

RECORD OF DECISION

PROPOSED GOETHALS BRIDGE REPLACEMENT (GBR) ACROSS THE ARTHUR KILL, MP 11.5, BETWEEN STATEN ISLAND, NEW YORK AND ELIZABETH, NEW JERSEY

I. DESCRIPTION OF THE PROPOSED PROJECT

Background

The Port Authority of New York and New Jersey (Port Authority), a transportation and development agency for the Port of New York and New Jersey, proposes the replacement of the functionally and physically obsolete Goethals Bridge that carries I-278 vehicular traffic between Staten Island, New York, and Elizabeth, New Jersey. As a structure over a navigable water of the United States, such replacement bridge requires a United States Coast Guard (USCG) Bridge Permit pursuant to the General Bridge Act of 1946 (Title 33 U.S.C. 525-533). The Bridge Permit would constitute a major Federal action; in this regard, the USCG, an agency within the Department of Homeland Security (DHS), by virtue of its regulatory authority over bridges across navigable waters of the United States, is the lead Federal agency for review of potential effects on the human environment, pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 et seq.).

The USCG issued a Notice of Intent (NOI) to prepare a Draft EIS (DEIS) on August 10, 2004 and conducted agency and public scoping meetings in September and October of 2004. Following the Scoping Process, the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), and the Federal Highway Administration (FHWA – both the New Jersey and New York Divisions) were invited in April 2005 to serve as cooperating agencies for the environmental review, and all had accepted the invitation by July 2005.

On May 28, 2009, the USCG issued a Notice of Availability (NOA) for the DEIS. Two formal public meetings were held, one in Staten Island, New York and the other in Elizabeth, New Jersey on July 8 and 9, 2009, respectively. Written comments were accepted by the USCG through July 28, 2009.

On August 13, 2010, the USCG issued an NOA for the Final EIS (FEIS), which was dated August 4, 2010. The comment period closed on September 13, 2010.

The Draft General Conformity Determination (GCD) was also issued as part of the Goethals Bridge Replacement Project (GBR) FEIS with a 30 day comment period concluding on September 13, 2010. Copies of the Draft GCD were provided to the applicable agencies. The USCG received comments from the USEPA, New Jersey Department of Environmental Protection (NJDEP) and New York State Department of Environmental Conservation (NYSDEC). The actual comment letters on the DEIS, FEIS and the Draft GCD can be reviewed on the project website at www.goethalseis.com and/or the USCG's online docket (Docket No. USCG-2009-0097) at www.regulations.gov. The Final GCD was signed by the USCG on January 14, 2011 and will be published with the USCG Record of Decision (ROD) for the federal action.

All substantive comments on the DEIS, FEIS and Draft GCD have been adequately addressed and considered. The project complies with all applicable laws, including Section 106 and general conformity regulations for federal activities pursuant to 40 CFR Part 93 Subpart B.

Prior to issuance of the FEIS, the Port Authority, as the project sponsor, chose the New Alignment South as its proposed alignment; in turn, the USCG, the lead Federal agency for the NEPA process, identified the New Alignment South as the Preferred Alternative for presentation and evaluation in the FEIS, along with other project alternatives that had been considered.

Purpose and Need

The purpose of the Proposed Project is to eliminate the functional and physical obsolescence of the current Goethals Bridge, and address the aging structure's escalating maintenance, repair, and structural retrofit needs and associated costs. The Proposed Project would also improve traffic flows, improve safety conditions and management of traffic incidents on the bridge, and improve overall performance, reliability, flexibility, and redundancy of the transportation network serving the greater New York/New Jersey metropolitan area. Specifically, the Proposed Project seeks to provide for a modernized Goethals Bridge crossing that will address the following needs:

- address design deficiencies that make the existing span functionally obsolete;
- enhance structural integrity and reduce life-cycle cost concerns with the existing bridge;
- provide transportation system redundancy;
- improve traffic service on the bridge and its approaches;
- provide safer operating conditions and reduce accidents on the bridge;
- provide for safe and reliable truck access for regional goods movements; and
- provide for potential future transit in the corridor.

II. DECISION

The Commander, First Coast Guard District, has recommended, and the Commandant, U.S. Coast Guard, has decided to approve the location and plans for the Goethals Bridge Replacement Project utilizing the New Alignment South across the Arthur Kill between Staten Island, New York and Elizabeth, New Jersey.

This ROD, which supports the USCG's intent to issue a Bridge Permit for the Proposed Project, is contingent upon receipt of the New York and New Jersey Water Quality Certificates (WQCs) and Coastal Zone Management (CZM) concurrences with the applicant's consistency certifications from the applicable state and local agencies.

The timing of construction has recently been determined to be on a two year delayed schedule with the new bridge operation forecasted to begin in the year 2017. The USCG has verified the impacts addressed in the FEIS are still valid for the delayed construction schedule.

III. ALTERNATIVES CONSIDERED

Alternative Screening Process

Initially, a set of 15 preliminary alternatives (mainly grouped into four categories encompassing New Crossing Alternatives, Transit Alternatives, Travel Demand Management Alternatives, and Freight Management Alternatives) were identified. Those preliminary alternatives were then qualitatively

evaluated against a set of criteria consistent with the project's goals and objectives. Four intermediate alternatives were identified for further development at a design concept level of detail sufficient for estimating their relative performance as part of a more comparative and quantitative screening process. The results of the comparative screening were presented and discussed at agency/stakeholder meetings and public open houses in June 2006.

Alternatives Evaluated in the EIS

Following completion of the alternatives screening process, further inputs obtained during the agency coordination and public outreach efforts resulted in the Port Authority making alignment and conceptual design refinements to the four bridge replacement alternatives that had been identified and advanced for further study in the EIS. During this time, it was determined that such refinements to the project alternatives did not alter the outcome of the alternatives screening process. It was also then confirmed that a cable-stayed design option continued to be the most efficient bridge type, given construction complexity and cost as well as other engineering and maintenance factors. The results of such design refinements were presented and accepted at a special interagency meeting in September 2007.

As a result, the following alternatives were considered for further evaluation in the EIS:

- ***No-Build Alternative*** – The Goethals Bridge would not be replaced, thereby requiring that maintenance of the bridge and its approaches would continue and that a full deck replacement and retrofit procedures for seismic upgrade would be required within the next 7 – 10 years.
- ***New Alignment South*** – A replacement bridge with a new six-lane structure directly and entirely south of the existing structure's alignment, to be constructed in its entirety, after which the existing bridge would be demolished.
- ***New Alignment North*** – A replacement bridge with a new six-lane structure directly and entirely north of the existing structure's alignment, to be constructed in its entirety, after which the existing bridge would be demolished.
- ***Existing Alignment South*** – A replacement bridge with a new six-lane structure constructed partially within the existing bridge's alignment and partially directly south of the existing bridge's alignment, with the southern half of the new bridge constructed first, followed by demolition of the existing bridge and construction of the northern half of the new bridge.
- ***Existing Alignment North*** – A replacement bridge with a new six-lane structure constructed partially within the existing bridge's alignment and partially directly north of the existing bridge's alignment, with the northern half of the new bridge constructed first, followed by demolition of the existing bridge and construction of the southern half of the new bridge.

Of these, the New Alignment South has been selected as the Preferred Alternative for the Proposed Project, and has also been determined to be the Environmentally Preferable Alternative for the reasons presented below.

Preferred Alternative

The Preferred Alternative consists of construction of a new cable-stayed bridge over the Arthur Kill to replace the existing bridge, as well as removal of elements of the existing bridge. The new bridge will be located to the south of the existing bridge and would consist of the following components:

- six 12-foot-wide travel lanes, three on each roadway deck (i.e., one roadway for eastbound traffic and one roadway for westbound traffic);
- a 12-foot-wide outer shoulder on each roadway;
- a 5-foot-wide inner shoulder on each roadway;
- a minimum 10-foot-wide sidewalk/bikeway along the northern edge of the westbound roadway; and
- a central area to be maintained between the eastbound and westbound roadway decks with sufficient width to accommodate the provision of future transit service, should future conditions warrant inclusion of such service during the service life of the bridge.

The Preferred Alternative would provide the following clearances under the navigable span:

Horizontal clearance as measured between face of New York tower and New Jersey side fender system, normal to axis of channel	864.0' (263.35 m)
Minimum vertical clearance above mean high water elevation 2.35' (0.72 m) [1988 NAVD]	135.0' (41.15 m)
Minimum vertical clearance above mean low water elevation -2.77' (-0.84 m) [1988 NAVD]	140.11' (42.70 m)

Other elements of the Proposed Project include: (1) new approach structures; (2) a maximum 310-foot wide right-of-way encompassing the replacement bridge, its approach structures, and two adjacent 50-foot areas; (3) permanent right-of-way fencing at ground level generally along the right-of-way on both sides of the proposed replacement bridge approach structures; (4) permanent access road located generally below the proposed replacement bridge approach structures for purposes of construction, maintenance and security; (5) replacement of the Travis Branch railroad bridge over I-278 in Staten Island to accommodate the wider roadway; (6) re-alignment of Gulf Avenue in Staten Island; and (7) construction staging areas of approximately ten acres in total (i.e., five acres on each side of the Arthur Kill), which are required for storage of the materials, pre-assembly activities and office space for the construction effort. Following construction of the new replacement bridge, the existing Goethals Bridge (including its main truss span, its New Jersey and New York approach structures and abutments) would be demolished and removed. The Port Authority anticipates that such construction for the new bridge and demolition of the existing bridge would take approximately 56 months, depending on the type of superstructure to be used (i.e., steel girder, or pre-cast/pre-stressed concrete, or segmental concrete superstructure) for the main span and approaches. Construction is expected to start in 2013, and it is anticipated that the new bridge would be open to traffic in late 2017.

The Council on Environmental Quality (CEQ) regulations for implementing NEPA requires that the ROD specify "the alternative or alternatives which were considered to be environmentally preferable" (40 CFR 1505.2(b)). Based on its independent environmental review and evaluation of public/agency inputs, the Commander, First Coast Guard District, has recommended, and the Commandant, U.S. Coast Guard, has decided to approve, the location and plans for the proposed bridge project for the Preferred Alternative, the New Alignment South, which has been determined as the Environmentally Preferable Alternative because it best balances impacts to the natural, cultural and human environment, as well as overall transportation needs, construction cost and duration. As stated in Section II above, Coast Guard approval is contingent upon receipt of the New York and New Jersey Water Quality Certificates (WQCs) and Coastal Zone Management (CZM) concurrences with the applicant's consistency certifications from

the applicable state and local agencies. Further details regarding this determination are provided in Section IV below.

IV. BASIS FOR DECISION

The No-Build Alternative was rejected as the Preferred Alternative because the project purpose and need would not be achieved. It also was not considered to be the Environmentally Preferable Alternative due to the continued safety concerns, regional traffic congestion issues and higher regional emissions, greenhouse gas emissions and mobile source air toxic emissions inherent in not replacing the functionally and physically obsolescent bridge.

The four Build Alternatives are located within the existing bridge corridor and its fixed termini on either side of the Arthur Kill, such that their respective alignments and footprints are similar. However, some differences in construction duration, complexity, cost and level of environmental impact were noted between the four Build Alternatives. Both the Existing Alignment South and Existing Alignment North alternatives would require longer construction periods resulting in longer construction-related environmental impacts, as well as greater complexity in construction staging and higher construction costs. In this regard, the Existing Alignment Alternatives would require the use of a temporary support apparatus to stabilize the half-bridge construction accommodating a traffic shift during construction, so as to not interfere with traffic operations and maintain traffic safety during existing bridge demolition. These alternatives add complications in terms of additional construction techniques and shifting traffic operations several times throughout construction, and would prolong the construction schedule by as much as a year, resulting in an estimated additional cost of \$50 million as compared to the two New Alignment Alternatives. In addition, temporary impacts related to indirect impacts to wetlands, water resources and aquatic resources, as well as air quality and noise would be extended with either of the Existing Alignment Alternatives.

The Existing Alignment North and the New Alignment North alternatives would require the displacement and/or major encroachment on several locally and regionally important commercial properties. These two alternatives would result in property impacts to varying degrees on the entrance (and related facilities) to the New York Container Terminal (NYCT) in Staten Island, as well as the Waste Management, Inc solid waste transfer facility, the Bayway Metals scrap metal recycling facility and the proposed waterfront-dependent dredged material facilities of Jay Cashman Inc., in Elizabeth. In comparison, the Existing Alignment South and the New Alignment South alternatives would require the displacement of the R.T. Baker & Son machinery dismantlers in Staten Island, as well as the entire or partial acquisition/displacement of the Bay Way/Krakov Street neighborhood, an area of mixed-use residences (up to 51 housing units comprising as many as 130 persons) and commercial properties (up to 7 local businesses) located beneath the Goethals Bridge within a predominantly industrial district of Elizabeth. A detailed Environmental Justice analysis has been conducted and the USCG has determined that the residential displacements would not have a disproportionate impact on low-income and minority populations. The City of Elizabeth has sufficient rental and real estate capacity to accommodate all of the displaced residents.

Considering other resources of concern in the area (e.g., water resources, wetland habitats, aquatic communities, contaminated materials, air quality, noise, and traffic), the four Build Alternatives would result in only slightly different operational and long-term environmental impacts, given the close proximity and similar design of each. In the case of regulated wetlands, the total permanent impacts range between 5.27 – 5.45 acres for the two Existing Alignment Alternatives to 5.57 – 5.59 acres for the two New Alignment Alternatives. Within the Old Place Creek ecosystem on Staten Island, which consists of mudflats, saltmarshes and tidal creeks, the permanent tidal wetland impacts would fall within the range of 4.57 to 5.45 acres across the four Build Alternatives, with higher acreages for the Northern

Alternatives (i.e., 5.45 acres for the New Alignment North and 5.29 acres for the Existing Alignment North) in comparison to the Southern Alternatives (i.e., 5.10 acres for the New Alignment South and 4.57 acres for the Existing Alignment South). The Southern Alternatives would result in higher acreages of permanent impacts to the mostly freshwater wetlands or open waters on the New Jersey side of the Arthur Kill (up to 0.71 acre) when compared to the Northern Alternatives (up to 0.25 acre).

The National Marine Fisheries Service (NMFS), in its DEIS comment letter dated August 5, 2009, affirmed that low saltmarsh and mudflats are more likely to support aquatic species of concern to NMFS than high saltmarsh. The two Northern Alternatives would impact more acres of intertidal low saltmarshes and mudflats than the two Southern Alternatives (with respective ranges of 2.72 to 3.17 acres versus 0.81 to 0.92 acre). The Northern Alternatives would also have greater impact on portions of the Old Place Creek Marsh that were restored subsequent to the 1990 Exxon Bayway oil spill and now possesses a high ecological value. Conversely, both Southern Alternatives would result in the placement of piers within the open waters of the Cory Warehouse Interpier Basin, an area of limited species diversity.

In reviewing all of the evaluation criteria as presented in the FEIS, the two Existing Alternatives (Existing Alignment North and Existing Alignment South) were removed from consideration due to their longer construction duration, with an associated increase in their period of construction impact and higher cost. In turn, the selection tradeoffs between the New Alignment North and New Alignment South came down to the displacement and potential disruption of existing businesses that would have a significant impact on the regional economy. The New Alignment North was removed from consideration since it would displace or otherwise impact three regionally significant businesses that would have difficulty finding suitable relocation sites within the general vicinity of the impact. The New Alignment North would also result in a higher level of impact to valuable low saltmarsh and mudflat habitats than the New Alignment South.

Conversely, the New Alignment South would displace an estimated 51 housing units and eight small businesses (seven in New Jersey and one in New York), all of which could relocate locally. The City of Elizabeth has sufficient rental and real estate capacity to accommodate the displaced residents. Furthermore, the displaced residents would not pose a disproportionate impact on low income or minority based populations. The total impact to wetlands associated with the New Alignment South is virtually the same as that for the New Alignment North, although the former would have the least impact of all the Build Alternatives to low saltmarsh and mudflat habitats, which are considered to be of higher quality for aquatic species.

Although the FEIS contains detailed analyses of the navigational and environmental impacts associated with a wide variety of resources, only those factors described above are considered to be the most appropriate for making comparative assessments and decisions between the several alternatives considered, including the No-Build and the four Build Alternatives. Some of the impact evaluations, such as navigation, traffic and air quality during bridge operation, do not vary between alignment alternatives, as they are not dependent on the actual alignment of the alternative. This is also true for historic resources, as the three impacted resources would occur regardless of which alternative is chosen. Similarly, in the case of contaminated materials, any of the Build Alternatives would have an impact on known or suspected contaminated properties, although the levels and types of contamination may vary, as well as the specific properties to be acquired.

Based on the above factors, as well as the comments received from public agencies and officials (see Section VI and Attachment A), the USCG maintains that the New Alignment South is the Preferred Alternative and has determined that it is also the Environmentally Preferable Alternative. Specifically, this alternative fully meets the stated purpose and need and is one of two Build Alternatives having the

lowest estimated construction cost and shortest construction duration. Due to its shorter construction period, this alternative is also one of two Build Alternatives having the shortest period of construction-related impact to wetlands, water resources and aquatic resources, as well as air quality and noise. Although the New Alignment South has a marginally higher permanent wetland impact in comparison to the other Build Alternatives, it exhibits the lowest impact to low salt marsh and mud flats, which NMFS has identified as being more likely to support aquatic species of concern to NMFS than high saltmarsh. In addition, although the New Alignment South would displace an estimated 51 housing units and eight small businesses, it is anticipated that they could all relocate locally, whereas some of the businesses to be displaced by other alternatives could be more difficult to relocate.

The USCG has also determined that mitigation measures are appropriate for inclusion as part of the Proposed Project in order to further minimize impacts on a variety of resources within the study area.

V. MITIGATION

The strategies employed to avoid, minimize and mitigate the Project's Preferred Alternative social and environmental impacts, as disclosed in the environmental document shall be adhered to during the implementation of the project. If during further project development, it is determined that there is substantial change in the impacts or scope of the proposed action, the environmental document will need to be reevaluated.

Displacements of Residential and Local Business Properties

The Proposed Project and its associated right-of-way for construction and operation would require that an estimated 51 residential units would be acquired from the mixed-use residential neighborhood of Bay Way/Krakov Street in Elizabeth, New Jersey, resulting in the estimated displacement of 130 persons. No residential acquisitions are anticipated in New York. The Proposed Project would also result in the acquisition of commercial properties in New Jersey and New York, resulting in the displacement of up to eight active local businesses with an estimated employment of 110 jobs. In addition, the Proposed Project would result in some minor business operational impacts with the acquisition of four other commercial structures or elements, such as an employee parking lot, a weigh station and two billboards.

The recommended mitigation measure for the residential and business property acquisitions is compensation of the private property owners as provided by applicable law. It is anticipated that the Port Authority, after project authorization, would acquire the real property interests necessary to effectuate the Proposed Project by negotiation and/or the exercise of the right of eminent domain by condemnation.

Some of the residences to be displaced in New Jersey are considered low-income and/or minority households; those displacements would not have a disproportionate adverse impact on low income and minority populations. Furthermore, it was also determined that the City of Elizabeth has sufficient rental and real estate capacity to accommodate all of the displaced residents.

Adverse Effect on Historic Architectural Properties

In terms of Archaeological Resources, both the New Jersey and New York State Historic Preservation Offices (SHPOs) have concurred that no National or State Register Eligible or Listed Archaeological Resources would be affected by the Proposed Project, and that no further archaeological investigations are necessary. In terms of Historic Resources, three architectural historic properties will experience an adverse effect, including demolition of the Goethals Bridge and visual impacts to the Staten Island Railroad Historic District in Elizabeth and the Staten Island Railway Lift Truss Bridge (Arthur Kill Lift Bridge) over the Arthur Kill. Such findings were submitted to the Advisory Council on Historic

Preservation (ACHP) in May 2009; the ACHP declined to participate in the Section 106 consultation process.

Pursuant to Section 106 of the of the National Historic Preservation Act (NHPA) and upon further consultation with both SHPOs, a Memorandum of Agreement (MOA) dated September 3, 2010, was executed by all signatory agencies (i.e., USCG, NJHPO, NYSOPRHP, and the Port Authority). The fully-executed MOA (see Attachment B) includes stipulations and respective completion requirements, as well as details of the following mitigation measures to be implemented by the Port Authority: (1) Project Design Consultation; (2) Documentation and Curation of Original Documents; (3) Historic American Engineering Record (HAER); (4) Goethals Bridge Publication; and (5) Documentary Film and Lesson Plans.

Loss of Regulated Wetlands and Aquatic Habitats

There are wetlands in the project vicinity that would be directly impacted by the Proposed Project. Coordination between the USCG, USACE, NMFS, NJDEP, NYSDEC, New York City Department of Parks and Recreation (NYCDPR) and the Port Authority (the applicant) throughout the NEPA process followed the avoidance, minimization and mitigation concept of wetland impact analysis. The combined temporary impacts (0.27 acre) and permanent impacts (5.59 acres) on regulated wetlands and open waters will total approximately 5.86 acres, approximately 0.56 acre in New Jersey (mostly to open waters and freshwater wetlands) and 5.30 acres in New York (mostly to high saltmarshes). An additional 1.3 acres of regulated wetland buffer areas (New Jersey and New York combined) will also be impacted by the Proposed Project. Structural elements which would impact wetlands include: bridge piers and main towers; temporary/permanent access roads for construction and future maintenance and security; cofferdam erection; realignment of Gulf Avenue in New York; right-of-way fencing in New York; and construction of an I-278 roadway U-turn in New Jersey. As part of the 30-day Public Notice on September 22, 2010 for the Bridge Permit application, the Essential Fish Habitat (EFH) Assessment was formally transmitted to the National Marine Fisheries Service (NMFS) by the USCG pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act. During EFH consultation with NMFS, it was determined that with implementation of NMFS's conservation recommendations (see Attachment C), the Proposed Project's wetland and aquatic impacts would be limited to construction-related short-term and localized effects on the fish and benthic community. These recommendations shall be incorporated into any Coast Guard Bridge Permit issued.

Habitat shading is unlikely to be significant, but habitat fragmentation is likely to occur given the unpaved access road and continuous security fence in New York that would bisect the Old Place Creek ecosystem complex and have subsequent indirect impacts to terrestrial wildlife and wetlands hydrology

The combined direct and indirect impacts to regulated wetlands and aquatic habitats would be mitigated through the following measures:

- ***The Use of Standard Construction Practices and/or Best Management Practices (BMPs)*** during project construction to avoid and minimize the impacts to aquatic communities. These practices include: the implementation of a Soil Control and Sediment Erosion Plan; the use of temporary cofferdams to contain dredging, construction, and demolition activities; the use of vibration-powered pile drivers rather than impact drivers; and the potential construction of stormwater detention basins to ensure that project-related impacts to aquatic communities are minor. In order to minimize impacts to the aquatic community, all in-water construction and demolition work would be contained within cofferdams in dry conditions. In turn, the actual installation and removal activities for those cofferdams would only be performed from July 1 through December 31 in order to comply with NMFS' recommended in-water work moratoriums

for the protection of winter flounder spawning habitat and migrating alewife, blueback herring, and American shad in the Arthur Kill. The Proposed Project will also be bound to the mitigation requirements imposed by the states of New Jersey and New York in their ultimate approval of environmental permits, including those related to the National Pollutant Discharge Elimination System (NPDES).

- ***The Development and Implementation of a Sound Monitoring Program*** to measure the ambient sound levels in the Arthur Kill as compared to the sound levels generated during construction (specifically as it relates to pile driving and controlled-explosive demolition activities). Upon preparation of final design plans by the Port Authority, the sound monitoring program will be developed and reviewed by NMFS prior to its implementation during the construction period.
- ***The Implementation of Further Considerations for Avoidance, Minimization and In-Kind Restoration*** during the development of the final design plans during the subsequent regulatory permitting reviews and consultation with USACE, NJDEP, and NYSDEC. At this stage of conceptual design, a worst-case scenario for the Proposed Project (e.g., with an access road built on fill material with 3:1 slopes and a security fence to run continuously along the new bridge's right-of-way, except along open water sections) has been assumed in the FEIS. Other engineering considerations to further reduce/minimize and mitigate direct and indirect impacts (e.g., habitat fragmentation) will be developed and agreed upon with regulatory agencies during the permitting review and final design processes.
- ***The Development, Review and Approval of a Compensatory Mitigation Plan*** for all unavoidable impacts to wetland and aquatic habitats. At this point, and based on a worst-case scenario for conceptual design of the Proposed Project, it is estimated that a total of 5.59 acres (5.10 acres in New York and 0.49 acre in New Jersey) of permanent wetland impacts would be unavoidable as presented in the FEIS. To that end and pursuant to regulatory requirements for future permit applications with USACE, NJDEP, and NYSDEC, and in consultation with the Inter-Agency Wetland Mitigation Group (created specifically for this project), the following strategies have been proposed:
 - In New Jersey, the conceptual plan currently considers the following two options (in order of preference):
 - ***Option 1 – ProLogis/ Port Reading Wetland Mitigation Bank***—Mitigation is proposed by purchasing credits from ProLogis in the Port Reading Wetland Mitigation Bank in Woodbridge, New Jersey. Based on preliminary conversations with NJDEP and ProLogis, both tidal and freshwater wetland impacts would be adequately covered by the bank since only a small amount of freshwater wetlands would be impacted in New Jersey. This mitigation bank, once fully approved, would sell mitigation credits that translate into 1 credit for 1 acre impacted. Pursuant to its Project Authorization, the Port Authority will purchase credits from the ProLogis/Port Reading Wetland Bank.
 - ***Option 2 - NJDEP Wetlands Mitigation Fund*** – In the event that Option 1 is no longer viable, the Port Authority proposes to provide funding toward the New Jersey Wetlands Mitigation Fund, pursuant to further consultation with the NJDEP's Wetlands Mitigation Council.

- In New York, the conceptual plan currently considers a permittee-responsible mitigation option on a site owned by NYSDEC. The Port Authority and NYSDEC-Region 2 reached an informal agreement on August 27, 2009 to pursue wetland restoration of the Old Place Creek Site, located west of the West Shore Expressway and within the same watershed. NYSDEC agreed that previously developed preliminary restoration plans for the site should be used by the Port Authority, pending potential design updates as necessary. At this point and depending on its needs, the Port Authority would use a portion of NYSDEC wetland restoration, which calls for the creation of 15.39 acres of mudflat, high/low marsh and scrub-shrub habitats; and the preservation of 3.91 acres of existing high/low marsh and open water habitats.

Ultimately, the appropriate compensatory mitigation options in both New Jersey and New York will be determined during the permitting processes of the USACE, NJDEP and NYSDEC, and in consultation with NMFS (at their request).

Wildlife / Threatened and Endangered Species / Critical Habitat

Mitigation of direct and indirect impacts of the bridge construction and operation on wildlife / threatened and endangered species / critical habitat would require a variety of techniques, ranging from those that limit the spatial distribution of wildlife to limiting construction activities during certain times of the year. Details of the mitigation measures to be implemented during construction will be further identified during the environmental permitting phase of the project, although potential measures could include:

- Perform wildlife surveys to identify travel corridors;
- Fencing of construction staging areas and permanent access road;
- Schedule construction activities to avoid wildlife disturbance during vulnerable life stages;
- Use low impact lighting and curtains to avoid visual disturbance;
- Prepare traffic management plan and stormwater management plan;
- Prepare a fluid spill response plan;
- Perform surveys for suitable diamondback terrapin nesting habitat and relocate vulnerable individuals;
- Use netting on the tops of cranes and around fluid sources for the exclusion of bird species (e.g., peregrine falcon);
- Identify and restore potential habitat refuges prior to commencement of construction; and
- Utilize previously developed areas for construction staging zones, to the extent possible.

In addition, a number of mitigation measures and/or best management practices in the bridge's light design would be implemented to reduce the risk of bird collisions with the replacement bridge during the operational phase. Details of the mitigation measures to be implemented will be further identified during the environmental permitting phase of the project, although potential measures could include:

- Cable markers could be affixed to bridge cables to improve their visibility to birds during the day and downshields could be installed on any lights not needed for aviation safety;
- Bridge illumination should provide only what light is necessary to ensure the safety of ship, aircraft and automobile traffic; and
- The pedestrian walkway/bikeway could potentially be used to conduct surveys to determine whether migrating birds and residential birds are encountering problems navigating through the bridge area.

Navigation

The navigation channel would be kept open during construction with the exception of some short duration channel closures for barge-based material deliveries, construction activities and bridge demolition. The Port Authority and its contractors will coordinate the channel closures with the USCG to minimize vessel navigation conflicts and allow for the appropriate timing of releases of a Local Notice to Mariners (LNM).

During construction, impacts to navigation on the Arthur Kill in the vicinity of the Goethals Bridge would be minimized by placing construction barges and equipment outside the navigation channel in locations coordinated with the USCG. Equipment placed south of the Goethals Bridge would be located away from the edge of the navigation channel to avoid impacts to large vessels turning into the Bayway refinery. Any construction activities requiring the use of barges in the channel would be accomplished during short channel closures scheduled between the passages of large vessels navigating the Arthur Kill.

Contaminated Materials

The Goethals Bridge study area has a long history of industrial and manufacturing use dating back to the 1800s. As a result, contaminated soil and groundwater are anticipated to be encountered during construction. Furthermore, previous studies have shown that a number of properties, which would be acquired for construction purposes, are contaminated and/or possess asbestos and lead-based paint.

The Port Authority will mitigate impacts through the following process:

- A Health and Safety Plan will be developed prior to conducting any subsurface investigations and construction activities associated with the project to reduce the potential for worker or public contact with contaminated materials.
- The Port Authority will conduct a detailed Phase II environmental assessment, including soil, sediment, and groundwater sampling, to more clearly identify sources and extent of contamination.
- A comprehensive investigation work plan will be prepared that is consistent with applicable state guidance and regulations.
- Once all subsurface investigations are completed and remedial alternatives have been assessed, a Remedial Action Workplan (RAW) will be prepared to address remediation of the contaminated sites in the affected area.
- A contaminated materials handling plan will be developed for the management, handling, treatment and disposal of contaminated soils, sediments, groundwater and wastes encountered during construction.

- Surveys of asbestos and lead-based paint will be conducted on buildings and other structures to be demolished. Any asbestos and lead-based paint identified, as well as PCB-containing materials would be removed in accordance with applicable regulations.

Traffic Impacts

The Proposed Project would result in significant level-of-service (LOS) F traffic impacts in three general areas within the larger GBR EIS traffic study area for the 2034 Build Condition (the forecast design year), including:

- In New Jersey, in the Bayway Avenue corridor, at I-278 mainline and interchanges, and at New Jersey Turnpike Interchange 13;
- In New York, on the Staten Island Expressway and service and local roads in the vicinity of the Howland Hook Marine Terminal; and
- In New York, on service and local roads in the vicinity of the Verrazano-Narrows Bridge.

As a result, a series of potential traffic mitigation measures have been contemplated, analyzed, and reviewed in consultation with the affected transportation agencies that have authority over those impacted roadway facilities. Such interagency coordination included the New York State Department of Transportation (NYSDOT), the New Jersey Department of Transportation (NJDOT), the New Jersey Turnpike Authority (NJTA), the New York City Department of Transportation (NYCDOT), the New York Economic Development Corporation (NYCEDC) and the Cities of Elizabeth and Linden. In order to satisfy the New York City Environmental Quality Review (CEQR) requirements, an additional impact and mitigation analysis for the 2014 Build Condition (forecasted year of bridge opening) was conducted in consultation with NYCDOT.

Consequently, the following Traffic Mitigation Plan was developed and will be implemented by the Port Authority in order to return the impacted locations to 2034 No-Build or better traffic conditions, as follows:

- Implement a managed-use lane (MUL) for buses and high-occupancy vehicles (HOVs) only, on the proposed Goethals Bridge Replacement during AM and PM peak periods. One lane in each direction will operate as a MUL, and the remaining two lanes will operate for all vehicles, with the MUL connecting to the Staten Island Expressway (I-278) in New York and the New Jersey Turnpike Interchange 13 complex in New Jersey; and
- Implement a set of transportation system management (TSM) measures including intersection-specific signal re-timing, provision of new signals, restriping, reduction of parking at selected approaches and minor widening to provide channelized turn lanes, as appropriate, at impacted locations in the vicinities of the Howland Hook Marine Terminal (HHMT) and the Verrazano-Narrows Bridge in New York and in the Bayway Avenue/Bayway Circle corridor in New Jersey. Details of the specific mitigations proposed are presented in Appendix J.5 of the FEIS.

As a result, the proposed Traffic Mitigation Plan would effectively mitigate most of the significant impacts at locations in New York and New Jersey. Only nine specific locations would not be fully mitigated with implementation of this plan. Two traffic locations in New Jersey (in the New Jersey Turnpike Interchange 13 complex) and seven in New York (along the Staten Island Expressway between the proposed Goethals Bridge and Richmond Avenue) would exhibit LOS conditions that are worse than

the No-Build condition in 2034, even with the combined implementation of a MUL on the new bridge and of TSM improvements on local streets as mitigation measures.

Mitigation at the remaining unmitigated impact locations would require that other transportation agencies, which own and operate the facilities on which these unmitigated impacts would occur, undertake planning studies and design for major reconstruction projects at New Jersey Turnpike Interchange 13 and along Staten Island Expressway between Richmond Avenue and West Shore Expressway. While such studies are not currently contemplated, it is recommended that the Port Authority continue interagency coordination with NJTA, NJDOT, NYSDOT, NYCDOT, and the Cities of Elizabeth and Linden beyond this NEPA process, regarding mitigation measures proposed for roadway facilities not owned/operated by the Port Authority.

Air Pollutant Emission Exceedances and General Conformity Determination

As part of the environmental review of the Proposed Project, the USCG prepared a general conformity determination pursuant to 40 C.F.R. Part 93 Subpart B. The general conformity regulations apply at this time to the USCG issuance of a Bridge Permit because the project area is located in an area that is designated as a nonattainment area for the 8-hour ozone standard, nonattainment for PM_{2.5}, and a maintenance area for carbon dioxide (CO). The USCG conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with USEPA.

The USCG prepared a Draft GCD which was published as part of the FEIS on August 13, 2010 for public review and forwarded to required federal, state and local air resource agencies for review. Upon further comments and reviews, and in consultation with the USEPA, NJDEP and NYSDEC, the USCG issued its Final GCD on January 14, 2011 (see Attachment D).

Based on this review, the USCG has concluded that the Proposed Project would not increase regional emissions and would, therefore, comply with both the New Jersey and New York State Implementation Plans (SIPs). USEPA reviewed and agreed with the regulatory analysis. The USCG has determined that the Proposed Project, utilizing the New Alignment South, will conform to the approved SIPs, based on the findings below. For the GBR project construction-phase years, the following determinations were made that:

- A commitment from the Port Authority, that all construction-phase nitrogen oxides (NO_x) emissions for years exceeding the 8-hour ozone nonattainment area thresholds will be offset by the utilization of three years worth of excess credits from the Harbor Deepening Project (HDP);¹
- A determination that Project-generated PM_{2.5} emissions would not exceed the conformity applicability threshold for PM_{2.5}; and
- A demonstration based on the results of microscale CO analyses that the Project would not cause or exacerbate a localized violation of the National Ambient Air Quality Standard (NAAQS).

During construction, the Port Authority's sustainability guidelines will be followed to minimize construction-phase emissions. In accordance with these guidelines, a variety of emission control

¹ Without setting a precedent, the Port Authority has advised that it would commit to offset NO_x emissions with five years worth of NO_x credits during the construction period that would satisfy the position of the NYSDEC and NJDEP regarding applicability of thresholds for a severe nonattainment area for the 1-hour ozone standard. Further, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Replacement Program, if necessary.

measures for diesel equipment exhaust and fugitive dust, as detailed in Section 5.21.7.3 of the FEIS and in the Final GCD in Attachment D, are proposed to minimize construction-phase air quality impacts.

In terms of the Proposed Project's operations phase in the future, predicted localized CO levels would not exceed the applicable CO standards; therefore, no significant CO impacts would occur, and mitigation would not be required. The Proposed Project also would not cause, worsen or contribute to a violation of the PM_{2.5} NAAQS. At a regional level (mesoscale), no significant impact associated with operation of the Proposed Project would occur as pollutants emitted from vehicles traveling on study area roadways would decrease in comparison to the No-Build Alternative.

Construction Noise

While the operation of the replacement bridge following its construction would not result in increased noise levels, the construction of the bridge would have the potential to impact local residences and parks during certain periods. In New Jersey, construction noise impacts could result to P.S. 22 Halloran School, residences along the I-278 westbound on-ramp, and residences and the Louis Avenue Park in Linden along the I-278 westbound mainline. The following mitigation measures will be taken into consideration by the Port Authority and its contractors:

- The construction contract will require the development and implementation of a *Construction Environment Plan*, consistent with the Port Authority's sustainable design guidelines, which reduces pollution, noise, and vibration from construction activities and vehicles to adjoining neighborhoods.
- The Port Authority and contractor will conduct community and municipal outreach and notifications to advise affected residents about construction schedules and anticipated periods of higher level construction related noise.
- Work time restrictions would be imposed on the Contractor requiring all construction activities to be conducted during daylight hours only, in accordance with local regulations, and any exception to this would require special permits from the cities of Elizabeth and/or Linden.
- Coordination with local officials and community groups and/or street signage will be employed to advise local residents of traffic detour routes and the periods of their duration, related to the closure of Atlantic Avenue EB on-ramp during the construction period.

In New York, the construction of the Proposed Project could result in significant noise level increases on the Goethals Garden Homes community during a four month timeframe, as a result of work for the replacement of the Travis Bridge. To mitigate these impacts, the Port Authority will follow its sustainability guidelines, comply with the New York City Noise Code, and coordinate with local officials and Community Board members during construction activities to notify residents within the Goethals Garden Homes about construction schedules and anticipated periods of higher level construction related noise.

VI. COMMENTS & ERRATA SHEET ON THE FINAL EIS

Eleven comments in response to the FEIS were received from a total of six federal/state/local agencies (i.e., USEPA, NMFS, FHWA-New York Division, NJDEP, New York City Landmarks Preservation Commission (NYCLPC) [two separate comment submittals], and Linden Economic Development Corporation (EDC); one commercial property owner in Staten Island (i.e., R. Baker & Son Machinery Dismantlers, Inc.); the College of Staten Island – CUNY; and two residential property owners (one in Elizabeth and one in Staten Island). None of these comments was of a nature that required further

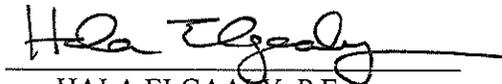
discussion or analysis. A summary of these comments and USCG responses is provided in Attachment A², while the actual comment letters can be reviewed on the project website at www.goethalseis.com and/or the USCG's online docket (Docket No. USCG-2009-0097) at www.regulations.gov.

Additionally, an Errata Sheet was created in order to either rectify or clarify some minor inaccuracies and/or erroneous statements that were made in the FEIS (see Attachment E).

VII. CONCLUSION

Having reviewed all pertinent factors, including navigation and the human environment, I conclude that the proposed Goethals Bridge Replacement Project will meet the reasonable needs of navigation with no significant, unmitigated adverse impact on environmental quality.

Date 1/31/2011



HALA ELGAALY, P.E.
Administrator, Bridge Program
U.S. Coast Guard
By direction of the Commandant

List of Attachments:

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|--------------|-----------------------------------------------------------------------------------------------------------------|
| Attachment A | Comments/Responses to the Final EIS (FEIS) |
| Attachment B | Executed Memorandum of Agreement (MOA) pursuant to Section 106 of the National Historic Preservation Act (NHPA) |
| Attachment C | Essential Fish Habitat (EFH) Consultation and NMFS' EFH Conservation Recommendations |
| Attachment D | Final General Conformity Determination (Final GCD) |
| Attachment E | Errata Sheet to the FEIS |

² Agency comment letters received on the Draft GCD may be viewed at the USCG's online docket (Docket No. USCG-2009-0097) at www.regulations.gov. The Final GCD (see Attachment D) reflects agency comments, as appropriate; responses to NJDEP comments may also be viewed at the USCG's online docket.