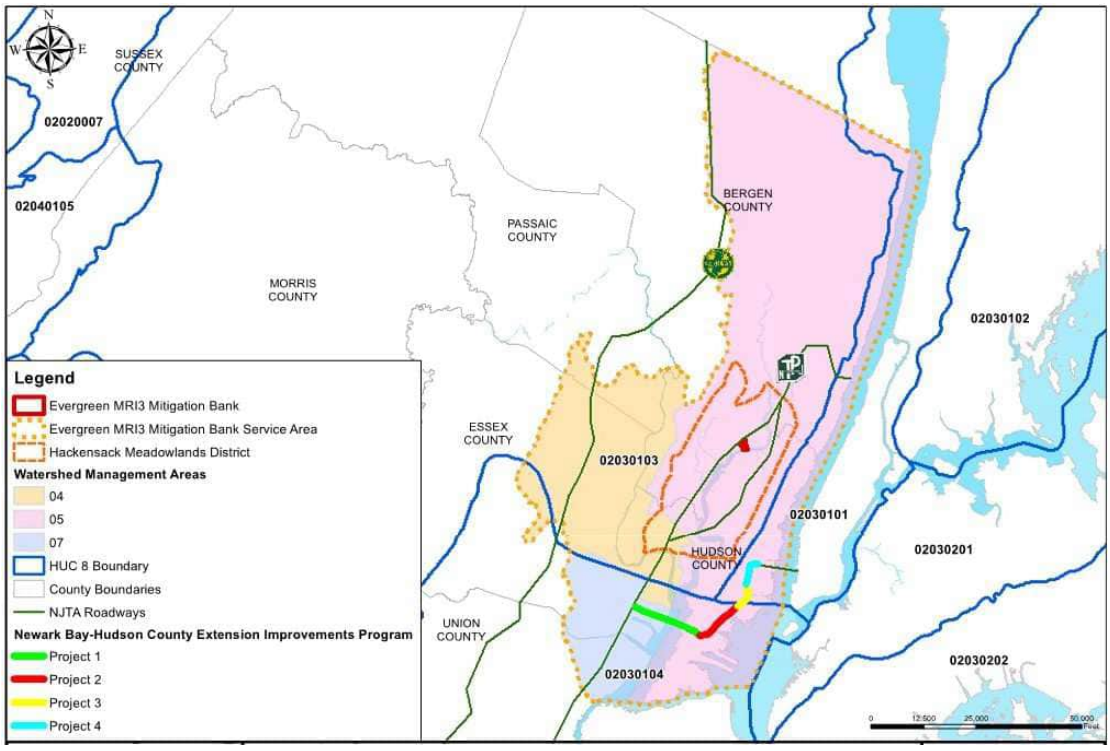
May 28, 2024

Lisa K. Navarro, P.E.
Supervising Engineer
New Jersey Turnpike Authority
1 Turnpike Plaza
PO Box 5042
Woodbridge, NJ 07095-5042

Re: Credit Availability - NBHCE - Evergreen 5-14-24

Dear Ms. Navarro:

Evergreen Environmental, LLC (Evergreen) is pleased to submit this letter of credit availability for the NJTA NBHEC project. Please note that our tidal and federal mitigation banks have service areas defined by HUC watershed units and not specifically WMAs. This is especially relevant to tidal wetland impacts as regulated by the Corps and NJDEP. For example, our Evergreen MRI3 Mitigation Bank serves several HUCs that encompass parts of WMAs 4, 5 and 7 (see below figure).



Here are the assets we have available that may service the project:

Evergreen MRI3 Mitigation Bank. Of the original 22.46 credits we have 0.5108 available for sale. In addition, we have two clients who purchased more mitigation credits than their projects needed. We have made formal written offers to repurchase them, which would make these credits available in addition to the 0.5108. These additional "repurchase credits" make up an additional 2.036 credits. These credits can be purchased or reserved by the Authority at any time. Until such time as the Authority is ready to purchase or reserve them, they are available to other permittees on a "first come, first served" basis.

In addition, we have three sites which we have been advancing as banks. Because of the drawn out credit release schedule mandated by the Corps and NJDEP, we cannot bring them on line in time to make them fully available to your project as bank credits. The most efficient way to make them available for the project is as Permittee Responsible Mitigation ("PRM") sites. We will use the term, "credit equivalents", below to describe the mitigation available in the three sites for your project, when they are used as PRM. The three sites are:

Evergreen Mill Creek Point Mitigation Site. Evergreen owns the right to record a conservation easement on this 22-acre site and will do so as soon as we find an interested permittee. The site is located in the HMD. The site has been thoroughly studied. The agencies offered us 6 credits. However, we have recently submitted an Evaluation of Planned Wetlands ("EPW") study which documents sufficient uplift to warrant 10 credits. We are engaged with the MIMAC in discussing the use of this method. We believe that if your team engaged with Evergreen to present Mill Creek Point as mitigation for the actual impacts of your project, a persuasive argument may be made for 10 credit equivalents. For now, we are confident that Mill Creek Point can deliver at least six (6) credits worth of mitigation and as many as ten (10) credit equivalents.

Evergreen Whale Creek Mitigation Site. Evergreen owns this 18-acre site in fee simple. It is located along Raritan Bay in the same HUC-8 as the Newark Bay. The agencies offered us three (3) credits for it. We believe the functional uplift (EPW) study will yield a more generous crediting. As with Evergreen Mill Creek Point, we are confident that Whale Creek can deliver a minimum of three (3) but possibly as many as five (5) credit equivalents.

Evergreen Raritan River Mitigation Site. We recently put this 30-acre site under a long term option and have begun detailed studies (title, survey and soil sampling are currently underway). It is located on the lower tidal portion of the Raritan River. We believe this site could yield a variety of credit types: riparian zone, forested freshwater wetland and tidal wetland mitigation. We are confident it will yield ten (10) credit equivalents and using a functional uplift analysis may yield as many as fifteen (15) credit equivalents.

As you know, the existing credits in MRI3 may be secured under an agreement for purchase and sale. We also have the ability to provide a purchase agreement that could include a provision providing a full refund in the event the Authority does not get a permit or decides not to proceed with the project. There are other provisions which could be included if useful to the Authority.

The PRM sites will probably require an RFP issued by the Authority in in order to procure. In case your team plans to advance an RFP for additional mitigation, and on behalf of other potential permittees in the HMD and Raritan Bay, we are continuing to aggressively advance the three PRM sites with the Corps and NJDEP. Note that we are

deliberately not mentioning your project to the regulators as a potential user of the sites' potential mitigation.

Best wishes with your continuing efforts to secure permits. We look forward to assisting the team in any way we can, including with the purchase of bank credits and "credit equivalents" from any of our three mitigation sites.

Please do not hesitate to contact me should you require further information at 973/356-7164.

Sincerely,
EVERGREEN ENVIRONMENTAL, LLC

Mark Renna
President

ATTACHMENT E

GREENVEST LETTER OF CREDIT AVAILABILITY

GreenVest
VISION • PERFORMANCE • RESULTS

May 22, 2024

Lisa K. Navarro, P.E.
Supervising Engineer
New Jersey Turnpike Authority
1 Turnpike Plaza
PO Box 5042
Woodbridge, NJ 07095-5042

Re: Oradell Reservoir Mitigation Bank
Credit Availability

For: NJTA Newark Bay Bridge Reconstruction

Ms. Navarro,

As requested, below is a summary of credit availability for our Oradell Reservoir Mitigation Bank.

Current Credit Availability
Freshwater Wetland: 7.017
Riparian Zone: 0.356

Future Credit Release (Late 2024)
Freshwater Wetland: 2.64
Riparian Zone: 1.59

Total Credit Availability
Freshwater Wetland: 9.657
Riparian Zone: 1.946

Thank you for your interest in mitigation credits from Oradell Reservoir Mitigation Bank. If you have any questions do not hesitate to contact us.

Sincerely,

Douglas Lashley
Managing Member

CC: James D. Heeren, Dewberry

ATTACHMENT F

KANE MITIGATION BANK LETTER OF CREDIT AVAILABILITY

Kane Mitigation, LLC
An EnviroFinance® Group Company
115 Wilcox Street, Suite 220
Castle Rock, CO 80104
P. 720 633-9676
F. 303 474-3131

May 31, 2024

New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095
Attn: Lisa K. Navarro. P.E.

RE: **Newark Bay Bridge Replacement Project**
Essex and Hudson Counties, New Jersey
NJDEP Permit No(s).:0000-23-0012.2 LUP230001
Dept. of the Army Permit No. NAN-2020-729

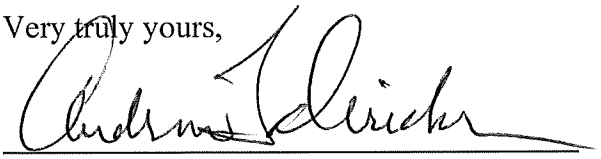
Dear Ms. Navarro:

The Richard P. Kane Wetland Mitigation Bank ("Kane Bank") was established to provide compensatory mitigation for wetland and other aquatic resource losses that result from authorized transportation-related activities, like the Newark Bay Bridge Replacement Project, conducted by the New Jersey Turnpike Authority ("NJTA"), New Jersey Department of Transportation, Port Authority of New and New Jersey and New Jersey Transit Corporation. The Kane Bank may provide such off-site compensatory mitigation associated with regulated activities occurring within the Hackensack Meadowlands District or with a component of the project within the District. The Interagency Review Team (also known as "MIMAC" within the Hackensack Meadowlands District) that oversees the establishment and management of the Kane Bank may authorize the sale and application of mitigation credits from the Kane Bank for use outside the primary service area of the Kane Bank under special circumstances like those that we believe exist with this project.

As the New York District of the U.S. Army Corps of Engineers ("ACOE") and the New Jersey Department of Environmental Protection ("NJDEP") are the lead agencies of MIMAC, we respectfully request and authorize NJTA to name the Kane Bank as a potential source of compensatory mitigation in any requests for modification of the NJDEP permit referenced above and the permit application being submitted to or reviewed by the ACOE for the Newark Bay Bridge Replacement Project. By submitting this letter to you, I do hereby certify on behalf of Kane Mitigation, LLC that **29.282 Wetland Mitigation Credits** remain authorized and currently available for purchase from the Kane Bank as of this date as reflected in the attached Official Credit Ledger.

Thank you for your prompt and courteous attention to this matter. If you should have any questions concerning this correspondence, please do not hesitate to contact the undersigned directly at (720) 633-9676.

Very truly yours,



Andrew L. Derickson
Sr. Vice President and General Counsel of
EnviroFinance Group, LLC and Affiliated
Companies; Project Manager for the Kane
Bank

Encls.

Cc: Chris Guddemi, Dewberry
James Heeren, Dewberry

Richard P. Kane Mitigation Bank

Official Credit Ledger

Date of Transaction	Permittee	Permit #	Permit Type	Locality	Type of impacted system (cowardin classification)	Amount of impacts	Debit / Credit Amount	USGS HUC Catalog Unit	Credit Amount Availability
7/30/2010	EarthMark NJ Kane, LLC	NAN-2009-00224	Credit Release				7.000		7.000
10/15/2010	New Jersey Turnpike Authority	NAN-2006-03095 and NAN 2007-01103; NJDEP Permit #0212-07-0001	Credit Debit		Wetland	2.44 acres	(1.500)	2030103180	5.500
11/22/2010	New Jersey Turnpike Authority	NAN-2006-03095 and NAN 2007-01104; NJDEP Permit #0212-07-0001	Credit Debit		Wetland	2.44 acres	(0.940)	2030103180	4.560
1/30/2012	New Jersey Department of Transportation (NJDOT)	NAN-2010-611; NJDEP Permit #0900-09-0002.1	Credit Debit		Wetland	1.365 acres	(1.365)	2030103180	3.195
2/7/2012	Kane Mitigation, LLC	NAN-2009-00224	Bank Sponsor Amendment				0.000		3.195
8/28/2012	New Jersey Transit Corporation	NAN-2012-00355; NJDEP Permit #0900-09-0005.4; FHA120001; FHA120002 & CDT120001	Credit Debit		Wetland	2.13 acres	(2.130)	2030103180	1.065
9/4/12 (3/27/12)	Kane Mitigation, LLC	NAN-2009-00224	Hydrology Credit Release				14.000		15.065
11/27/2012	Kane Mitigation, LLC	NAN-2009-00224	Planting Credit Release				7.000		22.065
12/17/2012	The Port Authority of New York and New Jersey	Various	Credit Debit		Wetland	Multiple	(22.000)		0.065
12/28/2015	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				14.000		14.065
6/29/2018	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				10.490		24.555
1/17/2019	New Jersey Transit Corporation	NAN-2009-01222-M1 NJDEP Permit #0900-09-0005.2 WFD 150001	Credit Debit		Wetland	4.246 acres	(4.246)	2030103180 2030103150	20.309
4/29/2019	New Jersey Department of Transportation (NJDOT)	NWP 33 NJDEP Permit #0000-15-0011.1; WFD 180001 and 180002; FHA 180001; FWW 180002	Credit Debit		Wetland	1.726 acres	(1.726)	2030103180	18.583
1/30/2020	Kane Mitigation, LLC	NAN-2009-00224	Operational Credit Release				17.490		36.073
5/17/2023	New Jersey Turnpike Authority	NJDEP Permit #0212-22-0005.1; LUP220001; CDT220001 NAN-2022-00927-WCO	Credit Debit		Wetland	.161 acres	(0.161)		35.912
3/1/2024	New Jersey Transit Corporation	NJDEP Permit #0900-08-0003.3 LUP200001 NAN-2020-00835	Credit Debit		Wetland	5.205 acres	(5.205)		30.707
5/17/2024	New Jersey Department of Transportation (NJDOT)	NJDEP Permit #0000-22-0018.1 LUP 220001	Credit Debit		Wetland	1.425 acres	(1.425)		29.282
									29.282
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Appendix F-5

New Jersey Department of Environmental Protection:
Permit for Newark Bay Bridge Replacement

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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERSHED & LAND MANAGEMENT
Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420
Telephone: (609) 777-0454 or Fax: (609) 777-3656
www.nj.gov/dep/landuse

PERMIT

In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the terms, conditions, and limitations listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition, or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.

Approval Date
April 3, 2024

Expiration Date
April 2, 2029

Permit Number(s):	**Type of Approval(s):**	**Governing Rule(s):**
0000-23-0012.2 LUP230001	WFD Individual Upland Permit WFD Individual In-Water Permit FHA Induvial Permit FWW Individual Permit Water Quality Certificate	N.J.A.C. 7:13-1.1(b) N.J.A.C. 7:7-1.1(a) N.J.A.C. 7:7A-1.1(a)

Permittee:
Lisa Navarro
NJ Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095

Site Location:
Block(s) & Lot(s): [5078, 90] [5078, 91] [5078.02, 87] [5078.03, 85] [5078.03, 92] [5082, 10] [5082, 16] [11, 1] [11, 2] [12, 1] [12, 2] [13, 1] [13, 15] [13, 16] [13, 18] [8, 1] [8, 2] [8, 3] [8, 4] [8, 5] [8, 6]
Municipality: Newark City, Bayonne City
County: Essex, Hudson

Description of Authorized Activities:

This document authorizes the New Jersey Turnpike Authority to reconstruct the Newark Bay Bridge (NBB) over the Newark Bay, between the Cities of Newark and Bayonne, Essex and Hudson Counties respectively. The approved project includes the replacement of the existing four-lane, multi-span structure with a new four-lane westbound structure in a parallel alignment north of the existing alignment, and a new eastbound four-lane multi span structure in the same approximate alignment as the existing NBB structure. The approval also includes roadway realignment and improvements on the east and westbound approach roadways, the construction of a trestle system to construct the new bridges, and various drainage and stormwater management improvements. This approval is in association with a linear development project on the parcel(s) referenced above and as shown on the approved plans cited at the end of this document.

This project is authorized under and in conditional compliance with the applicable Coastal Zone Management Rules (N.J.A.C. 7:7-1.1 et seq.) as amended through October 5, 2021, the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-1.1 et seq) as amended through November 7, 2022, and the Flood Hazard Area Control Act Rules (N.J.A.C. 7:13-1.1 et seq.) as amended through July 17, 2023 provided that all conditions to follow are met.
This approval includes a Water Quality Certification (WQC).

The Department has determined that the herein approved activities meet the requirements of the (FHACA/CZM) rules. This approval does not obviate the local Floodplain Administrator's responsibility to ensure all development occurring within their community's Special Flood Hazard Area is compliant with the local Flood Damage Prevention Ordinance, and minimum NFIP standards, regardless of any state-issued permits. FEMA requires communities to review and permit all proposed construction or other development within their SFHA in order to participate in the NFIP.

Prepared by:
Matthew Resnick

Received and/or Recorded by County Clerk:

If the permittee undertakes any regulated activity, project, or development authorized under this permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the requirements of the permit and all conditions therein.

This permit is not valid unless authorizing signature appears on the last page.

STATEMENT OF AUTHORIZED IMPACTS:

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:13-2.18; N.J.A.C. 7:7-29; N.J.A.C. 7:7A-22.

FWW Individual Permit-Open Water (not SFH/Duplex)	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Freshwater wetlands	4.038	5.118
Transition areas	3.792	2.936
State open waters	0	0

Riparian Zone Vegetation	Area of riparian zone (Acres)
Permanent Disturbed	2.867
Temporary Disturbed	1.629

WFD IP-Commercial/Industrial/Public(Waterward)	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Tidal Open Waters	3.808	10.974
Intertidal subtidal shallows (ISS)	2.045	5.449

PRE-CONSTRUCTION CONDITIONS:

1. This permit is not valid until such time as you have obtained a Department of the Army authorization. You are advised to contact the Philadelphia District at 215-656-6728 if your project is located south of the Manasquan River or the New York District at 212-264-3912 if your project is located north of the Manasquan River.

2. In accordance with N.J.S.A. 12:5-3 and N.J.S.A. 13:1D-150-156, within 90 days of permit issuance or prior to pre-construction earth movement, site preparation and construction of the Bridge

Replacement, whichever is earlier, the Applicant shall submit a formal and complete public access project proposal, as outlined in the submitted addendum to the permit application entitled "**Waterfront Development Public Access Implementation Proposal New Jersey Turnpike Authority Newark Bay-Hudson County Extension Program Newark Bay Bridge Replacement NJDEP File No.: 0000-23-0012.2 Activity Number LUP23000**" for the City of Bayonne, Hudson County and for the City of Newark, Essex County, to this Division for review and approval.

3. Within 90 days of permit issuance and prior to any construction activities for the Bridge Replacement Project, whichever is earlier, the permittee shall also execute an escrow agreement with the Division for which the funds shall be held in trust in an attorney trust account of a licensed New Jersey attorney, to meet the public access requirements of the permit.

4. The permittee and/or respective municipalities shall secure all requisite permits and approvals for the agreed upon public access improvement projects in their respective municipalities prior to the start of any site disturbance, pre-construction earth movement or construction of the Bridge Replacement.

5. At least 90 days prior to any site disturbance, pre-construction earth movement, construction activities, the permittee shall deposit the $6,000,000 contribution towards the "Public Access Improvement Project" for the improvements in both respective municipalities identified in the escrow agreement. The permittee shall deposit such funds to be held in escrow in their attorney's trust account and shall comply with all other provisions outlined in the escrow agreement.

6. The permittee may deposit partial contributions in the attorney trust account in advance of site disturbance, pre-construction earth movement or construction of the Bridge Replacement Project, and, subject to the Division's approval, may request release and approval, and expend such funds needed for the purpose of the planning, engineering or permitting costs for the public access improvement projects other than for the actual construction of the public access improvements.

7. The Division approved public access improvements shall be constructed prior to, or concurrent with, the construction of the Bridge Replacement project within the respective municipality as authorized by this permit.

8. Prior to the construction of any structures and/or the placement of fill within any tidelands areas authorized under this permit, the permittee must apply to the Division's Bureau of Tidelands Management for a tidelands instrument (e.g., a license or lease) for the use and occupation of said tidelands. Tidelands staff will provide further guidance upon review for the timing of construction. All decisions concerning the issuance of any tidelands instrument is solely up to the Division's Bureau of Tidelands Management following the Tidelands Resource Council policy.

9. De-watering of cofferdams must include properly sized temporary sediment basins or other filtering methods to reduce turbidity. The stream area to receive return water discharged from cofferdams must be encompassed by a turbidity barrier. The turbidity barrier must be located parallel to the stream banks and anchored to the shoreline to maintain free flow of the stream center. In order to avoid obstruction of stream flows or fish passage, turbidity barriers must not be placed across the entire stream channel.

10. Prior to the commencement of site clearing, grading, or construction onsite, the permittee shall install a sediment barrier at the limits of disturbance authorized herein, which is sufficient to prevent the sedimentation of the remaining freshwater wetlands and transition areas and shall serve as a physical barrier protecting these areas from encroachment by construction vehicles or other soil-disturbing

activities. All sediment barriers and soil erosion control measures shall be kept in place and maintained throughout the duration of construction, until such time that the site is stabilized.

11. If a geodetic control reference marker is found on site and the position of the survey marker or monument cannot be protected, the applicant shall coordinate with the New Jersey Department of Transportation's Geodetic Survey and Survey Support Unit at least 60 days prior to disturbance to relocate the geodetic control marker to an appropriate location prior to construction. The impacted areas shall be restored to original grade and condition. The applicant shall contact NJGCS with any questions at (609) 963-1680.

HISTORIC PRESERVATION SPECIAL CONDITIONS:

1. Prior to the removal, demolition, or alteration of any components of the Newark Bay Bridge, the permittee, using the services of an Architectural Historian who meets the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in Architectural History, shall document the existing conditions of the bridge to Level III equivalent standards of the Historic American Engineering Record (HAER). In lieu of large format photography, the permittee shall include high-resolution digital photos that meet the National Park Service National Register Digital Photo Submission Standards. The standards can be found at the following web address:

   NR and NHL Consolidated and Updated Photograph Policy 2024 (nps.gov)

   The recordation shall include both archivally stable, 4-inch by 6-inch black and white prints and high-resolution digital RAW and/or TIFF files. A minimum of thirty (30) views of the bridge shall be produced as part of the recordation. Photography shall include, but not be limited to, documentation of the bridge and its setting.

   The permittee shall ensure that all documentation is completed and accepted by the Historic Preservation Office prior to any removal, demolition, or alteration of any components of the bridge or new construction. The permittee shall provide one original archival copy of the recordation to the HPO and duplicate copies, with original photographs, shall be provided to the appropriate repositories as identified in consultation with the Historic Preservation Office.

   The HAER documentation shall be submitted to the Historic Preservation Office within six (6) months of permit issuance.

2. The permittee, using the services of a qualified consultant meeting the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in History and/or Architectural History, shall develop and install interpretive signage regarding the history and significance of the Newark Bay Bridge, including the structure's involvement in the construction of the New Jersey Turnpike Newark Bay-Hudson County Extension and its design as a cantilevered truss bridge. The signage shall incorporate historic images of the bridge and shall be installed in a publicly accessible location near the bridge such as the Richard A. Rutkowski Park in the City of Bayonne. The applicant shall consult with the HPO on the design, layout, and content of interpretive signage, as well as its proposed location, within one (1) year of permit issuance. The signage shall be installed within six (6) months of the project completion, and the permittee shall submit photographs of the installed signage to the HPO within thirty (30) days of installation.

3. The permittee, using the services of a qualified consultant meeting the Secretary of the Interior's Professional Qualifications Standards [48 FR 44738-9] in Architectural History, shall prepare a historic context study and inventory of the extant bridges at least 45 years of age (pre-1979) on the

New Jersey Turnpike owned by the New Jersey Turnpike Authority (NJTA). The study and inventory would serve as a planning tool to help the NJTA identify which structures may be historic and may feasibly be prioritized for preservation, while ensuring the long-term safety of each crossing. The study would detail the history of the NJTA and the development of the New Jersey Turnpike network and provide an inventory of all undergrade and overgrade bridges under the NJTA's ownership on the New Jersey Turnpike main stem, Newark Bay-Hudson County Extension, Western Extension/Spur, and Pearl Harbor Memorial Turnpike Extension. The inventory shall include NJHPO Survey Forms for each bridge to evaluate the individual NRHP eligibility of each structure. The draft context study and inventory shall be submitted to the HPO for review within eighteen (18) months of permit issuance. The final report and inventory, addressing any HPO comments, shall be submitted to the HPO within ninety (90) days of the issuance of HPO comments on the draft report. Quarterly reports shall be submitted to the HPO documenting the current status of all outstanding mitigation items.

4. The permittee shall conduct a Phase IB archaeological survey within the project's area of potential effects prior to construction to identify the presence or absence of archaeological deposits. The results of Phase IB archaeological survey shall be submitted to the Division of Land Resource Protection and the Historic Preservation Office for review and comment.

5. The permittee shall submit a Phase II archaeological survey to the Historic Preservation Office for review, if archaeological resources were identified during Phase I archaeological survey and cannot be avoided. The Phase II archeological survey work plan shall be submitted to the Historic Preservation Office for review and approval prior to the commencement of the Phase II fieldwork.

6. The permittee shall consult with the Historic Preservation Office upon completion of the Phase II archaeological survey to assess the effects of the proposed project on any resources identified as eligible for listing on the New Jersey and National Registers of Historic Places.

7. The permittee shall submit an avoidance and protection plan to the Historic Preservation Office and the Division of Land Resource Protection within 30 days of completion of the Phase II archaeological survey for any resources eligible for inclusion or listed on the New Jersey and National Registers of Historic Places will be avoided by project impacts.

8. The permittee shall submit an archaeological monitoring plan to the Historic Preservation Office and the Division of Land Resource Protection for approval prior to the start of construction. The approved archaeological monitoring plan shall be referenced in all project documents, plans, and bid proposals. Any failure to comply with the provisions of the archaeological monitoring plan shall be reported to the Historic Preservation Office and the Division of Land Resource Protection within 24 hours.

9. The permittee shall submit a minimization and/or Phase III mitigation plan to the Historic Preservation Office if impacts to resources eligible or listing on the New Jersey and National Registers of Historic Places that cannot be avoided. The minimization and/or mitigation plan(s) must be approved by the Historic Preservation Office prior to the commencement of on-site construction activities or any data recovery activities to ensure that the research designs, work plans, proposed archaeological buffer zones, data recovery plans and public outreach components are acceptable to the Historic Preservation Office.

10. The permittee shall ensure the Historic Preservation Office approved archaeological work plans for the Phase II and Phase III data recovery surveys are implemented.

11. The permittee shall not commence with any on-site construction activities until the Division of Land Resource Protection, in consultation with the Historic Preservation Office, has released the data recovery project site for construction once the fieldwork component of the data recovery is completed and the Historic Preservation Office has received A) an approved data recovery work plan with requirements for monthly updates and delivery schedules; B) notification of the completion of the data recovery fieldwork; and C) a Historic Preservation Office approved data recovery management summary of the data recovery field work.

12. The permittee shall ensure complete draft Phase II reports shall be submitted to the Historic Preservation Office for review and approval within three months after respective phases of fieldwork are completed. The project permittee shall ensure a complete draft Phase III report shall be submitted to the Historic Preservation Office for review and approval within six months after fieldwork is completed. Final reports for each phase of survey shall be submitted to the Historic Preservation Office within two months after comments are received on the respective draft reports. Other timelines (for example, for public outreach) shall be established in consultation with the Historic Preservation Office, as necessary, based on the findings of the archaeological survey.

13. The permittee shall notify the Historic Preservation Office within three days of the completion of each phase of archaeological fieldwork.

14. The Permittee shall ensure that all phases of the archaeological survey and reporting shall be in keeping with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and the archaeological survey and report rules at N.J.A.C. 7:4-8.4 through 8.5. Evaluations to determine the National Register eligibility of archaeological sites should be in keeping with the National Park Service's 2000 National Register Bulletin, Guidelines for Evaluating and Registering Archaeological Properties. The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation are available on the National Park Services web site: http://www.nps.gov/history/local-law/arch_stnds_0.htm)

15. The Permittee shall ensure that the individual(s) conducting the work meet the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Architecture (48 FR 44738-9).

16. The permittee shall ensure that all artifacts from State and National Register eligible archaeological sites will be analyzed, catalogued, and curated in accordance with the National Park Service Standards, codified as 36 CFR Part79.

17. The permittee shall ensure that within two months of the submission of the final Phase II report and any final Phase III data recovery report to Division of Land Resource Protection and the Historic Preservation Office, the artifacts, field records (including the artifact catalogue), and copies of all phases of survey from National Register eligible sites shall have been turned over to the New Jersey State Museum or other institution meeting the Secretary of the Interior's Standards for Curation. A copy of the New Jersey State Museum Deed of Gift Form (or a Deed of Gift Form from another suitable curation facility) shall be submitted to the Historic Preservation Office at that time as an indicator of the final transmission of the artifact collection. All archaeological reports shall identify the repository where the project records and artifacts will be located.

18. The project permittee shall ensure that work that does not meet the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and the requirements of the Coastal Zone Management Rules and Freshwater Wetlands Protection Act Rules as determined by the

Historic Preservation Office in consultation with Division of Land Resource Protection, will be rectified by the project archaeological consultant(s).

19. The permittee shall immediately cease all ground disturbing activities and contact the Historic Preservation Office if potential human burials or human skeletal remains are encountered. The potential burials and/or human skeletal remains shall be left in place unless imminently threatened by human or natural displacement.

20. If, for any reason the Phase I identification survey, Phase II evaluation, Phase III data recovery, and/or architectural fieldwork is not accomplished prior to construction within the defined project area site limits, the project permittee shall be responsible for all investigation, evaluation, survey, salvage, and/or stabilization deemed necessary by the Historic Preservation Office, in consultation the Division of Land Resource Protection, pursuant to the implementing regulations. Information gathered from such investigation, evaluation, or survey shall be used by the Historic Preservation Office, in consultation with Division of Land Resource Protection, to determine the extent of damage, evaluate the resource, and direct any measures to mitigate impacts from project-related activities, including any actions on the part of the permittee's contractors. Should any archaeological or architectural site be partially or entirely destroyed by project-related activities before completion of any of the required phases of archaeological fieldwork are completed, the Historic Preservation Office, in consultation with Division of Land Resource Protection, shall determine other appropriate mitigation (e.g., alternative site excavation, alternative analysis, and/or public outreach activities) and enforcement, commensurate with the impacts which occurred.

FISH AND WILDLIFE SPECIAL CONDITIONS:

1. In order to protect anadromous species spawning runs within the Newark Bay and associated UNT tributaries, a timing restriction from **March 1 through June 30** is required for any in-water disturbance, sediment generating activities and pile driving activities. A separate timing restriction of **January 1 through May 31** is required to protect Winter Flounder species during migration and spawning in the area. This Winter Flounder species timing restriction period shall be applied to tidal waters ranging from near-shore (sub-tidal) to 20 ft. depths, in low to moderate tidal velocity areas, and in waters averaging between 10 - 32 ppt salinities. Furthermore, any activity outside the river, which would likely introduce sediment into the river and/or increase its turbidity, is also prohibited during this period. The Department reserves the right to suspend all regulated activities onsite should it be determined that the permittee has not taken proper precautions to ensure continuous compliance with this condition. If sediment control structures, cofferdams or other water isolation measures are installed prior to the timing restrictions stated above, construction activities behind the sediment control structures may proceed during the restricted period.

2. <u>For the Trestle construction</u>: Authorization is granted to the Permittee to conduct pile driving installation for trestle construction during the above referenced timing restriction period, by allowing for the use of bubble curtains, both with and without external confinement casings, provided that the applicant/contractor use the best management practices, as applicable, outlined below;
    - Use of noise attenuation and minimization measures during piles driving, such as:
    - Driving piles in the dry or during low water conditions for intertidal areas.
    - Use of vibratory hammers and construction phasing to minimize acoustic impacts.
    - Driving piles as deep as possible with a vibratory hammer prior to using an impact hammer.
    - Minimizing the number and size of temporary and permanent piles.
    - Limiting pile driving activities to no more than 12 hours per day.

- Providing a 12 hour quiet (recovery) period between pile driving days.
- Use of "soft start" or "ramping up" pile driving (e.g., driving does not begin at 100% energy).
- Use of cushion blocks when using an impact hammer.
- Using drilled shafts instead of hammered piles where appropriate.

3. Within 90 days of permit issuance and prior to any construction activities for the Bridge Replacement Project, whichever is earlier, a project schedule and plan is required to be developed and provided to the Division of Fish and Wildlife Services, attn: Kelly Davis at Kelly.Davis@dep.nj.gov for review. The project schedule and plan shall describe how the installation methods avoids or minimizes noise during sensitive life stages (migration and spawning) of ESA-listed species, federally-managed species, and other NOAA-trust resources such as anadromous fish.

THREATENED AND ENDANGERED SPECIES SPECIAL CONDITIONS:

1. To protect sensitive habitat for Peregrine Falcon (State-listed, endangered), the Permittee shall adhere to a seasonal restriction on all work, inclusive of project site preparation and storage of materials, from March 1 through July 31 of each calendar year.

2. Prior to the commencement of site preparation, inclusive of site clearing, project staging, onsite storage of materials, pre-construction earth movement, other site disturbance, and all authorized activities, and within 90 days of the issuance of this permit authorization, the Permittee **shall** submit to the NJDEP DLRP ETSU for review and written approval, an impact avoidance proposal designed to protect the identified Peregrine Falcon nesting habitat that exists at the project site. **To that end, the proposal must detail the construction of a nest structure suitable for use by Peregrine Falcons and all efforts that will be taken to ensure its occupation.**

    A. Guidance from NJ Fish & Wildlife supports installation of a replacement nest structure on Block 5708, Lot 91 and the City of Newark has confirmed that the NJTA is authorized to conduct mitigation efforts on this block and lot (Eric S. Pennington**,** City of Newark, April 1, 2024). The mitigation plan must propose an exact location of the proposed nest structure on Block 5708, Lot 91.

    B. The impact avoidance proposal must include the proposed project design and include four poles with a finished deck height of 25' to 30'. The deck should be approximately 10' x 10' and be made of wood or composite. The nest area should be made of an XL dog igloo, with no tunnel entrance. The applicant should include spikes on one pole for climber access to the nest structure.

    C. The impact avoidance proposal must detail all anticipated efforts to exclude peregrine falcons from the original nest location (i.e. exclusion netting over all suitable nest sites). If Peregrine Falcons are observed on or near the subject bridge, all authorized work shall cease immediately until the Permittee has coordinated with, and guidance on habitat management practices can be issued by, the NJ Department of Environmental Protection.

    D. The Permittee shall engage a qualified wildlife biologist, with sufficient knowledge of and experience with avian species, and particularly Peregrine Falcon behavior, to monitor the project area from March 1 through July 31 of the given calendar. The wildlife biologist shall document Peregrine Falcon usage of the newly installed nest structure and continued use of the bridge proposed for demolition. For the Department's review and approval, the

impact avoidance proposal must identify all contractors who plan to perform and assist with the Peregrine Falcon surveys and include a copy of their curriculum vitae, identifying their experience with avian survey. All State-listed (endangered, threatened, special concern) species observed must be reported to the NJDEP, Division of Fish and Wildlife, Endangered and Nongame Species Program.

E. The permittee must detail all efforts to exclude Peregrine Falcon from using the Newark Bay Bridge prior to construction as well as efforts to discourage Peregrine Falcon from nesting on the newly constructed Newark Bay Bridge.

F. The permittee must provide a detailed work schedule in relationship with measures to exclude Peregrine Falcon from nesting on the Newark Bay Bridge and construction of the alternate nest structure.

3. Prior to the commencement of site preparation, inclusive of site clearing, project staging, onsite storage of materials, pre-construction earth movement, other site disturbance, and all authorized activities, the Permittee shall demonstrate to NJDEP that the approved efforts to discourage Peregrine Falcon nesting on the Newark Bay Bridge and safe relocation of nesting to the alternate nest structure on Block 5708, Lot 91 have been successful. Once this has been confirmed, the proposed project can commence after concurrence from the NJDEP is issued.

FRESHWATER WETLAND MITIGATION CONDITIONS:

1. The permittee shall mitigate for the disturbance of **9.156** acres of herbaceous wetlands through an on-site or off-site creation, restoration or enhancement project or with the purchase of credits from a mitigation bank serving the appropriate watershed management area in accordance with the mitigation hierarchy. (N.J.A.C. 7:7A-11 et seq)

2. **At least 90 days prior to the initiation of regulated activities authorized by this permit**, the permittee shall submit a mitigation proposal to the Division of Watershed Protection and Restoration (Division) for review and approval. Activities authorized by this permit shall not begin until the permittee has obtained written approval of a mitigation plan from the Department (N.J.A.C. 7:7A-11.6(a)).

3. **All mitigation for permanent disturbances shall be conducted prior to or concurrent with the construction of the approved project** (N.J.A.C. 7:7A-11.3(a)). Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole. **All mitigation for temporary disturbances shall be conducted immediately following completion of the activity that caused the disturbance.**

4. If the permittee fails to perform mitigation within the applicable time-period the acreage of mitigation required shall be increased by 20 percent each year after the date mitigation was to begin (N.J.A.C. 7:7A-11.3(c)).

5. If the permittee is considering obtaining land to satisfy a mitigation requirement, the Department strongly recommends that the permittee obtain the Division's conceptual review and approval of any land being considered as a potential mitigation area.

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the

Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

7. If the permittee is considering conducting a creation, restoration or enhancement project, the following conditions shall apply:

    a. **Prior to the initiation of regulated activities** authorized by this permit the permittee shall submit a final design of the mitigation project for approval and include all of the items listed on the checklist entitled Checklist for Completeness: Creation, Restoration or Enhancement for a Freshwater Wetland Mitigation Proposal located at https://dep.nj.gov/wlm/forms/.

    b. **Prior to the completion of the mitigation project**, the permittee shall complete, sign and file with the County Clerk (the Registrar of Deeds and Mortgages in some counties), a conservation restriction that meets the requirements of N.J.A.C. 7:7A-12.1. The conservation restriction shall include the wetland and required transition area and conform to the format and content of the Wetlands Mitigation Area model conservation restriction that is available at: https://dep.nj.gov/wlm/forms/. The permittee is required to include a metes and bounds description shown on a map. Within 180 days of the issuance of the mitigation approval, the recorded conservation restriction shall be provided to the Mitigation Unit, Division of Watershed Management and Restoration for verification. (N.J.A.C. 7:7A-12.1 et. seq.)

    c. The permittee shall notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing **at least 30 days prior to the start of construction of the wetland mitigation project** to arrange an on-site pre-construction meeting among the permittee, the contractor, the consultant and the Division.

    d. To ensure the intent of the mitigation design and its predicted wetland hydrology is realized in the landscape, the mitigation designer shall be present on-site during all critical stages of mitigation construction and during the restoration of any temporarily impacted areas. Critical stages of construction include but are not limited to herbicide applications, earthmoving activities, planting, and inspections.

    e. The permittee shall be responsible for ensuring that best management practices are used throughout construction to control the spread and colonization of highly invasive plants. Specifically, all equipment, especially tracks and tires, must be thoroughly cleaned every time equipment or vehicles move from an area containing invasive plants or from off-site to the mitigation area. In addition, soil containing root fragments and above-ground vegetative material from invasive plants shall be carefully managed during earthmoving activities and disposed of at a suitable off-site location rather than mulched and reused or stockpiled elsewhere on the site.

    f. If changes to the mitigation design are necessary to ensure success of the project as a result of on-site conditions, the mitigation designer shall immediately notify the Division in writing and

submit an alternative plan which achieves the proposed wetland conditions. The Division shall review the plan in accordance with N.J.A.C. 7:7A-11.7. Any modifications to the plan that are reviewed and approved by the Division must be shown on a signed and sealed revised plan. The As-Built plans required as a part of the Construction Completion Report may serve as the signed and sealed revised plan required to be submitted as part of the construction modification process described above if time constraints warrant such action and have been approved by the Division in writing.

g. **Within 30 days of final grading of the mitigation site and prior to planting**, the permittee shall notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing to arrange a post-grading construction meeting among the permittee, contractor, consultant and the Division.

h. **Within 30 days following the final planting of the mitigation project**, the permittee shall submit a Construction Completion Report to the Division detailing as-built conditions (see below) and any changes to the approved mitigation plan that were made during construction (N.J.A.C. 7:7A-11.12). The Construction Completion Report shall contain, at a minimum, the following information:

    i. A completed Wetland Mitigation Project Completion of Construction Form. This form is located at https://dep.nj.gov/wlm/forms/ and certifies that the mitigation project has been constructed as designed and that the proposed area of wetland creation, restoration or enhancement has been accomplished;

    ii. As-Built plans which depict final grade elevations at one-foot contours and include a table of the species and quantities of vegetation that were planted including any grasses that may have been used for soil stabilization purposes; and

    iii. Photos of the constructed wetland mitigation project with a photo location map as well as the GPS waypoints in NJ state plane coordinates NAD 1983.

i. **Within 30 days following final planting of the mitigation project**, the permittee shall post the mitigation area with permanent signs which identify the site as a wetland mitigation project and that all-terrain vehicle use, motorbike use, mowing, dumping, draining, cutting and/or removal of plant materials is prohibited and that violators shall be prosecuted and fined to the fullest extent under the law. The signs must also state the name of the permittee, a contact name and phone number, and the Department's permit number.

j. The permittee shall monitor **all freshwater wetland and transition area projects** for a minimum of 5 years, unless otherwise stipulated within the approved mitigation proposal, beginning the first full growing season after the mitigation project has been completed. The permittee shall submit monitoring reports to the Division of Watershed Management and Restoration no later than December 31st of each full monitoring year (N.J.A.C. 7:7A-11.12(g)). All monitoring reports must include the standard items identified in the checklist entitled, "Wetland Mitigation Monitoring Project Checklist", which can be found at https://dep.nj.gov/wlm/forms/.

k. Once the required monitoring period has expired and the permittee has submitted the final monitoring report, the Division will make the finding that the mitigation project is either a success or a failure. This mitigation project will be considered successful if the permittee demonstrates all of the following:

i. That the goals of the wetland mitigation project, including acreage and the required transition area, as stated in the approved wetland mitigation proposal and the permit have been satisfied. The permittee shall submit a field wetland delineation of the wetland mitigation project based on the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (1989) which shows the exact acreage of State open waters, emergent, scrub/shrub and/or forested wetlands in the mitigation area;

ii. The site has an 85 percent survival and 85 percent area coverage of the mitigation plantings or target hydrophytes, which are species native to the area and similar to ones identified on the mitigation planting plan. All plant species in the mitigation area must be healthy and thriving and all trees must be at least five feet in height;

iii. The site has less than 10 percent coverage by invasive or noxious species.

iv. The site contains hydric soils or there is evidence of reduction occurring in the soil; and,

v. The proposed hydrologic regime as specified in the mitigation proposal has been satisfied.

l. The permittee is responsible for assuming all liability for any corrective work necessary to meet the success criteria established above (N.J.A.C. 7:7A-11.12(i)). The Division will notify the permittee in writing if the mitigation project is considered a failure. Within 30 days of notification, the permittee shall submit a revised mitigation plan to meet the success criteria identified above for Division review and approval. The financial surety, if required, will not be released by the Division until such time that the permittee satisfies the success criteria as stipulated above.

INTERTIDAL AND SUBTIDAL SHALLOWS AND TIDAL WATER MITIGATION CONDITIONS:

1. **At least 90 days prior to commencing regulated activities authorized by this permit,** the permittee shall submit a mitigation proposal to mitigate for the loss of **2.045** acres of intertidal and subtidal shallows and **3.808** acres of tidal water to the Division of Watershed Protection and Restoration (Division) for review and approval.

2. **All mitigation shall be conducted prior to or concurrent with the construction of the approved project.** Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole.

3. The permittee shall mitigate for the loss of intertidal and subtidal shallows and tidal waters through the creation of intertidal and subtidal shallows and tidal waters, at a creation to loss ratio of 1:1, on the site where the filling occurred.

4. If mitigation for the filling of intertidal and subtidal shallows and tidal waters is not feasible onsite, then mitigation shall be performed offsite through the creation of intertidal and subtidal shallows and tidal waters at a ratio of 1:1 within the same estuary as the site of the filling or through the purchase of in-kind credits form a mitigation bank with a service area that includes the site of the filling.

5. If mitigation for the filling of intertidal and subtidal shallows is not feasible onsite or offsite, then mitigation shall be in the form of restoration, creation, or enhancement of a wetland within the same estuary as the site of the filling in accordance with N.J.A.C. 7:7-17.13 or through the purchase of out-of-kind wetland credits from a mitigation bank with a service area that includes the site of the filling.

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   As of the date of this permit, **there are no mitigation banks** with the appropriate credit types serving your project area. Additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

7. If mitigation for the filling of intertidal and subtidal shallows and tidal waters is not feasible, then mitigation shall be in the form of one or both of the following, as determined in consultation with the Department:

   a. Upland preservation in accordance with the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A-15.9; or

   b. In-lieu fee payment in accordance with N.J.A.C. 7:7-17.16.

8. If mitigation for the filling of intertidal and subtidal shallows and tidal waters as described above is not feasible, then mitigation shall be in the form of a land donation in accordance with the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A-15.19.

9. If the permittee is proposing to construct an on-site intertidal subtidal shallows and/or tidal waters creation project, (see N.J.A.C. 7:17.11(b)) one acre of creation must be performed for each acre disturbed. If the permittee is proposing to mitigate through off-site creation, restoration, or enhancement project, or by purchasing credits from a mitigation bank serving the area an enhancement or creation project, the ratio of disturbance to mitigation required shall be in accordance with N.J.A.C. 7:7-17.11(c) through (g). If proposing onsite or offsite mitigation, provide the following:

   a. At least 90 days prior to commencing regulated activities authorized by this permit, submit for review and approval, a conceptual plan showing the location and proposed hydrology of the mitigation site; and

   b. Within 30 days of receiving Division approval of the conceptual mitigation proposal, submit a final design of the mitigation project.

10. The following requirements will apply to an onsite or offsite intertidal subtidal shallows and tidal waters mitigation project:

    a. Complete, sign and file with the County Clerk (the Registrar of Deeds and Mortgages in some counties), a conservation restriction protecting the mitigation site that meets the requirements of N.J.A.C. 7:7-18.

b. Notify the Mitigation Unit at the Division of Watershed Protection and Restoration in writing at least 30 days prior to the start of construction of the wetland mitigation project to arrange an on-site pre-construction meeting among the permittee, the contractor, the consultant and the Division.

c. In accordance with N.J.A.C. 7:7-17.11(h), within 60 days following the completion of the mitigation project, submit a Construction Completion Report to the Division detailing as-built conditions (see below) and any changes to the approved mitigation plan that were made during construction (N.J.A.C. 7:7-17.11(h)). The Construction Completion Report shall contain, at a minimum, the following information:

i. A completed Wetland Mitigation Project Completion of Construction Form that certifies the mitigation project has been constructed as designed and that the proposed area of wetland creation, restoration or enhancement has been accomplished. This form is located at on the Division's website at: https://dep.nj.gov/wlm/forms/ in the Mitigation tab of Forms & Checklists.

ii. An as-built plan of the completed mitigation area showing grading and any structures included in the approved mitigation proposal;

iii. Photographs, both pre and post construction, of the intertidal and subtidal shallows and tidal waters mitigation project including a photo location map as well as the GPS waypoints in NJ state plane coordinates NAD 1983; and

(1) For ISS creation projects only, provide documentation that the mitigation site meets the definition of an intertidal and subtidal shallow as defined at N.J.A.C. 7:7-9.15; and

d. Monitor the mitigation site in accordance with N.J.A.C. 7:7-17.11(i), (j), and (k).

11. Once the required monitoring period has expired and the permittee has submitted the final monitoring report, the Division will make the finding that the mitigation project is either a success or a failure (see N.J.A.C. 7:7-17.11(k)). This mitigation project will be considered successful if the permittee demonstrates all of the following:

i. That the goals of the ISS and tidal waters mitigation project, including acreage as stated in the approved mitigation proposal and the permit, have been satisfied. The permittee shall submit a field delineation of the mitigation project which shows the exact acreage of ISS in the mitigation area;

ii. The mitigation site is an intertidal and subtidal shallows area, as defined at N.J.A.C. 7:7-9.15, or tidal water. The documentation shall include tidal data, topography for the spring high tide line, photographs, and field observation notes collected throughout the monitoring period;

iii. The mitigation meets all applicable requirements of Subchapter 17 of the Coastal Zone Management Rules (N.J.A.C. 7:7-17);

iv. The mitigator has executed and recorded a conservation restriction that meets the requirements of N.J.A.C. 7:17-18.

12. The permittee is responsible for assuming all liability for any corrective work necessary to meet the success criteria established above (N.J.A.C. 7:7-17.13(h)). The Division will notify the permittee in writing if the mitigation project is a failure and the permittee shall submit a revised mitigation plan or alternative mitigation proposal to satisfy the mitigation requirement. No financial surety will be released until such time that the permittee satisfies the success criteria.

RIPARIAN ZONE MITIGATION CONDITIONS:

1. **At least 90 days prior to commencing regulated activities authorized by this permit**, the permittee shall submit a proposal to mitigate the disturbance of **4.358** acres of herbaceous riparian zone vegetation. The proposal shall be designed in accordance with the standards at N.J.A.C. 7:13-13. Activities authorized by this permit shall not begin until the permittee has obtained written approval of a mitigation plan from the Department (N.J.A.C. 7:13-13.2(b)).

2. **All mitigation for permanent disturbances shall be conducted prior to or concurrent with the regulated activity that causes the disturbance.** Concurrent means that at any given time, the mitigation must track at the same or greater percentage of completion as the project as a whole. **All mitigation for temporary disturbances shall be conducted immediately following completion of the activity that caused the disturbance.**

3. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase for mitigation credits from an approved riparian mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

   Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

4. If the permittee is considering conducting a creation, restoration or enhancement project, the following conditions shall apply:

   Prior to the initiation of regulated activities authorized by this permit, the permittee shall sign a Department approved conservation restriction to protect the mitigation area from future development that would remove the vegetation planted. (N.J.A.C. 7:13-13.2(g)). The conservation restriction shall conform to the format and content of the rules at N.J.A.C. 7:13-14 and the Riparian Zone Mitigation Area model located at https://dep.nj.gov/wlm/forms/. The restriction shall be included on the deed and recorded in the office of the County Clerk (the Registrar of Deeds and Mortgages in some counties) in the county wherein the lands of the mitigation project are located. A metes and bounds description shown on a map must be included within the recorded conservation restriction. Within 10 days of filing the conservation restriction, the permittee must send a copy of the conservation restriction to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

5. The permittee shall monitor the riparian project for at least 5 years beginning the year after the riparian zone mitigation project has been completed (N.J.A.C. 7:13-13.12(c)). **The permittee shall submit monitoring reports to the Division of Watershed Protection and Restoration, no later than December 31st of each full monitoring year**.

    a. All monitoring reports except the final one should include the requirements and goals of the mitigation proposal and a detailed explanation of the ways in which the mitigation has or has not achieved progress toward those goals. If mitigation has not achieved progress, the report shall also include a list of corrective actions to be implemented and a timeline for completion.

    b. The final monitoring report must include documentation and data demonstrating that:

        i. The goals of the riparian zone mitigation as stated in the approved riparian zone mitigation proposal and the permit conditions have been satisfied.

        ii. At least 85 percent of the mitigation plantings have survived and that at least 85 percent of the mitigation area is established with native species similar to ones identified on the mitigation planting plan. All plant species in the mitigation area must be healthy and thriving. All trees must be at least 5 feet in height; and

        iii. The site is less than 10 percent occupied by invasive or noxious species; and

        iv. The conservation restriction for the mitigation site has been executed and recorded.

6. If the riparian mitigation project does not meet the success criteria established above the project shall be considered a failure and the permittee shall submit a revised riparian mitigation plan. The revised plan shall be submitted within 60 days of receipt of notification from the Division indicating the riparian mitigation project was a failure.

7. If the Division determines that the riparian zone mitigation project is not constructed in conformance with the approved plan, the permittee will be notified in writing by the Department and will have 60 days to submit a proposal to indicate how the project will be corrected.

8. For preservation projects, the application shall provide documentation showing that the proposed preservation area will fully compensate in accordance with N.J.A.C. 7:13-13.13 for the loss of functions and values caused by the disturbance.

SPECIAL CONDITIONS:

1. This permit is issued subject to compliance with N.J.A.C. 7:7-27.2 Conditions that apply to all coastal permits.

2. This permit to conduct a regulated activity in a state open water includes the Division's approval of a Water Quality Certificate for these activities.

3. The authorized activities shall comply with the applicable conditions set forth under N.J.A.C. 7:7A-5.7, 9.3, and 20.2. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et. seq.). Any additional un-permitted disturbance of freshwater wetlands, State open waters, or transition areas besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules

unless the activity is exempt or a permit is obtained from the Department prior to the start of the disturbance.

4. This authorization for a Freshwater Wetlands Individual Permit, Waterfront Development Individual In-water and Upland Permit, and Flood Hazard Area Individual Permit is valid for a term not to exceed five years from the date of this permit. If the permittee wishes to continue an activity covered by the permit after the expiration date of the permit, the permittee must apply for and obtain a permit extension or a new permit, prior to the permit's expiration. If the term of the authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, or is not reissued, the applicant must comply with the requirements of the new regulations by applying for a new GP authorization or an Individual permit.

5. The Site Remediation Program Interest number associated with the project is No. G000008760. All activities shall conform to the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C), including Subchapter 16 regarding Linear Development Projects, and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E).

6. To minimize turbidity downstream of the project area and to maintain the water quality of Newark Bay and all associated unnamed tributaries, construction activities within the channel may only be performed in the dry or dewatered conditions.

7. Construction equipment shall not be stored, staged or driven within any channel, freshwater wetland or transition area, unless expressly approved by this permit and/or described on the approved plans.

8. Raw, unset, or tremie concrete shall not come in contact with any surface waters onsite, since such contact can be toxic to aquatic biota.

9. All excavated material shall be disposed of in a lawful manner. The material shall be placed outside of any flood hazard area, riparian zone, regulated water, freshwater/coastal wetlands and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.

10. Vegetation within 50 feet of the top of the bank shall only be disturbed in the areas specifically shown on the approved drawing(s). No other vegetation within 50 feet of the top of any stream bank onsite shall be disturbed for any reason. This condition applies to all channels onsite regardless of the contributory drainage area.

11. All riparian zone vegetation that is cleared, cut, and/or removed to conduct a regulated activity, access an area where regulated activities will be conducted, or otherwise accommodate a regulated activity shall be replanted immediately after completion of the regulated activity, unless prevented by seasonal weather, in which case the vegetation shall be replanted as soon as conditions permit. Portions of the riparian zone occupied by an authorized structure need not be replanted. The vegetation to be replanted shall:

i. Consist of vegetation of equal or greater ecological function and value as the vegetation that was cleared, cut, or removed. For example, herbaceous vegetation may be replaced with the same type of vegetation or with trees, but the trees in forested areas must be replaced with trees of equal or greater density and ecological function and value;

ii. Consist of native, non-invasive vegetation, except in an actively disturbed area. In an actively disturbed area, the vegetation may be replaced with the same type of vegetation that was cleared,

cut, or removed, or with another kind of vegetation typical of an actively disturbed area. For example, lawn grass may be replaced with garden plants or agricultural crops; and

iii. In cases where replanting would interfere with continued access to or maintenance of a structure that is required by Federal, State, or local law, the vegetation replanted shall meet the requirements to the extent feasible.

12. Any additional un-permitted disturbance of freshwater wetlands, transition areas, intertidal subtidal shallows, tidal open waters, and riparian zones besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules unless the activity is exempt or a permit is obtained from the Department prior to the start of the proposed disturbance.

13. Any pipes laid through wetlands, transition areas, or State open water must be properly sealed so as to prevent leaking or infiltration. Pipes and backfilled materials must be placed entirely beneath the pre-existing ground elevation.

14. The excavation for any pipes within the wetlands and transition area must be backfilled with the original soil material or suitable material to within 18 inches of the surface. The upper 18 inches must be backfilled with the original topsoil material to the preexisting elevation and replanted with indigenous species.

15. The Department has determined that this project meets the requirements of the Stormwater Management rules at N.J.A.C. 7:8. Any future expansion or alteration of the approved stormwater management system, which would affect water quality, increase the rate or volume of stormwater leaving the site, affect the infiltration capacity on the site, or alter the approved green infrastructure best management practices, shall be reviewed and approved by the Department by obtaining a modification or new permit as appropriate prior to construction. This includes any proposed changes to the discharge characteristics of any basin, the construction of new inlets or pipes that tie into the storm sewer network and/or the replacement of existing inlets or pipes with structures of different capacity.

16. The applicant must adhere to the operations and maintenance plan for the stormwater management measures incorporated into the design of this major development in accordance with N.J.A.C. 7:8-5.8. Guidance set forth in the New Jersey Stormwater Best Management Practices Manual should be followed to the maximum extent practicable.

17. Any new, reconstructed, enlarged, or elevated structure within a flood hazard area shall be secured to resist flotation, collapse, and displacement due to hydrostatic and hydrodynamic forces from floodwaters.

18. All foundations, slabs, footings and walls of the proposed structure/s shall be designed to resist uplift, flotation, collapse and displacement due to hydrostatic and hydrodynamic forces resulting from flooding up to an elevation of one foot above the flood hazard area design flood elevation. Furthermore, all structural components shall be designed to resist the same forces.

STANDARD CONDITIONS:

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.

2. The issuance of a permit does not convey any property rights or any exclusive privilege.

3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.

4. A permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District or designee having jurisdiction over the site.

5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.

6. The permittee shall immediately inform the Department of any unanticipated adverse effects on the environment not described in the application or in the conditions of the permit. The Department may, upon discovery of such unanticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit.

7. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (WARN DEP hotline) of any noncompliance that may endanger public health, safety, and welfare, or the environment. The permittee shall inform the Watershed & Land Management by telephone at (609) 777-0454 of any other noncompliance within two working days of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:

    i. A description of the noncompliance and its cause;

    ii. The period of noncompliance, including exact dates and times;

    iii. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and

    iv. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

8. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action, as well as, in the appropriate case, suspension and/or termination of the permit.

9. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.

10. The permittee shall employ appropriate measures to minimize noise where necessary during construction, as specified in N.J.S.A. 13:1G-1 et seq. and N.J.A.C. 7:29.

11. The issuance of a permit does not relinquish the State's tidelands ownership or claim to any portion of the subject property or adjacent properties.

12. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.

13. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

    i. Enter upon the permittee's premises where a regulated activity, project, or development is located or conducted, or where records must be kept under the conditions of the permit;

    ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

    iii. Inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action; and

    iv. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Federal Act, by the Freshwater Wetlands Protection Act, or by any rule or order issued pursuant thereto, any substances or parameters at any location.

14. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris or structures within or adjacent to the channel while the regulated activity, project, or development is being undertaken. Upon completion of the regulated activity, project, or development, the permittee shall remove and dispose of in a lawful manner all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.

15. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit.

16. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect, so long as the regulated activity, project, or development, or any portion thereof, is in existence, unless the permit is modified pursuant to the rules governing the herein approved permits.

17. The permittee shall perform any mitigation required under the permit in accordance with the rules governing the herein approved permits.

18. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.

19. Any permit condition that does not establish a specific timeframe within which the condition must be satisfied (for example, prior to commencement of construction) shall be satisfied within six months of the effective date of the permit.

20. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.

21. The permittee shall provide monitoring results to the Department at the intervals specified in the permit.

22. A permit shall be transferred to another person only in accordance with the rules governing the herein approved permits.

23. A permit can be modified, suspended, or terminated by the Department for cause.

24. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.

25. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.

26. The permittee shall submit email notification to the Bureau of Coastal & Land Use Compliance & Enforcement at CLU_tomsriver@dep.nj.gov at least 3 days prior to commencement of site preparation and/or regulated activities, whichever comes first. The notification shall include proof of completion of all pre-construction conditions, including proof of recording of permits, approved plans and/or conservation easements, if required. The permittee shall allow an authorized Bureau representative on the site to inspect to ensure compliance with this permit.

27. The permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to Watershed & Land Management through the DEP Online service. The uploaded documents will go directly into the Department's database, and staff will be notified that information has been received. The service can be found at: https://www.nj.gov/dep/landuse/epermit.html.

APPROVED PLAN(S):

The drawing(s) hereby approved consist of sixty nine (69) sheet(s) prepared by Micheal A. Morgan, P.E., of Gannet Fleming Inc., dated September 2023 unrevised, and entitled:

"NEW JERSEY TURNPIKE AUTHORITY NEW JERSEY TURNPIKE OPS NO. T3820, FRESHWATER WETLAND INDIVIDUAL PERMIT PLANS AND WATERFRONT DEVELOPMENT PERMIT PLANS, NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION NEWARK BAY BRIDGE REPLACEMENT, CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON"

- "LOCATION PLAN", sheet 1 of 23,
- "PLAN REFERENCE SHEET", sheet 2 of 23,
- "FRESHWATER WETLAND/WATEFRONT DEVELOPMENT PERMIT PLAN -1-" through "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT PERMIT PLAN -10-", sheets 3 through 12 of 23,
- "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -1-" through "FRESHWATER WETLAND/WATERFRONT DEVELOPMENT RESTORATION PLAN -9-", sheets 13 through 21 of 23,
- "PLANTING NOTES AND DETAILS" sheets 22 and 23 of 23.

And,

"NEW JERSEY TURNPIKE AUTHORITY NEW JERSEY TURNPIKE OPS NO. T3820, NJDEP FLOOD HAZARD AREA PERMIT PLANS, NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION NEWARK BAY BRIDGE REPLACEMENT, CITY OF NEWARK, COUNTY OF ESSEX, CITY OF BAYONNE, COUNTY OF HUDSON"

- "LOCATION PLAN", sheet 1 of 38,
- "PLAN REFERENCE SHEET", sheet 4 of 38,
- "FLOOD HAZARD AREA PLAN -1-" through "FLOOD HAZARD AREA PLAN -10-", sheets 5 through 14 of 38,
- "STORMWATER MANAEMENT PLAN -1-" through "STORMWATER MANAGEMENT PLAN -10-", sheets 15 through 24, of 38,
- "BASIN GRADING PLAN -01-" through "BASIN GRADING PLAN -07-", sheets 25 through 31, of 38
- "CONSTRUCTION DETAILS -1-" through "CONSTRUCTION DEAILS -7-", sheets 32 through 38 of 38.

Additional drawing(s) hereby approved consist of eight (8) sheet(s) prepared by Gannett Fleming, INC, dated February 2023, unrevised, unless otherwise noted, and entitled:

"NEW JERSEY TURPINKE AUTHOIRTY NEW JERSEY TURNPIKE OPS NO. T3820 NEW JERSEY TURNPIKE NEWARK BAY-HUDSON COUNTY EXTENSION BRIDGE REPLACMENTS AND CAPACITY ENHACEMENTS PROGRAM"

- "SECTION KEY PLAN"- Sheet No. 6 of 13,
- "SECTION S-01"- Sheet No. 7 of 13,
- "SECTION S-02"- Sheet No. 8 of 13,
- "SECTION S-03"- Sheet No. 9 of 13,
- "SECTION S-04 & SECTION S-05"- Sheet No. 10 of 13,
- "SECTION S-06"- Sheet No. 11 of 13,
- "SECTION S-07"- Sheet No. 12 of 13,
- "SECTION S-08"- Sheet No. 13 of 13.

APPEAL OF DECISION:

Any person who is aggrieved by this decision may submit an adjudicatory hearing request within 30 calendar days after public notice of the decision is published in the DEP Bulletin (available at www.nj.gov/dep/bulletin). If a person submits the hearing request after this time, the Department shall deny the request. The hearing request must include a completed copy of the Administrative Hearing Request Checklist (available at www.nj.gov/dep/landuse/forms.html). A person requesting an adjudicatory hearing shall submit the original hearing request to: NJDEP Office of Administrative Hearings and Dispute Resolution, Attention: Adjudicatory Hearing Requests, Mail Code 401-07A, P.O. Box 420, 401 East State Street, 7th Floor, Trenton, NJ 08625-0420. Additionally, a copy of the hearing request shall be submitted to the Director of Watershed & Land Management at the address listed on page one of this permit. In addition to your hearing request, you may file a request with the Office of Dispute

Resolution to engage in alternative dispute resolution. Please see www.nj.gov/dep/odr for more information on this process.

If you need clarification on any section of this permit or conditions, please contact Watershed & Land Management's Technical Support Call Center at (609) 777-0454.

Approved By:

Digitally signed by Janet Stewart
Date: 2024.04.03 12:29:11 -04'00'

Janet Stewart, Manager
Bureau of Coastal Permitting
Watershed & Land Management

c: Municipal Clerk, Newark City
Municipal Construction Official, Newark City
Agent (original) – Dana Flynn

State of New Jersey

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Watershed & Land Management Program
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

SHAWN M. LATOURETTE
Commissioner

June 7, 2024

Lisa Navarro
New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, New Jersey 07095

RE: Mitigation Conditions Correction Letter
File and Activity No.: 0000-23-0012.2 LUP230001
Project: Newark Bayonne Bridge

Block: 8	Lots: 1, 2, 3, 4, 5 and 6
Block: 11	Lots: 1 and 2
Block 12	Lots: 1 and 2
Block: 13	Lots: 1, 15, 16 and 18

City of Bayonne, Hudson County

Block: 5078	Lots: 90 and 91
Block: 5078.02	Lot: 87
Block: 5078.03	Lots: 85 and 92
Block: 5082	Lots: 10 and 16

City of Newark, Essex County

Dear Mr. Garofalo:

This letter serves to add an additional mitigation bank to the permit conditions of File No. 0000-23-0012.2 LUP230001, which is located on the above referenced blocks and lots in the City of Newark, Essex County and City of Bayonne, Hudson County.

The Freshwater Wetlands Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following bank(s) are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation unit for the most up to date service area information if you would like additional options.

Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Freshwater Wetland Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, prior to the initiation of regulated activities authorized by this permit, the permittee shall submit proof of purchase of mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   At this time, the following banks are approved to serve the project area; additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

   Oradell Reservoir Mitigation Bank – Contact Doug Lashley, GreenVest. Phone: (410) 987-5500. Email: Doug@greenvestus.com; Or Brian Cramer, GreenVest. Phone: (732) 902-6644. Email: Brian@greenvestus.com.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

Additionally, the Intertidal and Subtidal Shallows and Tidal Water Mitigation Conditions No. 6 originally stated the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   As of the date of this permit, **there are no mitigation banks** with the appropriate credit types serving your project area. Additional banks may be approved at any time, so please contact the Mitigation Unit for the most up to date service area information if you would like additional options.

However, upon further review of the HUC 11's, the project located in WMA 7 is serviced by MRI 3 mitigation bank. With that being considered, Intertidal and Subtidal Shallows and Tidal Waters Mitigation Conditions No. 6 is corrected to state the following:

6. If the permittee is purchasing credits from a mitigation bank to satisfy a mitigation requirement, the permittee shall submit proof of purchase for mitigation credits from an approved wetland mitigation bank to the attention of the Mitigation Unit Supervisor, NJDEP, Division of Watershed Protection and Restoration at Mail Code 501-02A, P.O. Box 420, Trenton, NJ 08625-0420.

   MRI3 – Contact: Mark Renna, Evergreen Environmental, LLC, 709 Natures Way, Franklin Lakes, NJ, 07417 and he can be reached at 201-644-7302 or 973-356-7164 or by email at mrenna@evergreenenv.com

This correction letter has been appended to the original permit. All of the conditions of the original permit remain in effect unless identified in this letter.

If you have any questions regarding this letter, please contact Faelyn Meyers by email at faelyn.meyers@dep.nj.gov or by phone at (609) 940-5227. Please reference the Division's file number in all communication.

Sincerely,

Cathryn Schaffer, Manager
Bureau of Watershed Management
Division of Watershed Protection and Restoration

C: Matt Resnick, NJDEP, DLRP
Faelyn Meyers, NJDEP, DWPR