THE PORT AUTHORITY
OF NEW YORK & NEW JERSEY

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

John F. Kennedy International Airport Redevelopment Program

December 16, 2022

Prepared for
U.S. Department of Transportation
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New York Airports District Office
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ACRONYMS

The following is a list of acronyms used in this Supplemental EA:

ACEIT	Airport Construction Emissions Inventory Tool
AEDT	Aviation Environmental Design Tool
AIG	Airport Improvement Grant
AIP	Airport Improvement Program
AIR	Airport Inter-Terminal Route
ALP	Airport Layout Plan
AOA	Air Operations Area
APE	Area of Potential Effect
BMP	Best Management Practices
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CAA	Clean Air Act
CBRA	Coastal Barrier Resources Act
CEQ	Council on Environmental Quality
CMP	New York State Coastal Management Program
CoGen	Cogeneration Plant
CRIS	Cultural Resource Information System
CTA	Central Terminal Area
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DNL	Day-Night Average Sound Level
DOT	United States Department of Transportation
EA	Environmental Assessment
eGSE	Electric Ground Service Equipment
EO	Executive Order
ERM	Environmental Resource Mapper
ESA	Endangered Species Act
EWR	Newark Liberty International Airport
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FFRMS	Federal Flood Risk Management Standard
FHV	For Hire Vehicles
FIRM	Flood Insurance Rate Map
GHG	Greenhouse Gas
GSE	Ground Support Equipment

GTC	Ground Transportation Center
GWP	Global Warming Potential
HOV	High Occupancy Vehicle
Hz	Hertz
IPaC	Information for Planning and Conservation
JFK	John F. Kennedy International Airport (Airport)
KIAC	Kennedy International Airport Cogeneration
KV or kV	Kilovolt
LEED	Leadership in Energy and Environmental Design
LGA	LaGuardia Airport
LOS	Level of Service
LWCF	Land and Water Conservation Fund
MUL	Managed Use Lane
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
MVM	Million Vehicle Miles
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
New T1	New Terminal 1
NHPA	National Historic Preservation Act
NPL	National Priorities List
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NYCDCP	New York City Department of City Planning
NYMTC	New York Metropolitan Transportation Council
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
NYSDOS	New York State Department of the State
NYSDOT	New York State Department of Transportation
NYSECL	New York State Environmental Conservation Law
OPA	Oil Pollution Act
Panel	Airport Advisory Panel
PFC	Passenger Facility Charge
PIDS	Perimeter Intrusion Detection System
PIES	Post Implementation Evaluation System
Port Authority	Port Authority of New York & New Jersey
POV	Privately Owned Vehicle
PPA	Pollution Prevention Act
PVMS	Permanent and Portable Variable Message Sign
RCRA	Resource Conservation and Recovery Act

Region	New York/New Jersey Metropolitan Region
SHPO	New York State Historic Preservation Office
SIP	State Implementation Plan
SNWA	Special Natural Waterfront Areas
SPCC	Spill Prevention, Control, and Countermeasure
SPDES	State Pollution Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan
T1	Terminal 1
T2	Terminal 2
T3	Terminal 3
T4	Terminal 4
T5	Terminal 5
T6	Terminal 6
T7	Terminal 7
T8	Terminal 8
TMDL	Total Maximum Daily Load
TSA	Transportation Security Administration
TSCA	Toxic Substances Control Act
TWA	Trans World Airlines
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VWE	Van Wyck Expressway
VMT	Vehicle miles traveled
WHMP	Wildlife Hazard Management Plan
WRCRA	Waterfront Revitalization and Coastal Resources Act of 1981
WRP	New York City Waterfront Revitalization Program

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1 INTRODUCTION

This Supplemental Environmental Assessment (Supplemental EA) is prepared pursuant to the requirements of the National Environmental Policy Act (NEPA), and in accordance with Federal Aviation Administration (FAA) Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, and *FAA Order 1050.1F, Environmental Impacts: Policies and Procedures*. The Proposed Action requires the FAA to approve a change to the JFK Airport Layout Plan (ALP) and to approve applications for federal funding under the Airport Improvement Program (AIP), Airport Improvement Grant (AIG) and to impose and use Passenger Facility Charge (PFC) funds on certain project elements in accordance with FAA Order 5500.1 Passenger Facility Charge, which are Federal actions addressed pursuant to NEPA. This Supplemental EA examines potential impacts associated with design modifications and schedule changes to the roadway network and Ground Transportation Center (GTC)/JFK Central within, and leading to and from, the John F. Kennedy International Airport (JFK or Airport) Redevelopment Program (JFK Redevelopment Program) since a Finding of No Significant Impact and Record of Decision (FONSI/ROD) was issued by the FAA for the JFK Redevelopment Program in April 2020. ***Exhibit 1-1, John F. Kennedy International Airport (JFK) and Surroundings,*** shows the location of JFK and surrounding area, including Kings, Queens, and Nassau Counties. On-Airport, the existing JFK Central Terminal Area (CTA) includes all Airport terminals and the supporting interior roadway network, parking garages, and surface parking lots that are divided into five zones that include one or more terminals (see ***Exhibit 1-2, Existing JFK CTA Zones and Vehicle Parking Areas***).

As part of the Proposed Action set forth in the April 2020 *"Final Environmental Assessment for the John F. Kennedy International Airport Redevelopment Program"* (2020 EA) and the subject of the FONSI/ROD (referred to herein as the No Action), the Port Authority of New York and New Jersey (Port Authority) proposed a reconfiguration of the existing CTA[1] roadway network[2] and changes to vehicle parking within the CTA that included construction of a new 16-acre GTC/JFK Central within the CTA. As described in the 2020 EA, the proposed CTA roadway network would have consolidated the existing terminal roadway network from five zones to three zones to improve automobile access to and from the proposed South and North Terminal Developments and new GTC/JFK Central as part of the JFK Redevelopment Program (see *Section 1.1.2* of the 2020 EA). Due to the approval of the Proposed Action in the 2020 EA (through the issuance of the 2020 EA FONSI/ROD), it is assumed these improvements, as previously proposed, would be advanced if the Proposed Action in this Supplemental EA is not approved. As such, the Proposed Action from the 2020 EA is considered the No Action for this Supplemental EA.

Following the issuance of the 2020 EA FONSI/ROD, the Port Authority identified opportunities to further simplify the CTA roadway network while still addressing the two main deficiencies of the existing CTA roadways identified above. As the proposed terminal developments progressed in

[1] The CTA is located on the Airport between Runways 13L/31R and 13R/31L and to the west of Runways 4L/22R and 4R/22L. The CTA encompasses approximately 880 acres and is surrounded by a dual ring of peripheral taxiways. JFK serves passengers from six passenger terminals within the CTA.

[2] For the purposes of this Supplemental EA, the term "roadway network" refers to the roads providing vehicle access to the Airport and the CTA, within the CTA terminals and auto parking garages.

coordination with the terminal developers, the Port Authority designed the roads and utilities to serve the terminals. Due to the COVID-19 pandemic, the start of construction on the JFK Redevelopment Program was delayed; however, during this time design/build contractors were retained by the terminal developers to advance the design of the terminals, despite the delay. As part of the design/build process, a construction coordination review resulted in a significantly simplified road design that improves traffic circulation and wayfinding, while reducing construction duration and complexity. This improved design further enhances road safety within the Airport, reduces traffic congestion and reduces road construction cost and complexity.

This simplified roadway network includes changes to the CTA Roadways and modifications to Off-CTA Roadways to accommodate current and projected passengers with an acceptable roadway and frontage level of service (LOS). The proposed improvements, as part of the JFK Redevelopment Program, result in the following:

- Off-CTA Roadway modifications provide a more intuitive and direct roadway connections from the Van Wyck Expressway and JFK Expressway to improve wayfinding and minimize vehicle travel distance and congestion.
- Off-CTA Roadway modifications allow for a reduction in the overall number of driver decision points and conflict points within the constrained area of the CTA Roadways.
- CTA Roadway modifications provide improved space for loading and unloading vehicles in close proximity to the terminals to improve pedestrian safety and reduce vehicle wait times, while meeting Transportation Security Administration (TSA) recommendations for the setback of ground transportation areas from passenger terminals.

This simplified roadway network includes the Proposed CTA Roadways and Proposed Off-CTA Roadways, as well as the reduced footprint (from 16 to 13.5 acres) of the GTC/JFK Central while maintaining parking capacity for 3,500 automobiles (collectively, the Proposed Action) (see *Section 1.4.1, Proposed CTA Roadways* for additional information about the changes to the GTC/JFK Central). The Proposed CTA Roadways and Proposed Off-CTA Roadways are described below and further detailed in *Section 1.4, Description of the Proposed Action* and ***Table 1-1, Comparison of the No Action and Proposed Action*** in this Supplemental EA.

The Proposed CTA Roadways would split the CTA into (1) the South Terminal Zone, which would include Terminals 1 (T1) and 4 (T4); and (2) the North Terminal Zone, which would include Terminal 5 (T5), Expanded T5 and Terminal 8 (T8). Information regarding the renaming of the terminals, when the JFK Redevelopment Program becomes operational, is included in ***Appendix G, Draft Access Modification Report*** in this Supplemental EA.[3]

Unlike the existing roadways and the proposed CTA roadways included in the No Action, which allow access to all terminals from either the Van Wyck Expressway or the JFK Expressway, the Van Wyck Expressway would provide exclusive access (entry and exit routes) to/from the South Terminal Zone, and the JFK Expressway would provide exclusive access (entry and exit routes) to/from the North Terminal Zone. Because T8 is located at the confluence of the JFK

[3] The Port Authority intends to change the JFK terminal designations from numerical to alphabetical as follows: Terminal 1 will become Terminal A; Terminals 4, 5, and Expanded Terminal 5 will become Terminals B, C, and D, respectively; and Terminal 8 will become Terminal E. In this Supplemental EA, the current terminal names (i.e., numbers) are consistent with the terminal names in the 2020 EA.

Expressway and the Van Wyck Expressway, drivers exiting the T8 arrivals frontage would still be able to use either the Van Wyck Expressway or the JFK Expressway.[4]

With just two terminal zones that are each accessible by a dedicated highway, modifications to the roads located outside of the CTA would be needed to ensure that drivers coming to the Airport, from any direction, and on any of the major highways north, east, and west of the Airport, can confirm the correct route to their destination before entering the CTA and to provide drivers with dedicated routes that avoid local roads (i.e., North Conduit Avenue (NY-27)) and areas of frequent congestion (i.e., Van Wyck Expressway and Belt Parkway Interchange). These roadway modifications are proposed for the Van Wyck Expressway, JFK Expressway, Nassau Expressway (NY-878) and Cargo Service Road and are referred to as the Proposed Off-CTA Roadways. The Proposed Off-CTA Roadways would provide improved dedicated routes to the North and South Terminal Zones for vehicles entering the Airport from the north (Van Wyck Expressway) and from the east and west (JFK Expressway, Nassau Expressway and Belt Parkway).

Segments of the Proposed Off-CTA Roadways would occur partially off-Airport on New York State owned property adjacent to the Airport. Because of this, the Port Authority has coordinated the design with the New York State Department of Transportation (NYSDOT). In addition, because the Proposed Off-CTA Roadways would require modification to the Van Wyck Expressway (I-678), the Port Authority has coordinated with the Federal Highway Administration (FHWA) to address such modifications. The FHWA is a Cooperating Agency[5] on this Supplemental EA.

The Proposed Off-CTA Roadways would involve construction and operations in areas not previously evaluated in the 2020 EA. In accordance with NEPA, this Supplemental EA assesses the potential impacts associated with the construction and operation of the Proposed Action as they differ from the No Action.[6]

For comparison purposes, ***Exhibit 1-3, CTA Roadways and Off-CTA Roadways from the 2020 EA*** provides an overview of the proposed roadway network in the 2020 EA. Whereas, ***Exhibit 1-4, Proposed CTA Roadways and Off-CTA Roadways in this Supplemental EA*** provides an overview of the Proposed Action.

[4] Port Authority, Transportation Project Report, *Draft Access Modification Report - Eastbound MUL Loop Ramp, Nassau Expressway Widening, and Westbound Direct Connection Operational Improvements*, 2022.

[5] Cooperating agencies are Federal agencies other than a lead agency which have jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal or reasonable alternative. Sections 40 CFR 1501.6 and 40 CFR 1508.5 of the CEQ Regulations address cooperating agencies. https://ceq.doe.gov/ceq-reports/cooperating_agencies.html *NEPA | National Environmental Policy Act - Reports on Cooperating Agency Status (doe.gov)*. Site accessed May 12, 2022.

[6] This Supplemental EA includes the design and schedule changes addressed in the September 2021 WR/ROD for Terminal 4 (T4), along with proposed schedule and design changes addressed in the June 2022 WR/ROD for new Terminal 1 (T1).

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EXHIBIT 1-1 JOHN F. KENNEDY INTERNATIONAL AIRPORT (JFK) AND SURROUNDINGS

Source: JFK Redevelopment Program EA, Exhibit 1-2, Page 1-9.

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EXHIBIT 1-2 EXISTING JFK CTA ZONES AND VEHICLE PARKING AREAS

Source: Mott MacDonald NY Inc., 2021.

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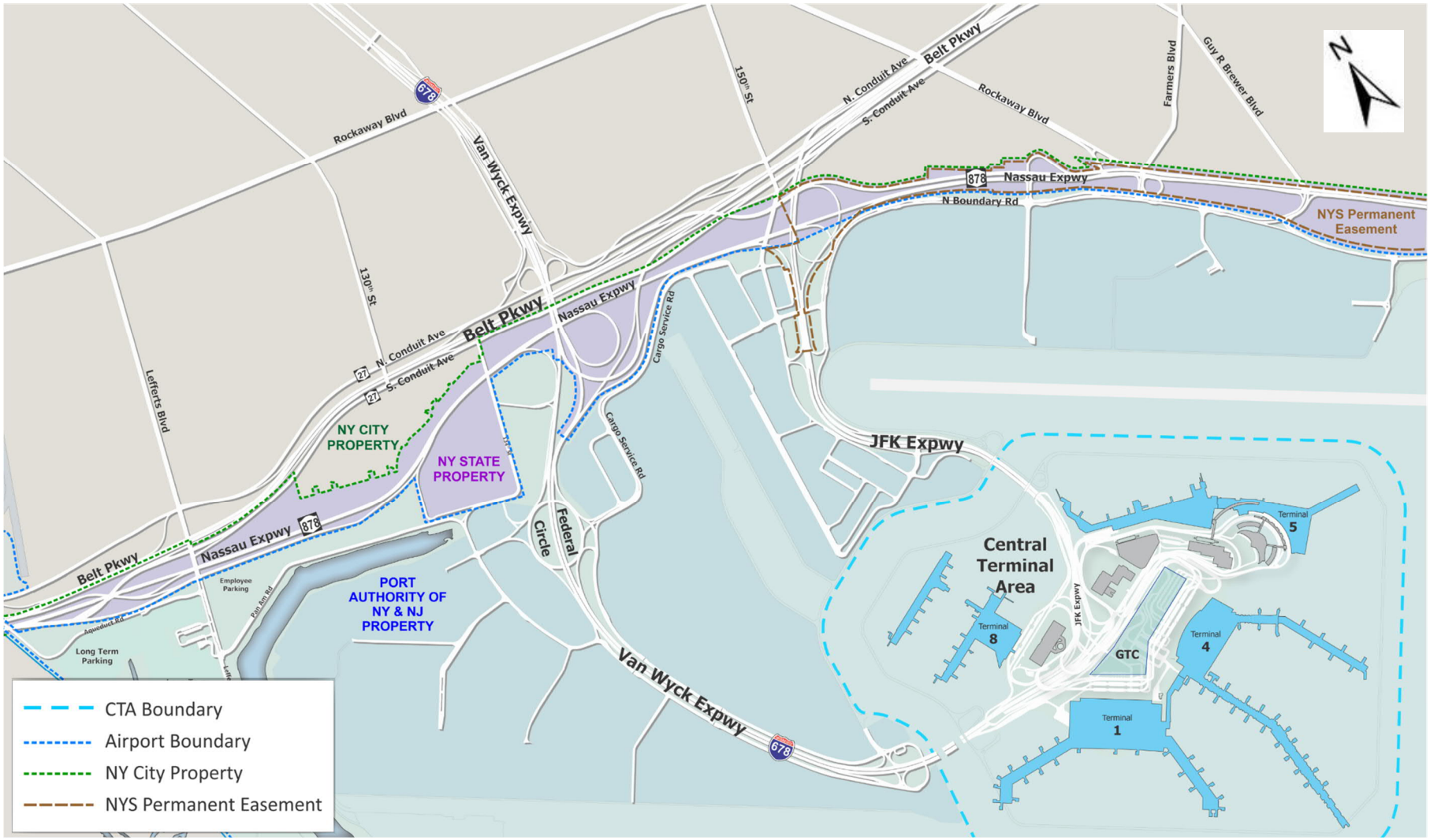
EXHIBIT 1-3 CTA ROADWAYS AND OFF-CTA ROADWAYS FROM THE 2020 EA



Source: Port Authority, Civil Engineering Department, 2022

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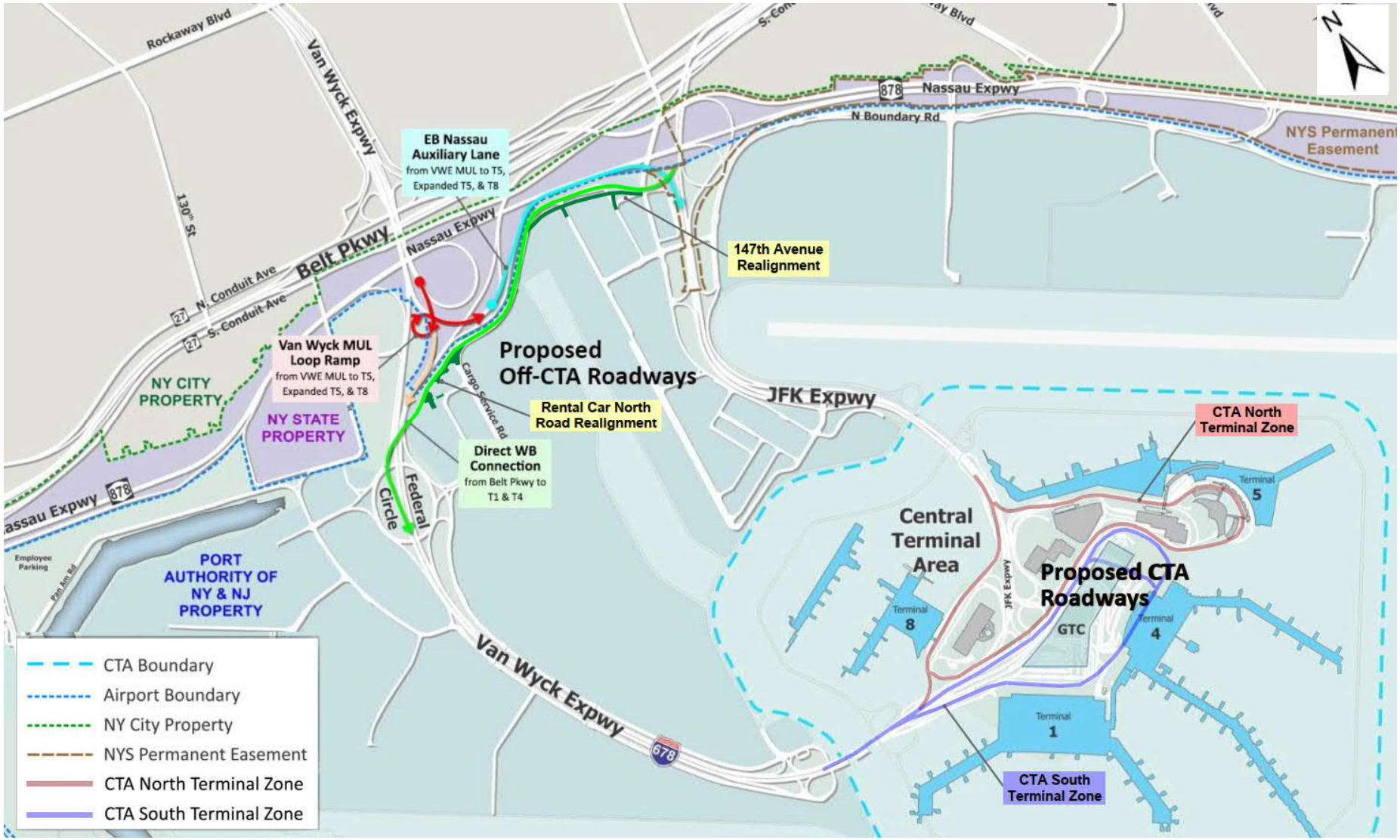
EHIBIT 1-4 PROPOSED CTA ROADWAYS AND OFF-CTA ROADWAYS IN THIS SUPPLEMENTAL EA



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1.1. Project Background

The Port Authority operates JFK through a lease agreement with the City of New York that extends through 2060.[7] The Airport comprises over 4,930 acres of land, including 880 acres in the CTA and more than 30 miles of roadway. JFK is one of three large-hub airports within the New York/New Jersey Metropolitan Region (the Region) and is an important gateway for domestic and international air travel.[8] It is also one of the busiest airports in the Region, and among the busiest in North America and the world.[9] [10]

In January 2017, the New York Governor's Airport Advisory Panel submitted a report on JFK - *A Vision Plan for John F. Kennedy International Airport: Recommendations for a 21st Century Airport for the State of New York (Vision Plan).* The Panel recommended improvements to the Airport and its supporting infrastructure so that the Airport meets today's standards for a leading global airport, and to better position JFK to meet the needs of the future.

The Proposed Action in the 2020 EA was developed to accommodate current and projected passengers with an acceptable Level of Service (LOS) at JFK. Because the Proposed Action in the 2020 EA has already been approved (through the issuance of the 2020 EA/FONSI/ROD), it is assumed the JFK Redevelopment Program, as previously proposed would be advanced if the Proposed Action in this Supplemental EA is not approved. As such, the Proposed Action from the 2020 EA is considered the No Action for this Supplemental EA.

The No Action was scheduled to commence construction in 2020. However, the COVID-19 pandemic delayed the start of construction. Pandemic-related travel restrictions resulted in a significant loss of revenue for the Port Authority, the terminal operators, the airlines and other users of JFK. In 2020, passenger traffic at JFK was approximately 27% of pre-pandemic levels.[11] However, passenger traffic at JFK began to slowly recover in late 2020. By August 2021, passenger traffic was approximately 60% of pre-pandemic levels.[12] As of March 2022, passenger traffic was approximately 80% of pre-pandemic levels.[13] Additional information regarding existing and forecast passenger demand is included in ***Appendix E, Existing & Forecast Passenger Demand***.

Due to the COVID-19 pandemic and its impact on the airline industry, the lease amendments for the proposed new T1 and expanded T4 were put on hold, which resulted in a delay in the new T1 and expanded T4 construction schedule start date, changes in construction duration for the new T1, and design modifications for both the new T1 and expanded T4. During the

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[7] The City of New York granted a ten-year emergency extension of the master lease for JFK Airport, which had been set to expire in 2050.

[8] Federal Aviation Administration, Report to Congress, National Plan of Integrated Airport Systems, 2019-2023, September 26, 2018.

[9] In 2019, the Airport had a record 62.55 million passengers and handled more than 1.3 million tons of cargo. That same year set an all-time record in international travel with approximately 55 percent (or 34.3 million) of total passengers traveling internationally, which was more than any other U.S. airport. However, in 2020, as a result of the COVID-19 pandemic, air travel worldwide experienced a sharp decline. JFK served more than 16.6 million passengers and handled more than 1.15 million tons of cargo. The Airport employs approximately 41,000 people and contributes more than $23.5 billion in economic activity to the New York-New Jersey metropolitan region, supporting more than 125,000 total jobs and nearly $8 billion in annual wages.

[10] Port Authority, 2020 Airport Traffic Report, 2021.

[11] Airlines for America, Impact of COVID-19: Data Inputs, Airlines for America, Updated June 22, 2021.

[12] Port Authority, August 2021.

[13] Port Authority, April 2022.

COVID-19-related delay, the proposed designs of the new T1 and expanded T4 were modified from those set forth in the No Action due to changes in the airline industry and travel patterns domestically and globally arising from the COVID-19 pandemic. The design modifications reflect the airline industry's accelerated shift in aircraft fleet mix changes earlier than originally anticipated prior to COVID-19, which resulted in an adjustment to terminal building shape and size. For example, the expanded T4 Concourse B modifications included changing three existing wide-body (WB) gates to three narrow-body (NB) and one WB gate; closing three regional jet (RJ) gates and upgauging seven RJ gates to NB gates to accommodate changes in aircraft fleet mix, as well as a slight reduction in the overall expanded T4 footprint. Similarly, the new T1 design changes included reconfiguring the contact gate composition to accommodate a reduction in average aircraft size per gate (i.e., several airlines no longer operate the larger A380 and B474 aircraft) and reducing the building square footage of the new T1 terminal area (approximately 440,000 square foot reduction). The Port Authority evaluated the environmental impacts of both the new T1 and expanded T4 design and schedule modifications and prepared and submitted to the FAA separate technical reports for each terminal that addressed the schedule and design modifications for T1 and T4.[14, 15] The FAA reviewed the technical reports and issued a Written Re-Evaluation and Record of Decision (WR/ROD) for the expanded T4 in September 2021 and a WR/ROD for the new T1 in June 2022.[16]

[14] Port Authority, *"Technical Report for the John F. Kennedy International Airport (JFK) Redevelopment Program Environmental Assessment and Finding of No Significant Impact/Record of Decision (April 2020) - Proposed Terminal 1 Design and Schedule Modifications,"* dated May 2022.

[15] Port Authority, *"Technical Report for the John F. Kennedy International Airport (JFK) Redevelopment Program Environmental Assessment and Finding of No Significant Impact/Record of Decision (April 2020) - Proposed Terminal 4 Design and Schedule Modifications,"* dated August 2021.

[16] In accordance with FAA Order 1050.1F, a Written Re-Evaluation is required if there are changes to the action or new circumstances or information that *could* trigger the need for a Supplemental EA. A Supplemental EA is required if there *are* substantial changes to the proposed action that are relevant to environmental concerns.

1.2. Project Location

Located on Jamaica Bay in the southeastern section of Queens County, New York City, JFK Airport lies generally south of the Belt Parkway and Nassau Expressway. Currently, all six existing JFK terminals can be accessed from either the Van Wyck Expressway or the JFK Expressway. Vehicles coming to and leaving JFK typically use four main highways:

(1) Belt Parkway - An east-west highway located north of the Airport. Vehicles on the Belt Parkway may access the Airport by exiting onto the southbound JFK Expressway or southbound Van Wyck Expressway.

(2) Van Wyck Expressway - A north-south interstate highway (I-678) that traverses onto Airport property, travels through Federal Circle, and connects to the CTA roads at the southwestern portion of the CTA. Vehicles headed southbound on the Van Wyck Expressway may also access the north side of the CTA by exiting onto the eastbound Nassau Expressway.

(3) JFK Expressway - A north-south highway that traverses onto Airport property and connects to the CTA in the area between T7 and T8. The JFK Expressway provides access to the CTA for vehicles traveling westbound on the Belt Parkway and for vehicles traveling eastbound on the Nassau Expressway.

(4) Nassau Expressway - An east-west highway located north of the Airport. Vehicles west of the Airport traveling eastbound on the Nassau Expressway can access the Airport by exiting onto either the Van Wyck Expressway or the JFK Expressway.

The Van Wyck Expressway and the Belt Parkway, just north of the Airport, experience traffic congestion due to the high volume of traffic on both highways. A vehicle traveling westbound on the Belt Parkway and headed to the CTA via the Van Wyck Expressway, must exit the Belt Parkway and travel westbound along North Conduit Avenue to access the southbound ramp onto the Van Wyck Expressway. This occurs at the Van Wyck Expressway and Belt Parkway interchange where traffic from north and south, and east and west converge.

North Conduit Avenue and South Conduit Avenue are local arterial roadways[17] with signalized intersections. Within the vicinity of the Airport, North Conduit Avenue and South Conduit Avenue run parallel to the Belt Parkway in an east-to-west direction through residential and commercial areas north and south of the Belt Parkway, respectively. North Conduit Avenue provides access to the Airport by connecting to both the southbound Van Wyck Expressway and southbound JFK Expressway via on-ramps to the Airport. Similarly, egress traffic from the Airport can access North Conduit Avenue via the northbound Van Wyck Expressway; and northbound JFK Expressway via a ramp to the Westbound Nassau Expressway, which then connects to North Conduit Avenue. North Conduit Avenue is routinely congested with traffic moving at slower speeds (compared to a highway or expressway) because of vehicles exiting/entering North Conduit Avenue to/from local streets north of the Belt Parkway and the Airport, and because of signalized intersections. South Conduit Avenue provides a route to the east for vehicles leaving the Airport.

[17] The primary function of an arterial roadway is to deliver traffic from roads which provide connections from local streets to freeways or expressways.

1.3. Description of Proposed Action Site

As shown in ***Exhibit 1-5, Proposed Action Site***, the Proposed Action Site associated with this Supplemental EA includes both the Proposed Project Site in the 2020 EA (including the roadways within the CTA and the GTC/JFK Central) and a Proposed Off-CTA Roadways Site.

The Proposed Off-CTA Roadways Site, as part of the Proposed Action Site, is northwest of the CTA on Port Authority property and New York State owned property within the NYSDOT's right-of-way (ROW) adjacent to Airport property (see ***Exhibits 1-3 and 1-4)***. The Proposed Off-CTA Roadway Site modifications are bounded to the east by the JFK Expressway; to the west by the Van Wyck Expressway at Federal Circle; to the north by the Eastbound Nassau Expressway; and to the south by the on-Airport Cargo Service Road.

The Proposed Off-CTA Roadways portion of the Proposed Action Site is in the vicinity of off-Airport commercial and industrial developments and residential areas ranging from detached single-family to medium-density row houses and garden apartments. The Proposed Off-CTA Roadways are separated from these land uses by the existing high-volume east-west roadway network of the Belt Parkway, South Conduit Avenue, Nassau Expressway, and North Conduit Avenue, which are located north of the Airport.

The Proposed Off-CTA Roadways Site includes paved shoulders, mowed grassy areas, scattered trees and shrubs, and an Airport boundary fence, which separates the on-Airport Cargo Service Road from the off-Airport Eastbound Nassau Expressway. Infrastructure within this area includes roadway lighting poles and fixtures, traffic and wayfinding signage, and four traffic signals. In addition, at Federal Circle, there is a rental car facility surface parking lot, including associated rental car facility infrastructure.

EXHIBIT 1-5 PROPOSED ACTION SITE

Source: 2020 EA, Exhibit 1-1, Page 1-5, with edits by Mott MacDonald NY, Inc., 2022.

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1.4. Description of the Proposed Action

The Proposed Action consists of improvements to the roads in the CTA (CTA Roadways) and improvements to roads outside of the CTA (Off-CTA Roadways). The Proposed Action (CTA Roadways and Off-CTA Roadways) are paired in that the improvements to the CTA Roadways and Off-CTA Roadways must both be constructed to achieve the full benefits of the Proposed Action, as shown in ***Table 1-1, Comparison of the No Action and Proposed Action*** of *Section 1.4.3, Comparison of the No Action and Proposed Action*. A detailed description of the design and functionality of the Proposed Action is provided in *Section 1.4.1, Proposed CTA Roadways* and *Section 1.4.2, Proposed Off-CTA Roadways*.

1.4.1 Proposed CTA Roadways

The proposed roadway changes within the CTA (depicted in ***Exhibit 1-4***) would include the following improvements:

- **CTA South Terminal Zone:** Similar to the No Action, combines the existing Green and Blue Zones to create a single South Terminal Zone that serves the new T1 and expanded T4 via the Van Wyck Expressway. Changes from the No Action include roadway design modifications that would eliminate the need for drivers traveling to the T4 departures curb frontage to drive through the new T1 curb frontage to access the T4 departures curb frontage. It would also allow drivers leaving the new T1 departures curb frontage to exit the CTA more quickly by traveling on a roadway that connects directly to the Van Wyck Expressway. Thus, average vehicle miles traveled (VMT) within the Zone would be reduced from the No Action to the Proposed Action. These improvements would provide a more direct connection between these terminals and major highways and simplifies driver access to and from the CTA. Improved wayfinding (directional signs providing drivers with guidance information to access the terminals and exit the Airport) would be provided for the new roadways.

- **CTA North Terminal Zone:** Combines the existing Red, Yellow, and Orange Zones to create a single North Terminal zone that serves T5, Expanded T5, and T8 via the JFK Expressway. The improvement would provide a direct connection between these terminals and major highways and further simplify driver access to and from the CTA than the No Action by reducing the number of zones in the CTA North Terminal Zone from two to one. The No Action was originally designed for (1) maintaining the Red Zone; and (2) combining the Yellow and Orange Zones. Improved wayfinding will be provided for the new roadways.

- **GTC/JFK Central:** Constructs a smaller version of the GTC/JFK Central in two phases than that set forth in the No Action (or Proposed Action in the 2020 EA), reducing its footprint from 16 to 13.5 acres while maintaining parking capacity for 3,500 automobiles.

As described above, each terminal zone would be served by a dedicated existing highway (one existing highway linked to a single terminal zone). Linking a single existing highway to each terminal zone would minimize potential driver confusion and traffic congestion within the CTA by decreasing the number of opportunities to miss a turn and the need for drivers to recirculate within the CTA (see ***Exhibits 1-6a and 1-6b, Proposed CTA Roadways Circulation and GTC/JFK Central***).

The traffic within each terminal zone would be limited largely to vehicles heading to or leaving just the terminals located within that zone and would not include vehicles heading to or leaving terminals outside of that zone. Reducing the commingling of traffic within a zone would reduce traffic congestion by eliminating through traffic and reducing traffic volumes within a zone. In addition, a reduction in the number of terminal zones improves the quality of the network by reducing the number of CTA roadway loops from three (3) to two (2), resulting in a decrease in the total number of weaving and merging segments, and elevated road structures, as well as providing increased distance between decision points and intersections. This will result in an overall improved LOS and safer roadway network.

Under the Proposed CTA Roadways design, the number of driver decision points within the CTA at which a driver must make a decision about turns on the roadway would be reduced. Under the No Action, the CTA roadway network reduced the existing roadway decision points from 35 to 23. The Proposed CTA Roadways provides a further reduction in driver decision points from 23 to 17 when compared to the CTA roadway network proposed in the No Action. This significant reduction would be accomplished by shifting the initial terminal decision points[18] currently within the existing CTA roadway system to locations outside of the CTA. ***Exhibits 1-7a, Shift in Terminal Decision Points with the Off-CTA and CTA Roadways (Entering Airport)*** and ***1-7b, Shift in Driver Decision Points with the Off-CTA and CTA Roadways (Exiting Airport)*** highlights where a concentration of driver decision points are located for the existing roadway system versus the Proposed CTA Roadways.

In addition to the existing CTA roadway system having 35 driver decision points, the CTA's specific driver decision points for vehicles traveling inbound to JFK's terminals are in close proximity to each other. Presently, a driver within the existing CTA must decide where to turn while navigating oncoming traffic or turning movements from other vehicles several times along their journey, to reach their terminal destination with limited lead time among a number of directional signs that are placed in close proximity along the roadway. Reducing the number of CTA specific driver decision points and density of directional signage minimizes the number of opportunities for a driver to experience confusion. It would also reduce traffic congestion due to slower speeds or bottlenecks[19] associated with vehicles changing lanes or stopping or slowing down to make turning movements at signalized intersections. The shift in driver decision points to areas outside of the CTA is discussed further in *Section 1.4.2, Proposed Off-CTA Roadways*.

The Proposed CTA Roadways would result in a total of fourteen (14) areas where drivers must weave or merge with traffic, which is a reduction of five (5) total weave and merge areas from the No Action. Minimizing CTA traffic weaving and merging would reduce the potential for driver confusion and conflict points. The fewer the areas of weaving and merging traffic and traffic signals, the greater the opportunity to enhance traffic safety and traffic flow on the CTA roadways and the highways that connect to the Airport.

[18] A *terminal decision point* is a key point along the roadway where a driver needs to make a decision for the appropriate route to reach their desired terminal. Similarly, a *driver decision point* is a key point where a driver needs to make a decision for the appropriate route to reach their desired destination that is other than a terminal, such as remaining on the CTA roads, where to exit the Airport, etc. Whether it's a *driver decision point* or a *terminal decision point*, traffic flow tends to slow at these points as drivers consider their options for entering or exiting a roadway.

[19] A bottleneck is a narrow section of road or a junction that impedes traffic flow.

The Proposed CTA Roadways would reduce the number of elevated structures from twenty (20) to eight (8) in comparison to the roadway network proposed in the No Action (see ***Exhibit 1-8, Elevated Structures Within the CTA***). Thus, decreasing the number of additional elevated roadway structures that would need to be constructed, as well as associated bridging, decking and support columns.

A driver that inadvertently selects the wrong highway into the Airport (the Van Wyck Expressway or JFK Expressway) would be able to reach their destination in the CTA by utilizing on-Airport roadways that are outside of the CTA. For example, a driver who takes the JFK Expressway but needs to get to the South Terminal Zone could follow existing local airport roadways (i.e., S. Cargo Road, 148th Street, Cargo Plaza, Cargo Service Road, and the Direct Westbound Connection) to get to the Van Wyck Expressway to access the South Terminal Zone.

The on-Airport roadways outside of the CTA can be used to access different areas of the CTA and are referred to collectively as the Airport Inter-Terminal Route (AIR) (see ***Exhibit 1-9, Airport Inter-Terminal Route (AIR))***. In addition, as shown on ***Exhibit 1-9***, vehicles with origins or destinations internal to airport property that wish to travel by either the JFK Expressway or the Van Wyck Expressway may follow the AIR to reach their destination. New directional signs would be installed to direct drivers to their terminals via the AIR. The AIR would also be used in the event of an emergency or closure of either the Van Wyck Expressway or JFK Expressway; drivers would be directed to use the opposite expressway by a system of Permanent and Portable Variable Message Signs (PVMS).

The following provides a description of the key elements of the Proposed CTA Roadways evaluated in this Supplemental EA. To construct the Proposed CTA Roadways, some existing pavement and bridge structures within the CTA would be removed. Construction of the Proposed CTA Roadways would require the same building demolition evaluated in the 2020 EA.

Simplification of South Terminal Zone (New T1 and Expanded T4):

Unlike the proposed CTA Roadway network in the No Action, which maintained the existing connection between both the Van Wyck Expressway and JFK Expressway to and from the new T1 and expanded T4 (i.e., the South Terminal Zone), the Proposed CTA Roadways would provide all vehicular access to and from these terminals by just the Van Wyck Expressway. ***Exhibit 1-6a*** provides an overview of the ingress and egress routes between the Van Wyck Expressway and the arrivals and departures frontages of the new T1 and T4 (i.e., South Terminal Zone).

The modifications to the Proposed CTA Roadways' South Terminal Zone include removal of existing pavement and elevated roadway structures in the South Terminal Zone to accommodate the footprint of the new T1 and associated arrival and departure frontages of the new T1, as well as the new GTC/JFK Central. It would also include three elevated transitional roadways that travel adjacent to the zone of the new GTC/JFK Central. These design modifications would eliminate the need for drivers traveling to the T4 departures curb frontage to drive through the new T1 curb frontage to access the T4 departures curb frontage. It would also allow drivers leaving the new T1 departures curb frontage to exit the CTA more quickly by traveling on a roadway that connects directly to the Van Wyck Expressway. Thus, average vehicle miles traveled (VMT) within the South Terminal Zone would be reduced by

approximately six percent (or 5,500 VMT/day) in comparison to the CTA roadway network in the No Action due to a more direct travel route for drivers in the South Terminal Zone.

Simplification of North Terminal Zone (T5, Expanded T5, and T8):

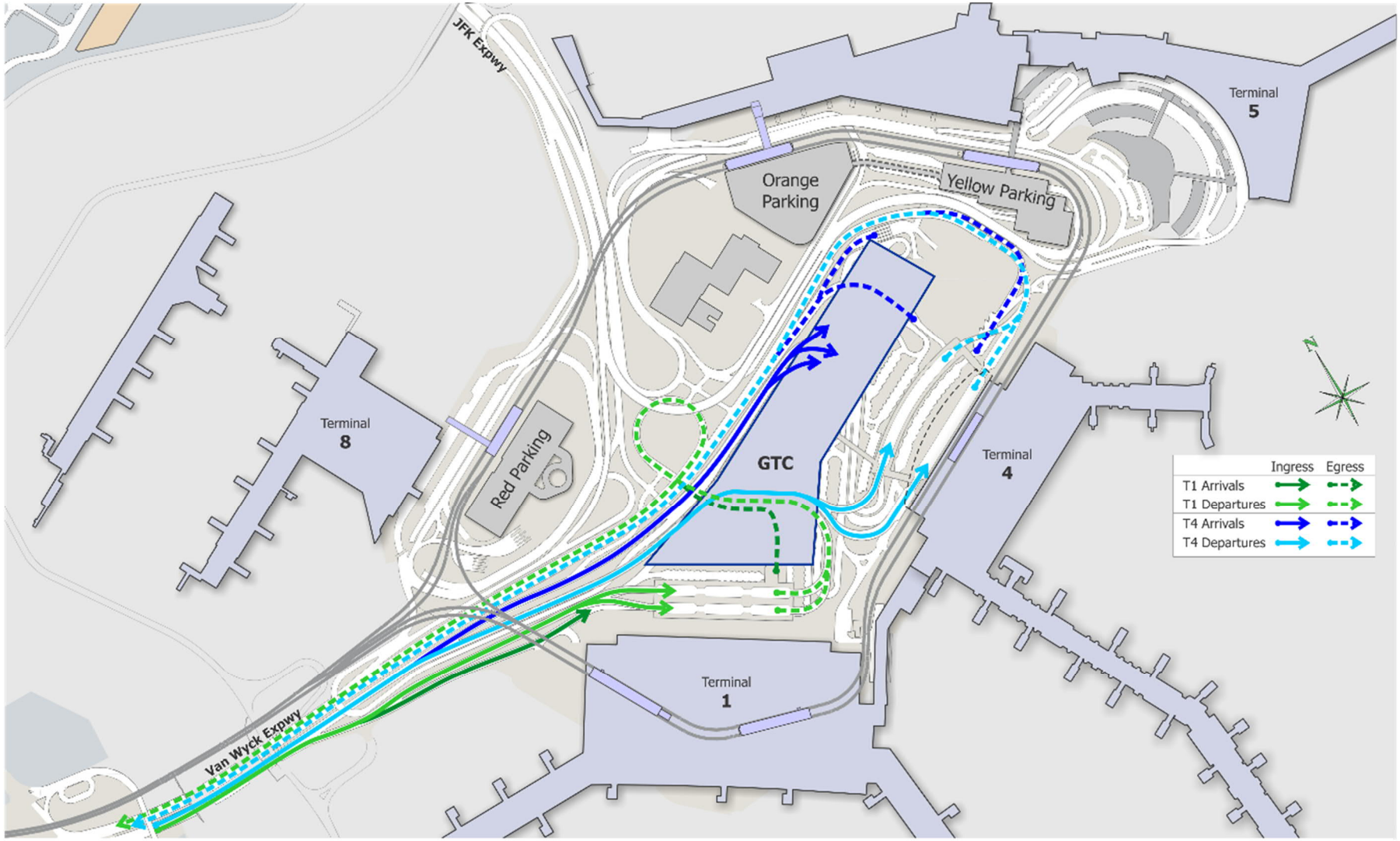
Unlike the CTA roadway network in the No Action, which maintained the existing connection between T5, T7 and T8 accessibility by either the Van Wyck Expressway or the JFK Expressway, the Proposed CTA Roadways provides a dedicated route for vehicles entering or exiting the North Terminal Zone by using the JFK Expressway. ***Exhibit 1-6b*** provides an overview of the ingress and egress routes between the JFK Expressway and the arrival and departure frontages of the terminals in the North Terminal Zone.

The JFK Expressway would provide a dedicated route for traffic to directly access the North Terminal Zone. Traffic destined for T5, Expanded T5 and T8 would use the JFK Expressway only and would not have to comingle with traffic destined for other terminals on the Airport. This configuration simplifies traffic flows within the CTA, because drivers would no longer have to contend with the added traffic volumes (or drivers) for vehicles accessing the South Terminal Zone, as that traffic would be dedicated to the Van Wyck Expressway. This simplification is the result of reducing vehicle weaving and merging areas within the CTA that would be necessary to separate traffic destined for new T1 and T4 frontages (i.e., South Terminal Zone).

Reduction of the Footprint of the GTC/JFK Central:

The footprint of the proposed GTC/JFK Central would be reduced from approximately 16 acres as set forth in the No Action to 13.5 acres. All other elements of the GTC/JFK Central concept remain consistent with the No Action. To maintain the same number of parking spaces as in the No Action (3,500 parking spaces), the Proposed Action would add parking spaces on the roof of the building.

EXHIBIT 1-6a **PROPOSED CTA ROADWAYS CIRCULATION AND GTC/JFK CENTRAL**
South Terminal Zone: Routing to/from Terminals 1 & 4 and Van Wyck Expressway



Source: Port Authority, Civil Engineering Department, 2022

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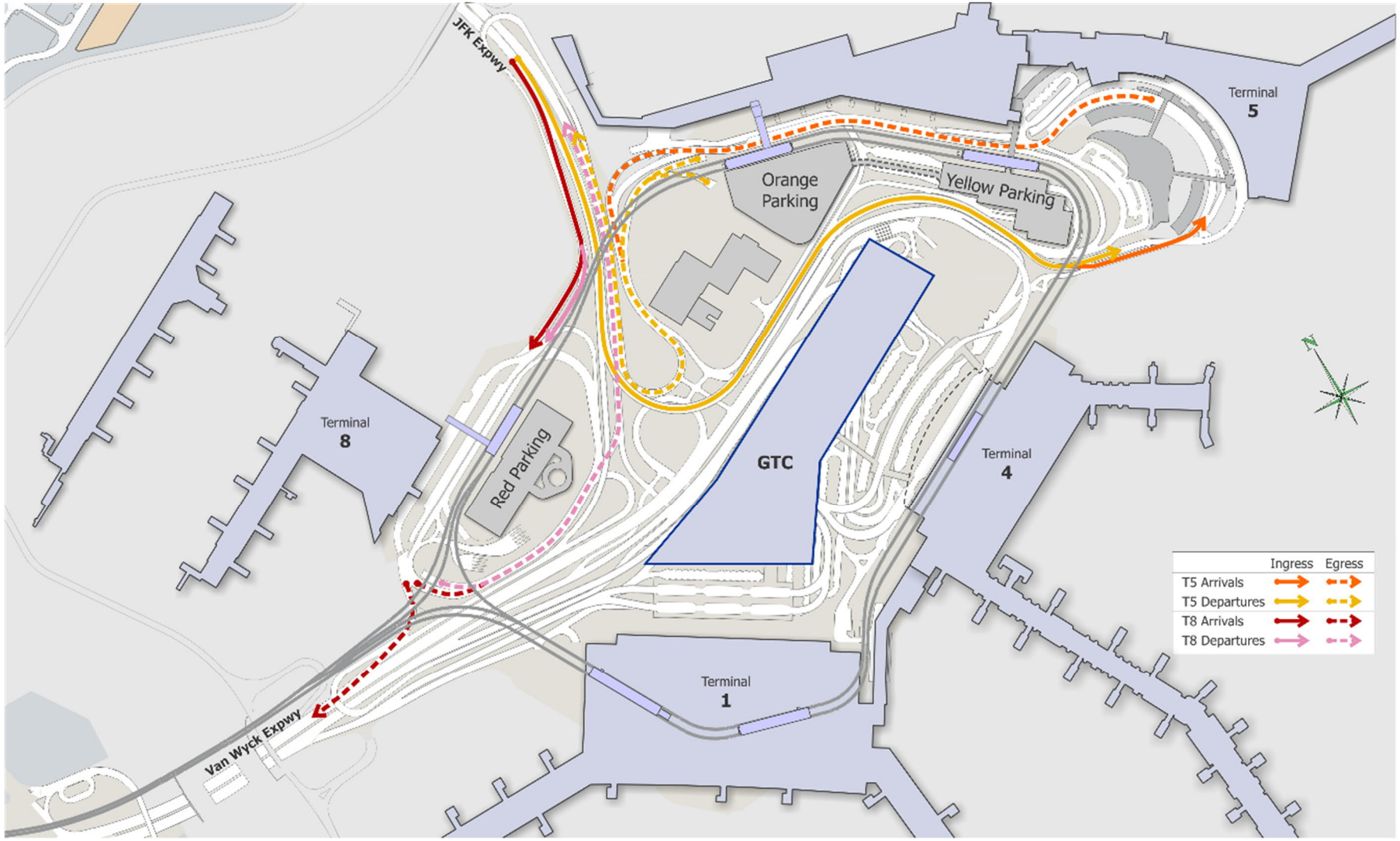
EXHIBIT 1-6b **PROPOSED CTA ROADWAYS CIRCULATION AND GTC/JFK CENTRAL**
North Terminal Zone: Routing to/from Terminals 5 & 8 and JFK Expressway



Source: Port Authority, Civil Engineering Department, 2022.

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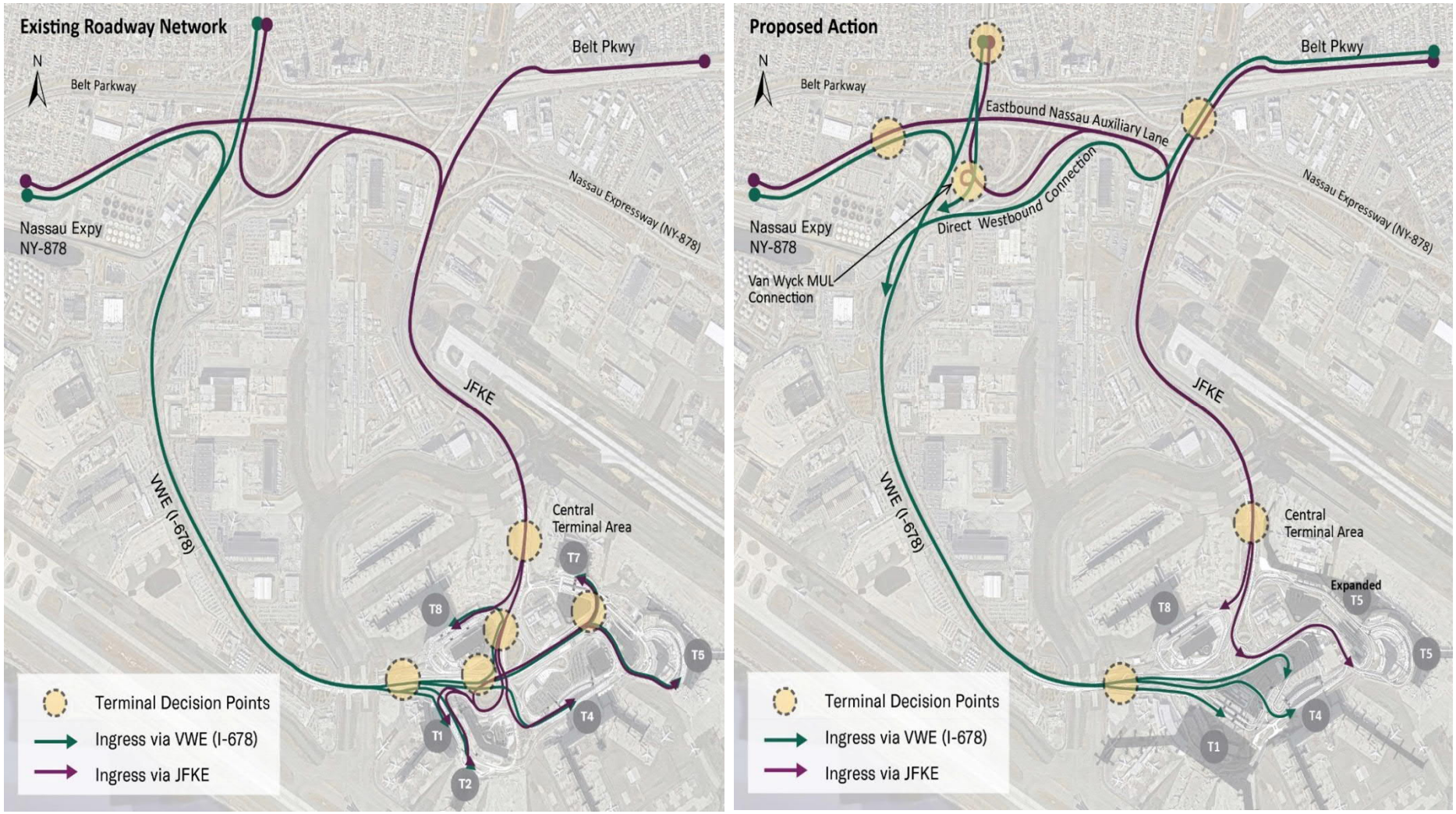
EXHIBIT 1-7a SHIFT IN TERMINAL DECISION POINTS[20] WITH THE OFF-CTA AND CTA ROADWAYS (ENTERING AIRPORT)
Points at which Drivers Traveling to the Airport Decide which Road to Take to Reach Their Terminal



Source: Port Authority, with edits by Mott MacDonald NY Inc., 2022.

[20] Terminal decision points shown above refers to a concentration of decision points where a driver needs to make a decision for the appropriate route to reach their desired terminal.

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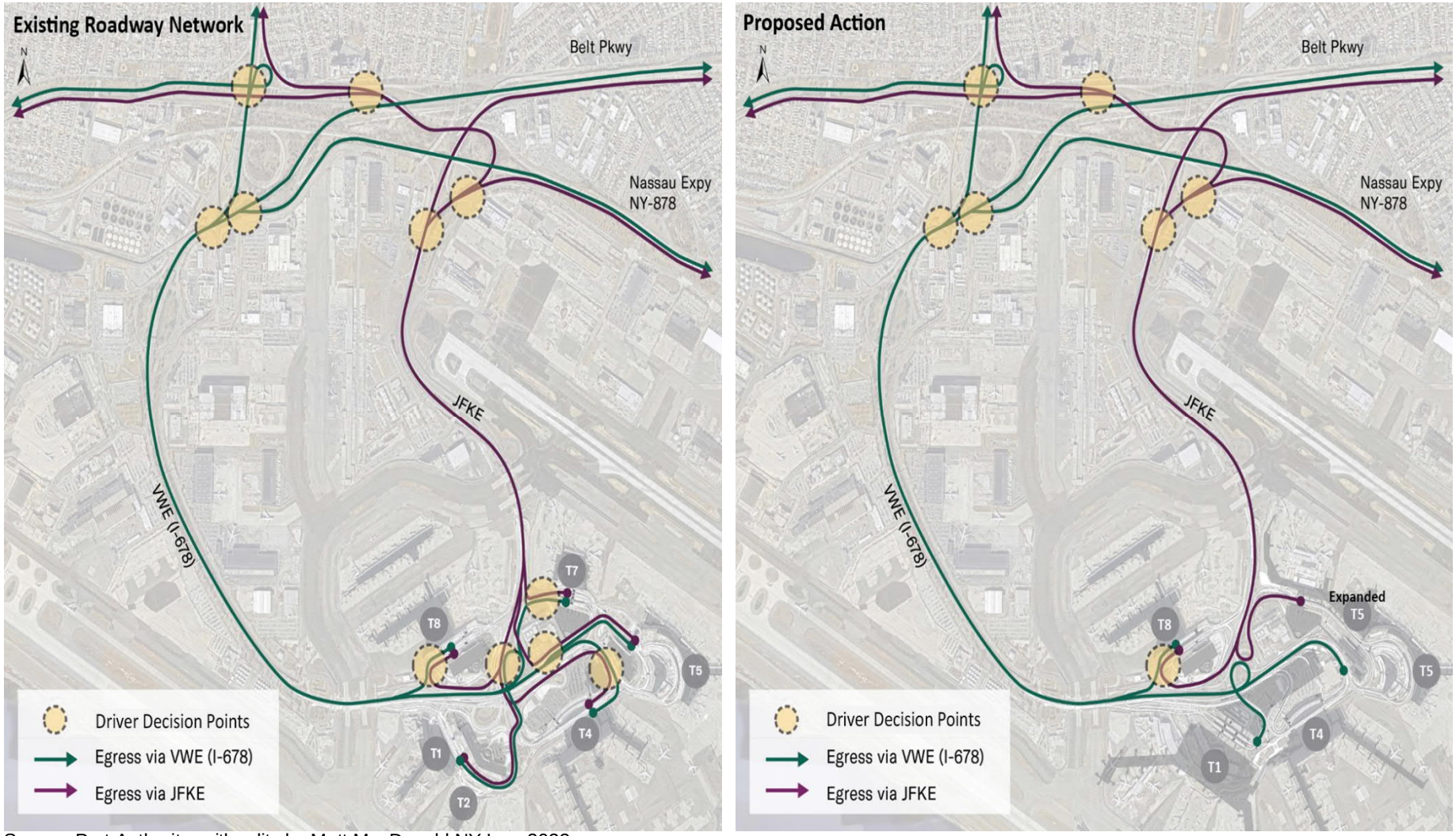
EXHIBIT 1-7b SHIFT IN DRIVER DECISION POINTS[21] WITH THE OFF-CTA AND CTA ROADWAYS (EXITING AIRPORT)
Points at which Drivers Leaving the Airport Decide which Road to Take to Reach Their Terminal



Source: Port Authority, with edits by Mott MacDonald NY Inc., 2022.

[21] Driver decision points is a key point where a driver needs to make a decision for the appropriate route to reach their desired destination that is other than a terminal, such as remaining on CTA Roads or exiting the Airport.

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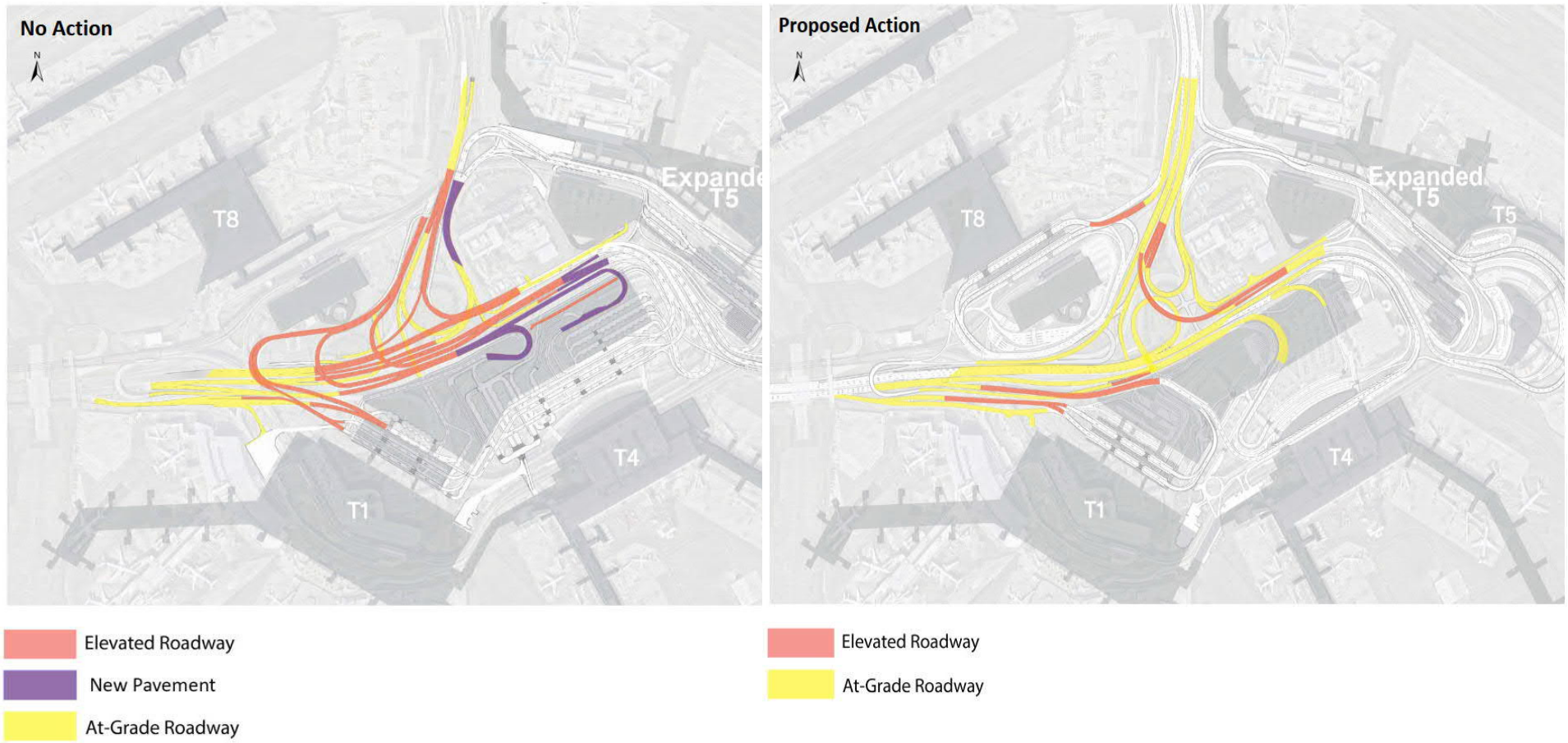
EXHIBIT 1-8 ELEVATED STRUCTURES WITHIN THE CTA



Source: Port Authority, with edits by Mott MacDonald NY Inc., 2022.

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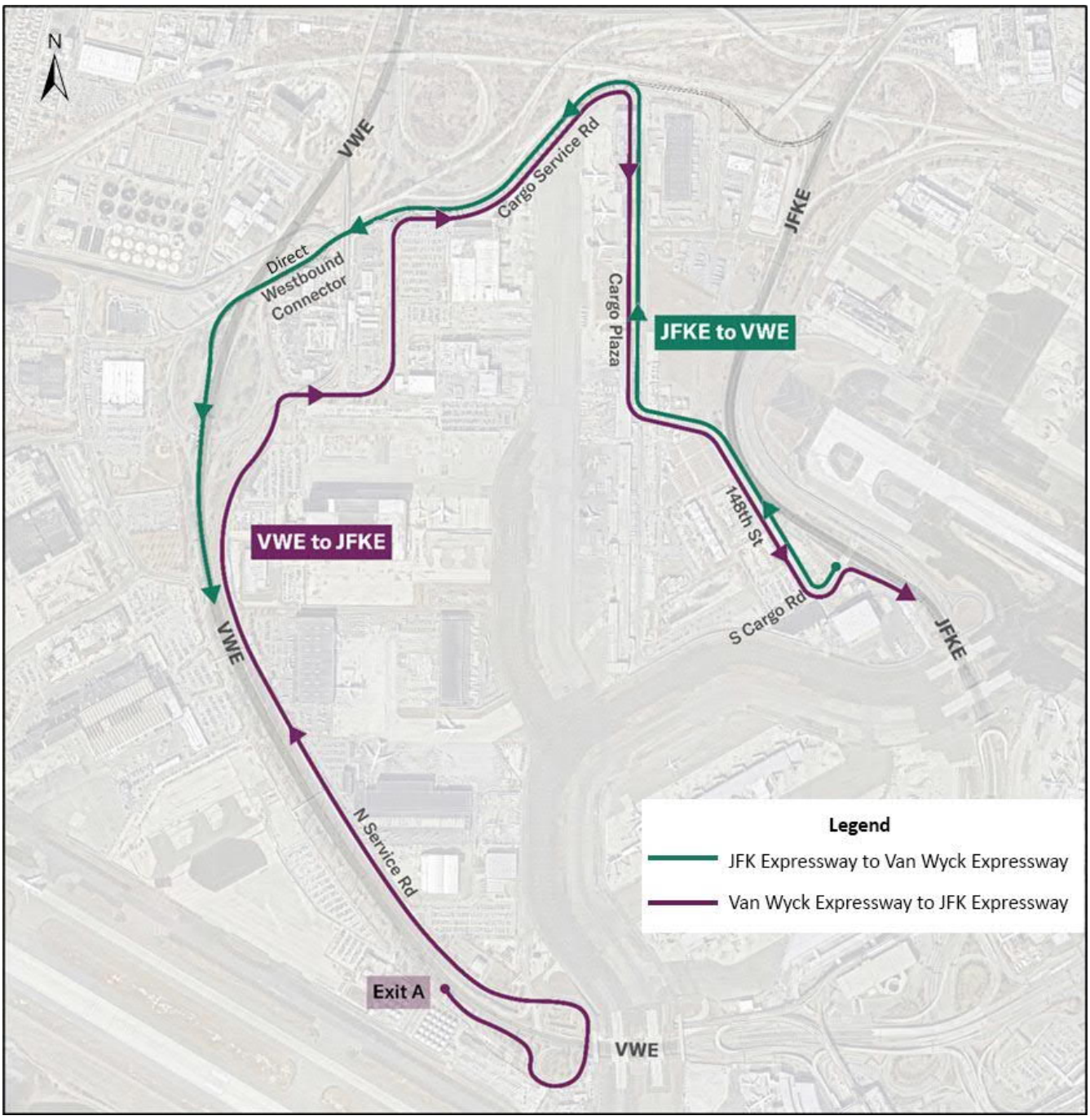
EXHIBIT 1-9 **AIRPORT INTER-TERMINAL ROUTE (AIR)**
On-Airport Vehicle Recirculation between the JFK Expressway and the Van Wyck Expressway and North and South Terminal Zones



Source: Port Authority, Transportation Project Report, *Draft Access Modification Report* - Eastbound MUL Loop Ramp, Nassau Expressway Widening, and Westbound Direct Connection Operational Improvements, 2022

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1.4.2 Proposed Off-CTA Roadways

The Proposed Off-CTA Roadways are located at the Airport property line, bounded by Federal Circle and the Van Wyck Expressway to the west and the JFK Expressway to the east. The Proposed Off-CTA Roadways consists of the following improvements:

- Direct Westbound Connection (JFK Expressway to the Van Wyck Expressway)
- Van Wyck MUL Loop Ramp (Van Wyck to Eastbound Nassau Auxiliary Lane)
- Eastbound Nassau Auxiliary Lane (to the JFK Expressway)
- Off-Airport Signage

The Proposed Off-CTA Roadways would enhance access to the Airport, even for those driving to the Airport for the first time, by providing more direct routes and reduced overall average daily VMT per vehicle. According to a Port Authority analysis, if the Proposed Off-CTA Roadways are not implemented when the Proposed CTA Roadways become operational, network-wide driver travel times are projected to increase by 67% because of key roadway sections experiencing gridlock. With the addition of the Proposed Off-CTA Roadways, overall driver travel times are projected to improve over existing roadway conditions and are approximately 8% less than the No-Build existing condition (see ***Appendix G, Draft Access Modification Report***).[22] A description of the Proposed Off-CTA Roadways traffic circulation is provided in ***Exhibit 1-10, Proposed Off-CTA Roadways Traffic Flow*** and ***Exhibit 1-11, Proposed Off-CTA Roadways - Overview*** provides a description of the Proposed Off-CTA Roadway elements.

It should be noted that the NYSDOT has initiated the *Van Wyck Expressway (VWE) Capacity and Access Improvements to JFK Airport.* This project is designed to improve access to the Airport from the Kew Gardens Interchange to the north to JFK. Although the *Van Wyck Expressway (VWE) Capacity and Access Improvements to JFK Airport* and the Proposed Off-CTA Roadways will complement each other, they are separate projects that are not dependent upon each other. The Proposed Off-CTA Roadways has independent utility from the *VWE Capacity and Access Improvements to JFK Airport* construction project. The VWE construction project was developed before the Proposed Off-CTA Roadways was conceived and independently from the Proposed Off-CTA Roadways. The Proposed Off-CTA Roadways could function without the *VWE Capacity and Access Improvements to JFK Airport* construction project as connections to the Van Wyck Expressway could be made at locations other than the construction project's MUL while achieving the Purpose and Need of the Proposed Off-CTA Roadways (see Chapter 3 of this Supplemental EA). Further, modeling results contained in Table 4 of ***Appendix G, Draft Access Modification Report*** clearly demonstrate that along key routes on the Van Wyck Expressway, Belt Parkway, Nassau Expressway, and JFK Expressway, travel times remain largely unchanged between the Proposed Action and existing conditions regardless of whether each project individually is constructed.

Each project has a unique set of identified needs that meet the discrete purpose and objectives established for each of their respective projects. Although the VWE Capacity and Access Improvements to JFK Airport and the Proposed Project are geographically proximate, they are not dependent upon each other. Neither project would meet the purpose and objectives of the other and they could proceed prior to, concurrently with, or subsequent to the completion of the other. In addition to demonstrating the operational independence of the *VWE Capacity and Access Improvements to JFK Airport* construction project and the Proposed Off-CTA Roadways,

[22] Port Authority, Transportation Project Report, Draft Access Modification Report - *Eastbound MUL Loop Ramp, Nassau Expressway Widening, and Westbound Direct Connection Operational Improvements*, 2022, Section 3.2.

the Purpose and Need for the two projects is consistent and does not conflict with each other (see ***Appendix G, Draft Access Modification Report*** for the Purpose and Need of the *VWE Capacity and Access Improvements to JFK Airport* construction project). Therefore, the Proposed Project will not dimmish the design objectives of the *VWE Capacity and Access Improvements to JFK Airport* construction project.

Direct Westbound Connection: The Direct Westbound Connection would include a new one-lane westbound ramp from the JFK Expressway at the Airport boundary that merges with Cargo Service Road north of Building 89 (see ***Exhibit 1-11a, Proposed Off-CTA Roadways, Direct Westbound Connection***). The Direct Westbound Connection would be situated on airport property and consist of a new single, at-grade westbound lane that extends north of the Federal Circle AirTrain Station, connecting to a new elevated roadway that would pass over the Van Wyck Expressway at Federal Circle interchange before turning south and merging with the southbound Van Wyck Expressway. The length of the Direct Westbound Connection, including Cargo Service Road, would be approximately 1.2 miles. Signage on the JFK Expressway would be installed to guide drivers heading to the South Terminal Zone to the Direct Westbound Connection. Underground and overhead utilities would be relocated as needed to accommodate the additional pavement.

The Direct Westbound Connection would provide access from the JFK Expressway (westbound Belt Parkway's Exit 20) to the Van Wyck Expressway so that vehicles traveling westbound on the Belt Parkway can access the South Terminal Zone. Providing a direct route from the JFK Expressway to the Van Wyck Expressway, the Direct Westbound Connection would minimize VMT compared to the existing roadway configuration.

As discussed above, the following two elevated roadways (connector bridges) would be constructed to facilitate elevation changes along the Direct Westbound Connection (see ***Exhibit 1-11, Proposed Off-CTA Roadways - Overview***):

- **Connector Bridge from JFK Expressway to On-Airport Cargo Service Road:** New westbound elevated connector bridge from JFK Expressway over the Eastbound Nassau Expressway and 150th Street, joining a widened on-Airport Cargo Service Road.
- **Connector Bridge from On-Airport Cargo Service Road to Van Wyck Expressway:** New westbound elevated connector bridge from the widened on-Airport Cargo Service Road to the southbound Van Wyck Expressway to access destinations in the South Terminal Zone. The connector bridge would traverse through a portion of the Avis Car Rental lease area (see *Section 1.4.4, Areas Affected by the Proposed Off-CTA Roadways* for additional information).

Final design and construction of these structures would require coordination with NYSDOT and FHWA (as applicable) and is discussed in ***Appendix G, Draft Access Modification Report*** in this Supplemental EA.

The Airport property runs along the north side of existing 147th Street, Cargo Service Road, and Rental Car North Road. Construction of the Direct Westbound Connection on Airport property would require the realignment of 147th Avenue and Rental Car North Road (see ***Exhibit 1-11***).

The 147th Avenue realignment would require realignment of 147th Avenue itself, 147th Street, and Cargo Service Road. The existing 147th Avenue would be shifted approximately 125 feet north (between 147th Street and 148th Street) to reduce the existing curvature of the roadway as it aligns with the existing 147th Street, thereby straightening the alignment between 147th

Avenue and 147th Street. As the realignment continues west, 147th Street would shift south of the existing 147th Street and Cargo Service Road. This realignment would accommodate the Direct Westbound Connection immediately north of 147th Street and 147th Avenue, just east of where it merges with the existing Cargo Service Road (proximate to Building 87) (see ***Exhibit 1-11***). The proposed realignment of 147th Street provides for two westbound and two eastbound lanes, which is the same number of lanes as the existing 147th Street, as it merges with the Direct Westbound Connection, and continues to provide two westbound and two eastbound lanes as the realignment merges with existing Cargo Service Road.

The Direct Westbound Connection would also require realignment of a portion of Rental Car North Road south of its existing location, adjacent to the Direct Westbound Connection, as the Direct Westbound Connection continues under the AirTrain before turning south and merging with the southbound Van Wyck Expressway. Proposed improvements in this area would also include a new roadway connection under the AirTrain near the Federal Circle northern bus loop to facilitate circulation for car rental customers without impacting the Port Authority shuttle bus pick-up area adjacent to the Federal Circle AirTrain Station.

Van Wyck Managed Use Lane Loop Ramp (Van Wyck MUL[23] Loop Ramp): The proposed Van Wyck MUL Loop Ramp consists of a new loop ramp that would connect the Van Wyck Expressway MUL (the MUL is being constructed as part of a separate project referred to as the NYSDOT's *VWE Capacity and Access Improvements to JFK Airport* construction project[24]) to the Eastbound Nassau Auxiliary Lane (described below) (see ***Exhibit 1-11b Proposed Off-CTA Roadways, Van Wyck MUL Loop Ramp and Eastbound Nassau Auxiliary Lane***). The Van Wyck Expressway MUL is primarily a High-Occupancy Vehicle (HOV) lane. Currently, the Van Wyck Expressway MUL will run south, parallel to the existing Van Wyck Expressway, but will provide no egress for vehicles to exit and access the North Terminal Zone. The proposed Van Wyck MUL Loop Ramp would allow vehicles traveling southbound on the Van Wyck Expressway MUL to exit to the Eastbound Nassau Auxiliary Lane and ultimately reach the North Terminal Zone by merging with the southbound JFK Expressway.

Without the MUL Loop Ramp and the Eastbound Nassau Auxiliary Lane, vehicles traveling south on the Van Wyck Expressway MUL heading to the Airport would not be able to directly access the North Terminal Zone and would be required to use local airport roads to access T5, Expanded T5, and T8. The Van Wyck Expressway MUL would only provide direct access to the South Terminal Development. Underground and overhead utilities would be relocated as needed to accommodate the MUL Loop Ramp.

Eastbound Nassau Auxiliary Lane: The Eastbound Nassau Auxiliary Lane is designed to accommodate increased inbound traffic from points west (via the Belt Parkway and Eastbound Nassau Expressway) and points north (via the Van Wyck Expressway) bound for the North Terminal Zone by adding an additional lane on the existing eastbound Nassau Expressway. The

[23] A Managed Use Lane is a highway lane that is operated by applying capacity management measures, such as lane use restrictions or variable tolling, to optimize traffic flow, vehicle throughput, or both. The proposed managed use lane on the Van Wyck Expressway, as part of the *Van Wyck Expressway Capacity and Access Improvements to JFK Airport Project*, will be primarily a High Occupancy Toll (HOT) lane and high-occupancy vehicle (HOV) lane, managed by the NYSDOT. The concept will require the collection of tolls by the NYSDOT for some or all the vehicles that would use the HOT lane. The Van Wyck MUL Loop Ramp would allow drivers on the MUL to access the Eastbound Nassau Expressway with access to either eastern Long Island or the North Terminal Development.

[24] The southbound Van Wyck Expressway is proposed as part of the NYSDOT's Van Wyck Expressway (VWE) Capacity and Access Improvements to JFK Airport construction project.

Van Wyck Expressway MUL traffic will access the North Terminal Zone via the Van Wyck MUL Loop Ramp, which would connect to the existing Nassau Expressway Ramp and the Eastbound Nassau Auxiliary Lane. As part of this proposed project, the pavement for the existing Nassau Expressway Ramp would be rehabilitated and shoulders widened to accommodate the additional traffic from the proposed southbound Van Wyck Expressway MUL. Underground and overhead utilities would be relocated as needed to accommodate the additional pavement.

The proposed Eastbound Nassau Auxiliary Lane would widen the existing Nassau Expressway by adding a new continuous lane from the eastbound Nassau Expressway ramp to the southbound JFK Expressway (see ***Exhibit 1-11b Proposed Off-CTA Roadways, Van Wyck MUL Loop Ramp and Eastbound Nassau Auxiliary Lane***). The auxiliary lane would enhance traffic flow along the Nassau Expressway for current and projected traffic volumes by providing additional capacity. The length of the pavement widening is approximately 0.5 miles between the Van Wyck Expressway and JFK Expressway.

The addition of the auxiliary lane to the eastbound Nassau Expressway would change the segment weaving section from a Type A weave (one-lane on-ramp, auxiliary lane, one-lane off-ramp) to a Type B weave (two-lane on-ramp, auxiliary lane, two-lane off-ramp). This proposal would be supported through the provision of enhanced guide signs. A safety benefit is expected when converting from a Type A weave to a Type B weave. In the Type B weave, there would be only one potential conflict point since a merging maneuver can be made without a lane change while a diverging vehicle will make at least one lane change. The Type A weave has two potential conflict points as every merging or diverging vehicle must make at least one lane change. The proposed improvements are expected to result in a 28% crash reduction as per the NYSDOT Post Implementation Evaluation System (PIES) crash reduction factors. The existing crash rate for the Nassau Expressway is 2.19 crashes/million vehicle miles (MVM), which is higher than the State average of 1.41 crashes/MVM for an urban mainline segment with junctures.[25] Additional information about the safety benefit associated with the Eastbound Nassau Auxiliary Lane is provided in ***Appendix G, Draft Access Modification Report*** in this Supplemental EA.

Off-Airport Signage: The Proposed Off-CTA and CTA Roadways create decision points for the North and South Terminal Zones outside of the CTA and off-Airport.

As stated in Section 1.5 of ***Appendix G, Draft Access Modification Report***, an operational and safety analysis concluded that the proposed change in access, due to the Proposed Action, does not have a significant adverse impact on the safety and operation of the VWE including mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad or on the local street network, based on both the current and the planned future traffic projections. This will be supported by terminal directory signs in advance of the decision points, along the Van Wyck Expressway, JFK Expressway, and Nassau Expressway. The proposed Off-CTA signage will revise directional signage for passengers accessing the CTA terminals. Power and communications will be provided to facilitate lighting and dynamic signs (providing real time traffic information) as needed.

Guide sign plans have been developed to accompany the proposed geometric access modifications to ensure safe, convenient, and efficient access to all airport terminals. The

[25] Port Authority, Transportation Project Report, Draft Access Modification Report - *Eastbound MUL Loop Ramp, Nassau Expressway Widening, and Westbound Direct Connection Operational Improvements*, 2022.

signing plan incorporates all key decision points to direct Airport customers to their appropriate terminal and non-airport related decision points. The conceptual signing plans for the off-Airport signage are provided in ***Appendix D, Traffic Report*** in this Supplemental EA. Additional information about the off-Airport signage is provided in ***Appendix G, Draft Access Modification Report*** in this Supplemental EA.

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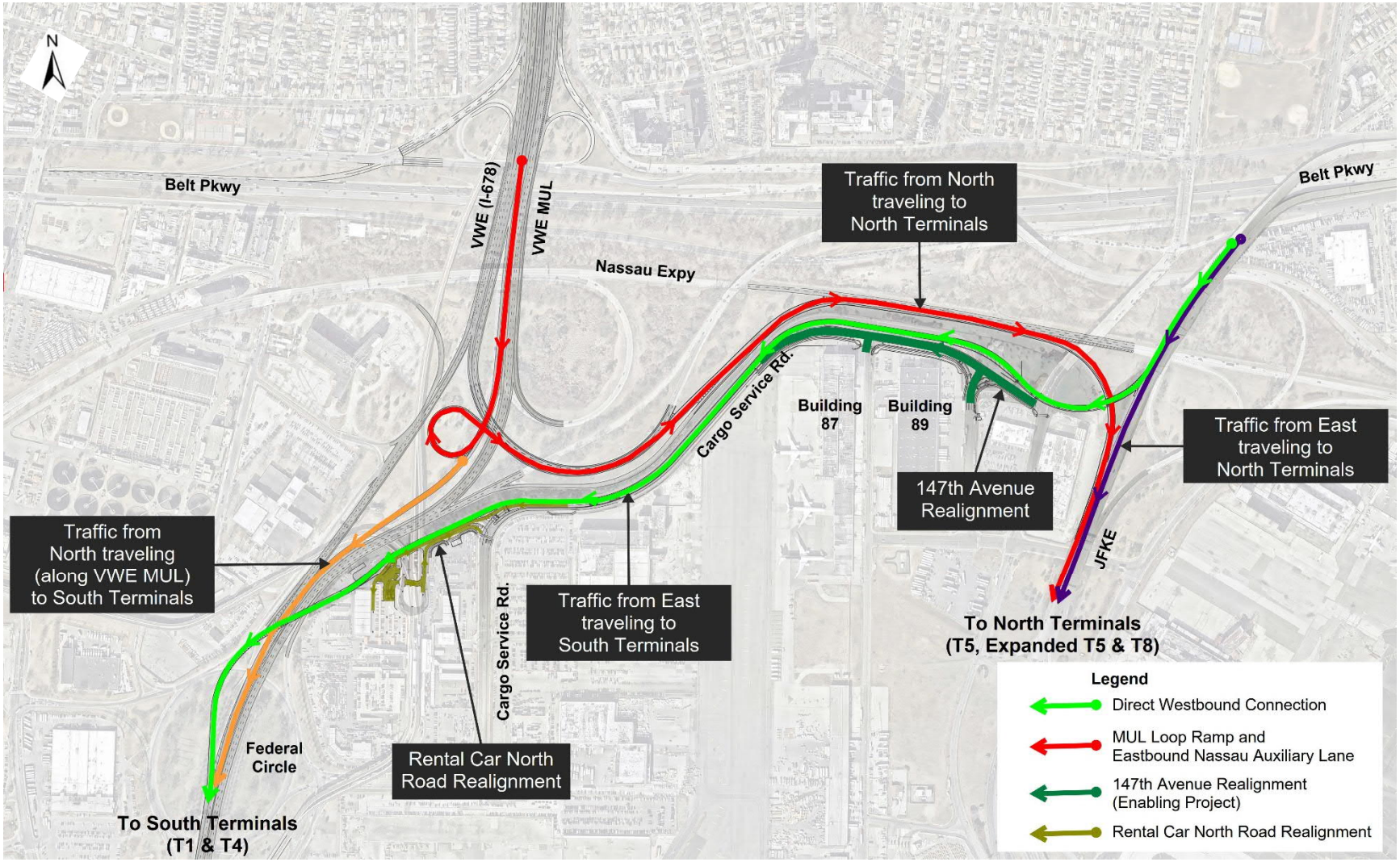
EXHIBIT 1-10 PROPOSED OFF-CTA ROADWAYS TRAFFIC FLOW



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2022

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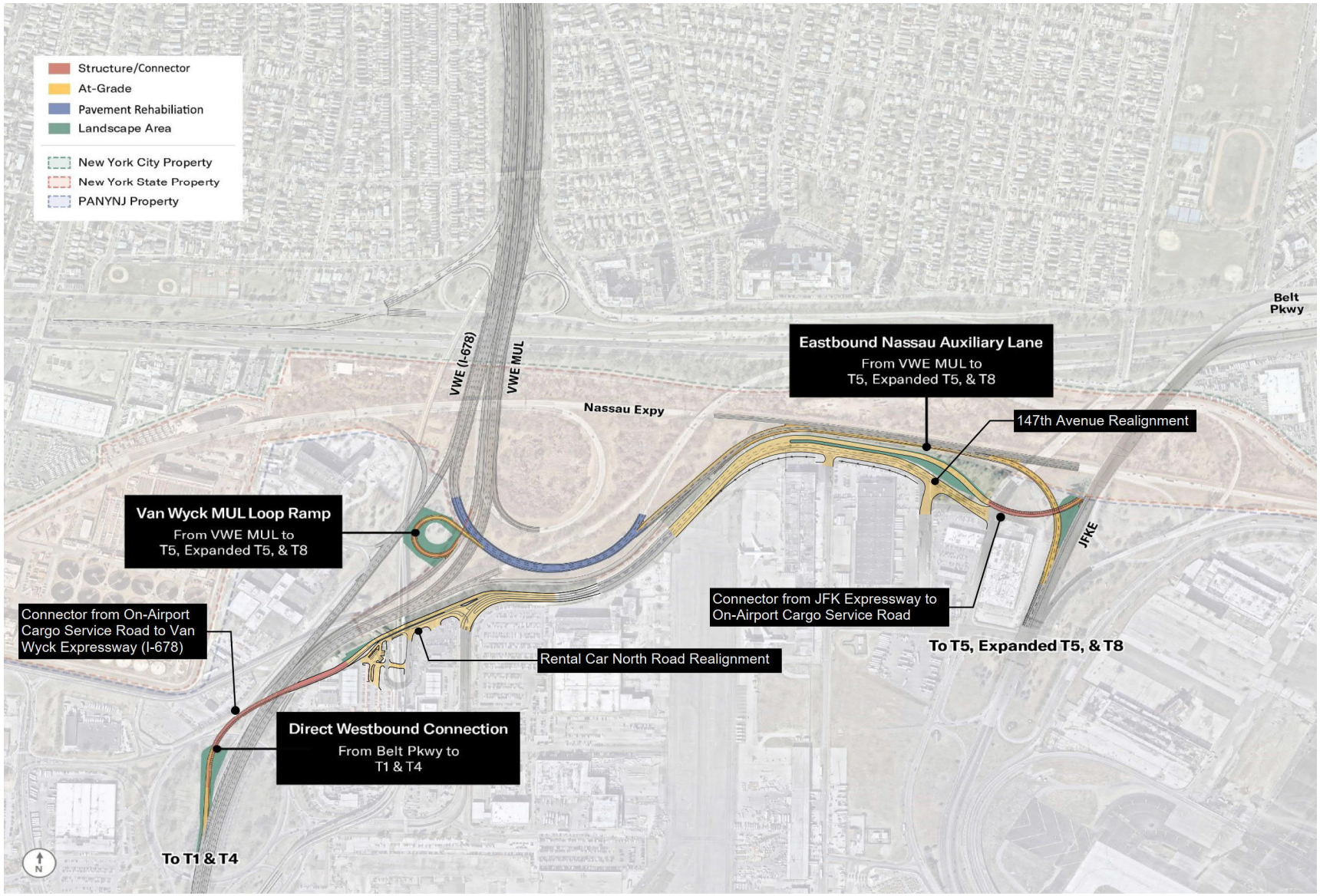
EXHIBIT 1-11 PROPOSED OFF-CTA ROADWAYS - OVERVIEW



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2021.

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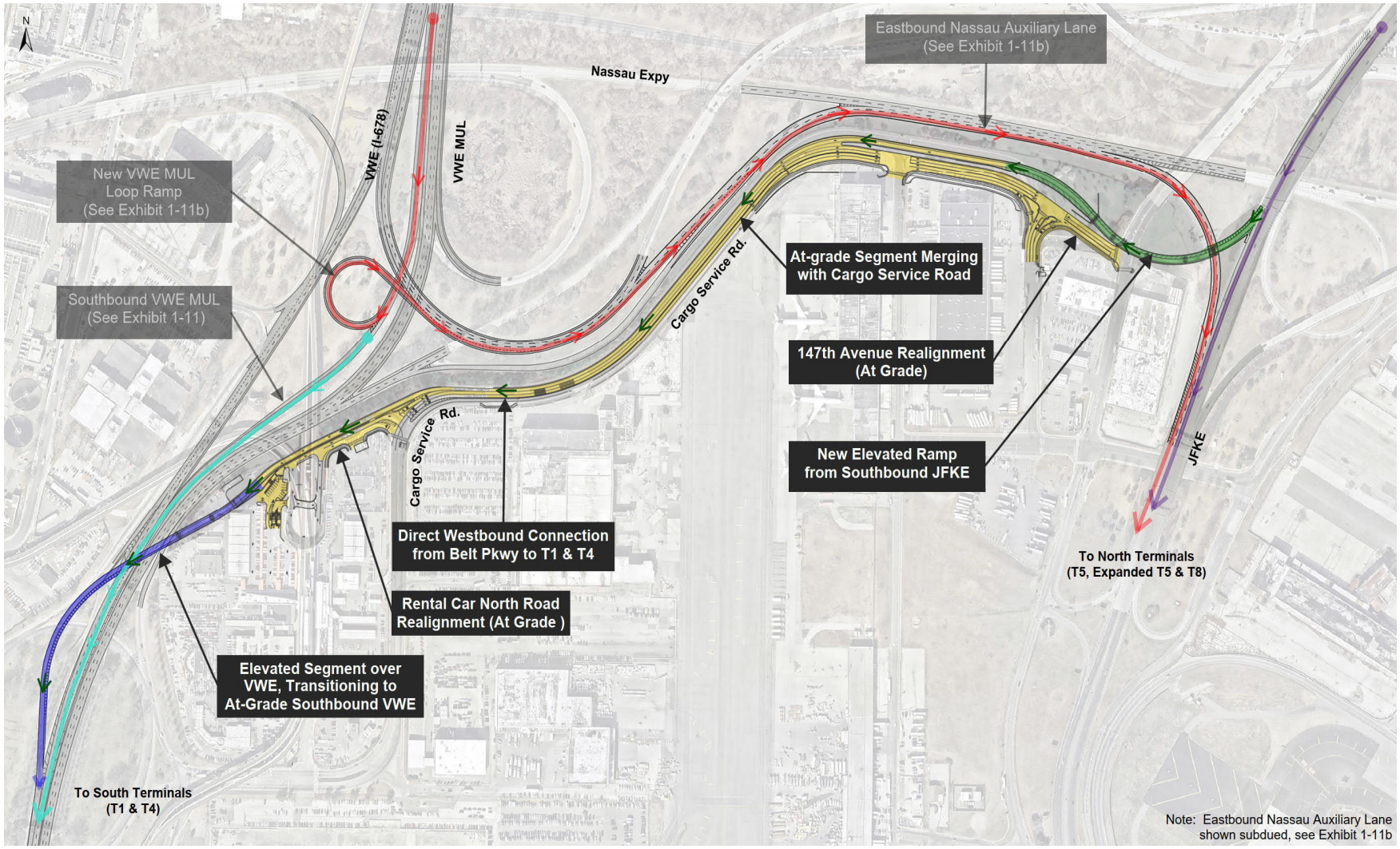
EXHIBIT 1-11a **PROPOSED OFF-CTA ROADWAYS**
Direct Westbound Connection



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2022.

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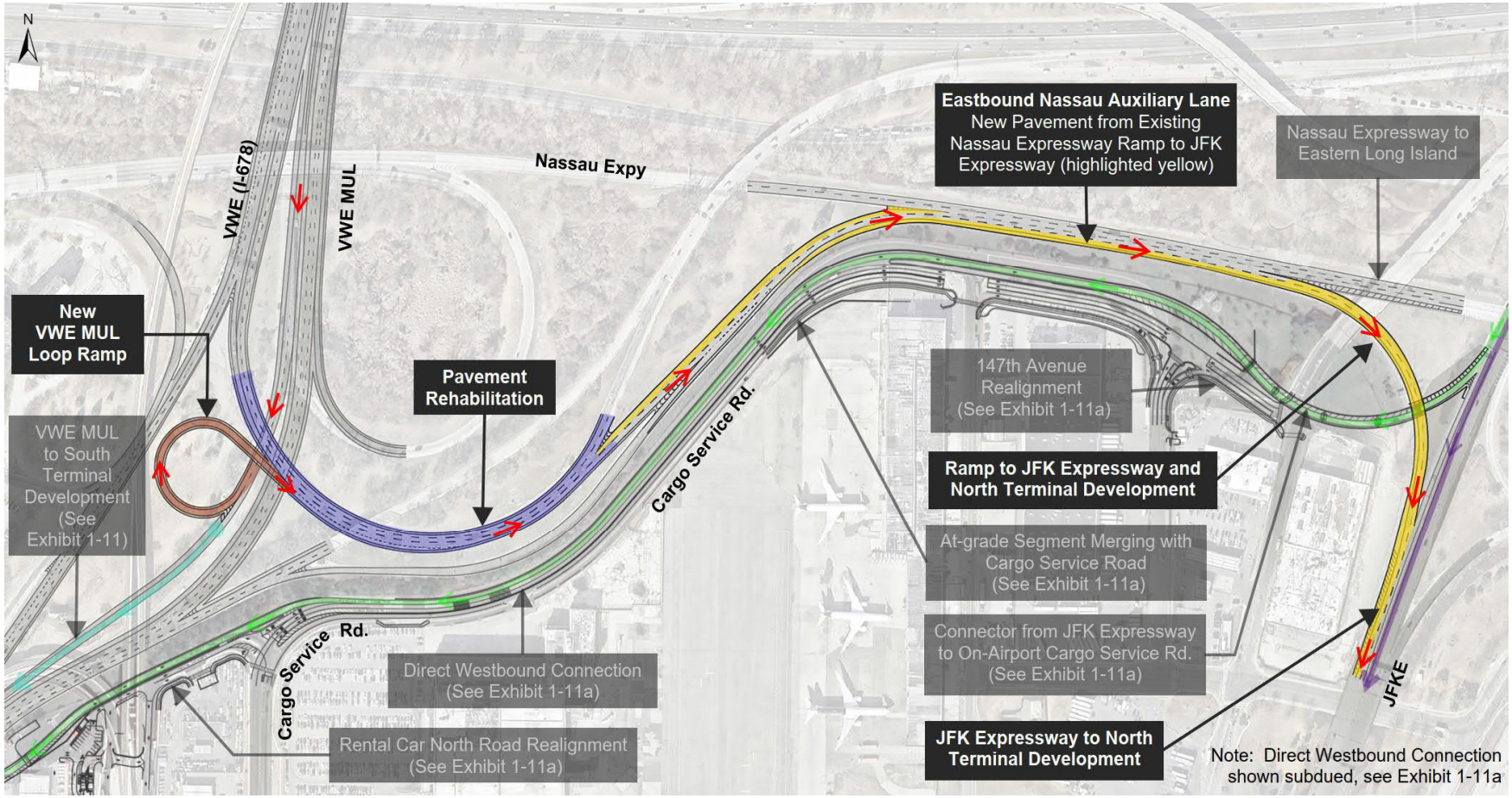
EXHIBIT 1-11b **PROPOSED OFF-CTA ROADWAYS**
Van Wyck MUL Loop Ramp and Eastbound Nassau Auxiliary Lane



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2022.

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1.4.3 Comparison of the No Action and Proposed Action

Table 1-1, Comparison of the No Action and Proposed Action summarizes and compares the CTA roadway network proposed in the No Action to the Proposed Off-CTA and Proposed CTA Roadways in this Supplemental EA, along with the proposed changes to the GTC/JFK Central. For additional detail regarding these changes refer to *Section 1.4, Description of the Proposed Action* in this Supplemental EA.

TABLE 1-1 COMPARISON OF THE NO ACTION AND PROPOSED ACTION
John F. Kennedy International Airport

Characteristic	No Action	Proposed Action
CTA Roadway Design		
Terminal Zones For additional detail, refer to *Section 1.2, Project Location and Section 1.4, Description of the Proposed Action*	Reduce # of terminal zones from 5 to 3. • Combine the existing Green Zone and Blue Zone roadway network to create a new South Terminal Zone roadway network to serve the proposed new T1 and expanded T4. • Combine the existing Yellow Zone and Orange Zone roadway network to create a new North Terminal Zone roadway network to serve T5 and the proposed Expanded T5. • Existing T8 roadway network (Red Zone) remains unchanged.	Reduce # of terminal zones from 3 to 2 among South and North Terminal Developments: • Combine the existing Green Zone and Blue Zone roadway network to create a new South Terminal Zone roadway network to serve the proposed new T1 and expanded T4 (North Terminal Zone). • Combine the existing Red, Yellow, and Orange Zone roadway network to create a new North Terminal Zone roadway network to serve T5, Expanded T5, and T8 (South Terminal Zone).
Traffic Flow (Total Areas of Weaving and Merging Roadway Segments)	19 total segments of weaving and merging traffic	14 total segments of weaving and merging traffic
Roadway Complexity	20 new elevated structures (i.e., additional elevated roadway structure and associated bridging, decking and support columns)	8 new elevated structures
Design	Roadway sections with substandard road geometry (radius and width).	Reduction in the # of roadway sections with substandard road geometry (radius and width).
Driver Decision Points Within the CTA	23 driver decision points (areas where drivers must change lanes, exit, etc.)	17 driver decision points, with a reduction in the density of directional signage
Signalized Intersections	8 signals	Longer interval between signalized intersections (8 signals) to improve LOS.

Characteristic	No Action	Proposed Action
Ground Transportation Center (GTC / JFK Central) Design		
Footprint	16 acres	13.5 acres
Parking Spaces	3,500	3,500
Other		
Off-CTA Roadways Design	No proposed changes to roadways outside of the CTA	Through coordination with the NYSDOT, a more intuitive and direct roadway connection for drivers coming to and leaving the CTA. Refer to Section 1.4.2 for a detailed description of the changes to the Off-CTA Roadways.
Daily Vehicle Miles Traveled (VMT), Airport-Bound Trips	Average daily VMT in the first year of operation is approximately 771,000 VMT for airport-bound trips.	Average daily VMT in the first year of operation is approximately 765,000 VMT for airport-bound trips; a net benefit by providing more direct connections.

1.4.4 Areas Affected by the Proposed Off-CTA Roadways

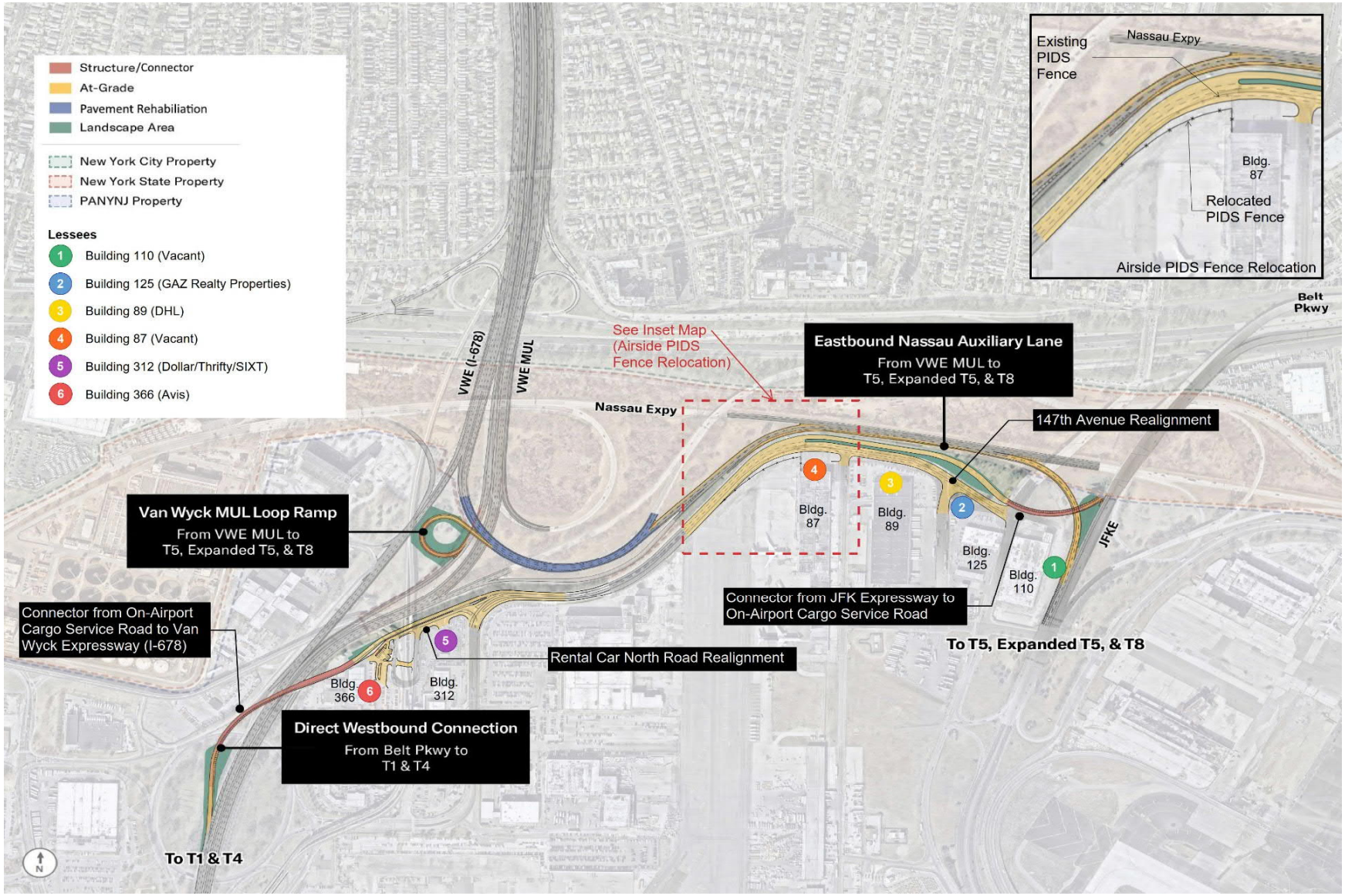
Implementation of the Proposed Off-CTA Roadways is expected to impact six areas. These areas are adjacent to the following roadways:

- 147th Street (on-Airport)
- 147th Avenue
- Cargo Service Road
- Rental Car North Road

The impacts, all on Airport property, result from the relocation of portions of 147th Street, 147th Avenue, Cargo Service Road and Rental Car North Road, and involve the removal of existing paved areas within areas leased by the Port Authority, and the repositioning of a portion of the Airport's Perimeter Intrusion Detection System (PIDS)[26] fence line (see ***Exhibit 1-12, Areas Affected by the Proposed Off-CTA Roadways***). There will be no direct impacts to tenant buildings. The Port Authority will coordinate construction activities with each affected tenant to minimize business disruptions.

[26] PIDS is a technology-based system that is used to monitor the perimeter fence at JFK. The purpose of the system is to detect and prevent unauthorized access onto secure areas of JFK.

EXHIBIT 1-12 AREAS AFFECTED BY THE PROPOSED OFF-CTA ROADWAYS



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2022.

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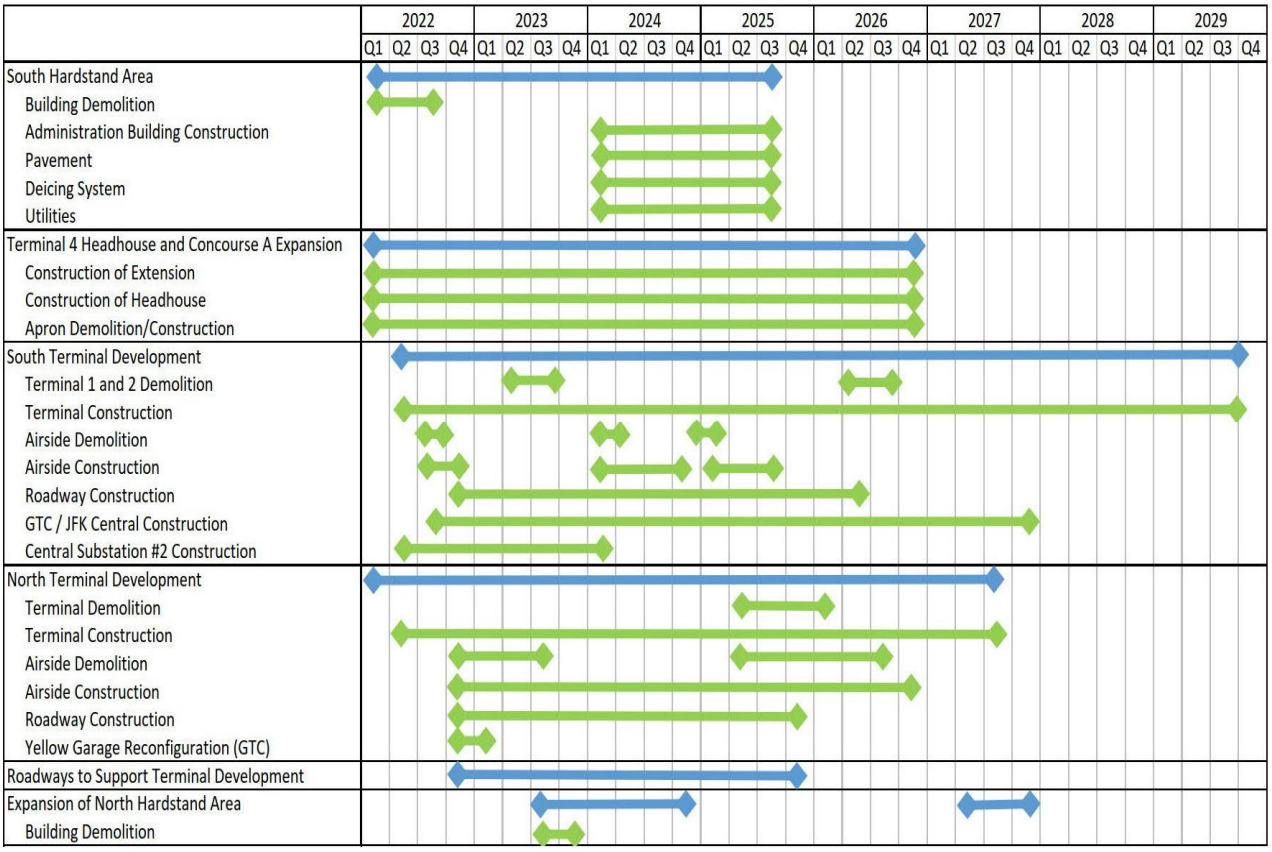
1.5. Construction Phasing

As illustrated in *Section 1.2* of the 2020 EA, the No Action anticipated a 2020 to 2025 construction duration. However, subsequent to the 2020 EA's FONSI/ROD, the COVID-19 pandemic had a pronounced impact on air travel. As a result, the Port Authority and terminal developers reevaluated the JFK Redevelopment Program schedule and shifted the construction start by approximately 2-years from 2020 to the Fourth Quarter of 2021. As shown in ***Exhibit 1-13, Proposed JFK Redevelopment Construction Schedule***, the Proposed Action is planned to begin in 2022 (with some preliminary construction starting in November and December of 2021). The JFK Redevelopment Program will be completed by the Fourth Quarter of 2029.

EXHIBIT 1-13 PROPOSED JFK REDEVELOPMENT CONSTRUCTION SCHEDULE*



Notes: * Construction associated with the T4 Headhouse and Concourse A Expansion and preparation for the demolition of buildings 122, 121, and 95 for the South Hardstand Area occurred in November and December of 2021 (i.e., Fourth Quarter of 2021).

* GTC/JFK Central construction is assumed to be performed in two consecutive phases for the purposes of conservatively evaluating potential impacts.

Source: Port Authority, 2022.

In addition to the shift in the overall JFK Redevelopment Program start date from the 2020 EA, the start and end dates, as well as duration of the program elements, have been modified in the Proposed Action from the No Action. These changes are shown below:

TABLE 1-2 PROPOSED SCHEDULE MODIFICATIONS TO JFK REDEVELOPMENT PROGRAM ELEMENTS

John F. Kennedy International Airport

Program Element	2020 EA (No Action)			Supplemental EA (Proposed Action)			Duration Change (Months)
	Start Date	End Date	Duration (Months)	Start Date	End Date	Duration (Months)	
South Hardstand Area	April 2020	June 2021	14	Nov 2021	July 2025	25*	+9
Terminal 4 Headhouse and Concourse A Expansion	April 2020	Dec 2022	28	Nov 2021	Dec 2026	61	+33
South Terminal Development	April 2020	Sept 2025	65	April 2022	Sept 2029	89	+24
North Terminal Development	April 2020	Dec 2025	68	June 2022	July 2027	60	-8
Roadways to Support Terminal Development	April 2020	March 2023	35	Oct 2022	Dec 2025	37	+2
Expansion of North Hardstand Area	April 2020	Oct 2020	6	July 2023	Oct 2026	15*	+9

Note: Durations marked with an asterisk (*) represent construction activities that are not continuous through the construction duration.

1.6. Permits and Easements

Elements of the Proposed Action will occur on NYSDOT property and on the Port Authority leasehold. The following provides a breakdown of the project elements relative to the NYSDOT property line and the Port Authority leasehold (see ***Exhibit 1-14, Required Permits and Easements***).

- The affected property intended for the Van Wyck Expressway Southbound MUL Loop Ramp between the Van Wyck Expressway and Nassau Expressway will be largely within the Port Authority leasehold. A portion of the entrance and exit ramps are on State property. This work will be constructed by NYSDOT.
- The Eastbound Nassau Auxiliary Lane will be situated entirely on NY State property and be constructed by NYSDOT, with the exception of State Ramp BB (see **Exhibit 1-14**) between the Nassau Expressway and the JFK Expressway, which will be constructed by the Port Authority.
- The Direct Westbound Connection is situated entirely within the Port Authority leasehold and will be constructed by the Port Authority.

To support construction, the Port Authority will require the following permits. For Items 3 through 6 below, see Appendix C of the Draft Access Modification Report contained in Appendix G of this Supplemental EA for the proposed sign placement:

1. Direct Westbound Connection
    - NYSDOT Highway Work Permit for construction
2. Eastbound Nassau Expressway: State Ramp BB to JFK Expressway
    - NYSDOT Highway Work Permit for construction
3. Eastbound Nassau Expressway: New sign structures and sign panels
    - NYSDOT Highway Work Permit for construction
4. Eastbound Nassau Expressway: New Intelligent Transportation System (ITS) devices
    - NYSDOT Permit for the Temporary Use of State-Owned Property to allow installation of the ITS devices and appurtenances
    - NYSDOT Highway Work Permit for construction
5. Eastbound Belt Parkway: New sign panels on existing sign structures between Exit 17 and Lefferts Boulevard
    - NYCDOT Highway Work Permit for construction
6. Westbound Belt Parkway: New sign panels between Guy Brewer Boulevard and the southbound JFK Expressway
    - NYCDOT Highway Work Permit for construction

To support construction and maintenance of the MUL Loop Ramp, NYSDOT will require the following permits and easements:

- Permanent easement from New York City to maintain the Van Wyck Expressway Southbound MUL Loop Ramp
- Right of Entry permit from Port Authority to construct the Van Wyck Expressway Southbound MUL Loop Ramp

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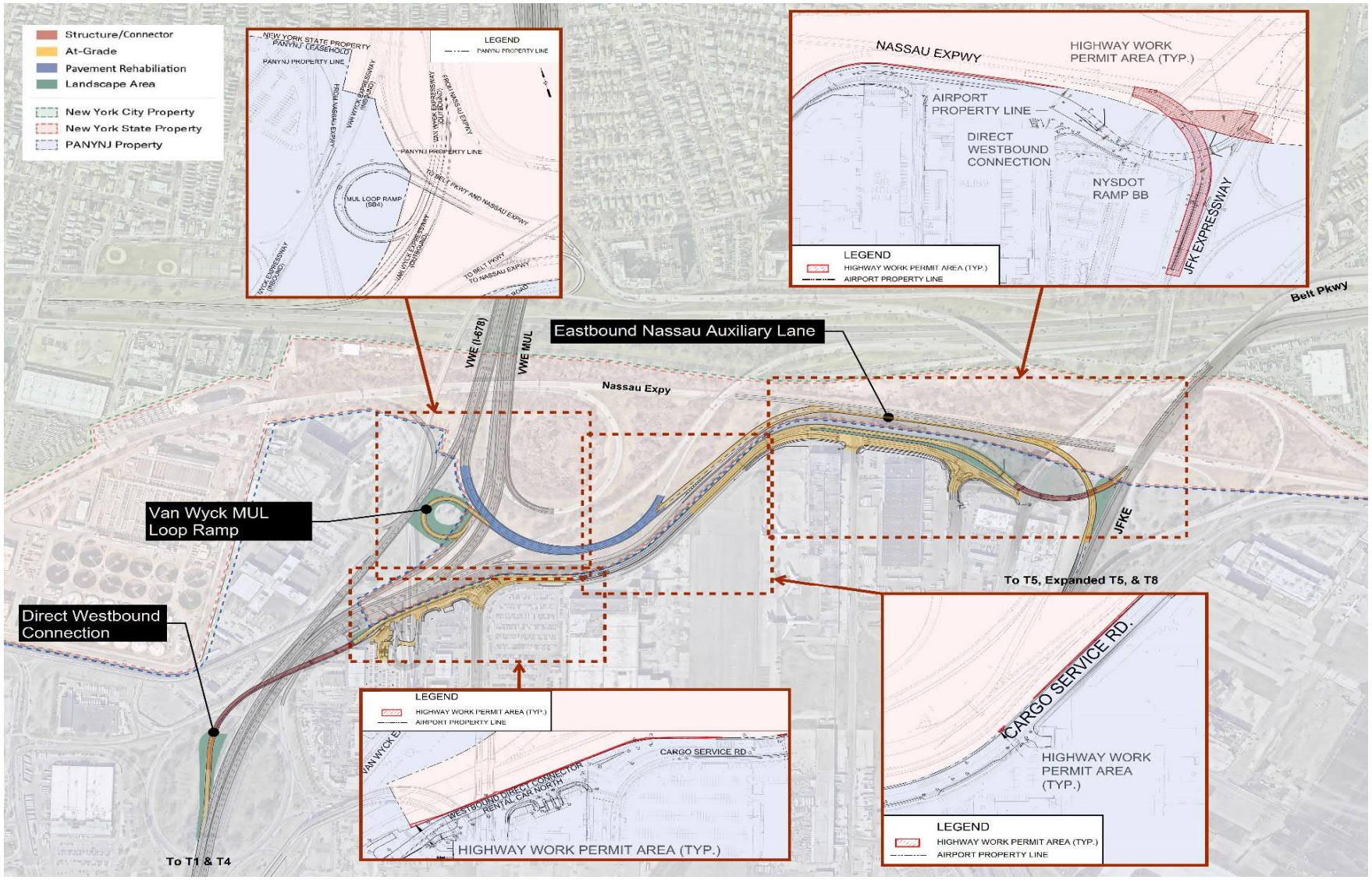
EXHIBIT 1-14 REQUIRED PERMITS AND EASEMENTS



Source: Port Authority, with edits by Mott MacDonald NY, Inc., 2022.

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1.7. Required Approvals

Pursuant to FAA Order 1050.1F, Section 6-2.1, the following is a list of permits, licenses, other approvals, or reviews that apply to the Proposed Action in this Supplemental EA.[27]

1.7.1 Federal

- FAA approval of the ALP (Airport Layout Plan)
- Consultation with United States Fish & Wildlife Service (USFWS) pursuant to the Endangered Species Act of 1973
- FAA approval of AIP, AIG and PFC applications
- FHWA approval of the change in access to the Interstate System

1.7.2 State

- New York State Department of State (NYSDOS) Determination of Consistency with Coastal Zone Management Program
- Preparation of a New York State Department of Environmental Conservation (NYSDEC) Stormwater Pollution Prevention Plan (SWPPP) for each Proposed Action area in accordance with the approved New York State Pollution Discharge Elimination System (SPDES) Program at JFK
- Consultation with the New York State Historic Preservation Office (SHPO) and consulting parties pursuant to Section 106 of the National Historic Preservation Act
- Temporary Easement
- Use and Occupancy Permit
- Highway Work Permit

1.7.3 Local

- Preparation of a Construction Noise Control Plan as mandated in Chapter 28, Title 15 of the City of New York Administrative Code, Citywide Construction Noise Mitigation
- Concurrence with New York City Waterfront Revitalization Program Coastal Zone Consistency Assessment Forms
- Consultation with the Landmarks Preservation Commission and the Queens Borough President's Office pursuant to Section 106 of the National Historic Preservation Act

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[27] Under Section 163(d) of the FAA Reauthorization Act of 2018, the FAA does not possess the legal authority to approve or disapprove components of a proposed action that have no potential to materially impact aircraft operations at, to, or from JFK, nor adversely affect the safety of people or property on the ground adjacent to the airport as a result of aircraft operations. Thus, the FAA does not possess the legal authority to approve or disapprove changes to the JFK ALP associated with construction of a new GTC/JFK Central, demolition of the existing Blue and Green garages and relocation of parking to the newly constructed GTC/JFK Central, and Terminal Roadway Reconfiguration (see 2020 EA FONSI/ROD, Page 4).

The Proposed Action in this Supplemental EA is submitted for review under NEPA in keeping with the 2020 EA's evaluation of the entire JFK Redevelopment Program, rather than only portions that require ALP approval. This supplemental EA represents a conservative disclosure of environmental effects because it examines impacts of activities encompassing the entirety of the Port Authority's JFK Redevelopment Program, which includes components of the JFK Redevelopment Program that may not ultimately require NEPA or special purpose law compliance (i.e., the Proposed Action). Thus, this supplemental EA provides an evaluation of the potential impacts associated with the Proposed Action in this Supplemental EA, as compared to the potential impacts of the JFK Redevelopment Program as described in the April 2020 FONSI/ROD. Federal funding may be used for this Proposed Action.

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2 PURPOSE & NEED

The 2020 EA purpose and need is consistent with the purpose and need in this Supplemental EA. The purpose and need for the Supplemental EA serves as the foundation for identifying reasonable alternatives to the Proposed Action and comparing the impacts of such alternatives. For a potential alternative to be considered viable and carried forward for detailed evaluation in this Supplemental EA, that alternative must address the purpose and need as provided below from the 2020 EA.

2.1 Project Purpose

As set forth in *Section 2.1* (*Purpose)* of the 2020 EA, the purpose of the Proposed Action in the 2020 EA is to *"accommodate current and projected passengers with an acceptable level of service (LOS) at JFK through the redevelopment of the CTA, associated landside (parking and roadways) infrastructure, and aircraft parking areas in a manner that efficiently utilizes the available space."* The acceptable LOS for the roadway network and parking layout to support the terminal facilities in the 2020 EA, included:

- *More intuitive and direct roadway connections from the Van Wyck and JFK Expressways to improve wayfinding and minimize vehicle travel distance and congestion.*
- *Sufficient space for loading and unloading vehicles in close proximity to the terminals to reduce vehicle wait times and improve pedestrian safety, while simultaneously meeting Transportation Security Administration (TSA) recommendations for the setback of ground transportation areas from passenger terminals.*

The Proposed Action in this Supplemental EA meets the same Project Purpose as the Proposed Action in the 2020 EA.

As described in *Section 1.4.1, Proposed CTA Roadways* in this Supplemental EA, the Proposed CTA Roadways would reduce VMT on- and off-Airport. In addition, the Proposed Off-CTA Roadways would meet the Project Purpose of providing more intuitive and direct roadway connections from the Van Wyck Expressway and JFK Expressway. The Proposed Action is consistent with the Project Purpose stated in the 2020 EA.

2.2 Project Need

As set forth in *Section 2.2 (Need)* of the 2020 EA, the needs for the Proposed Action in this Supplemental EA are presented below:

- *"The need to accommodate the existing and forecast passenger demand at an acceptable LOS that is consistent across all terminals and provides better connectivity between terminals;*
- *The need to provide efficient apron and taxilane space to reduce delays; and*
- *The need to provide efficient terminal roadways and curb frontages at an acceptable LOS that comply with Port Authority and TSA recommendations." (see 2020 EA, Section 2.2)*

The Proposed Action is needed to accommodate existing and forecast passenger demand at an acceptable LOS, enhance the roadways to and from the terminal developments and terminal curb frontages with improved service levels and efficient circulation of traffic, as well as inclusion of Port Authority and TSA setback distance recommendations at terminal curb frontages. In addition, the Proposed Action maintains the efficiency of the aprons and taxilane space as proposed in the 2020 EA. Thus, the Proposed Action is consistent with the Project Need stated in the 2020 EA.

3 ALTERNATIVES ANALYSIS

This Chapter describes and evaluates two reasonable and practicable alternatives identified and evaluated by the Port Authority for the Proposed Action in this Supplemental EA. The Alternatives considered are (1) *Alternative A: Proposed Action* (or Preferred Alternative in this Supplemental EA), and (2) *Alternative B: Off-CTA Roadways Located Off-Airport*. The No Action Alternative in this Supplemental EA is the Proposed Action in the 2020 EA. The Port Authority considered other alternatives but determined, through collaboration with NYSDOT, that these were not feasible from a safety standpoint and therefore were not included in this Supplemental EA or the Draft Access Modification Report (see ***Appendix G***). In addition to screening the alternatives based on the ability of the alternatives to meet the Purpose and Need of the Supplemental EA, access modification alternatives were screened in the Draft Access Modification Report based on, and consistent with, the Purpose and Need of the NYSDOT's *Van Wyck Expressway (VWE) Capacity and Access Improvements to JFK Airport* FEIS.

Alternative A: Referred to in this Supplemental EA as the Proposed Action; the proposed roadway changes within the CTA (depicted in ***Exhibit 1-4***) would include creating a two-loop system consisting of the CTA South Terminal Zone and the CTA North Terminal Zone and construction of a smaller footprint of the GTC/JFK Central. Coupled with the CTA improvements, ***Alternative A*** also includes the Proposed Off-CTA Roadways located at the Airport property line, bounded by Federal Circle and the Van Wyck Expressway to the west and the JFK Expressway to the east. The Proposed Off-CTA Roadways consists of the following improvements:

- Direct Westbound Connection (JFK Expressway to the Van Wyck Expressway)
- Van Wyck MUL Loop Ramp (Van Wyck to Eastbound Nassau Auxiliary Lane)
- Eastbound Nassau Auxiliary Lane (to the JFK Expressway)
- Off-Airport Signs

Alternative B: Similar to ***Alternative A*** with the implementation of the Proposed CTA Roadways and Off-CTA Roadways included in the Proposed Action. However, the westbound connection of the Proposed Off-CTA Roadways would be located in an area outside of the JFK Airport boundary (see *Section 3.1, Screening & Results* for additional information about ***Alternative B***).

The two alternatives were evaluated using the same screening process utilized in the 2020 EA. The goals and objectives of the screening process support the Project Purpose and Need, as shown in ***Table 3-1.***

TABLE 3-1 SCREENING CRITERIA FOR THE PROPOSED ACTION
John F. Kennedy International Airport

Goals	Objectives
1. Provide more intuitive and direct routes for drivers traveling to JFK from the Van Wyck Expressway and JFK Expressway	1a. Improve wayfinding with new signage to replace existing signage 1b. Minimize vehicle travel distance 1c. Minimize traffic congestion
2. Support an efficient terminal roadway network and curb frontages at an acceptable LOS	2a. Maintain space within the CTA that provides sufficient short-term vehicle parking at parking facilities. 2b. Incorporate TSA/Port Authority roadway recommendations.

3.1. Screening & Results

The alternatives analysis screening evaluates the ability of the two Alternatives (*Alternatives A* and *B*) to meet the Project Purpose and Need of this Supplemental EA. The screening eliminated *Alternative B: Off-CTA Roadways Located Off-Airport* because it does not meet the Project Purpose and Need as noted below.

- **Alternative B: Off-CTA Roadways Located Off-Airport**
  Alternative B would implement the Proposed CTA Roadways and Off-CTA Roadways included in the Proposed Action. However, *Alternative B* differs from the Proposed Action in the alignment of the westbound connection. In *Alternative B*, the new westbound connector alignment would be located mostly off-Airport and on New York State property. The westbound connector would start from a JFK Expressway off-ramp, between the separate westbound and eastbound Nassau Expressways, and would consist of a new indirect east-to-west roadway located off-Airport and north of the eastbound Nassau Expressway. The *Alternative B* westbound connector would run under the Van Wyck Expressway and then transition to an ascending horseshoe curve, followed by an elevated roadway curve that connects to the existing southbound Van Wyck Expressway, to access the Airport's new T1 and expanded T4 (see ***Exhibit 3-1, Alternatives A and B - Westbound Connection***). As noted below, *Alternative B* would not meet Objectives 1b and 1c of the screening criteria due to indirect routing with increased vehicle travel distance and increased traffic congestion due to limited vehicle capacity and reduced vehicle speeds from multiple curved roadway segments:
    - **Goal 1, Objective 1b - Minimize Vehicle Travel Distance:** *Alternative B* does not meet Objective 1b because the travel distance for vehicles traveling from points east (via the Belt Parkway) to the South Terminal Zone would be greater than vehicle travel distance in *Alternative A*. Vehicle travel distance would increase for drivers traveling from origins east of the Airport, via the Belt Parkway and then the JFK Expressway, to access the Airport's new T1 and expanded T4 due to the off-Airport roadway alignment under *Alternative B*. Under *Alternative B*, travel distance from the JFK Expressway on-ramp to the southbound Van Wyck Expressway would be approximately two miles. In comparison, the Direct

Westbound Connection would be less than 1.5 miles from the equivalent start to finish under *Alternative A*.

- **Goal 1, Objective 1c - Minimize Traffic Congestion:** *Alternative B* does not meet Objective 1c because the alignment of this roadway would limit vehicle capacity, reduce vehicle speeds, and result in inconsistent driver behavior such as abrupt braking from reduced driver line of sight and minimized ability to see the visible path ahead due to multiple curved roadway segments. This would lead to increased traffic congestion and a lower LOS for vehicles traveling to the Airport's South Terminal Zone and an overall deterioration of roadway operations. With a lower LOS on the westbound connector, drivers could elect to take alternative routes north of the Airport and the Belt Parkway such as driving along the off-Airport westbound North Conduit Avenue. In addition, there is a residential community adjacent to North Conduit Avenue. Therefore, this alternative would expose residents to increased traffic.

As described above, *Alternative B does* not meet two key objectives of the Project Purpose of Need in this Supplemental EA. *Alternative B* does not minimize vehicle travel distance, nor minimize traffic congestion. Therefore, *Alternative B* was not carried forward for analysis. However, *Alternative A* (or Preferred Alternative in this Supplemental EA) meets the Project Purpose and Need in the Supplemental EA by providing intuitive and direct routes for drivers traveling to JFK from the Van Wyck Expressway and JFK Expressway; and supports an efficient terminal roadway network and curb frontages at an acceptable LOS.

3.2. Results of Screening Process

Table 3-2 provides an overview of the screening results and the Alternative carried forward based on this Supplemental EA's screening process. *Alternative B* was eliminated because it does not meet the Project Purpose and Need of the 2020 EA and this Supplemental EA.

Alternative A: Proposed Action is the Preferred Alternative for the roadways within the CTA and Off-CTA because it meets all screening criteria. This Alternative meets the Project Purpose and Need of providing a more intuitive and direct route for drivers traveling to JFK from the Van Wyck Expressway and JFK Expressway; supports an efficient terminal roadway network and curb frontages at an acceptable LOS; and maximizes roadway traffic flow and safety. The No Action Alternative (or Proposed Action from the 2020 EA) was carried forward to satisfy the intent of NEPA and FAA Order 1050.1F. ***Exhibit 3-1*** provides the location of *Alternative A: Proposed Action* and *Alternative B: Off-CTA Roadways Located Off-Airport* discussed in this Chapter.

For the development of the preferred alternative, design criteria were developed in close collaboration between the Port Authority and NYSDOT for the proposed connections and justifications of non-standard features for proposed connections were provided and are documented within Appendix A of the Draft Access Modification Report (see **Appendix G**).

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TABLE 3-2 SCREENING CRITERIA RESULTS
John F. Kennedy International Airport

Alternative	Tier 1 Screening Criteria	Does Alternative Conform to Screening Criteria?	Carried Forward for Tier 2 Screening?
No Action Alternative (Proposed Action in the 2020 EA)	The No Action Alternative is carried forward to satisfy the intent of NEPA and FAA Order 1050.1F.		Yes - Retained for Further Analysis (as required by CEQ regulations)
Alternative A: Proposed Action (Preferred Alternative)	1a. Improve wayfinding with new signage to replace existing signage	1a. Meets criteria. *Alternative A* allows for improved wayfinding on- and off-Airport.	Yes *(Meets Criteria)*
	1b. Minimize vehicle travel distance	1b. Meets criteria. *Alternative A* minimizes vehicle travel distance (i.e., westbound connection).	
	1c. Minimize traffic congestion	1c. Meets criteria. The proposed connection point and roadway geometry would result in an unacceptable LOS.	
	2a. Maintain space within the CTA that provides sufficient short-term vehicle parking	2a. Meets criteria. *Alternative A* supports the proposed design modifications to the CTA Roadways to support the terminal developments.	
	2b. Incorporate TSA/Port Authority roadway recommendations at curb frontages	2b. Meets criteria. *Alternative A* supports the proposed design modifications to the CTA Roadways to support the terminal developments.	
Alternative B: Off-CTA Roadways Located Off-Airport	1a. Improve wayfinding with new signage to replace existing signage	1a. Meets criteria. *Alternative B* allows for improved wayfinding on- and off-Airport.	No *(Eliminated)*
	1b. Minimize vehicle travel distance	1b. Does not meet criteria. Vehicle travel distance increases as a result of westbound connection proposed in *Alternative B*.	
	1c. Minimize traffic congestion	1c. Does not meet criteria. The proposed connection point and roadway geometry would result in a lower LOS.	
	2a. Maintain space within the CTA that provides sufficient short-term vehicle parking	2a. Meets criteria. *Alternative B* supports the proposed design modifications to the CTA Roadways to support the terminal developments.	
	2b. Incorporate TSA/Port Authority roadway recommendations at curb frontages	2b. Meets criteria. *Alternative B* supports the proposed design modifications to the CTA Roadways to support the terminal developments.	

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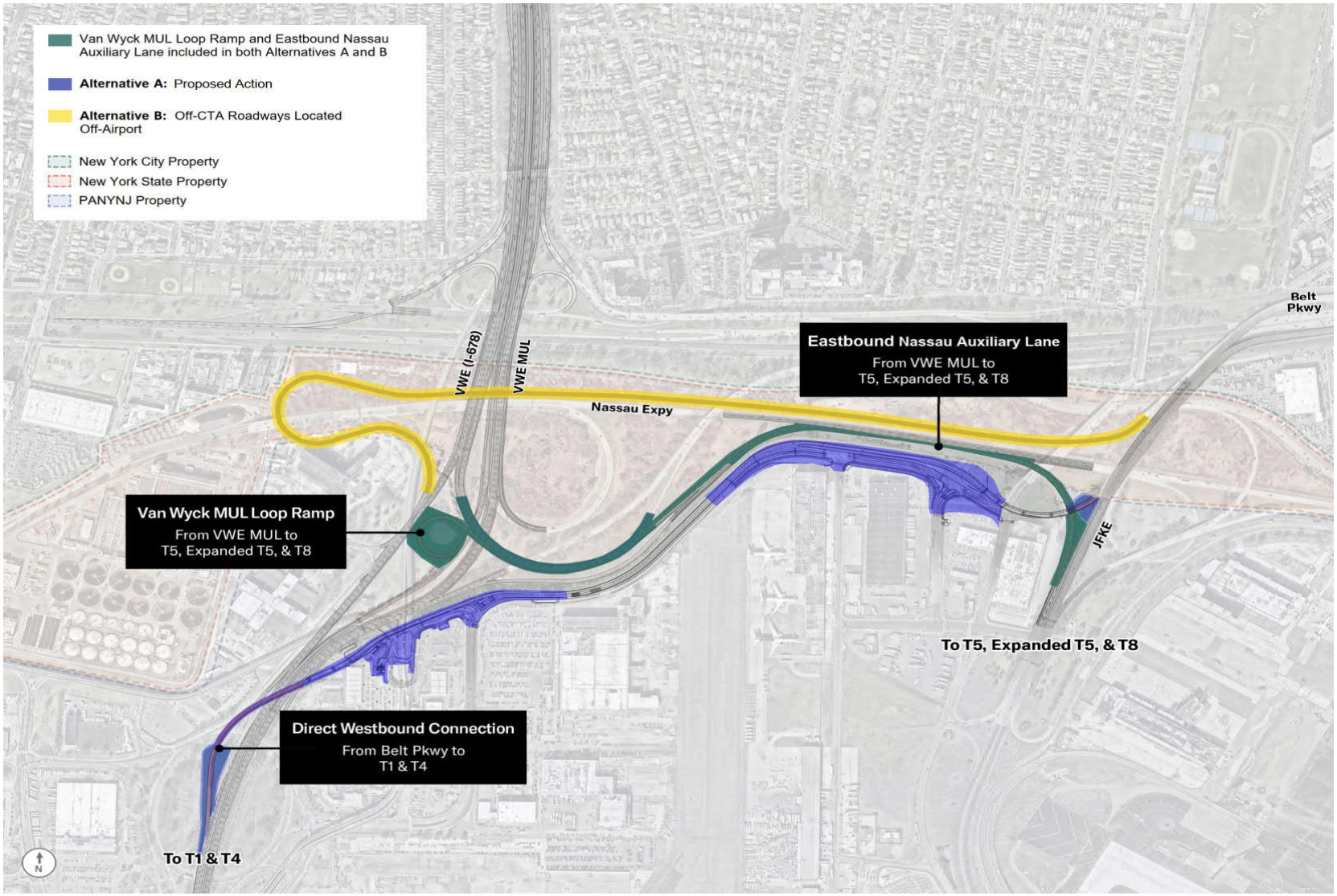
EXHIBIT 3-1 ALTERNATIVES A AND B - WESTBOUND CONNECTION



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4 AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

FAA Order 1050.1F states that for analysis under NEPA, the affected environment section of an EA must "succinctly (describe) the environmental conditions of the potentially affected geographic area or areas". FAA Order 1050.1F also requires an analysis of environmental consequences of the proposed action that considers the "direct effects and their significance, the indirect effects and their significance, and cumulative effects and their significance". Accordingly, this Chapter identifies the existing environmental conditions (natural and human environment) within the Study Area of the Proposed Action (see *Section 4.1, Study Area*) and potential impacts on the natural and human environment from construction of the Proposed Action.

4.1 Study Area

In the 2020 EA, the Study Areas for direct and indirect effects were generally limited to the Airport boundaries except for air quality, traffic, land use, and socioeconomics resources, environmental justice, and children's environmental health and safety risks since the Proposed Project described in the 2020 EA was limited to on Airport improvements.

The Study Area for the Proposed Action evaluated in this Supplemental EA includes the Study Area from the 2020 EA and the area of potential direct and indirect impacts for the Proposed Off-CTA Roadways. As stated previously, the Study Area for the No Action is the same as that evaluated for the Proposed Project in the 2020 EA. Since the Study Area encompassing the CTA Roadways was largely evaluated in the 2020 EA, the analysis in this Chapter focuses on the affected environment and environmental consequences associated with the new Study Area of the Proposed Off-CTA Roadways, unless otherwise noted. For additional information on the Proposed Off-CTA Roadways, refer to *Section 1.3, Description of Proposed Action Site* in this Supplemental EA.

4.2 Resource Categories Not Applicable

Consistent with the 2020 EA, the following environmental resources are not present within the Proposed Action Site and, therefore, are not evaluated in this Supplemental EA:

- Farmlands
- Wild and Scenic Rivers
- Section 6(f) Resources

4.3 Resources Present

The following resources were evaluated in the 2020 EA and are evaluated further in this Supplemental EA due to their potential to be affected by the implementation of the Proposed Action (see ***Table 4-11, Summary of Environmental Consequences***):

- Section 4.4 Air Quality
- Section 4.5 Biological Resources
- Section 4.6 Climate

- Section 4.7 Coastal Resources
- Section 4.8 Department of Transportation Act: Section 4(f) Resources
- Section 4.9 Hazardous Materials, Solid Waste, and Pollution Prevention
- Section 4.10 Historical, Architectural, Archaeological, and Cultural Resources
- Section 4.11 Land Use
- Section 4.12 Natural Resources and Energy Supply
- Section 4.13 Noise and Noise-Compatible Land Use
- Section 4.14 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Section 4.15 Visual Effects
- Section 4.16 Water Resources
- Section 4.17 Cumulative Impacts Analysis

4.4 Air Quality

In accordance with the Federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) sets standards and policies to achieve and maintain acceptable air quality conditions nationwide. These standards, called the National Ambient Air Quality Standards (NAAQS), apply to six air pollutants (known as "criteria air pollutants") represent outdoor concentrations that are considered safe for the human and natural environments.[28] The criteria air pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), fine and coarse particulate matter ($PM_{2.5}$ and PM_{10}), sulfur dioxide (SO_2) and lead (Pb).

The current USEPA air quality designations for Queens County (including JFK) are shown in ***Table 4-1, USEPA Air Quality Designations***.

TABLE 4-1 USEPA AIR QUALITY DESIGNATIONS
John F. Kennedy International Airport

Pollutant	Status
Carbon Monoxide (CO)	Maintenance
Lead (Pb)	Attainment
Nitrogen Dioxide (NO_2)	Attainment
Ozone (O_3), 8-Hour (2008)	Severe Nonattainment
Ozone (O_3), 8-Hour (2015)	Moderate Nonattainment
Particulate Matter (PM_{10})	Attainment
Particulate Matter ($PM_{2.5}$)	Maintenance
Sulfur Dioxide (SO_2)	Attainment

Sources: Nonattainment Areas for Criteria Pollutants (Green Book), USEPA, 2022
USEPA notice signed by the USEPA on September 15, 2022

The pollutants of greatest importance when considering potential impacts associated with the Proposed Action are CO, $PM_{2.5}$, and O_3. These pollutants were also reviewed for potential impacts in the 2020 EA (*Section 4.2, Air Quality* (*Affected Environment*)).

[28] USEPA, 40 C.F.R. § 50, National Primary and Secondary Ambient Air Quality Standards (NAAQS).

The most direct approach to meeting the General Conformity requirement is to show that a project's emissions are below applicable CAA *de minimis* levels.[29] The *de minimis* levels for the New York City (NYC) metropolitan area are provided in ***Table 4-2, General Conformity Rule De Minimis Levels***.

TABLE 4-2 GENERAL CONFORMITY RULE *DE MINIMIS* LEVELS
John F. Kennedy International Airport

Pollutant	Levels
Carbon Monoxide (CO)	100
Nitrogen Oxides (NO_x) - as O_3 precursor	25
Volatile Organic Compounds (VOCs) - as O_3 precursor	25
Particulate Matter ($PM_{2.5}$)	100

Source: General Conformity Rule (40 C.F.R. Part 93, Subpart B).
Note: Pre-cursor pollutants nitrogen oxides (NO_x) and volatile organic compounds (VOCs) lead to the formation of O_3.

Given the NYC metropolitan area's (including Queens County where JFK is located) Severe Nonattainment classification for the 2008 O_3 standard,[30] *de minimis* levels of 25 tons apply to the precursor pollutants of O_3: NO_x and VOC. For CO and $PM_{2.5}$, the 100 ton *de minimis* level for Maintenance areas is used. These *de minimis* levels are used for the air quality analysis in this Supplemental EA. Notably, because at the time the area was designated to be a Serious Nonattainment area for the 2008 O_3 standard, the *de minimis* level applicable to the 2020 EA was 50 tons.

4.4.1 Summary of 2020 EA Air Quality Analysis

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. Emissions from construction equipment and fugitive dust from construction activities, motor vehicle traffic, and aircraft operations are detailed in *Section 5.2, Air Quality (Environmental Consequences)* and *Appendix B, Air Quality Technical Report* of the 2020 EA. The analysis in the 2020 EA concluded that the expected increase in construction emissions would be below *de minimis* levels and therefore would not be expected to have a significant air quality impact.

4.4.2 Air Quality Emissions Analysis Methodology in this Supplemental EA

To evaluate potential air quality impacts associated with construction of the Proposed Action, and to be consistent with the methodology of the air quality analysis in the 2020 EA, sources of emissions associated with the Proposed Action were divided among construction activities, aircraft operations, and motor vehicle traffic (see ***Appendix A, Air Quality Technical Report*** for additional information).

[29] The *de minimis* thresholds represent emission quantities of a NAAQS-regulated pollutant or its applicable precursors, in tons per year, over which an action in a nonattainment or maintenance area may cause or contribute to a new or continued violation of the NAAQS.

[30] 84 Fed. Reg., 44238 (Aug. 23, 2019) (Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Several Areas Classified as Moderate for the 2008 Ozone National Ambient Air Quality Standard).

The Study Area for the air quality analysis is centered on the CTA and encompasses the Proposed Action (including the Proposed Off-CTA Roadways and intersections) as described in *Section 1.3, Description of Proposed Action Site* in this Supplemental EA. Off-Airport, the Study Area expands outward north, east and west to include the Aqueduct Parking area, the JFK Expressway, and the Belt Parkway. Construction worker trips and construction truck haul routes extend further to the neighboring Queens and Kings Counties. The Study Area for the air quality analysis is consistent with the Study Area for the traffic analysis (see ***Appendix D, Traffic Report*** in this Supplemental EA). The CO, $PM_{2.5}$, and O_3 Nonattainment/Maintenance areas encompass the New York/New Jersey Metropolitan Region.

In addition, the air quality analysis process, as mentioned in *Section 5.2* of the 2020 EA, remains the same for the Proposed Action in this Supplemental EA.

4.4.3 Proposed Action - Emissions During the Construction and Operational Scenario

In accordance with the FAA NEPA guidelines and the Proposed Action construction schedule, air emissions are estimated for the Proposed Action and compared to the air emissions estimated for and evaluated in the 2020 EA. Consistent with the 2020 EA methodology (see *Section 5.2.2* of the 2020 EA), the air quality analysis for the Proposed Action in this Supplemental EA included a Construction Scenario and Operational Scenario. Each of these scenarios are associated with a specific time period. For the purposes of this air quality analysis and the anticipated schedule of the Proposed Action, as mentioned in *Section 1.5, Construction Phasing* in this Supplemental EA.

4.4.4 Proposed Action - Air Quality Emissions Analysis Results

Total project-related emissions associated with the Proposed Action are the sum of construction emissions, changes in operational aircraft and roadway traffic emissions (i.e., the Proposed Action minus the air emissions estimated for the 2020 EA) for the construction period and future years. These results are provided in **Table 4-3, *Total Net Change in Emissions from the No Action to the Proposed Action (Tons/Year)*** and **Table 4-4, *Total Net Change in Operational Emissions (+5 Build Year) for the No Action and Proposed Action (Tons/Year)***. These results are added together for direct comparison to the General Conformity Rule *de minimis* levels. As shown in **Table 4-3**, the third year of construction (2024) represents the year of highest overall project-related emissions because it is the peak year of construction.

Reductions in operational emissions are attributable to reduced taxi/delay times resulting from the Proposed Action's airfield improvements and the addition of new gates. Emissions reductions are also realized in Years 2029 and 2034 from improvements to the Proposed Off-CTA and CTA Roadways, which provide more efficient motor vehicle operating conditions from reduced roadway congestion, higher LOS at terminal curbfronts, and less "stop-and-go" and "bottle-necks."

As discussed above, under the CAA, compliance with the SIP must be demonstrated for the Proposed Action. To meet this requirement, the total project emissions are compared to the General Conformity Rule *de minimis* levels. As shown in **Table 4-3**, the Proposed Action would not generate emissions that exceed the applicable *de minimis* levels of the General Conformity Rule. This outcome applies to all construction years (2021 through 2029), and future year 2034 and for all pollutants for which the JFK area is designated as nonattainment (O_3) and

maintenance (CO and $PM_{2.5}$). Therefore, consistent with the No Action, the Proposed Action meets the requirements of the General Conformity Rule, and thereby conforms with the approved SIP. As a result, no further action is needed to meet the requirements of the General Conformity Rule.

As noted in **Table 4-3**, the construction period for the No Action is 2020-2025 (five-year duration) and the construction period for the Proposed Action is 2022-2029 (seven-year duration). Similarly, the operational year in **Table 4-4** is year 2030 for the No Action (+5 build year) and year 2034 for the Proposed Action (+5 build year). For the purposes of the following tables, there are no emissions associated with these alternatives outside of the No Action and Proposed Action during the construction and operation periods.

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TABLE 4-3 TOTAL NET CHANGE IN EMISSIONS FROM THE NO ACTION TO THE PROPOSED ACTION (TONS/YEAR)

John F. Kennedy International Airport

Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Year 2020																		
Construction Emissions	38.0	0	-38.0	32.9	0	-32.9	0.17	0	-0.17	25.6	0	-25.6	31.8	0	-31.8	4.6	0	-4.6
Operational Emissions	--[a]	--		--	--		--	--		--	--		--	--		--	--	
Total	*38.0*	*0*		*32.9*	*0*		*0.17*	*0*		*25.6*	*0*		*31.8*	*0*		*4.6*	*0*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	--		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	
Year 2021																		
Construction Emissions	81.6	1.8	-79.8	28.3	0.9	-27.4	0.16	<0.01	-0.15	30.6	0.5	-30.1	30.8	0.3	30.5	4.2	0	-4.2
Operational Emissions	0	7.4	7.4	0	0.5	0.5	0	0.01	0.01	0	0.2	0.2	0	0.2	0.2	0	0.03	0.03
Total	*81.6*	*9.2*		*28.3*	*1.4*		*0.16*	*0.01*		*30.6*	*0.7*		*30.8*	*0.4*		*4.2*	*0.1*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	*100*		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	
Year 2022																		
Construction Emissions	63.4	21.9	-41.5	21.3	9.0	-12.3	0.2	0.03	-0.17	30.8	2.7	-28.1	15.8	14	-1.8	2.4	1.7	-0.7
Operational Emissions	0	41.9	41.9	0	2.6	2.6	0	0.05	0.05	0	1.1	1.1	0	1.1	1.1	0	0.2	0.2
Total	*63.4*	*63.8*		*21.3*	*11.6*		*0.2*	*0.1*		*30.8*	*3.8*		*15.8*	*15.1*		*2.4*	*1.8*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	*100*		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	
Year 2023																		
Construction Emissions	44.1	40.4	-3.7	19.3	16.3	-3.0	0.1	0.1	0	10.2	9.1	-101	12.6	17.0	4.4	2.0	2.2	0.2
Operational Emissions	-14.5	35.7	50.2	-1.7	2.2	3.9	-3.1	0.05	3.15	-0.8	1.0	1.8	-0.1	1.1	1.2	-0.1	0.2	0.3
Total	*29.6*	*76.1*		*17.6*	*18.5*		*-3.0*	*0.1*		*9.4*	*10.2*		*12.5*	*18.1*		*1.9*	*2.3*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	*100*		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	

Year 2024																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	29.8	47.0	17.2	14.1	19.1	5.0	0.1	0.1	0	26.1	8.6	-17.5	19.0	26.3	7.3	2.4	3.2	0.8
Operational Emissions	-25.4	33.8	59.2	-2.9	1.9	4.8	-5.4	0.05	5.45	-1.3	0.9	2.2	-0.1	1.1	1.2	-0.1	0.2	0.3
Total	*4.4*	*80.8*		*11.2*	*21.0*		*-5.3*	*0.1*		*24.8*	*9.6*		*18.9*	*27.4*		*2.3*	*3.3*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	*100*		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	

Year 2025																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	8.8	39.4	30.6	10.1	17.6	7.5	0.1	0.1	0	14.0	15.2	1.2	10.1	24.4	14.3	1.4	2.9	1.5
Operational Emissions	-106.9	19.8	126.7	-12.3	-1.4	10.9	-22.9	-0.79	22.11	-5.6	-0.2	5.4	-0.4	1.0	1.4	-0.4	0.1	0.5
Total	*-98.1*	*59.2*		*-2.2*	*16.2*		*-22.8*	*-0.6*		*8.4*	*14.9*		*9.7*	*25.4*		*1.0*	*3.0*	
CAA *de minimis* levels	*100*	*100*		*50*	*25*		*100*	*100*		*50*	*25*		--	--		*100*	*100*	
Exceeds CAA *de minimis*?	*No*	*No*		*No*	*No*		--	--		*No*	*No*		--	--		*No*	*No*	

Year 2026																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	0	22.2	22.2	0	12.2	12.2	0	0	0	0	11.5	11.5	0	13.0	13.0	0	1.6	1.6
Operational Emissions	0	8.9	8.9	0	-4.0	-4.0	0	-1.29	-1.29	0	-1.2	-1.2	0	1.0	1.0	0	0.1	0.1
Total	*0*	*31.1*		*0*	*8.2*		*0*	*-1.2*		*0*	*10.4*		*0*	*14.0*		*0*	*1.7*	
CAA *de minimis* levels		*100*			*25*			*100*			*25*			--			*100*	
Exceeds CAA *de minimis*?		*No*			*No*			--			*No*			--			*No*	

Year 2027																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	0	15.5	15.5	0	9.7	9.7	0	0	0	0	5.9	5.9	0	5.1	5.1	0	0.7	0.7
Operational Emissions	0	-82.6	-82.6	0	-26.7	-26.7	0	-6.99	-6.99	0	-9.3	-9.3	0	0.1	0.1	0	-0.8	-0.8
Total	*0*	*-67.4*		*0*	*-17.2*		*0*	*-6.8*		*0*	*-3.7*		*0*	*5.6*		*0*	0.4	
CAA *de minimis* levels		*100*			*25*			*100*			*25*			--			*100*	
Exceeds CAA *de minimis*?		*No*			*No*			--			*No*			--			*No*	

Year 2028																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	0	8.0	8.0	0	1.8	1.8	0	0	0	0	0.2	0.2	0	1.5	1.5	0	0.2	0.2
Operational Emissions	0	-94.1	-94.1	0	-29.8	-29.8	0	-6.99	-6.99	0	-10.3	-10.3	0	-1.0	-1.0	0	-1.0	-1.0
Total	*0*	*-85.8*		*0*	*-27.5*		*0*	*-7.4*		*0*	*-10.4*		*0*	*0.9*		*0*	-0.4	
CAA *de minimis* levels		*100*			*25*			*100*			*25*			--			*100*	
Exceeds CAA *de minimis*?		*No*			*No*			--			*No*			--			*No*	
Year 2029																		
Emission Sources	CO		Net Change	NO_x		Net Change	SO_2		Net Change	VOC		Net Change	PM_{10}		Net Change	$PM_{2.5}$		Net Change
	No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action		No Action	Proposed Action	
Construction Emissions	0	5.2	5.2	0	3.5	3.5	0	0	0	0	0.2	0.2	0	1.1	1.1	0	0.2	0.2
Operational Emissions	0	-177.3	-177.3	0	-39.9	-39.9	0	-9.99	-9.99	0	-14.6	-14.6	0	-1.0	-1.0	0	-1.0	-1.0
Total	*0*	*-172.3*		*0*	*-36.5*		*0*	*-9.6*		*0*	*-14.8*		*0*	*0.4*		*0*	-0.6	
CAA *de minimis* levels		*100*			*25*			*100*			*25*			--			*100*	
Exceeds CAA *de minimis*?		*No*			*No*			--			*No*			--			*No*	

Notes: 40 CFR Section 93.153(b)(1) (general conformity *de minimis* thresholds).
Criteria pollutants and their precursors include carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOCs), and particulate matter with diameters of 10 and 2.5 microns (PM_{10} and $PM_{2.5}$).
Negative numbers under emissions categories represent reductions from baseline conditions.
Operational emissions reflect the change between the Proposed Action and the No-Build Alternative.
[a] "---" = No emission changes.
[b] "**--**" = Queens is in attainment and the *de minimis* levels do not apply.
Motor vehicle emissions were analyzed for the peak year and applied to all years equally.
Fugitive dust emissions were computed based on EPA's AP-42 Compilation of Air Pollutant Emission Factors. Evaporative emissions of VOCs were developed using EPA's guidance on asphalt paving "Emission Inventory Improvement Program, Asphalt Paving, April 2001." The JFKR roadways will be paved with hot-mix asphalt. As stated in the EPA guidance, hot-mix asphalt produces minimal emissions of VOCs compared to cut-back asphalt, which was conservatively assumed to be applied in the 2020 EA.

Source: CMT, 2022

TABLE 4-4 TOTAL NET CHANGE IN OPERATIONAL EMISSIONS (+5 BUILD YEAR) FOR THE NO ACTION AND PROPOSED ACTION (TONS/YEAR)

John F. Kennedy International Airport

+5 BUILD YEAR (OR 5 YEARS AFTER CONSTRUCTION COMPLETED) Year 2030 for No Action (2020 EA) and Year 2034 for Proposed Action (Supplemental EA)												
Emission Sources	CO		NO_x		SO_2		VOC		PM_{10}		$PM_{2.5}$	
	No Action (Year 2030)	Proposed Action (Year 2034)	No Action (Year 2030)	Proposed Action (Year 2034)	No Action (Year 2030)	Proposed Action (Year 2034)	No Action (Year 2030)	Proposed Action (Year 2034)	No Action (Year 2030)	Proposed Action (Year 2034)	No Action (Year 2030)	Proposed Action (Year 2034)
Construction Emissions	--	--	--	--	--	--	--	--	--	--	--	--
Operational Emissions	-249.9	*-253.3*	-27.7	-59.0	-52.6	-14.24	-12.9	-16.2	-0.9	-0.73	-0.9	-0.72
Total	*-249.9*	*-253.3*	*-27.7*	*-59.0*	*-52.6*	*-14.2*	*-12.9*	*-16.2*	*-0.9*	*-0.73*	*-0.9*	*-0.72*
CAA *de minimis* levels	*100*	*100*	*50*	*25*	*100*	*100*	*50*	*25*	--	--	*100*	*100*
Exceeds CAA *de minimis*?	*No*	*No*	*No*	*No*	--	--	*No*	*No*	--	--	*No*	*No*

Notes: 40 CFR Section 93.153(b)(1) (general conformity *de minimis* thresholds).
Criteria pollutants and their precursors include carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOCs), and particulate matter with diameters of 10 and 2.5 microns (PM_{10} and $PM_{2.5}$).
Negative numbers under emissions categories represent reductions from baseline conditions.
Operational emissions reflect the change between the Proposed Action and the No-Build Alternative.
Motor vehicle emissions were analyzed for the peak year and applied to all years equally.
Fugitive dust emissions were computed based on EPA's AP-42 Compilation of Air Pollutant Emission Factors. Evaporative emissions of VOCs were developed using EPA's guidance on asphalt paving "Emission Inventory Improvement Program, Asphalt Paving, April 2001." The JFKR roadways will be paved with hot-mix asphalt. As stated in the EPA guidance, hot-mix asphalt produces minimal emissions of VOCs compared to cut-back asphalt, which was conservatively assumed to be applied in the 2020 EA.

Source: CMT, 2022.

4.4.5 Conclusion - No Significant Air Emissions Impacts

Degradation of air quality from construction of the Proposed Action is not anticipated. Similar to the No Action, the Proposed Action would not require a formal conformity determination and "the action would not cause pollutant concentrations to exceed one or more of the NAAQS, as established by the USEPA under the CAA, for the time periods analyzed, or to increase the frequency or severity of existing violations".[31] Emissions associated with the Proposed Action are less than the *de minimis* thresholds of the CAA General Conformity Rule. Therefore, the Proposed Action conforms to the applicable SIP and there are no significant impacts to air quality.

In addition to demonstrating conformity with the CAA, the New York Metropolitan Transportation Council (NYMTC) Transportation Improvement Program (TIP) was amended on December 10, 2021 to add the construction of the new ramp from the Van Wyck Expressway southbound MUL to the eastbound Nassau Expressway (Proposed Off-CTA Roadways Project) under the existing *Van Wyck Expressway Capacity and Access Improvements to JFK Airport* construction project (PIN X73584). The NYMTC TIP was most recently found to conform to the State Implementation Plan for air quality pursuant to Resolution #2022-05 adopted by the NYMTC on October 13, 2022. The FHWA and Federal Transit Administration approved the conformity determination on November 1, 2022.

4.4.6 Reduction, Avoidance and Minimization Measures

Consistent with the No Action, one of the "key" components of the Proposed Action is the implementation of emissions avoidance and minimization measures, which were appropriately accounted for in the emissions modeling. The emission reductions achieved with these minimization measures are additional to those achieved by the operational benefits of the Proposed Action on both the airside (i.e., less emissions with less taxi/delay) and landside (i.e., more efficient roadway network resulting in less "stop-and-go" traffic and thus less emissions).

While the construction of the Proposed Action would contribute to fugitive dust in and around the construction site, emissions would be minimized by adhering to guidelines, included in FAA Advisory Circular (AC) 150/5370-10G, *Standards for Specifying Construction of Airports*.[32] These measures include: (i) exposing the minimum area of erodible earth; (ii) using water sprinkler trucks and covered haul trucks; and requiring contractors to adhere to Construction Emission Control Plans. This will minimize the amount of dust migrating off the Airport and into adjoining communities.

As discussed in *Section 5.2.6* of the 2020 EA, the following construction emission control measures are considered as a main contractor requirement for reducing construction emissions associated with the Proposed Action:

- Equipment Less Than 100 HP; 70% of non-road diesel construction equipment that is less than 100 horsepower shall meet USEPA Tier 4 Emission Standards; and

[31] See *Section 5.2.7* (Page 5-17) of the 2020 EA.

[32] FAA Advisory Circular, *Standards for Specifying Construction of Airports*, Item P-156, *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*, AC 150/5370-10G (July 21, 2014)

- Equipment Greater Than 100 HP; 100% of non-road diesel construction equipment equal to or greater than 100 horsepower shall meet USEPA Tier 4 (final) emissions standards.

These measures are considered "over and above" what is normally required for construction projects off-Airport.

In accordance with the Port Authority's *Sustainable Design Guidelines*, project-related emissions will be further reduced during and after construction. For example, during construction, contractors would be required to use ultralow sulfur diesel (ULSD) fuel; all off-road equipment would be required to be retrofitted with emission control devices using Best Available Technology; and diesel-powered generators would be limited to situations where commercial electric power may not readily be available.

4.5 Biological Resources

Biological resources at JFK, as well as potential impacts on the existing biological resources, are described in *Section 4.3, Biological Resources (Affected Environment)* and *Section 5.3, Biological Resources (Environmental Consequences)* of the 2020 EA, respectively. *Section 4.3* includes the data sources reviewed, relevant regulations, and key definitions used to identify and assess potential impacts to biological resources within the Airport boundaries, the Study Area evaluated in the 2020 EA. As part of the impact analysis of biological resources in *Section 5.3*, the USFWS and NYSDEC were consulted and a summary of the agency responses provided.

4.5.1 Summary of 2020 EA Biological Resource Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As detailed in *Section 5.3* of the 2020 EA, there are no naturally vegetated areas within the 2020 EA Proposed Project Site, which is limited to areas of direct impact on Airport property. Further, federally listed species and designated critical habitats are not known to be present at the Airport. Given the existing use of and development at the Airport; the lack of habitat areas for state-listed species, birds and other wildlife known to occur near the Airport; the nature of the No Action; and the enforcement of an Airport-wide Wildlife Hazard Management Plan (WHMP), the Proposed Project described in the 2020 EA would not result in significant adverse impacts to biological resources. This determination was further supported by coordination with the NYSDEC and USFWS. The NYSDEC and USFWS concurred the Proposed Project described in the 2020 EA would not result in significant adverse impacts to State-listed species and would have "no effect" on Federally listed species and designated critical habitats (see *Appendix C, Coastal, Biological & Water Resources* of the 2020 EA).

4.5.2 Proposed Action vs. No Action

A comparison of the No Action and Proposed Action is provided in ***Table 1-1*** in *Section 1.4.3, Comparison of the No Action and Proposed Action*. The Proposed Action expands the Proposed Project Site in the 2020 EA to include the Proposed Off-CTA Roadways Site both on- and off-Airport property along the northern Airport boundary between the Van Wyck Expressway and JFK Expressway. As described in *Section 4.3,* the Study Area for biological resources in the 2020 EA was primarily limited to direct impacts. For the purposes of this Supplemental EA, the

Proposed Action Site includes the 2020 EA Proposed Project Site and an area spanning 500 feet around the area of disturbance for the Proposed Off-CTA Roadways. While the Proposed CTA Roadways element of the Proposed Action includes design modifications compared to that evaluated in the 2020 EA, these areas were evaluated within the 2020 EA and, therefore, not reiterated in detail herein. Therefore, this biological resource assessment focuses on the portion of the Proposed Action Site within and around the Proposed Off-CTA Roadways.

Ecological Communities and Vegetation

A majority of the portion of the Proposed Action Site around the Proposed Off-CTA Roadways is paved if not developed with buildings or other infrastructure. However, limited previously disturbed vegetated parkway land and landscaped areas, including maintained lawn, ornamental shrubs and small trees are present on-Airport and within the adjacent NYSDOT ROW in the immediate vicinity of the Study Area around the Proposed Off-CTA Roadways. Within the 500-foot buffer around the site and north of the Eastbound Nassau Expressway (NY-878) is fragmented undeveloped naturally vegetated land among a high-volume roadway network between South Conduit Avenue (NY-27) and the Eastbound Nassau Expressway (NY-878). Similar to the Proposed Project Site evaluated in the 2020 EA, landscaping on-Airport is maintained for aesthetic reasons, while minimizing potential wildlife habitat. Naturally vegetated land within the adjacent NYSDOT ROW and other portions of the Study Area around the Proposed Off-CTA Roadways generally consists of urban-adapted and invasive/opportunistic vegetation. There are no previously undisturbed natural areas or other habitats, such as wetlands, present in the Study Area around the Proposed Off-CTA Roadways.

The FHWA maintains administrative guidance on invasive species and the roadside use of native plants pursuant to Executive Order (E.O.) 13112.[33] NYSDOT also maintains guidance on invasive species in the NYSDOT ROW reflecting on elements of E.O. 13112 and Section 4.4.10, Roadside Vegetation Management, of the NYSDOT Environmental Manual.[34] The Port Authority will coordinate with the FHWA and NYSDOT as the Proposed Action progresses to identify invasive species, as required, and to establish appropriate measures to prevent or minimize the spread of these species during construction.

Wildlife

Consistent with the Proposed Project Site described in the 2020 EA, wildlife occurring in the portion of the Proposed Action Site around the Proposed Off-CTA Roadways are species that are highly tolerant of human disturbance typically found in urban settings such as birds, mammals, amphibians, reptiles, and insects. Previously undisturbed habitats are not present, and most of the available habitat to these urban adapted wildlife species is limited to highly disturbed areas with fragmented habitats, including maintained lawn, ornamental shrubs, and small trees, and limited naturally vegetated areas between associated entrance/egress roads of the surrounding roadway infrastructure. Adjacent NYSDOT ROW to the north of the Airport boundary is not managed by the Airport's WHMP. The Proposed Off-CTA Roadways would be designed in consideration of the guidelines outlined in the FAA Advisory Circular (AC)

[33] United States Department of Transportation. Federal Highway Administration. *Federal Highway Administration Guidance on Invasive Species*. https://www.environment.fhwa.dot.gov/env_topics/ecosystems/roadside_use/vegmgmt_rdus3_13.aspx

[34] New York State Department of Transportation. Engineering Division – Office of Environment. *The Environmental Manual*. https://www.dot.ny.gov/divisions/engineering/environmental-analysis/manuals-and-guidance/epm

150/5200-33B, *Hazardous Wildlife Attractants on or Near Airport*. This FAA AC recommends that detention practices avoid creating aboveground standing water for more than 48 hours after a storm event and prohibit the use of vegetation that provides food or cover for wildlife considered a hazard to airport operations. The Proposed Off-CTA Roadways would not have any surface water retention and detention systems.

Federally Threatened and Endangered Species

The potential occurrence of Federally listed threatened and endangered species within the portion of the Proposed Action Site around the Proposed Off-CTA Roadways was evaluated using the USFWS Information from the Planning and Conservation (IPaC) online system. Consistent with the Study Area evaluated in the 2020 EA, the USFWS IPaC query identifies the same three species of birds and one plant species potentially occur in the Proposed Action Site, both on and off Airport (see ***Table 4-5, Federally Threatened and Endangered Species***). *Section 4.3* of the 2020 EA provides a description of these species of birds and plant species. The USFWs IPaC report also states that there is no designated critical habitat in the Proposed Action Site, which is consistent with the biological resources assessment in the 2020 EA.

TABLE 4-5 FEDERALLY THREATENED AND ENDANGERED SPECIES
John F. Kennedy International Airport

TAXONOMIC GROUP	COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS
Birds	Piping Plover	*Charadrius melodus*	Threatened
Birds	Red Knot	*Calidris canutus rufa*	Threatened
Birds	Roseate Tern	*Sterna dougallii*	Threatened
Flowering Plants	Seabeach Amaranth	*Amaranthus pumilus*	Threatened

Source: IPaC U.S. Fish & Wildlife Service, Accessed June 4, 2021.

As shown in ***Table 4-5***, the portion of the Proposed Action Site around the Proposed Off-CTA Roadways does not provide potential breeding habitat for the three bird species or for the seabeach amaranth because it comprises almost entirely of previously disturbed developed land, with few currently undeveloped landscaped and naturally vegetated areas (i.e., areas of urban-adapted, and invasive/opportunistic vegetation). Based on the habitat requirements of these species, it is highly unlikely they would be found in the Proposed Action Site, which is consistent with the biological resources assessment in the 2020 EA.

State Designated Threatened, Endangered, or Special Status Species

To screen for state-listed species that may occur on or near the Proposed Action Site, the NYSDEC online Environmental Resource Mapper (ERM) was accessed, and a database search request was made to the New York Natural Heritage Program (NYNHP) on October 21, 2021. As discussed in *Section 4.3* of the 2020 EA, the NYNHP maintains the ERM database, including the status and location of known records of rare species and natural communities. According to a review of the NYSDEC ERM, there are records of state-listed or rare animals and plants on or near the Proposed Action Site. The attached response letter from the NYNHP (see ***Appendix B, Coastal, Biological & Water Resources***), dated November 30, 2021, states the agency has "*no records of rare of state-listed animals or plants, or significant natural communities at the project site*". Further, while not noted as a concern for the environmental analysis, the letter also acknowledges that "*Upland Sandpiper (Bartramia longicauda, state listed as Threatened) has been documented throughout an area within ½ mile of the project."* This State-listed bird species

was identified by the NYNHP as potentially occurring on or near the Proposed Action Site; however, the presence of these bird species in the Proposed Action Site would continue to be discouraged and managed in accordance with the Airport's WHMP for on-Airport property and by guidance of the NYSDOT for areas in the adjacent ROW. Further, the Proposed Action Site is in a highly urbanized area with active transportation corridors, comprised of urban-adapted, and invasive/opportunistic vegetation, as well as landscaped areas, without suitable habitat for threatened, endangered and special status species. There are no previously undisturbed natural areas or other habitats, such as wetlands, present in the expanded Study Area.

Birds Protected Under the MBTA and the Bald and Golden Eagle Protection Act

According to the USFWS IPaC report, there are 22 migratory birds protected under the MBTA and the Bald and Golden Eagle Protection Act that may occur at and near the Proposed Action Site. South of the Proposed Action Site beyond the Airport property is the Jamaica Bay estuarine complex, which consists of extensive marine open water habitats, with numerous islands, tidal creeks, marshes, brackish ponds, and upland field and wooded habitats for migratory birds and other species. It is likely that the 22 migratory bird species identified by the USFWS IPaC report mostly occur in more suitable nearby natural habitats and not the Proposed Action Site. The nature and extent of the previously disturbed developed land within the Proposed Action Site, with a high-volume transportation network, comprising of few undeveloped landscaped and naturally vegetated areas (i.e., areas of urban-adapted, and invasive/opportunistic vegetation), are not suitable habitats for the identified migratory bird species.

NYSDEC Critical Environmental Areas (CEAs)

In *Section 4.3* of the 2020 EA, the NYSDEC Critical Environmental Areas (CEAs) are defined. The Jamaica Bay CEA is depicted on ***Exhibit 4-1, Jamaica Bay Critical Environmental Areas (CEA).*** Consistent with *Section 4.3* of the 2020 EA, the Proposed Action Site (i.e., the area of direct impact) would maintain a distance of at least 500 feet from the Jamaica Bay CEA.

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EXHIBIT 4-1 JAMAICA BAY CRITICAL ENVIRONMENTAL AREAS (CEA)

Source: NYS Department of Environmental Conservation, Critical Environmental Areas in Queens County, Accessed Online June 2021.

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4.5.3 Proposed Action - Biological Resource Impacts

This section analyzes the potential impacts of the Proposed Action on existing biological resources.

Ecological Communities and Vegetation

The Proposed Action Site consists of on-Airport developed/industrial land currently used for airport operations and off-Airport property almost entirely comprised of previously disturbed developed land, with few undeveloped landscaped and naturally vegetated areas (i.e., areas of urban-adapted, and invasive/opportunistic vegetation). There are no previously undisturbed natural areas or other habitats, such as wetlands, present in the Proposed Action Site that could be impacted by the Proposed Action. Therefore, the Proposed Action would not adversely impact ecological communities or vegetation.

Wildlife

Wildlife present in the Proposed Action Site is limited to those species that are highly tolerant of human disturbance and can use the on- and off-Airport buildings and paved roadways as well as landscaped and naturally vegetated areas (i.e., areas of urban-adapted, and invasive/opportunistic vegetation) within the adjacent NYSDOT ROW. A majority of the construction anticipated as part of the Proposed Off-CTA Roadways of the Proposed Action (i.e., off-Airport property) would occur within areas immediately adjacent to existing roadway infrastructure (i.e., one-lane widening to approximately 0.5 mile of the existing Eastbound Nassau Expressway (NY-878) from the Van Wyck Expressway to the JFK Expressway) such that the clearing of existing landscaped and naturally vegetated areas within the adjacent NYSDOT ROW would be limited. Wildlife species may be temporarily disturbed during construction due to noise, vibration, or temporary displacement. However, as noted above, the species found within the Proposed Action Site are highly tolerant of human disturbance. Therefore, the Proposed Action would be unlikely to adversely impact wildlife.

Federally Threatened and Endangered Species

The Proposed Action Site does not provide habitat for Federally listed species and is not designated critical habitat. Habitat for the Federally listed species identified by the IPaC review do not occur within the Proposed Action Site, and therefore, would not be adversely impacted by the Proposed Action. Coordination with the USFWS is ongoing to confirm the Proposed Action would have no effect on Federally listed species or designated critical habitat (see ***Appendix B, Coastal, Biological & Water Resources*** in this Supplemental EA for additional information).

State Designated Threatened, Endangered, or Special Status Species

Although state-listed bird species such as peregrine falcon and upland sandpiper were identified by the NYNHP as potentially occurring at or near the Airport property, the presence of these bird species would continue to be discouraged and managed in accordance with the WHMP for on-Airport areas and by guidance from the NYSDOT within the adjacent NYSDOT ROW. In accordance with the WHMP, the vegetation in unpaved areas of the Airport property is actively managed, and there are no naturally vegetated areas on- or off-Airport within the Proposed Action Site that would be conducive to usage as breeding habitat by the identified state-listed

species. Therefore, it is unlikely that the Proposed Action would have adverse impacts on state-listed species. Coordination with the NYSDEC is ongoing to confirm that the Proposed Action would have no effect on State-listed species (see ***Appendix B, Coastal, Biological & Water Resources*** in this Supplemental EA for additional information).

Birds Protected Under the MBTA and the Bald and Golden Eagle Protection Act

The Proposed Action Site does not provide suitable habitat for the migratory bird species identified from the USFWS IPaC report. It is also noted that implementation of the Airport's WHMP and adherence to FAA AC No. 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airport* within the Airport's adjacent NYSDOT ROW discourages birds of all types in support of flight safety. Therefore, the Proposed Action is not likely to adversely impact migratory birds.

4.5.4 Conclusion - No Significant Biological Resource Impacts

There are limited previously disturbed naturally vegetated areas within the Proposed Action Site, both on- and off-Airport. Federally listed species are not known to be present at the Proposed Action Site. Given the existing use of and development at and proximate to the Airport (i.e., within the NYSDOT ROW), habitat areas (or lack thereof) for state-listed species and birds known to occur near the Airport, and the nature of the Proposed Action, it is not anticipated that the Proposed Action would result in adverse impacts to biological resources. Consistent with the No Action from the 2020 EA, the Proposed Action would not result in significant adverse impacts on biological resources.

4.5.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would have no significant adverse impact on biological resources; therefore, no mitigation is required.

4.6 Climate

There is widespread consensus that human-caused greenhouse gases (GHGs) contribute to climate change (also known as global warming). Brought about principally by the combustion of fossil fuels, decomposition of waste materials and deforestation, these changes are said to cause an increase in the earth's average temperature which is commonly referred to as "climate change."

The three GHGs of greatest interest are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). On a world-wide scale, CO_2 represents the largest proportion, ranging from 80 to over 90 percent of the total. Because CO_2, CH_4 and N_2O are products of fuel combustion, they are also the predominate GHGs associated with most airports. Presently, there are no Federal or state standards for GHGs in ambient air. *Section 4.4, Climate (Affected Environment)* and *Section 5.4, Climate (Environmental Consequences)* of the 2020 EA provides the common sources of GHG emissions at JFK, FAA guidance for assessing GHGs and climate change, and an estimate of annual GHG emissions associated with construction of the No Action.

4.6.1 Summary of 2020 EA Climate Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. A quantitative assessment of the No Action's effect on climate is provided in *Section 5.4* of the 2020 EA for the Years 2020 through

2025. CO_2 represents the largest proportion of GHG emissions during construction of the No Action. The methodology and assumptions for the No Action climate analysis are provided in *Appendix B, Air Quality Technical Report* in the 2020 EA.

4.6.2 Proposed Action - Greenhouse Gas Emissions Analysis

For disclosure purposes, ***Table 4-6, Greenhouse Gas (GHG) Emissions Associated with Construction***, provides an estimate of annual GHG emissions associated with construction of the Proposed Action. The methodology and assumptions for the climate analysis are provided in ***Appendix A, Air Quality Technical Report*** of this Supplemental EA.

TABLE 4-6 GREENHOUSE GAS (GHG) EMISSIONS ASSOCIATED WITH CONSTRUCTION (METRIC TONS)
John F. Kennedy International Airport

Year	CO_2	CH_4	N_2O	Total CO_2e
2021	501	3	0.5	505
2022	7,058	25	5.3	7,089
2023	14,211	43	11.0	14,265
2024	17,279	55	12.5	17,347
2025	16,289	54	10.6	16,354
2026	9,855	37	6.0	9,898
2027	7,484	32	4.3	7,520
2028	1,904	12	1.4	1,918
2029	2,374	20	1.9	2,396

Notes: CO_2: Carbon Dioxide; CH_4: Methane; CO_2e: Carbon Dioxide equivalent; CO_2e is computed using Global Warming Potential (GWP) for CO_2=1; CH_4= 28, and N_2O = 265.
Emissions from motor vehicles are included.
Source: CMT, 2022.

4.6.3 Conclusion - Greenhouse Gas Emissions Analysis

While no significance thresholds have been established for climate impacts, GHGs associated with the Proposed Action have been calculated in accordance with FAA guidelines.

4.6.4 Reduction, Avoidance and Minimization Measures

Measures to help reduce GHGs from construction and operation of the Proposed Action will include the emission reduction and minimization measures discussed in *Section 5.2 (Air Quality)* and *Section 5.4* in the 2020 EA. Examples include the mandatory use of no- or low-emission construction equipment/vehicles and the improvement of motor vehicle travel on the Proposed CTA Roadway network with a reduction in VMT. In addition, 20 to 25 percent of the parking spaces in the new GTC/JFK Central would have EV charging stations.

4.7 Coastal Resources

Coastal resources at JFK are described in *Section 4.5, Coastal Resources (Affected Environment)* and *Section 5.5, Coastal Resources (Environmental Consequences)* of the 2020 EA. *Section 4.5* provides the relevant regulatory context and the existing coastal resources adjacent to the Airport. *Section 5.5* outlines the factors used to identify and assess potential impacts to coastal resources in connection with the No Action.

4.7.1 Summary of 2020 EA Coastal Resource Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As described in *Section 5.5* of the 2020 EA, the Proposed Project described in the 2020 EA would not result in direct impacts to coastal resources. However, potential indirect impacts to coastal resources could result from increased runoff to nearby receiving waters, such as Jamaica Bay, due to the approximately 5.9-acre increase in impervious paved areas. This increase in stormwater discharge would be small in comparison to the existing distributed nature of the proposed new paved areas and the quantity of new pavement compared to the overall 4,930-acre footprint of the Airport. Therefore, with existing Best Management Practices (BMP) and installation of glycol collection infrastructure to improve the quality of water discharged to surface water, the No Action would at most have a *de minimis* indirect adverse impact on coastal resources and surface waters.

The 2020 EA concluded that implementation of the No Action would be consistent with federal, state, and local coastal zone policies, and would not otherwise affect coastal resources. Coastal consistency assessments were submitted to the NYSDOS and the New York City Department of City Planning (NYCDCP). On January 28, 2020, the Port Authority received a response letter from the NYSDOS determining that the No Action meets the NYSDOS general consistency concurrence criteria. On February 3, 2020, the Port Authority received a response email from the NYCDCP stating the Proposed Action would not substantially hinder the achievement of any New York City Waterfront Revitalization Program (WRP) policy and provided its finding to the NYSDOS (see *Section 5.5* of the 2020 EA).

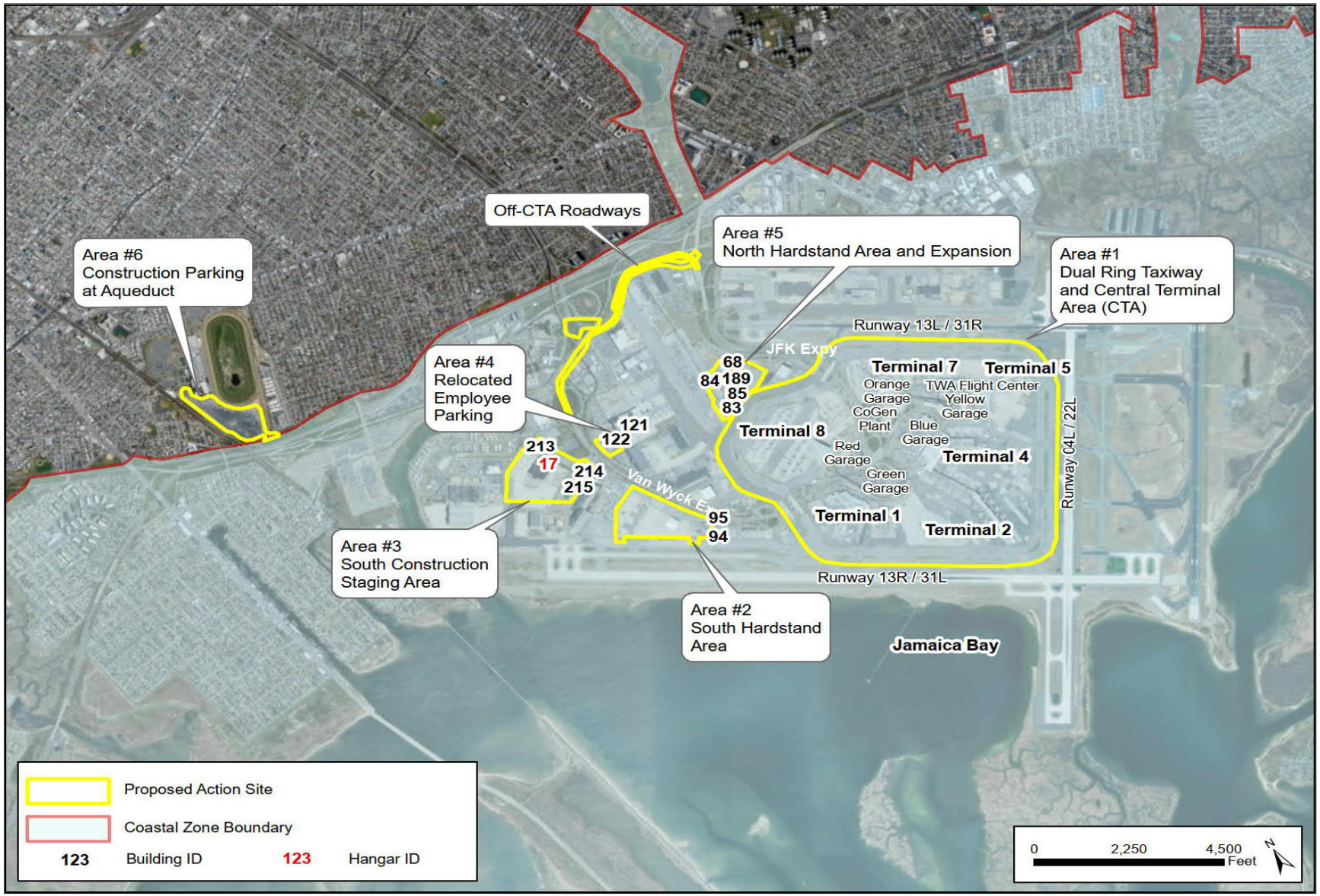
4.7.2 Proposed Action vs. No Action

The Proposed Action Site is entirely within the NYSDOS and NYCDCP- designated coastal zones (***Exhibit 4-2, Coastal Zone Boundary***), which is consistent with the 2020 EA Proposed Project Site. However, the Proposed Action Site is on development uplands and not within an area subject to the Coastal Barrier Resources Act (CBRA) or the Coastal Barriers Improvement Act (CBIA), which is consistent with the 2020 EA Proposed Project Site. JFK is adjacent to the Jamaica Bay Significant Coastal Fish and Wildlife Habitat (see ***Exhibit 4-3, Jamaica Bay Significant Coastal Fish and Wildlife Habitat***), New York City WRP designated Special Natural Waterfront Area in Jamaica Bay, and Recognized Ecological Complex in Bergen Basin, as well as state-designated tidal wetlands and floodplains associated with Jamaica Bay and Bergen Basin (see *Section 4.16, Water Resources* in this Supplemental EA for associated exhibits).

Similar to the 2020 EA Proposed Project Site, the area of direct impacts within the Proposed Action Site does not contain, nor is it adjacent to salt marshes, wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, or fish and wildlife habitat. In addition, the Proposed Action Site remains approximately 900 feet north of Jamaica Bay; approximately 4,000 feet from the Airport's boundary with the Head of Bay and Thurston Basin; and at least 500 feet from coastal resources, which are separated from the Proposed Action Site by runways and taxiways, access roads, elevated AirTrain tracks, terminals, and other Airport buildings and infrastructure.

However, the Proposed Off-CTA Roadways element of the Proposed Action Site is closer to Bergen Basin than the 2020 EA Proposed Project Site (approximately 1,000 feet compared to 1,600 feet).

EXHIBIT 4-2 COASTAL ZONE BOUNDARY



Source: NYS Department of State, Geographic Information Gateway, Accessed Online June 2021.

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EXHIBIT 4-3 JAMAICA BAY SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT

Source: NYS Department of State, Geographic Information Gateway, Accessed Online June 2021.

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4.7.3 Proposed Action - Coastal Resource Impacts

Although no coastal resources are within the Proposed Action Site, stormwater from the Proposed Action Site eventually discharges to coastal surface waters. As discussed in *Section 5.5* of the 2020 EA, potential indirect impacts to the coastal zone could result from the increase in impervious paved areas if this increase results in a corresponding increase in the volume of stormwater discharged into Jamaica Bay and surrounding waterbodies. The Proposed Off-CTA Roadways element of the Proposed Action would result in an approximately 4.1-acre increase in impervious surface in the form of new pavement. This would be in addition to the approximately 5.9-acre increase in new pavement from the No Action (see *Section 5.5* of the 2020 EA).

Although the overall impervious surface area would be increased under the Proposed Action, the impervious areas are not connected, and stormwater can infiltrate the remaining grassed infield areas and other vegetated spaces within the Study Area. Further, given the distributed nature of the newly paved areas and the quantity of new pavement compared to the overall 4,930-acre footprint of the Airport (approximately 0.2 percent of the Airport's overall footprint), the increase in stormwater discharge over existing levels is anticipated to be relatively small. The minimal increase in runoff from the increased impervious coverage would be detained by stormwater management practices and would not add additional stormwater discharges to receiving waters.

Consistent with *Section 5.5* of the 2020 EA, the Proposed Action would minimize the potential for stormwater-related impacts to coastal resources with adherence to a Stormwater Pollution Prevention Plan (SWPPP) through the State Pollutant Discharge Elimination System (SPDES) and NYSDEC requirements. In addition, any groundwater recovered during dewatering would be monitored, treated, and discharged to existing infrastructure in accordance with FAA policies, NYSDEC, SPDES requirements, and the Airport's BMP Plan requirements. Low Impact Development (LID) approaches would be included to the extent practicable to reduce runoff, promote groundwater recharge and minimize post-construction impacts to water quality. It is anticipated that the stormwater demand for the proposed stormwater facilities on the periphery of the Proposed CTA Roadways would be lower than the existing stormwater demand because of incorporation of green infrastructure at the proposed GTC/JFK Central parking facility such as a vegetated roof system in compliance with New York City Building's Local Law 92 of 2019 and Local Law 94 of 2019.[35] As compared to the No Action, this reduction would be slightly less under the Proposed Action given the reduced footprint of the GTC/JFK Central parking facility, and therefore, the reduced acreage of the green roof space. However, this reduction would be minimal (approximately 1 acre). As a result, the reduced benefits, in consideration of the size of the Airport, would be insignificant. In addition, the Port Authority remains committed to environmental stewardship with stormwater capture systems at the new terminals and glycol recovery systems at aircraft deicing facilities where feasible. These measures would minimize the potential for pollutant releases into Jamaica Bay, Bergen Basin, Thurston Basin and Head of Bay, the water bodies adjacent to the Airport. Therefore, the Proposed Action would not result in a significant increase of discharge to adjacent waterbodies and based on the foregoing is unlikely to adversely impact coastal resources either directly or indirectly.

[35] Local Laws 92 and 94 amends the New York City building code, in relation to requiring that the roofs of certain buildings be partially covered in green roof or solar photovoltaic electricity generating systems.

A coastal zone consistency determination process was conducted, which included the assessment of effects of the Proposed Action. Coastal consistency assessments were submitted to the NYSDOS and NYCDCP. The respective consistency assessments are included in ***Appendix B, Coastal, Biological & Water Resources***. On November 9th, 2022, the Port Authority received a response letter from the NYSDOS concluding that the Proposed Action meets the NYSDOS's general consistency concurrence criteria. The NYSDOS response letter was also provided to the NYCDCP. The response letter from the NYSDOS is included in ***Appendix B, Coastal, Biological & Water Resources***.

4.7.4 Conclusion - No Significant Coastal Resource Impacts

Based on the foregoing analyses and comparisons, the Proposed Action would at most have a *de minimis* indirect adverse impact on coastal resources and surface waters with existing BMP and minimization measures. The Proposed Action would be consistent with Federal, state, and local coastal zone policies, and would not otherwise affect coastal resources. The Proposed Action would have no significant impact on coastal resources.

4.7.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would not result in significant adverse impacts on coastal resources; therefore, no mitigation is required. As discussed above and in *Section 5.5.4 (Reduction, Avoidance, and Minimization Measures)* of the 2020 EA, elements have been incorporated into the Proposed Action to minimize and/or avoid potential adverse impacts to coastal resources.

4.8 Department of Transportation Act Section 4(f) Resources

Department of Transportation (DOT) Section 4(f) resources are discussed in *Section 4.6, DOT Act Section 4(f) Resources (Affected Environment)* and *Section 5.6, DOT Act Section 4(f) Resources (Environmental Consequences)* of the 2020 EA. *Section 4.6* also outlines the relevant regulatory context and key definitions used to identify and assess potential impacts to DOT Section 4(f) resources. As described and defined in *Section 4.6*, two types of impacts to a Section 4(f) resource can occur from a Proposed Action, physical or constructive use.

4.8.1 Summary of 2020 EA Section 4(f) Resource Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As described in *Section 5.6* of the 2020 EA, the No Action would have no adverse effect on public parks, recreational facilities, or wildlife or waterfowl refuges. In a letter dated February 3, 2020, to the FAA, the New York State Historic Preservation Office (NY SHPO) concluded that none of the Airport buildings that would be directly affected by the No Action are eligible for inclusion in the National Register of Historic Places (NRHP). In addition, the NY SHPO confirmed the No Action would have No Adverse Effect upon resources listed in or eligible for listing in the NRHP. As such, it was determined that the No Action would not likely result in a constructive use of potential DOT Section 4(f) resources, including potential visual impacts to the TWA Flight Center, which is listed on the NRHP. The 2020 EA FONSI/ROD confirmed there would be no significant adverse impacts to DOT Section 4(f) resources as a result of the No Action.

4.8.2 Proposed Action vs. No Action

The Proposed CTA Roadways do not change the boundaries of the 2020 EA Proposed Project Site, which is consistent with the Areas of Potential Effects (APEs) defined as part of the Section 106 process in the 2020 EA (see *Section 4.8, Historical, Architectural, Archaeological, and Cultural Resources* in the 2020 EA). Thus, the analysis presented in this Supplemental EA is focused on the Proposed Off-CTA Roadways as part of the Proposed Action Site. There are no public parks, recreational facilities, wildlife or waterfowl refuges, or historic properties of local, state, or national significance in the area of direct impact for the Proposed Off-CTA Roadways of the Proposed Action Site. The footprint and location of inventoried Section 4(f) resources within a ½-mile Study Area from the Proposed Off-CTA Roadways limits of disturbance is considered the Study Area for the analysis in this section, as illustrated in ***Exhibit 4-4, Parks and Open Space Study Area and Resource Locations***.[36]

While not within the area of direct impacts, two parks and one public open space are present within the ½-mile Study Area: Baisley Pond Park (BP Park), Police Officer Edward Byrne Park (Byrne Park), and Hilton Holiday Gardens (public open space). None of these parks and open spaces are recorded as a cultural resource according to the NY SHPO. These three facilities are north of North Conduit Avenue (NY-27) (see ***Exhibit 4-4*** in this Supplemental EA). For additional information regarding these three facilities, refer to ***Appendix C, Cultural & DOT Section 4(f) Resources*** in this Supplemental EA.

4.8.3 Proposed Action - Section 4(f) Resource Impacts

As noted above, there are no public parks, recreational facilities, wildlife, or waterfowl refuges, or significant local, state, or federal historic properties listed in or eligible for inclusion in the State and National Register of Historic Places (S/NRHP) in the area of direct impact for the Proposed Off-CTA Roadways as part of the Proposed Action Site. Further, none of the Section 4(f) resources within the ½-mile Study Area of the Proposed Off-CTA Roadways would be directly impacted by the Proposed Action. The Hilton Holiday Gardens (public open space) and Byrne Park both were developed after the Airport became operational. Therefore, these two resources have been subject to indirect noise and air quality effects from adjacent transportation routes and air flights throughout their use. While BP Park predates JFK and the predecessor Idlewild Airport, BP Park's setting is marked by adjacent transportation routes, and commercial, industrial, and residential development, which has only increased in density since BP Park's inception. The Proposed Action would not result in a constructive use of any of the Section 4(f) resources on airport property (i.e., TWA Flight Center), or within the footprint, or ½-mile Study Area of the Proposed Off-CTA Roadways Site.

[36] The ½-mile Study Area from the Proposed Off-CTA Roadways was selected because it is consistent with the ½-mile Study Area used by the NYSDOT for the *VWE Capacity and Access Improvements to JFK Airport Project Final Design Report/Final Environmental Impacts Statement* (VWE FDR/FEIS), which proposed capacity and access improvements to the Van Wyck Expressway vetted by transportation and other agencies, including the NYSDOT and FHWA. The VWE FDR/FEIS is described in further detail in *Section 4.17, Cumulative Impacts Analysis* in this Supplemental EA.

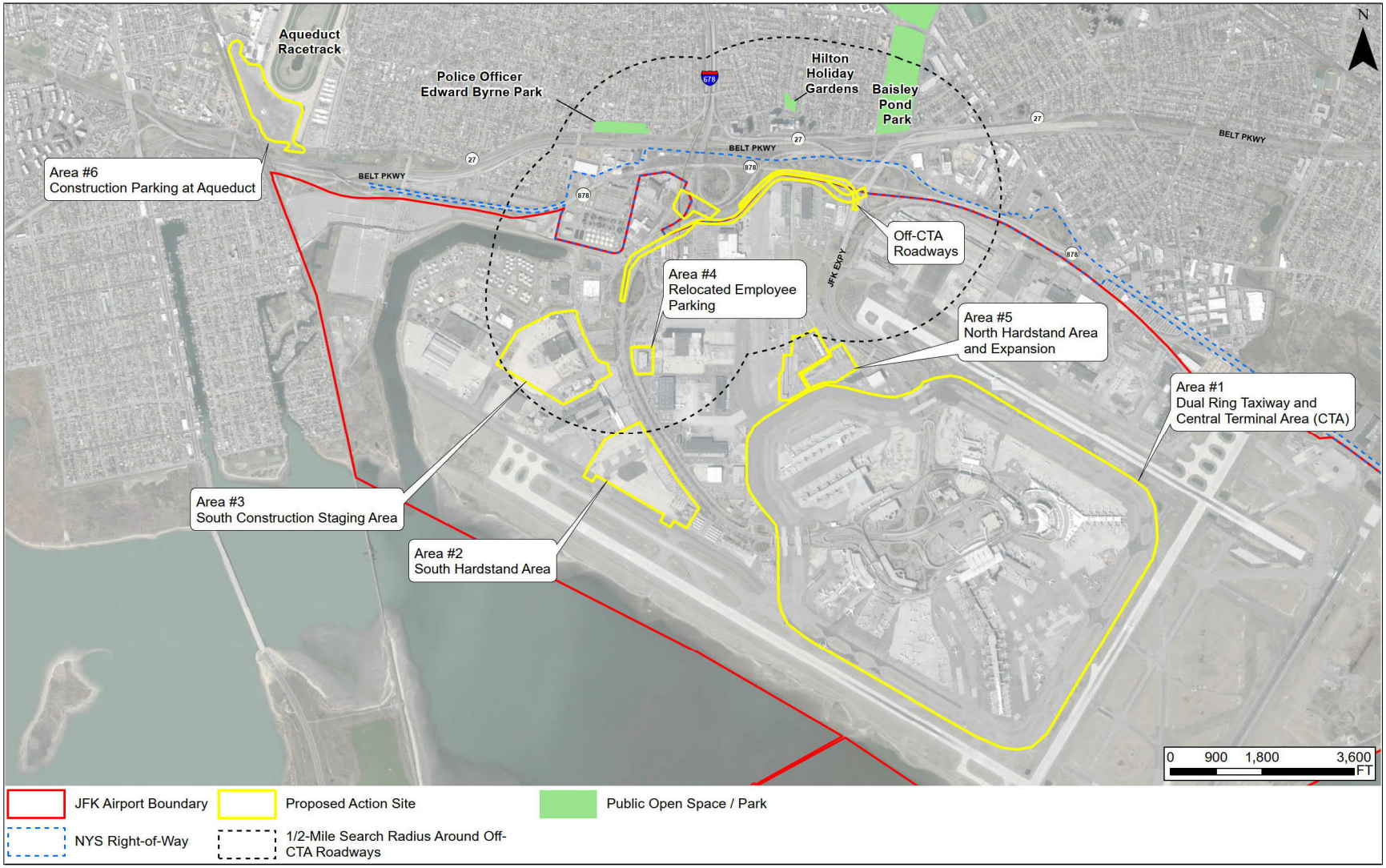
4.8.4 Conclusion - No Significant Section 4(f) Resource Impacts

Consistent with the 2020 EA, the Proposed Action would have no direct or indirect adverse impacts on Section 4(f) resources. The Proposed Action would not likely result in a constructive use of Section 4(f) resources.

4.8.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would not result in a significant impact on Section 4(f) resources; therefore, no mitigation measures are required.

EXHIBIT 4-4 PARKS AND OPEN SPACE STUDY AREA AND RESOURCE LOCATIONS



Source: New York City Department of Parks and Recreation: Park Properties (July 9, 2021)
Church and Rutsch (1987), Figure A-3, PDF Page 146
New York State Office of Parks, Recreation and Historic Preservation Cultural Resources Information System

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4.9 Hazardous Materials, Solid Waste, and Pollution Prevention

Section 4.7, Hazardous Materials, Solid Waste, and Pollution Prevention (Affected Environment) and *Section 5.7, Hazardous Materials, Solid Waste, and Pollution Prevention (Environmental Consequences)* of the 2020 EA describe existing hazardous materials and solid waste generation on-Airport and potential impacts associated with the No Action, respectively.

4.9.1 Summary of 2020 EA Hazardous Materials, Solid Waste, and Pollution Prevention Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As discussed in *Section 4.7* of the 2020 EA, the 2020 EA Proposed Project Site is not within an area on the USEPA's list of contaminated sites that warrant further environmental investigation (i.e., the National Priorities List (NPL)), nor were any NPL sites identified within a one-mile radius of the 2020 EA Proposed Project Site. Furthermore, the USEPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database confirmed the absence of potentially contaminated sites within a 0.5-mile radius of the 2020 EA Proposed Project Site.

Through consultation with the Port Authority, ongoing hazardous substance investigations and cleanup sites are present in the vicinity of the former Terminal 3 (T3), T6 and T7. In addition, buildings proposed for demolition, as part of the JFK Redevelopment Program, may contain asbestos and electrical components that consist of mercury, such as switches or thermostats, and polychlorinated biphenyls or lead paint coatings. All activities that involve disturbing or excavating soils would be performed in coordination with the NYSDEC and in accordance with applicable regulatory requirements. All demolition activities would be conducted with regard to worker safety and according to all applicable Federal, state, and local regulations. In addition, adherence to BMPs and control measures as outlined in *Section 5.7* of the 2020 EA would effectively reduce potential risks to human health and the environment during construction. Therefore, no significant impacts related to solid waste, hazardous materials or pollution prevention are anticipated due to the implementation of the No Action.

4.9.2 Proposed Action vs. No Action

The Proposed Off-CTA Roadways expands the 2020 EA Proposed Project Site to include roadway and access improvements both on- and off-Airport along the northern Airport boundary between the Van Wyck Expressway and JFK Expressway. While the Proposed CTA Roadways include design modifications within the 2020 EA Proposed Project Site, these areas were evaluated in the 2020 EA and impacts have not noticeably changed and therefore, are not reiterated in detail herein. Thus, the Proposed Off-CTA Roadways is the focus of evaluation in this assessment because its Study Area was not included in the Study Area evaluated in the 2020 EA.

Hazardous Materials

Consistent with *Section 4.7* of the 2020 EA's Proposed Project Site, historical soil and groundwater contamination is present in the vicinity of the Proposed Off-CTA Roadways. However, the Proposed Off-CTA Roadways are not within an area on the USEPA's list of contaminated sites that warrant further environmental investigation (i.e., the National Priorities List (NPL)), nor were any NPL sites identified within a one-mile radius of the Proposed Off-CTA

Roadways Site. Furthermore, the USEPA's CERCLIS database confirmed the absence of potentially contaminated sites within a 0.5-mile radius of the Proposed Off-CTA Roadways Site. In addition, the USEPA's "Cleanups in My Community" database did not identify any hazardous waste cleanup locations within the Proposed Off-CTA Roadways limits of disturbance.[37]

Land uses adjacent to and bordering the Proposed Off-CTA Roadways are located on Port Authority airport property with airport related facilities and NYSDOT ROW with infill, elevated paved roadway surfaces and adjacent grassy areas. Adjacent airport facilities include a rental car facility at the Federal Circle AirTrain Station with nine car rental companies, an active gasoline station proximate to JFK Expressway at 150th Avenue and 148th Street, and several buildings associated with airport operations. These properties are generally associated with the use, handling, and storage of hazardous materials, primarily gasoline and diesel fuel. However, it is unlikely or not anticipated that these properties will impact the implementation of the Proposed Off-CTA Roadways. The Proposed Off-CTA Roadways in this area would involve minimal disturbance associated with roadway improvements (i.e., widening, infill, and elevated roadway structures) and does not include large scale excavations, dewatering, or demolition associated with buildings. In the event that any structures or excavations are required for the purposes of constructing the Proposed Off-CTA Roadways, the construction will be completed in accordance with Federal, State, and local regulations.

Solid Waste

Consistent with the CTA roadway network proposed in the No Action, any solid waste and recyclables generated from construction of the Proposed Off-CTA Roadways would be handled by state-permitted disposal facilities located near JFK. For additional information regarding the specific facilities, refer to *Section 4.7* of the 2020 EA.

Pollution Prevention

Consistent with *Section 4.7* of the 2020 EA, the Proposed Off-CTA Roadways would comply with a SPCC Plan. The SPCC Plan contains appropriate spill prevention and clean up measures as well as requirements for reporting an unintended release of hazardous materials.

4.9.3 Proposed Action - Hazardous Materials, Solid Waste, and Pollution Prevention Impacts

Implementation of the Proposed Action is not expected to individually or cumulatively result in adverse impact with respect to hazardous materials, pollution prevention or solid waste. Construction and demolition debris generated would be recycled to the greatest extent possible.

Hazardous Materials

Historical soil and groundwater contamination is present in the vicinity of the Proposed Off-CTA Roadways. However, this area is not on the USEPA's list of contaminated sites that warrant further environmental investigation (i.e., the National Priorities List (NPL)), nor were any NPL sites identified within a one-mile radius of the Proposed Off-CTA Roadways Site. Further, the USEPA's CERCLIS database confirmed the absence of potentially contaminated sites within a 0.5-mile radius of the Proposed Off-CTA Roadways Site. In addition, the USEPA's "Cleanups in

[37] USEPA Cleanups in my Community. Available online: https://www.epa.gov/cleanups/cleanups-my-community#map. Accessed on July 30, 2021.

My Community" database did not identify any hazardous waste cleanup locations within the Proposed Off-CTA Roadways limits of disturbance.[38]

Land uses adjacent to and bordering the Proposed Off-CTA Roadways are located on Port Authority airport property and NYSDOT ROW with infill, elevated paved roadway surfaces and adjacent grassy areas. Adjacent airport facilities are generally associated with the use, handling, and storage of hazardous materials, primarily gasoline and diesel fuel. However, it is unlikely or not anticipated that these properties would impact the implementation of the Proposed Off-CTA Roadways. Construction of the Proposed Off-CTA Roadways would involve minimal disturbance associated with roadway improvements (i.e., widening, infill, and elevated roadway structures) and would not include large scale excavations, dewatering, or demolition associated with buildings. Activities that involve disturbing or excavating soils would be performed in coordination with the NYSDEC and in accordance with applicable regulatory requirements.

All activities that involve disturbing or excavating soils would be performed in coordination with the NYSDEC and in accordance with applicable regulatory requirements. During construction, any soil and groundwater encountered during excavation will be properly managed and disposed of in accordance with Federal, State, and local regulations. Additionally, all demolition activities would be conducted with regard to worker safety and according to all applicable Federal, state, and local regulations, including the Resource Conservation and Recovery Act (RCRA). Adherence to BMPs and control measures would effectively reduce potential risks to human health and the environment during construction.

Solid Waste

Any solid waste and recyclables generated from construction of the Proposed Off-CTA Roadways would be handled by state-permitted disposal facilities near JFK, as listed in *Section 4.7* of the 2020 EA. Measures to minimize the solid waste stream, such as source reduction and recycling strategies during construction and operation, would be implemented. This includes the implementation of the Port Authority policy requiring that contractors to the Port Authority recycle 75 percent of certain demolition debris items. Additionally, the Port Authority's *Sustainable Building Guidelines* would be implemented by all contractors of the Port Authority to reduce adverse environmental impacts of the design, construction, operation and maintenance and occupancy or leasing of new or substantially renovated buildings and facilities.[39] Therefore, no significant construction or operational-related solid waste impacts would occur as a result of the Proposed Action.

Pollution Prevention

The Proposed Off-CTA Roadways would comply with a project-specific SPCC Plan, including spill prevention and clean up measures and requirements for reporting an unintended release of hazardous materials.

The Proposed Action would not change existing pollution prevention measures from the No Action. The Port Authority would continue to operate the Airport under the existing Port Authority's *Sustainable Infrastructure Guidelines*.[40]

[38] USEPA Cleanups in my Community. Available online: https://www.epa.gov/cleanups/cleanups-my-community#map. Accessed on July 30, 2021.
[39] Port Authority, *Sustainable Building Guidelines*, 2018.
[40] Port Authority, *Sustainable Infrastructure Guidelines*, January 2021.

4.9.4 Conclusion - No Significant Hazardous Materials, Solid Waste, and Pollution Prevention Impacts

No significant hazardous materials, pollution prevention, and solid waste impacts are anticipated from construction or operation of the Proposed Action. Removal of all contaminated soils and treatment of contaminated groundwater encountered during excavation activities would start prior to construction. The disposal of construction and demolition debris would be conducted in accordance with a SPCC Plan and all applicable Federal, state, tribal or local laws or regulations.

4.9.5 Reduction, Avoidance and Minimization Measures

Consistent with the No Action, the reduction, avoidance, and minimization measures stated in *Section 5.7.4 (Reduction, Avoidance, and Minimization Measures)* of the 2020 EA would remain valid and the recommendations therein would ensure no applicable Federal, state, tribal or local laws or regulations regarding hazardous materials would be violated. The recommendations would ensure that the Proposed Action would not contribute to the existing contamination.

4.10 Historical, Architectural, Archaeological, and Cultural Resources

Resources defined under the National Historic Preservation Act (NHPA) of 1966, as amended, include archaeological sites, buildings, cultural landscapes, historic districts, objects, structures, and places of religious and cultural significance. *Section 4.8, Historical, Architectural, Archaeological, and Cultural Resources (Affected Environment)* and *Section 5.8, Historical, Architectural, Archaeological, and Cultural Resources (Environmental Consequences)* of the 2020 EA detail existing cultural resources and impacts associated with the No Action, respectively.

4.10.1 Summary of 2020 EA Historical, Architectural, Archaeological, and Cultural Resource Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As detailed in *Section 4.8* of the 2020 EA, six (6) distinct APEs were defined for the No Action, in consultation with the NY SHPO and in compliance with Section 106 of the NHPA. These six APEs were determined based on potential direct effects resulting from the No Action, including alteration to or demolition of buildings and structures. Five of the APEs (#s 1-5) are on-Airport property, while the sixth (APE #6) is northwest of, but proximate to the Airport, at the Aqueduct Racetrack parking lot. The Aqueduct Racetrack parking lot would be used for construction worker parking during construction.

The NRHP and NY SHPO Cultural Resources Information System (CRIS) databases were reviewed to identify known historic properties within the APEs. The TWA Flight Center was identified in the 2020 EA as the sole property listed in, or formally determined eligible for listing in the NRHP.

In NYSHPO's December 2, 2019 response to the FAA, NY SHPO concurred with the identified APEs and with the finding of No Adverse Effect to archeological resources in accordance with Section 106 of the NHPA. The NY SHPO concluded in their February 3, 2020 response letter to the FAA that the Proposed Action would have No Adverse Effect on historic resources and no

other above ground resources within the APEs associated with the No Action are eligible for inclusion in the NRHP. Consultation with local governments, including the Queens Borough President's Office and the New York City Landmarks Preservation Commission, was also conducted as part of the 2020 EA. The 2020 EA FONSI/ROD confirmed there would be no significant adverse impacts to historical, architectural, archaeological, and/or cultural resources as a result of the Proposed Project described in the 2020 EA.

4.10.2 Proposed Action vs. No Action

As defined in *Section 4.8* of the 2020 EA, the CTA roadway network proposed in the No Action was within the *APE #1, Dual Ring Taxiway and CTA*. The design modifications associated with the Proposed CTA Roadways and addition of the Proposed Off-CTA Roadways does not affect the boundaries of the APEs identified in the No Action. Therefore, the analysis presented in this Supplemental EA is focused on the Proposed Off-CTA Roadways of the Proposed Action Site, which is not included in an APE from the 2020 EA Proposed Project Site.

The footprint and location of inventoried cultural resources within the ½-mile Study Area of the Proposed Off-CTA Roadways Site is illustrated in ***Exhibit 4-5, Cultural Resources Study Area and Resource Locations***. This ½-mile Study Area is consistent with the Study Area evaluated in *Section 4.8, Department of Transportation Act Section 4(f) Resources* in this Supplemental EA.

According to the NY SHPO CRIS databases, there are no previously inventoried cultural resources in the immediate vicinity of the Proposed Off-CTA Roadways of the Proposed Action Site. However, there are 30 previously recorded buildings and structures and a small part of one archaeological site (New York State Museum [NYSM] Site #4534) within this ½-mile Study Area associated with the Proposed Off-CTA Roadways. Twenty-six (26) of the 30 buildings and structures are determined "Not Eligible" to the S/NRHP. The remaining four (4) are listed by NY SHPO as "Undetermined" in the CRIS database. None of these resources were considered in *Section 5.8* of the 2020 EA's analysis of potential effects to historical, architectural, archaeological, and cultural resources because these resources are beyond the defined study area of the No Action. ***Appendix C, Cultural & DOT Section 4(f) Resources*** in this Supplemental EA provides a description of these four (4) buildings and structures:

- USN 08101.000132, Ridgewood Aqueduct - between North and South Conduit Avenues
- USN 08101.009543, Existing Monopole Cell Tower - 154-09 146th Street
- USN 08101.011853, Former international Hotel (Bldg. 144) - Van Wyck Expressway 11430
- USN 08101.012069, 133-12 131st Avenue South, Ozone Park

Potential direct or indirect impacts to these four (4) buildings and structures from the implementation of the Proposed Off-CTA Roadways are considered further below.

4.10.3 Proposed Action - Historical, Architectural, Archaeological, and Cultural Resource Impacts

There would be no direct impact to inventoried, eligible, or listed cultural resources from the Proposed Action. Parts of the Ridgewood Aqueduct that might have been affected by the Proposed Action were removed by earlier actions, including NYSDOT actions unrelated to the Proposed Action. No historical, architectural, archaeological, or cultural resources would be indirectly affected by the Proposed Action. The Existing Monopole Cell Tower services a commercial and industrial area, including the Airport. The International Hotel was built to service the needs of Airport passengers and employees and it was purposefully sited near the terminals and other transportation modes. As for the two-family building at 133-12 131st Avenue South, Ozone Park, it was built after the Airport began operations, it faces away from the Airport, and its setting would not be affected by the Proposed Action. A coordination package detailing this analysis was submitted to NY SHPO on October 29th, 2022. The coordination package requested concurrence with the finding of no adverse effect to archeological resources in accordance with Section 106. In addition, the coordination package requested concurrence with the finding of no direct impact to inventoried, eligible, or listed cultural resources from the Proposed Action. Further, none of the existing resources in the Study Area would be indirectly affected by the Proposed Action. A copy of the coordination package submitted to NY SHPO is provided in **Appendix C, *Cultural & DOT Section 4(F) Resources***. A copy of the NY SHPO consultation package was provided to the New York City Landmarks Preservation Commission as well.

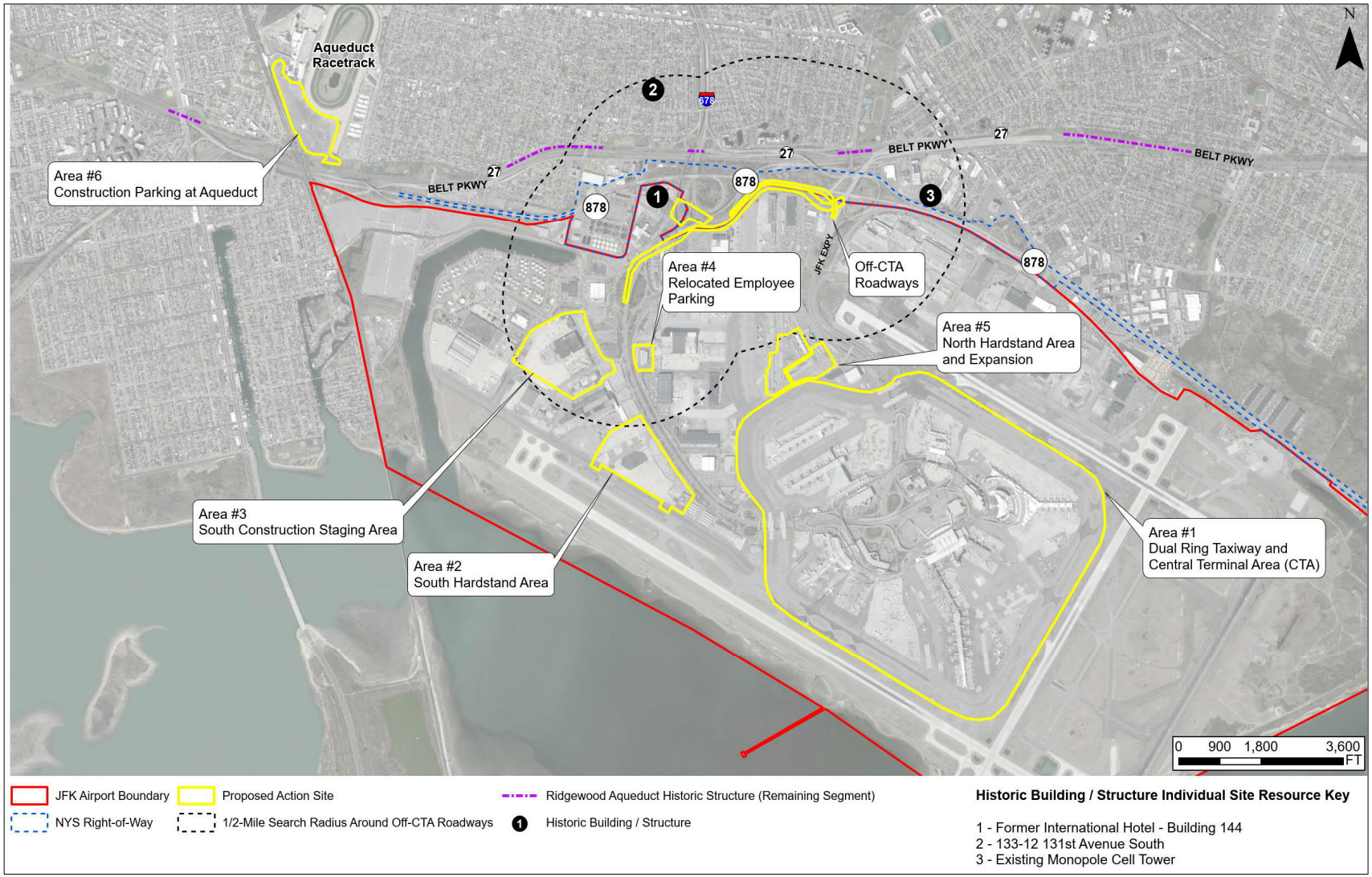
4.10.4 Conclusion - No Significant Historical, Architectural, Archaeological, and Cultural Resource Impacts

The 2020 EA concluded the Proposed Project described in the 2020 EA would have no significant adverse impact on historical, architectural, archaeological, and/or cultural resources. The conclusions therein remain valid for the Proposed Action. Evaluated in the 2020 EA, the TWA Flight Center, which is within the CTA remains the sole historic resource within the Proposed Action Site. There would be no direct impact to inventoried, eligible, or listed cultural resources from the Proposed Action. Consultation with NY SHPO and local governments, including the New York City Landmarks Preservation Commission, is ongoing. Associated correspondence is included in **Appendix C, *Cultural & DOT Section 4(F) Resources***.

4.10.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would result in No Adverse Effect to archaeological and historical resources; therefore, no mitigation measures are required.

EXHIBIT 4-5 CULTURAL RESOURCES STUDY AREA AND RESOURCE LOCATIONS



Sources: Church and Rutsch (1987), Figure A-3, PDF Page 146
New York State Office of Parks, Recreation and Historic Preservation Cultural Resources Information System
Esri, Maxar, Goeye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID
U.S. Census Bureau, Geography Division: Primary and Secondary Roads (2020)

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4.11 Land Use

Section 4.9, Land Use (Affected Environment) and *Section 5.9, Land Use (Environmental Consequences)* of the 2020 EA describes existing conditions and provides an impact analysis for the Proposed Project described in the 2020 EA, respectively. The land use analysis in the 2020 EA considers both direct and indirect impacts such as the potential for disruptions to communities or relocation of residences or businesses.

4.11.1 Summary of 2020 EA Land Use Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As detailed in *Section 5.9* of the 2020 EA, the No Action would be compatible with surrounding land uses. The 2020 EA Proposed Project Site is entirely on Airport property, which is leased by the Port Authority and in a predominantly commercial and industrial area. No land acquisition would occur as part of the No Action. Further, the Port Authority provided assurance by letter that appropriate action, including the adoption of zoning laws, has been or would be taken to the extent reasonable to restrict the use of land adjacent to, or in the immediate vicinity of the Airport to activities and purposes compatible with normal Airport operations. In addition, they would encourage and support other jurisdictions in the area in their efforts to do the same. Therefore, the 2020 EA concluded that land uses surrounding the Airport are consistent with local plans or laws related to land use and development and no impacts to land use would occur with implementation of the No Action.

4.11.2 Proposed Action vs. No Action

There are no changes to land use as a result of the proposed design modifications to the CTA Roadways subsequent to the assessment of land use impacts under the No Action. Therefore, the finding of no impact to land use for the CTA roadway network proposed in the No Action remains valid for the Proposed CTA Roadways and are not evaluated further in this Supplemental EA for land use impacts. Thus, this land use analysis focuses on the Proposed Off-CTA Roadways of the Proposed Action Site, which was not originally proposed as part of the CTA roadway network under the No Action.

As described in *Section 1.4.2, Proposed Off-CTA Roadways* in this Supplemental EA, the Proposed Off-CTA Roadways would occur in the immediate vicinity of the Van Wyck Expressway, Eastbound Nassau Expressway (NY-878), the JFK Expressway, and associated entrance / egress service roads, as well as fragmented grassy areas that are both landscaped and naturally vegetated. The Proposed Off-CTA Roadways are largely on Port Authority Airport property (see ***Exhibit 4-6, Land Uses in the Vicinity of John F. Kennedy International Airport***). However, the Proposed Off-CTA Roadways also includes roadway and access improvements off-Airport and within the NYSDOT ROW adjacent to the northern property boundary of the Airport.

Implementation of the Proposed Off-CTA Roadways is expected to impact six areas. These areas are on-Airport property and adjacent to the following roadways: 147th Street (on-Airport), 147th Avenue, Cargo Service Road and Rental Car North Road. The areas impacted include Building 110 (vacant), Building 125 (GAZ Realty Properties), Building 89 (DHL), Building 87 (vacant) and PIDS fence line, Building 312 (Dollar/Thrifty/SIXT Car Rental), and Building 366 (Avis Car Rental). Details regarding the potential impacts and associated mitigation, which would all be accommodated on-Airport, are included below in **Table 4-7**, discussed in *Section 1.4.4, Areas Affected by the Proposed Off-CTA Roadways,* and shown on ***Exhibit 1-12.***

TABLE 4-7 AREAS OF IMPACT

John F. Kennedy International Airport

Area ID	Name and Lessee (as applicable)	Function and Use	Impact	Mitigation
1	Building 110 (B110) No lessee	Warehouse - Vacant	Removal of 5,000 SF (15 parking spaces) of auto parking pavement	Not required - Building is vacant and derelict
2	Building 125 (B125) Gaz Realty Properties	Warehouse - Property Management	Shift of 147th Avenue north would provide an added 14,400 SF of auto parking area	Not required
3	Building 89 (B89) DHL	Air Cargo Handling Facility	Removal of 7,300 SF (49 parking spaces) of auto parking pavement	Auto parking lot adjacent to and south of B89 will provide replacement auto parking space
4	Building 87 (B87) No Lessee	Air Cargo Vacant	Removal of 8,550 SF (29 parking spaces) of auto parking pavement and relocation of PIDS	Adjust PIDS fence line south onto unused grass area of AOA* and onto B87 parking area. B87 is vacant, but parking for B87 could be accommodated at B89, if needed. (See inset graphic on Exhibit 1-12)
5	Building 312 (B312) Dollar/Thrifty/SIXT Car Rental	Rental car office, parking, and servicing	Removal of 26,000 SF (63 parking spaces) of parking pavement; parking lot entry and exit shift south	Parking lot entry and exit shift south, but in same location; Auto parking lot at B69 (south of B312) would provide replacement parking space
6	Building 366 (B366) Avis Car Rental	Rental car office, parking, and servicing	Removal of 15,250 SF of parking pavement and realignment of entrance and exit	Entry and exit to be realigned and reconstructed; Auto parking lot at B69 (south of Avis) would provide replacement space

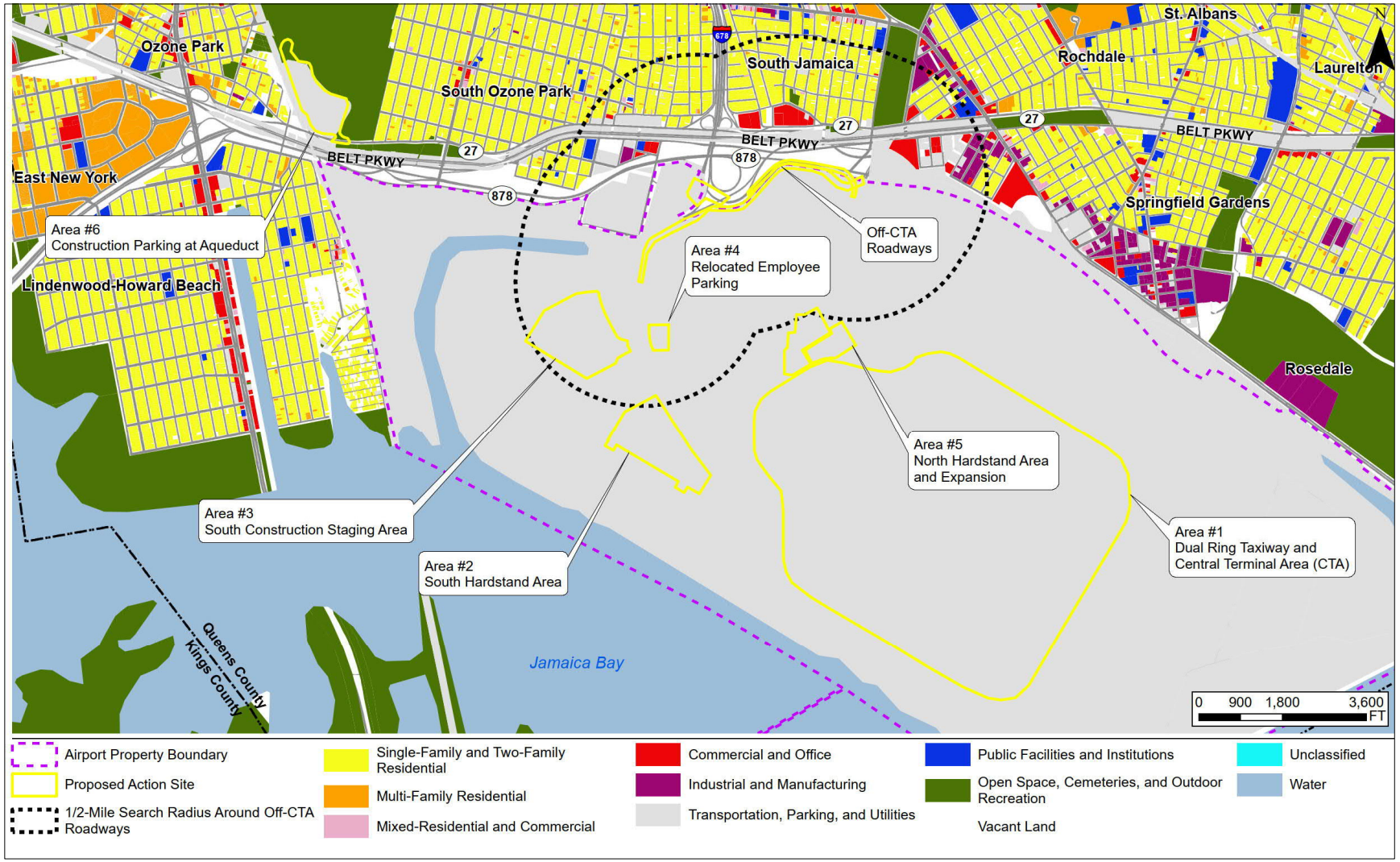
Note: * AOA (Air Operations Area) means a portion of an airport, specified in the airport security program, in which security measures specified in Title 49 of the Code of Federal Regulations are carried out. Reference 14 CFR § 153.3.

The Study Area for the Proposed Off-CTA Roadways is a ½-mile, consistent with the Study Area evaluated in *Section 4.8, Department of Transportation Act Section 4(f) Resources*, *Section 4.10, Historical, Architectural, Archaeological, and Cultural Resources*, and *Section 4.15, Visual Effects* in this Supplemental EA (see ***Exhibit 4-6*** for an illustration of the ½-mile Study Area boundary in relation to the Proposed Off-CTA Roadways). This was considered an appropriate Study Area due to the urbanized nature of the immediate surrounding area and beyond.

Off-Airport land uses within this Study Area consist of:

- Commercial and industrial developments;
- Residential areas ranging from detached single-family to medium-density row houses and garden apartments;
- Public open spaces/parks (i.e., Baisley Pond Park, Police Officer Edward Byrne Park); and
- NYSDOT ROW near the northern boundary of JFK containing high-volume roadways and fragmented vegetated areas.

EXHIBIT 4-6 LAND USES IN THE VICINITY OF JOHN F. KENNEDY INTERNATIONAL AIRPORT



Source: New York City Department of City Planning Information Technology Division.

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4.11.3 Proposed Action - Land Use Impacts

This section presents the analysis of potential land use impacts related to the Proposed Action, including potential conflicts with surrounding land uses and zoning as identified in comprehensive plans for the surrounding communities. The FAA has not established a significance threshold for land use. The determination that significant impacts exist in the land use impact category is dependent on the significance of other impacts, such as noise, socioeconomics, environmental justice, and children's health and safety risks. Potential impacts of the Proposed Action related to potential for disruptions to communities or relocation of residences or businesses is discussed in *Section 4.14, Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks*. Potential impacts of the Proposed Action related to noise is discussed in *Section 4.13, Noise and Noise Compatible Land Use*.

As previously discussed in *Section 4.11.1, Summary of 2020 EA Land Use Impacts* in this Supplemental EA, no impacts to land use would occur with implementation of the No Action. Consistent with the CTA roadway network proposed in the No Action, there would be no impacts to land use as a result of the design modifications to the Proposed CTA Roadways. In addition, land uses within the Study Area for the Proposed Off-CTA Roadways of the Proposed Action are generally characterized by high volume roadways (i.e., Van Wyck Expressway, Nassau Expressway (NY-878), Belt Parkway, JFK Expressway, and Cargo Service Road, etc.) with surrounding on-Airport industrial and commercial uses. The Proposed Off-CTA Roadways located off-Airport would be entirely within NYSDOT ROW, which is dedicated to automobile transportation uses, including the Van Wyck Expressway, Nassau Expressway (NY-878), South Conduit Avenue (NY-27), JFK Expressway, and associated entrance/egress service roads and undeveloped parkway land.

Based on the foregoing, it is anticipated that the Proposed Action would be compatible with and reinforce the existing land use character of the on- and off-Airport areas where they are located.

4.11.4 Conclusion - No Significant Land Use Impacts

The Proposed Action would be compatible with surrounding land uses and consistent with local plans or laws related to land use and development. Further, no land acquisition would occur as part of the Proposed Action. No impacts to land use would occur with implementation of the Proposed Action. Based on the foregoing, there would be no significant adverse impact to land uses.

4.11.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would result in no land use impacts; therefore, no mitigation measures are required.

4.12 Natural Resources and Energy Supply

Section 4.10, Natural Resources and Energy Supply (Affected Environment) and *Section 5.10, Natural Resources and Energy Supply (Environmental Consequences)* of the 2020 EA provides an overview of the Airport's existing natural resource and energy consumption and provides an analysis of the potential impacts to natural resources and energy supplies for the No Action, respectively.

4.12.1 Summary of 2020 EA Natural Resources and Energy Supply

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As discussed in *Section 5.10* of the 2020 EA, the No Action would increase demand for electricity and natural gas energy during both construction and implementation. There would also be an increase in demand for fuel for construction vehicles and construction materials during construction. These energy demands would impact local supplies. However, this increase would be met by current capacity and existing supplies would not be depleted. JFK is in a highly urbanized area with adequate access to natural resources for airport facilities, and aircraft operations. The Airport has access to utilities and fuel and these energy sources are not in short supply in the Region. In addition, implementation of the No Action would result in a reduction in demand for aircraft fuel (Jet-A) due to the decrease in airfield taxi-time from taxiway improvements that would increase airfield operational efficiency. Therefore, the 2020 EA concluded no significant impact to natural resources or energy supply as a result of the No Action.

4.12.2 Proposed Action vs. No Action

The Proposed Off-CTA Roadways is anticipated to increase fuel demand for construction vehicles and construction materials. However, it is anticipated this net increase in demand would be minimized by a resulting decrease in demand associated with the reduced GTC/JFK Central footprint from 16 to 13.5 acres; and the reduced footprint and number of new structures (i.e., elevated roadway structure, and associated bridging, decking and support columns) required for the Proposed CTA Roadways in comparison to the Original CTA Roadways.

As mentioned in *Section 1.4, Description of the Proposed Action*, the Proposed Off-CTA and CTA Roadways would provide a potential reduction in fuel demand for on-road vehicles traveling to and from the Airport's terminals due to a reduction in VMT within the Proposed CTA roadway network when compared to the CTA roadway network proposed in the No Action.

In lieu of using existing routes such as North Conduit Avenue (NY-27), which is both circuitous and often congested, the Off-CTA Roadways are anticipated to reduce congestion and increase average speeds along the Off-CTA Roadways and surrounding roadways. Thus, a reduction in vehicle energy consumption is anticipated. In addition, there would be no change in the number of aircraft operations and associated fuel demand as a result of construction and operation of the Proposed Off-CTA and CTA Roadways in comparison to the CTA roadway proposed in the No Action.

The existing roadway network within the Proposed Off-CTA and CTA Roadways Site have lighting poles throughout. All electricity supplied for lighting roadways on-Airport is provided by the Airport's electric substations and operated by Consolidated Edison. Electricity for lighting the Proposed Off-CTA Roadways would be on NYSDOT owned property and supplied by Consolidated Edison as well. Some relocation of existing lighting and additional electrical power may be required to service any new and/or relocated lighting fixtures and signs along new roadway segments of the Proposed Off-CTA and CTA Roadways not initially proposed in the No Action.

4.12.3 Proposed Action - Natural Resources and Energy Supply Impacts

The Proposed Action would increase demand for electricity and natural gas energy during construction and implementation. There would also be an increase in demand for fuel for construction vehicles and construction materials during construction, which would impact local supplies. However, this would be offset by the reduction in energy consumption attributable to energy efficient LED lighting, reduced footprint of the GTC/JFK Central, and anticipated decrease in VMT and the number of Proposed CTA roadway structures due to further simplification of the roadways within the CTA when compared to the No Action. In addition, congestion along the Off-CTA Roadways and surrounding roadways is anticipated to decrease. Thus, a reduction in vehicle energy consumption is anticipated.

The need for heating and cooling would be none to minimal for the Proposed Off-CTA and CTA Roadways because the proposed changes are focused on roadway and parking infrastructure and not the terminal buildings. Thus, there would be minimal change in the natural gas demand from the No Action. It is anticipated overall energy consumption would be reduced as a result of the Proposed Action when compared to the No Action.

The Proposed CTA Roadways would be constructed in accordance with the Port Authority's *Sustainable Infrastructure Guidelines*, which leverages the Envision Rating System (Envision) and ensures the Port Authority's non-building projects are planned, designed, and constructed in alignment with the Port Authority's Environmental Sustainability Policy. Any new lighting associated with the Proposed Off-CTA Roadways would be energy efficient LED lighting. In addition, the proposed GTC/JFK Central would be required to achieve a minimum certification level of Silver from the Green Business Certification, Inc.'s (GBCI) Parksmart rating system, which measures and recognizes high-performing, sustainable garages. The GTC/JFK Central would also comply with New York City Building's Local Laws 92 and 94 of 2019[41], which includes solar photovoltaic electricity generating systems, and continue to meet the Port Authority's *Sustainable Design Project Manual* as originally proposed in the 2020 EA. Consistent with *Section 5.10* in the 2020 EA, coordination between the Port Authority and Consolidate Edison would remain ongoing to ensure energy demands at JFK are met. Therefore, there would be no significant adverse impacts on natural resources and energy associated with the Proposed Action.

4.12.4 Conclusion - No Significant Natural Resources and Energy Supply Impacts

Similar to the No Action as described in the 2020 EA, no unusual materials, or materials short in supply would be used for the construction of the Proposed Action. Therefore, the Proposed Action would not result in individual or cumulative adverse impacts to energy supply or to the use or supply of natural resources.

4.12.5 Reduction, Avoidance and Minimization Measures

The reduction, avoidance and minimization measures for the Proposed Action is consistent with *Section 5.10.4 (Reduction, Avoidance, and Minimization Measures)* in the 2020 EA. Sufficient electrical generating capacity is available to support the Proposed Action. No unique or rare

[41] Local Laws 92 and 94 amends the New York City building code, in relation to requiring that the roofs of certain buildings be partially covered in green roof or solar photovoltaic electricity generating systems.

natural resources were identified to be required for construction of the Proposed Action. Construction materials would include resources that are typically available in the Region and would not be expected to exceed current or future supplies. The Proposed Action does not exceed the applicable thresholds of significance; therefore, no mitigation measures are required.

4.13 Noise and Noise-Compatible Land Use

Noise levels in the vicinity of JFK is a function of the Airport's aircraft operations, helicopter overflights, roadway traffic and numerous other activities common to an urban environment. In the 2020 EA, current noise conditions surrounding JFK were based on the recently completed noise analysis prepared for the Reconstruction of Runway 13L/31R and Associated Taxiways Project.[42] The regulatory setting, including 14 CFR Part 150 land use compatibility with yearly day-night average sound levels, and existing noise conditions is provided in *Section 4.11, Noise and Noise-Compatible Land Use (Affected Environment)* of the 2020 EA. *Section 5.11, Noise and Noise-Compatible Land Use (Environmental Consequences)* of the 2020 EA assesses potential aircraft and construction noise impacts associated with the No Action and detailed further below.

4.13.1 Summary of 2020 EA - No Noise and Noise-Compatible Land Use Impacts

Noise Exposure Contours

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As stated in the 2020 EA, the Airport's noise exposure contours were presented in terms of the number and type of noise-sensitive land uses affected by the No Action. Consistent with FAA Order 1050.1F, the first operational year (2025) and five-year build out year (2030) were analyzed using the latest version of the FAA's Average Environmental Design Tool (AEDT) (Version 2d). Inputs to AEDT include the number of airport operations, the types of aircraft, the time-of-day operations occur, runway definition and frequency of utilization, flight tracks, and trip lengths. The AEDT calculates noise exposure for the area around the Airport and outputs contours of equal noise exposure using a day-night average sound level (DNL) metric. The 2020 EA concluded the No Action would not result in a change in aircraft operations, runway use, or flight tracks for both the first operational year (2025) and five-year build out year (2030). Furthermore, the residential population and housing units affected by noise levels exceeding DNL 65 dB would be the same as under current conditions.

Construction Noise

As stated in the 2020 EA, noise levels for construction equipment were obtained from the FHWA approved Roadway Construction Noise Model (RCNM). International Standards Organization (ISO) 9613-2 methods were also used to estimate construction equipment and vehicle traffic noise levels. The nearest residential land uses to the 2020 EA Proposed Project Site were used as the noise receptor sites. The closest noise receptor was approximately 2,300

[42] The 2019 Proposed Action contour from the Reconstruction of Runway 13L-31R and Associated Taxiways Project Environmental Assessment, VHB Engineering, Surveying and Landscape Architecture, P.C., November 2018, was used as the Existing Conditions for the 2020 EA.

feet west of the South Construction Staging Area. Construction equipment and vehicle traffic noise were compared to existing monitored background levels at noise-sensitive sites in the vicinity of the Airport and near the closest residential land uses. The monitored background levels were obtained from the Port Authority.[43] According to NYSDOT's Noise Analysis Policy and Procedures, an impact to any sensitive receptor from construction noise would only occur when levels are above 85 decibels (dB) in New York City.[44] *Section 5.11* of the 2020 EA concludes that, *"Noise levels from construction (of the JFK Redevelopment Program) are not expected to exceed 85 Leq. Therefore, the construction noise from the (Original) Proposed Action would not cause an impact to sensitive receptors."* (2020 EA).

4.13.2 Proposed Action vs. No Action

Similar to the CTA roadway network evaluated in the No Action, the Proposed Off-CTA and CTA Roadways would not introduce traffic noise impacts or substantially increase existing noise levels to previously unaffected noise-sensitive areas. No increase in vehicular traffic and activity is anticipated during operations as a result of the Proposed Off-CTA and CTA Roadways when compared with the CTA roadway network proposed in the No Action. The Proposed Off-CTA Roadways expands the Study Area from the No Action to the north-west of the Airport and locates the Proposed Action Site closer to the nearest noise-sensitive areas than the 2020 EA Proposed Project Site. However, the Study Area for the Proposed Off-CTA Roadways already has existing high ambient noise levels due to its location among a high-volume network of highways. The closest residential neighborhood to the Proposed Off-CTA Roadways of the Proposed Action Site is approximately 1,000 feet north of the Site with a buffer of more than 12 lanes of vehicular roadway, including the Belt Parkway, South Conduit Avenue (NY-27), and a series of on- and off-access ramps. Traffic noise from the Van Wyck Expressway is also a major noise source within the Study Area. As a result, no noise impacts are expected to occur as a direct result of implementation of the Proposed Off-CTA and CTA Roadways.

4.13.3 Proposed Action - Noise and Noise-Compatible Land Use Impacts

Aircraft Noise

Consistent with the No Action, the Proposed Action would not result in a change in aircraft operations, runway use, or flight tracts. Therefore, the Proposed Action Noise Exposure Contour would remain the same as the No-Build Alternative Noise Exposure Contour from the 2020 EA. The residential population and housing units affected by noise levels exceeding DNL 65 dB would be the same.

Construction Noise

A construction noise analysis was conducted for the Proposed Action using the same methodologies from the No Action. Noise levels for construction equipment were obtained from the FHWA-approved RCNM. As shown on ***Exhibit 4-7, Neighborhood Receptor Locations,*** the nearest noise-sensitive receptor sites, among residential land uses proximate to the 2020 EA Proposed Project Site were also used as the noise-sensitive receptor sites for the Proposed Action Site. The closest noise-sensitive receptor site (Receptor #4) is approximately 1,000 feet

[43] Monthly Noise Monitor Report for JFK, LGA, and EWR, Port Authority Aviation Department's Noise Office, February 2019.

[44] NYSDOT Environmental Procedures Manual, Chapter 3.1, § 772.19 Construction Noise, August 1998.

north of the Proposed Off-CTA Roadways of the Proposed Action Site. Construction equipment and vehicle traffic noise during the Proposed Action's construction years (i.e., Fourth Quarter or 2021 to Fourth Quarter of 2029) were compared to the updated existing monitored background noise levels provided by the Port Authority at the noise-sensitive receptor sites in the vicinity of the Airport and near the closest residential land uses.[45] As shown in ***Table 4-8, Construction Noise Model Predicted Maximum (L_{MAX}) and Average Weekday (L_{EQ}) Noise Levels at Select Sites***, the current noise levels and the predicted construction noise levels at each noise-sensitive receptor site are provided. Noise levels from construction of the Proposed Action are not expected to exceed the NYSDOT's Noise Analysis Policy and Procedures construction noise impact criteria of 85 dB to any sensitive receptors. Therefore, the construction noise from the Proposed Action would not cause an impact to noise-sensitive receptors.

Highway Traffic Noise

Based on the procedures in FHWA's highway noise regulation (23 CFR 772) and NYSDOT Noise Policy, it is unlikely that the Proposed Action would have the potential to result in traffic noise impacts. The nearest noise sensitive land uses are located about 1,000 feet north of the airport access improvements (Proposed Off-CTA Roadways). Additionally, the proposed airport access improvements would occur on and adjacent to the Airport away from residential areas and, furthermore, are separated from the nearest noise sensitive sites by the high-volume Belt Parkway. As such, due to the distance between the Proposed Off-CTA Roadways to the nearest noise sensitive areas and the location of the Proposed Off-CTA Roadways relative to the high-volume Belt Parkway and Van Wyck Expressway Interchange, it is anticipated that there would be no traffic noise impacts associated with this project.

[45] Monthly Noise Monitor Report for JFK, LGA, and EWR, Port Authority Aviation Department's Noise Office, December 2021.

EXHIBIT 4-7 NEIGHBORHOOD RECEPTOR LOCATIONS

Source: 2020 EA, Exhibit 5-4, Page 5-49, with edits by Mott MacDonald NY Inc., 2022.

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TABLE 4-8 CONSTRUCTION NOISE MODEL PREDICTED MAXIMUM (L_{MAX}) AND AVERAGE WEEKDAY (L_{EQ})NOISE LEVELS AT SELECT SITES

REC #	LOCATION	MEASURED BACKGROUND DNL (dB(A))	CONSTRUCTION GENERATED NOISE LEVEL								
			L_{MAX}	AVERAGE WEEKDAY L_{EQ} (dB(A))							
				2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Howard Beach - 104th St. and 165th Ave	67.4	55.5	43.1	45.6	44.4	49.0	48.6	49.4	49.7	40.5	40.5
2	Howard Beach 104th St and Dunton Ct	64.4	54.7	41.9	45.1	44.4	48.1	50.5	48.7	49.0	39.7	39.7
3	South Ozone Park - 160th St and Old South Rd	59.0	56.0	43.7	52.7	52.9	53.7	48.6	50.1	46.2	40.9	40.9
4	Baisley Park - North Conduit Ave & 148th St	59.0	59.0	42.4	58.4	58.6	58.7	46.4	44.0	49.1	40.8	40.8
5	Springfield Gardens - Rockaway Blvd and 145th Dr	59.0	56.7	45.0	49.4	49.4	49.4	48.9	47.0	47.9	41.6	41.6
6	Springfield Gardens - 147th Ave and 224th St	67.4	48.6	43.5	47.0	47.0	47.0	46.4	45.1	42.6	40.2	40.2
7	Springfield Gardens - 148th Ave and 230th Pl	67.4	47.3	42.2	45.8	45.8	45.8	45.1	43.8	41.3	37.5	37.5
8	Rosedale - Broad Street and Bayview Ave	71.2	45.2	41.3	43.2	43.2	43.2	43.5	44.1	39.3	37.3	37.3
9	Woodmere Park - Park Ln & Park Ct	67.8	41.8	38.0	39.9	39.9	39.9	40.0	40.6	36.0	34.7	34.7
10	Inwood - Donahue Ave & Soloff Rd	63.5	56.2	39.9	50.0	50.0	50.0	50.2	50.2	49.8	49.7	49.7
11	Inwood - Pine Rd and Walnut Rd	63.5	56.2	39.3	50.0	50.0	50.0	50.1	50.1	49.8	49.7	49.7
12	Far Rockaway / Bayswater – Mott Ave and Beacon Pl	59.0	56.8	38.9	50.5	50.5	50.5	50.6	50.6	50.4	50.3	50.3
13	Hammels-Arverne-Edgemere - Bayfield Ave	64.9	52.8	35.6	46.5	46.5	46.5	46.6	46.6	46.4	46.3	46.3

Note: The residential land uses represented by sites #4 and #5 currently do not have noise monitors. Therefore, for comparison between measured and predicted noise levels, the Measured Background DNL at these sites were conservatively based on the lowest measured level among the sites that have a noise monitor (59.0 dB(A) at sites #3 and #12). It is expected that the actual measured levels at sites #4 and #5 would be higher than 59.0 dB(A) due to their proximity to major roadways.

Source: CMT, 2022.

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4.13.4 Conclusion - No Significant Noise and Noise-Compatible Land Use Impacts

The Proposed Action would not individually or cumulatively introduce noise to a previously unaffected area, or significantly increase noise over a noise sensitive area. This conclusion is consistent with the findings in the 2020 EA.

4.13.5 Reduction, Avoidance and Minimization Measures

Consistent with *Section 5.11.4 (Reduction, Avoidance, and Minimization Measures)* of the 2020 EA, noise minimization measures would be implemented, and a Noise Control Plan prepared to minimize the potential for adverse effects on the community during the construction period. As detailed in the 2020 EA, noise minimization measures would include pile driving noise control measures and strategies to reduce noise and vibration during construction as mentioned in the Port Authority's *Sustainable Infrastructure Guidelines*.

4.14 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

Section 4.12, Socioeconomics, Environmental Justice, and Children's Health and Safety Risks (Affected Environment) and *Section 5.12, Socioeconomics, Environmental Justice, and Children's Health and Safety Risks (Environmental Consequences)* in the 2020 EA detail existing resources and impacts associated with the No Action, respectively. *Section 4.12* also outlines the data sources reviewed, relevant regulatory context and key definitions used to identify and assess potential impacts to these resources, including establishing an off-Airport Study Area for the No Action that supports a thorough analysis of socioeconomic resources, environmental justice communities, and potential risks to children's environmental health and safety. The regulatory context in that section defines the criteria for identifying environmental justice communities near the Airport and denotes specific receptors, such as schools, that could be more susceptible to experiencing disproportionate impacts from a children's health and safety perspective.

4.14.1 Summary of 2020 EA Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As described in *Section 4.12* of the 2020 EA, the Study Area evaluated in the 2020 EA for socioeconomics, environmental justice, and children's health and safety risks was defined by the U.S. Census Block Groups within or partially within the following areas around the Airport:

- ½-mile north of the Belt Parkway, extending 2 miles west of its intersection with the Van Wyck Expressway and two miles east of the intersection with the JFK Expressway
- ½-mile radius around the proposed employee parking lot at the Aqueduct Racetrack
- ½-mile west of the long-term parking lot on Pan Am Road

In addition to the information described above, for comparative purposes and to provide a more regional representation of socioeconomic conditions, socioeconomic and environmental justice

data was provided for both Queens County and the New York Metropolitan Transportation Council (NYMTC) area.[46]

As described in *Section 5.12* of the 2020 EA, no induced growth, relocation of residences, or relocation of off-Airport businesses would occur as part of the No Action. Low-income and minority populations meeting the criteria for environmental justice and a number of schools are present within the Study Area evaluated in the 2020 EA. Temporary impacts would occur off-Airport and within the Study Area evaluated in the 2020 EA due to construction-related traffic. However, minimization measures would be implemented to reduce the potential for impacts and the overall impacts would not be significant. Minimization measures considered in the No Action include traffic control devices, signal timing modifications, and lane utilization changes, to reduce potential congestion on the roads and prevent LOS impacts during construction. Further, a construction management plan would be prepared which, based on the selected contractor(s) haul plan, would specify hours of operation, haul routes, and similar controls. Traffic impacts associated with the No Action would be most noticeable along major roads, Airport intersections, and highways to be used by construction vehicles, workers, and equipment, and not in the immediate vicinity of the schools within the Study Area evaluated in the 2020 EA. Local roadways would be less affected. Where traffic increases could occur near schools, minimization measures would be implemented to ensure the safety of children traveling to and attending those schools.

The 2020 EA FONSI/ROD determined the No Action would result in no significant adverse impacts to socioeconomics, environmental justice or children's environmental health and safety risks as a result of the No Action. In addition, the No Action would result in a beneficial economic impact on socioeconomic resources due to the creation of jobs during and after construction.

4.14.2 Proposed Action vs. No Action

Similar to the Proposed Project Site under the No Action, the Proposed Action Site is largely on Port Authority property. However, the Proposed Off-CTA Roadways within the Proposed Action Site incorporate some roadway and access improvements off-Airport and within the NYSDOT ROW adjacent to the northern property boundary of the Airport (see ***Exhibit 1-11, Proposed Off-CTA Roadways - Overview*** in this Supplemental EA).

As the footprint of the Proposed Off-CTA and CTA Roadways is mostly on-Airport, only extending slightly off-Airport for the Proposed Off-CTA Roadways, the Study Area used to identify and evaluate socioeconomics, environmental justice, and children's health and safety risks in the 2020 EA remains applicable for the Study Area of the Proposed Action (see *Section 4.14.1*, *Summary of 2020 EA Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks* above).

[46] The New York Metropolitan Transportation Council (NYMTC) is the designated Metropolitan Planning Organization for the New York metropolitan region. NYMTC was used to represent the region and includes Bronx County, Kings County, Nassau County, New York County, Putnam County, Queens County, Richmond County, Rockland County, Suffolk County, and Westchester County. While Queens County is included in the NYMTC data, it was also called out separately as a separate data set since the Airport is within Queens County.

Refer to ***Exhibit 4-8, Low Income Population within U.S. Census Block Groups of the Study Area*** and ***Exhibit 4-9, Minority Population within U.S. Census Block Groups of the Study Area*** for illustrations of the U.S. Census block group-based Study Area.

Socioeconomics

Socioeconomic conditions in the NYMTC region, Queens County, and U.S. Census Block Groups in the Study Area are presented in ***Table 4-9, Regional Socioeconomic Conditions*** using 2015-2019 U.S. Census Bureau American Community Survey (ACS) data (compared to the 2020 EA, which used data from 2013-2017).[47] There were slight shifts in the socioeconomic conditions at the Study Area level between the 2013-2017 and 2015-2019 U.S. Census Bureau ACS datasets used for the 2020 EA, and Supplemental EA, respectively.[48] However, these slight shifts were fairly limited such that the overall socioeconomic conditions of the Study Area, relative to these metrics, are not materially changed.

TABLE 4-9 REGIONAL SOCIOECONOMIC CONDITIONS
John F. Kennedy International Airport

Geographic Area	Total Population	Population < 18 Years	In Labor Force	Unemployment Rate	Total Households	Low Income Population	Minority Population
NYAQC	11,243,040	2,390,092	5,832,034	5.9%	4,126,779	15.2	50.9%
Queens County	2,287,388	426,323	1,202,712	5.6%	778,932	12.1	61.7%
Socioeconomic Study Area	171,848	36,496	89,604	6.4%	51,529	9.4	80.3%

Source: U.S. Census Bureau's American Community Survey (ACS) 2015-2019. Available online at http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh+t.

Environmental Justice

Other than the use of the updated U.S. Census Bureau ACS data noted in the Socioeconomics discussion above, the methodology for identifying low income and minority populations in the Study Area is consistent with that used in the 2020 EA. As described in the 2020 EA, if a U.S. Census block group's percent minority population exceeded 50 percent or the percent low-income exceeded 15 percent,[49] it was determined the U.S. Census block group contained an environmental justice population. ***Table 4-10, Low-Income and Minority Populations within U.S. Census Block Groups in the Study Area*** lists low-income and minority populations within the Study Area for the Proposed Action.

[47] Census data has been updated since the 2015-2019 American Community Survey (ACS); however, the U.S. Census Bureau published information regarding concerns with the 2020 ACS and encourages the use of information previously collected as they determine the impact of COVID-19 data collection issues on ACS 5-year estimates.

[48] The total population decreased from 178,138 to 171,848 persons, while the population under 18 years of age decreased from 38,581 to 36,496 persons. The total number of households remained largely unchanged, with 51,546 reported households in the 2013-2017 dataset and 51,529 reported households in the 2015-2019 dataset. Population in the labor force decreased slightly from 93,449 to 89,604, while the unemployment rate rose slightly from 6.0 to 6.4 percent. The percentage of low income and minority populations within the Study Area both decreased slightly, from 12 percent and 81 percent, respectively, in the 2013-2017 dataset, to 9.4 and 80.3 percent, respectively, in the 2015-2019 dataset.

[49] Pursuant to the methodology outlined in the Section 4.12.2, Affected Environment, of the 2020 EA

TABLE 4-10 LOW-INCOME AND MINORITY POPULATIONS WITHIN U.S. CENSUS BLOCK GROUPS IN THE STUDY AREA

John F. Kennedy International Airport

Map Key	Census Block Group	Total Population	Minority Population (%)	Low Income Population (%)[50]	Environmental Justice Population
	TOTAL:	**171,848**	**80.3**	**9.4**	**-**
1	Block Group 1, Census Tract 40.02, Queens County, New York	1,459	64.6	16.6	Yes
2	Block Group 2, Census Tract 54, Queens County, New York	1,178	63.1	10.4^	Yes
3	Block Group 1, Census Tract 58, Queens County, New York	2,119	46.5	14.1	No
4	Block Group 2, Census Tract 58, Queens County, New York	1,197	56.9	5.8	Yes
5	Block Group 2, Census Tract 62.01, Queens County, New York	2,002	28.2	6.9	No
6	Block Group 2, Census Tract 62.02, Queens County, New York	842	80.3	10.3	Yes
7	Block Group 1, Census Tract 86, Queens County, New York	1,589	71.7	18.8*	Yes
8	Block Group 2, Census Tract 86, Queens County, New York	1,257	37.0	1.7^	No[1]
9	Block Group 1, Census Tract 88, Queens County, New York	1,870	47.1	15.2*	Yes[2]
10	Block Group 2, Census Tract 88, Queens County, New York	1,793	31.3	13.7	No
11	Block Group 1, Census Tract 94, Queens County, New York	1,469	84.5	13.6	Yes
12	Block Group 2, Census Tract 94, Queens County, New York	1,300	81.2	12.5^	Yes
13	Block Group 1, Census Tract 96, Queens County, New York	1,796	77.1	4.8	Yes
14	Block Group 2, Census Tract 96, Queens County, New York	1,726	75.8	9.3	Yes
15	Block Group 1, Census Tract 98, Queens County, New York	1,569	92.8	23.1	Yes
16	Block Group 2, Census Tract 98, Queens County, New York	1,136	94.0	5.9	Yes
17	Block Group 1, Census Tract 100, Queens County, New York	1,310	59.4	5.8	Yes
18	Block Group 2, Census Tract 100, Queens County, New York	2,376	76.0	2.1	Yes
19	Block Group 1, Census Tract 102, Queens County, New York	1,144	95.7	10.4	Yes
20	Block Group 2, Census Tract 102, Queens County, New York	1,673	80.9	19.5*	Yes
21	Block Group 1, Census Tract 104, Queens County, New York	1,507	94.8	10.0	Yes
22	Block Group 2, Census Tract 104, Queens County, New York	1,507	85.3	4.8^	Yes
23	Block Group 2, Census Tract 106, Queens County, New York	2,093	88.6	20.0*	Yes
24	Block Group 2, Census Tract 112, Queens County, New York	986	64.1	15.8*	Yes
25	Block Group 1, Census Tract 166, Queens County, New York	2,255	88.8	11.9	Yes
26	Block Group 2, Census Tract 166, Queens County, New York	1,729	84.0	7.6	Yes
27	Block Group 1, Census Tract 168, Queens County, New York	1,736	94.5	17.2*	Yes

[50] Low-income populations were identified using the U.S. Census Bureau data for populations with income in the past 12 months below poverty level. This was determined by dividing the Income in the past 12 months below poverty level column with the survey's specific total population count and recorded as a percent.

Map Key	Census Block Group	Total Population	Minority Population (%)	Low Income Population (%)[50]	Environmental Justice Population
28	Block Group 2, Census Tract 168, Queens County, New York	1,521	74.0	7.4	Yes
29	Block Group 1, Census Tract 178, Queens County, New York	1,012	87.7	5.2	Yes
30	Block Group 1, Census Tract 180, Queens County, New York	1,328	74.6	24.5	Yes
31	Block Group 1, Census Tract 182, Queens County, New York	1,316	94.6	20.0	Yes
32	Block Group 2, Census Tract 182, Queens County, New York	1,183	91.0	13.2	Yes
33	Block Group 1, Census Tract 184.01, Queens County, New York	2,114	99.3	14.9^	Yes
34	Block Group 2, Census Tract 288, Queens County, New York	868	88.7	2.2	Yes
35	Block Group 1, Census Tract 294, Queens County, New York	1,753	100.0	10.4	Yes
36	Block Group 2, Census Tract 294, Queens County, New York	537	100.0	0.0	Yes
37	Block Group 3, Census Tract 294, Queens County, New York	1,195	92.7	4.9	Yes
38	Block Group 4, Census Tract 294, Queens County, New York	1,203	100.0	2.5	Yes
39	Block Group 5, Census Tract 294, Queens County, New York	822	100.0	5.0^	Yes
40	Block Group 6, Census Tract 294, Queens County, New York	1,490	80.5	15.1*	Yes
41	Block Group 1, Census Tract 306, Queens County, New York	1,189	97.6	23.0	Yes
42	Block Group 2, Census Tract 306, Queens County, New York	1,199	99.8	13.8	Yes
43	Block Group 3, Census Tract 306, Queens County, New York	1,650	90.7	9.4	Yes
44	Block Group 4, Census Tract 306, Queens County, New York	722	94.0	4.8	Yes
45	Block Group 1, Census Tract 320, Queens County, New York	994	98.8	4.6^	Yes
46	Block Group 2, Census Tract 320, Queens County, New York	1,073	81.2	70.5*	Yes
47	Block Group 3, Census Tract 320, Queens County, New York	2,046	97.0	11.9	Yes
48	Block Group 4, Census Tract 320, Queens County, New York	817	97.7	1.3^	Yes
49	Block Group 1, Census Tract 328, Queens County, New York	1,343	97.9	4.5	Yes
50	Block Group 2, Census Tract 328, Queens County, New York	1,426	99.6	6.8	Yes
51	Block Group 1, Census Tract 330, Queens County, New York	1,800	99.3	6.8	Yes
52	Block Group 2, Census Tract 330, Queens County, New York	1,092	97.4	2.5	Yes
53	Block Group 3, Census Tract 330, Queens County, New York	1,888	98.7	4.7	Yes
54	Block Group 4, Census Tract 330, Queens County, New York	1,308	96.7	15.0	Yes
55	Block Group 5, Census Tract 330, Queens County, New York	1,104	98.9	6.4	Yes
56	Block Group 2, Census Tract 334.01, Queens County, New York	2,445	98.8	4.5	Yes
57	Block Group 2, Census Tract 334.02, Queens County, New York	2,069	100.0	10.8	Yes
58	Block Group 3, Census Tract 334.02, Queens County, New York	1,813	91.0	2.5	Yes
59	Block Group 4, Census Tract 334.02, Queens County, New York	2,747	98.9	7.1	Yes

Map Key	Census Block Group	Total Population	Minority Population (%)	Low Income Population (%)[50]	Environmental Justice Population
60	Block Group 5, Census Tract 334.02, Queens County, New York	2,336	100.0	4.6	Yes
61	Block Group 6, Census Tract 334.02, Queens County, New York	1,070	100.0	0.0	Yes
62	Block Group 2, Census Tract 352, Queens County, New York	1,543	87.9	8.1	Yes
63	Block Group 3, Census Tract 358, Queens County, New York	1,363	91.9	6.6^	Yes
64	Block Group 4, Census Tract 358, Queens County, New York	682	97.4	17.9	Yes
65	Block Group 2, Census Tract 638, Queens County, New York	422	88.4	6.9	Yes
66	Block Group 1, Census Tract 646, Queens County, New York	1,560	98.7	9.3	Yes
67	Block Group 2, Census Tract 646, Queens County, New York	1,416	98.5	4.1	Yes
68	Block Group 1, Census Tract 650, Queens County, New York	1,289	95.0	5.6	Yes
69	Block Group 2, Census Tract 650, Queens County, New York	1,453	97.7	9.4	Yes
70	Block Group 1, Census Tract 654, Queens County, New York	1,339	96.1	5.8	Yes
71	Block Group 2, Census Tract 654, Queens County, New York	1,633	79.8	3.7	Yes
72	Block Group 3, Census Tract 654, Queens County, New York	810	82.5	3.0	Yes
73	Block Group 2, Census Tract 660, Queens County, New York	1,841	96.6	9.0	Yes
74	Block Group 1, Census Tract 664, Queens County, New York	146	40.4	40.4*	Yes[2]
75	Block Group 2, Census Tract 664, Queens County, New York	1,761	97.6	4.5	Yes
76	Block Group 3, Census Tract 664, Queens County, New York	933	98.4	0.0	Yes
77	Block Group 4, Census Tract 664, Queens County, New York	924	100.0	0.0	Yes
78	Block Group 5, Census Tract 664, Queens County, New York	1,230	86.1	16.8*	Yes
79	Block Group 1, Census Tract 680, Queens County, New York	1,551	98.0	4.6	Yes
80	Block Group 2, Census Tract 680, Queens County, New York	1,516	99.2	0.8	Yes
81	Block Group 3, Census Tract 680, Queens County, New York	1,416	99.9	6.0	Yes
82	Block Group 4, Census Tract 680, Queens County, New York	816	100.0	12.0	Yes
83	Block Group 1, Census Tract 682, Queens County, New York	661	97.0	8.3	Yes
84	Block Group 2, Census Tract 682, Queens County, New York	333	100.0	9.0	Yes
85	Block Group 1, Census Tract 690, Queens County, New York	1,927	100.0	3.6	Yes
86	Block Group 2, Census Tract 690, Queens County, New York	1,825	93.6	6.4^	Yes
87	Block Group 1, Census Tract 694, Queens County, New York	1,859	92.2	13.5^	Yes
88	Block Group 2, Census Tract 694, Queens County, New York	1,596	96.4	21.3*	Yes
89	Block Group 1, Census Tract 716, Queens County, New York	0	0.0	0.0	No
90	Block Group 1, Census Tract 788, Queens County, New York	1,066	91.6	5.4^	Yes
91	Block Group 2, Census Tract 788, Queens County, New York	799	100.0	16.1	Yes

Map Key	Census Block Group	Total Population	Minority Population (%)	Low Income Population (%)[50]	Environmental Justice Population
92	Block Group 1, Census Tract 790, Queens County, New York	1,153	98.9	15.4	Yes
93	Block Group 2, Census Tract 790, Queens County, New York	1,480	96.8	5.2^	Yes
94	Block Group 1, Census Tract 792, Queens County, New York	1,127	95.5	6.0	Yes
95	Block Group 2, Census Tract 792, Queens County, New York	1,287	99.4	8.9	Yes
96	Block Group 1, Census Tract 814, Queens County, New York	1,517	85.8	4.6^	Yes
97	Block Group 2, Census Tract 814, Queens County, New York	1,473	94.6	8.7^	Yes
98	Block Group 3, Census Tract 814, Queens County, New York	1,127	88.5	16.0	Yes
99	Block Group 1, Census Tract 818, Queens County, New York	1,837	91.3	23.4*	Yes
100	Block Group 2, Census Tract 818, Queens County, New York	688	70.8	12.1^	Yes
101	Block Group 3, Census Tract 818, Queens County, New York	1,384	85.6	10.2^	Yes
102	Block Group 1, Census Tract 838, Queens County, New York	1,765	80.3	0.4^	Yes
103	Block Group 2, Census Tract 838, Queens County, New York	924	75.3	16.8*	Yes
104	Block Group 3, Census Tract 838, Queens County, New York	1,482	70.2	0.0	Yes
105	Block Group 4, Census Tract 838, Queens County, New York	1,089	55.5	6.4^	Yes
106	Block Group 1, Census Tract 840, Queens County, New York	1,751	74.9	8.1	Yes
107	Block Group 2, Census Tract 840, Queens County, New York	1,156	90.1	13.2	Yes
108	Block Group 3, Census Tract 840, Queens County, New York	907	90.7	1.4^	Yes
109	Block Group 4, Census Tract 840, Queens County, New York	775	82.7	23.5*	Yes
110	Block Group 5, Census Tract 840, Queens County, New York	1,438	95.1	9.8^	Yes
111	Block Group 1, Census Tract 846.01, Queens County, New York	1,749	84.2	7.6^	Yes
112	Block Group 2, Census Tract 846.01, Queens County, New York	1,519	70.2	12.1^	Yes
113	Block Group 1, Census Tract 846.02, Queens County, New York	925	83.2	24.9	Yes
114	Block Group 1, Census Tract 864, Queens County, New York	1,622	72.7	20.8	Yes
115	Block Group 2, Census Tract 864, Queens County, New York	1,105	75.7	11.5^	Yes
116	Block Group 1, Census Tract 884, Queens County, New York	755	8.9	8.7	No
117	Block Group 2, Census Tract 884, Queens County, New York	615	2.4	0.0	No
118	Block Group 3, Census Tract 884, Queens County, New York	646	0.0	6.8	No
119	Block Group 4, Census Tract 884, Queens County, New York	988	10.1	0.0	No
120	Block Group 5, Census Tract 884, Queens County, New York	1,557	8.8	12.2^	No[1]
121	Block Group 6, Census Tract 884, Queens County, New York	1,398	22.0	3.6	No
122	Block Group 7, Census Tract 884, Queens County, New York	948	36.8	0.0	No
123	Block Group 8, Census Tract 884, Queens County, New York	1,438	8.2	3.6^	No[1]

Map Key	Census Block Group	Total Population	Minority Population (%)	Low Income Population (%)[50]	Environmental Justice Population
124	Block Group 2, Census Tract 892, Queens County, New York	796	11.3	0.0	No
125	Block Group 3, Census Tract 892, Queens County, New York	1,286	18.0	11.4	No
126	Block Group 5, Census Tract 892, Queens County, New York	1,197	0.0	5.8	No
127	Block Group 7, Census Tract 892, Queens County, New York	1,685	0.0	1.2	No
128	Block Group 8, Census Tract 892, Queens County, New York	458	0.0	0.0	No

Source: U.S. Census Bureau's American Community Survey (ACS) 2015-2019. Available online at http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh+t.

Notes:

^ Indicates that a U.S. Census block group that previously met the threshold for a low-income or minority population pursuant to the 2013-2017 data and no longer meets this threshold pursuant to the 2015-2019 data.

* Indicates that a U.S. Census block group that previously did not meet the threshold for a low-income or minority population pursuant to the 2013-2017 data and now meets this threshold pursuant to the 2015-2019 data.

1 Indicates that this U.S. Census block group was identified as an Environmental Justice Population in the 2020 EA but is no longer identified as such now due to use of updated data.

2 Indicates that this U.S. Census block group was not identified as an Environmental Justice Population in the 2020 EA but now is identified as such due to use of updated census data.

As shown in ***Exhibits 4-8 and 4-9***, nearly all U.S. Census block groups in the Study Area meet environmental justice criteria based on the percentage of minority populations. Approximately 19.5 percent (33 of the 128 U.S. Census block groups) meet the criteria based on low-income populations and nearly all meet the criteria for environmental justice communities based on minority populations. Overall, approximately 85.9 percent of the U.S. Census block groups within the Study Area meet the criteria for an environmental justice community. These U.S. Census block groups are concentrated in portions of the Ozone Park, South Ozone Park, Wakefield, Spring Gardens, Laurelton, and Brookville neighborhoods of Queens. The 14.1 percent of the U.S. Census block groups that do not meet the environmental justice criteria are primarily west of the Airport in the Hamilton Beach and Howard Beach neighborhoods.

It is noted that while the boundaries of the Study Area for the environmental justice analysis in this Supplemental EA mirror that in the 2020 EA, that EA identified 111 U.S. Census block groups within the Study Area, which met the criteria for environmental justice using the 2013-2017 ACS data. In comparison, 110 U.S. Census block groups met the criteria for environmental justice in this Supplemental EA with the updated 2015-2019 ACS data. This is considered a minor change and is reflective of the high variability in ACS data given the low sample size, compared to official 10-year census data. More specifically, 29 U.S. Census block groups that met the criteria for a low-income population geography pursuant to the 2013-2017 ACS dataset no longer met that threshold pursuant to the 2015-2019 ACS dataset and 15 U.S. Census block groups that did not meet the criteria for a low-income population geography to the 2013-2017 ACS dataset now meet that threshold pursuant to the 2015-2019 ACS dataset (84 U.S. Census block groups that met the low-income population threshold remained unchanged from the 2013-2017 to the 2015-2019 ACS datasets).

All U.S. Census block groups that met the minority population threshold in the 2013-2017 ACS dataset still met that threshold in the 2015-2019 ACS dataset (refer to ***Table 4-10***).

Children's Environmental Health and Safety Risks

Based on the information in ***Table 4-9,*** 36,496 of the Study Area's total population of 171,848, or approximately 21 percent, are children under the age of 18 (i.e., school-aged children). In addition, there are 29 schools within the Study Area (see ***Figure 4-10, Schools within U.S. Census Block Groups in the Study Area***). The 29 schools are scattered throughout the Study Area, primarily at the Study Area perimeter. There are six schools within a ½-mile of the Proposed Action Site, the majority of which are within a ½-mile of Area #6 - Construction Parking at Aqueduct. These schools were evaluated in the 2020 EA, including John Adams High School (#8 on ***Exhibit 4-10***), M.S. 137 America's School of Heroes (#6 on ***Exhibit 4-10***), P.S. 108 Captain Vincent G. Fowler (#9 on ***Exhibit 4-10***), P.S. 146 Howard Beach (#2 on ***Exhibit 4-10***), and Our Lady of Grace Catholic Academy (#7 on ***Exhibit 4-10***). There is also one school within a ½-mile of the Proposed Off-CTA Roadways, P.S. 124 Osmond A Church (#13 on ***Exhibit 4-10***), approximately 2,500-feet to the west. A majority of the schools are on or proximal to roadway corridors such as Rockaway Boulevard and Springfield Boulevard located in the Study Area and beyond a ½-mile from the Proposed Action Site, including the Proposed Off-CTA Roadways.

In addition to the schools, most properties within the Study Area are residential. Approximately 91 percent of the 34,126 tax lots within the Study Area include residential uses.[51] The Study Area is within the 12 residential neighborhoods of East New York, Laurelton, Lindenwood-Howard Beach, Ozone Park, Richmond Hill, Rochdale, Rosedale, South Jamaica, South Ozone Park, Springfield Gardens, St. Albans, Woodhaven, each of which were evaluated as part of the analysis in the JFK Redevelopment EA. Four (4) of these neighborhoods are within a ½-mile of the Proposed Off-CTA Roadways: Rochdale, South Jamaica, South Ozone Park, and Springfield Gardens. The Proposed Off-CTA Roadways would not physically occur in any of these neighborhoods and is divided from these neighborhoods with a high-volume transportation network, including the Belt Parkway, Westbound Nassau Expressway (NY-878) and North and South Conduit Avenues (NY-27).

[51] According to 2021 New York City Property Land Use Tax Lot Output data

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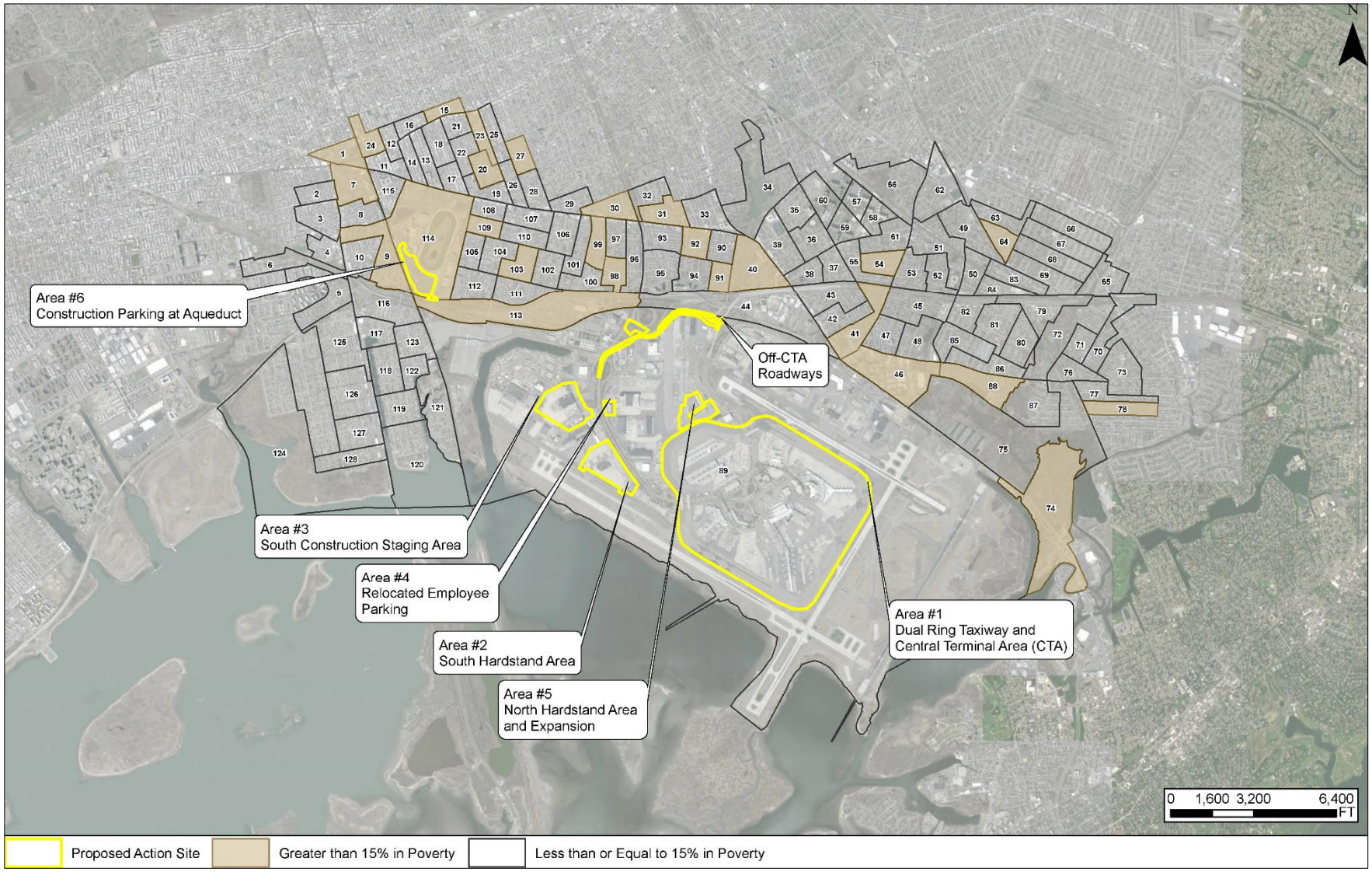
EXHIBIT 4-8 LOW INCOME POPULATION WITHIN U.S. CENSUS BLOCK GROUPS OF THE STUDY AREA



Source: New York City Department of Parks and Recreation: Park Properties (July 9, 2021)
Church and Rutsch (1987), Figure A-3, PDF Page 146
New York State Office of Parks, Recreation and Historic Preservation Cultural Resources Information System

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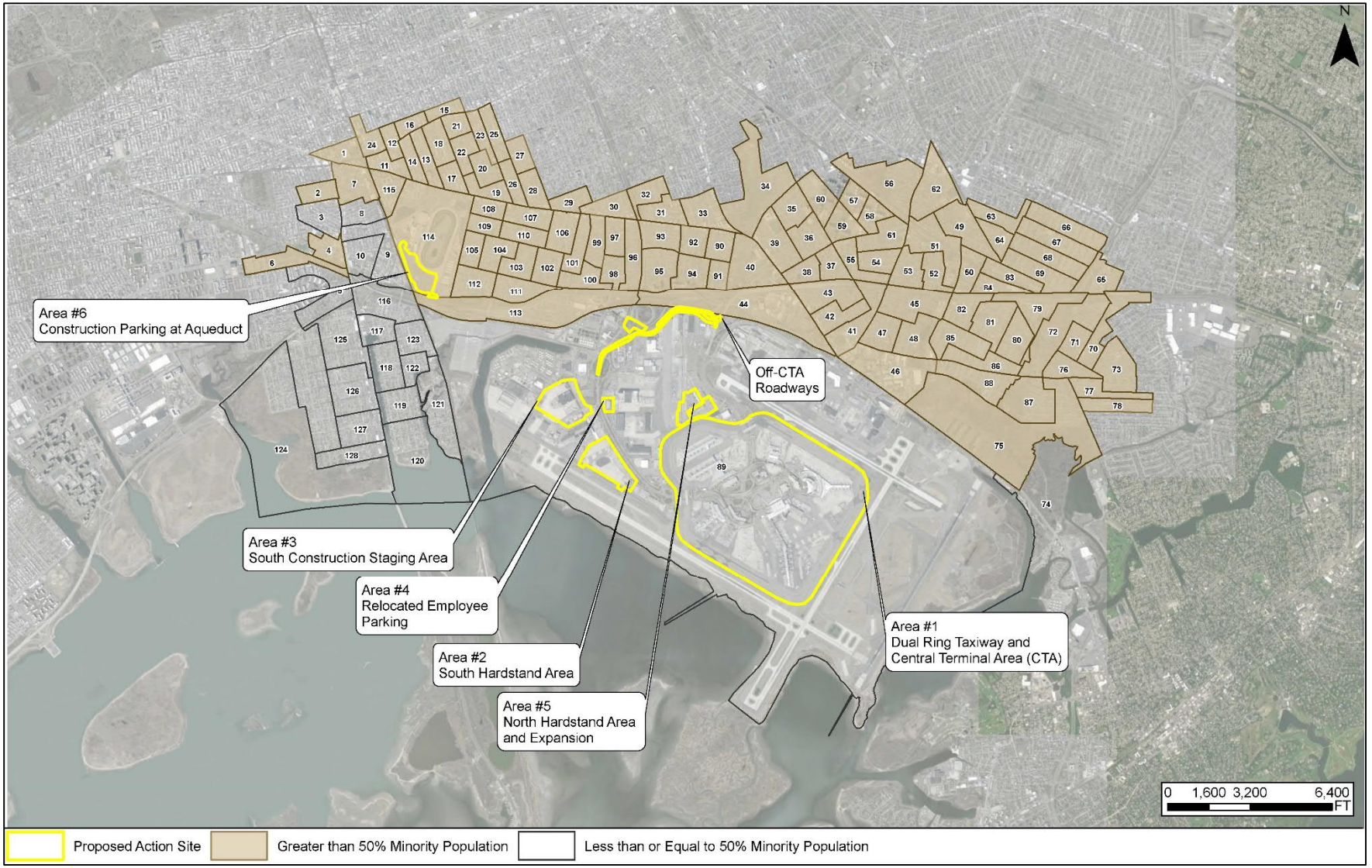
EXHIBIT 4-9 MINORITY POPULATIONS WITHIN U.S. CENSUS BLOCK GROUPS OF THE STUDY AREA



Source: New York City Department of Parks and Recreation: Park Properties (July 9, 2021)
Church and Rutsch (1987), Figure A-3, PDF Page 146
New York State Office of Parks, Recreation and Historic Preservation Cultural Resources Information System

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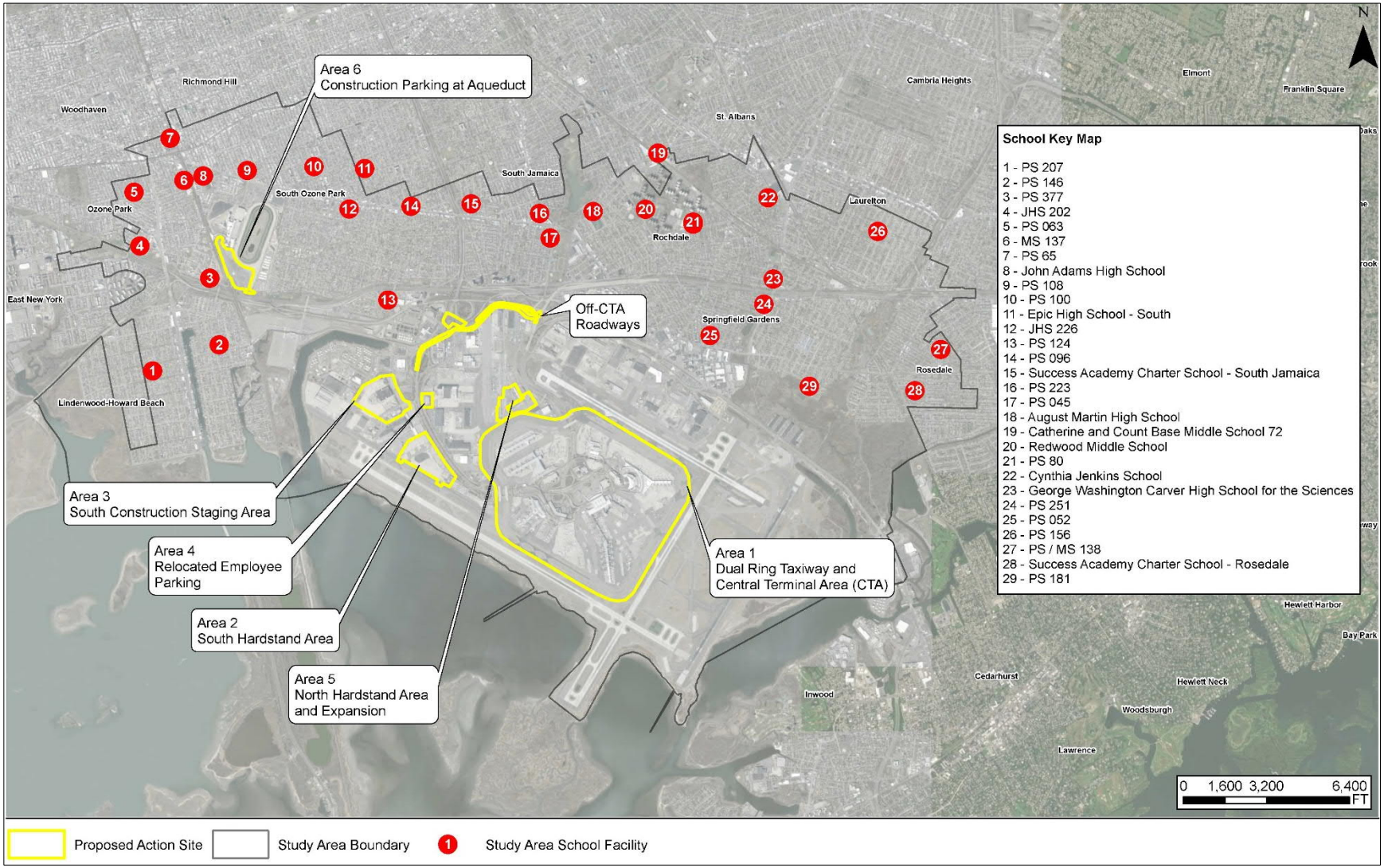
EXHIBIT 4-10 SCHOOLS WITHIN U.S. CENSUS BLOCK GROUPS IN THE STUDY AREA



Sources: New York City Department of Parks and Recreation: Park Properties (July 9, 2021)
Church and Rutsch (1987), Figure A-3, PDF Page 146
New York State Office of Parks, Recreation and Historic Preservation Cultural Resources Information System

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4.14.3 Proposed Action - Socioeconomics, Environmental Justice, and Children's Health and Safety Risk Impacts

This section evaluates the potential impacts of the Proposed Action on socioeconomic resources, environmental justice communities, and children's environmental health and safety risks. The methodology used to evaluate potential impacts to these resources is the same as that applied to and discussed in *Section 5.12* of the 2020 EA. It should be noted that the methodologies typically applied to FHWA environmental justice analyses parallel the approach taken by FAA, which confirms the approach in the 2020 EA is still applicable to this Supplemental EA analysis.

Socioeconomic Impacts

Under the Proposed Action, no private property would be acquired, and no businesses or residences would be relocated. However, construction of the Direct Westbound Connection, as part of the Proposed Off-CTA Roadways, is expected to impact six areas adjacent to the on-Airport 147th Street, 147th Avenue, Cargo Service Road and Rental Car North Road (see *Section 1.4.4, Areas Affected by the Proposed Off-CTA Roadways)*. The potential impact would be mitigated by providing alternative parking areas on-airport through coordination with each tenant. The Proposed Action would minimize congestion and provide a more direct, efficient, and simplified route for terminal passengers accessing the CTA, which would improve the overall roadway network circulation and connectivity to and within the Airport. Further, the Proposed Action would not disrupt or divide an established community and would not result in a substantial loss in community tax base.

Overall, the Proposed Action would result in beneficial impacts during construction. At the peak of construction, it is anticipated approximately 3,500 construction jobs would be on-site daily.[52] Direct and total jobs are anticipated to be similar to the 2020 EA's estimates of 9,600 direct jobs and over 15,000 total jobs. The Proposed Action would not result in a substantial loss in community tax base.

Consistent with the No Action, construction of the Proposed Action would result in a short-term increase in surface traffic. Traffic analyses were performed to determine the type and extent of potential on- and off-Airport construction-related traffic impacts anticipated during the peak construction phase for the Proposed Action (see ***Appendix D, Traffic Report*** in this Supplemental EA).

During construction of the Proposed Action, CTA frontage roadways would be managed and traffic impacts minimized with a transportation management plan, as needed. Traffic on the Nassau Expressway (NY-878) and JFK Expressway could be adversely impacted due to projected terminal closures, access restrictions, parking garage closures, and AirTrain operation changes during the construction peak year (i.e., Construction Stage Five (5), which is anticipated in Year 2024). During the construction peak year, T2 and T7 would be closed and under construction. T2 and T7 activities would be relocated to T4 and T8, respectively. The Van Wyck Expressway would no longer provide ingress access to T5 and T8 and the JFK Expressway would not be accessible for egress traffic from T8.

[52] Port Authority of New York and New Jersey

The traffic analyses also showed that construction of the Proposed Action would result in some increases in traffic delays at several off-Airport intersections (see ***Appendix D, Traffic Report*** in this Supplemental EA) due to the additional traffic generated by construction worker trips, delivery trucks, and construction equipment. However, only one intersection would be impacted during the AM and PM peak hours, at Lefferts Boulevard and Aqueduct Road. The potentially impacted intersection is on Port Authority property and appropriate traffic minimization measures would be implemented.

Overall, traffic impacts could include increased delays, increased traffic, and reduced LOS. However, the duration of the potential traffic impacts during weekdays would be short, about one hour in the morning and one hour in the afternoon since construction worker trips are highly peaked. Therefore, temporary deployment of traffic enforcement agents (TEAs) at key locations may be a suitable initial minimization measure. Additional minimization measures such as intersection signal phasing modifications will be developed and implemented in close coordination with the New York City Department of Transportation (NYCDOT), as needed.

Environmental Justice Impacts

As indicated in ***Table 4-10,*** most U.S. Census block groups surrounding the Airport meet the threshold for an environmental justice population. These populations could experience adverse impacts from increased air quality emissions and traffic during construction. As discussed in *Section 4.4, Air Quality* in this Supplemental EA, potential construction-related air quality impacts include emissions from construction equipment and operational emissions during construction (including increased roadway traffic congestion and VMT during construction). However, degradation of air quality associated with the Proposed Action is not anticipated. While the Proposed Action would result in a temporary increase in motor vehicle emissions during the Construction Scenario (Years 2021-2029) due to construction worker trips, delivery trucks, and construction equipment, once constructed, the Proposed Action would reduce motor vehicle emissions off- and on-Airport when operational. during the Operational Scenario would be reduced because the Proposed Off-CTA Roadways and design modifications to the roadways within the CTA would provide a more intuitive and direct connection to, from, and within the CTA. Overall, motor vehicle emissions would be reduced because of improvements to the flow of traffic and a decrease in VMT.

Similar to the No Action, the Proposed Action would not cause pollutant concentrations to exceed one or more of the NAAQS during construction or increase the frequency or severity of existing violations.[53] Emissions associated with construction of the Proposed Action would be less than the *de minimis* thresholds of the CAA General Conformity Rule. Therefore, there are no significant impacts to air quality.

As discussed above, there would be some potential increases in delays at several off-Airport intersections due to the additional traffic generated by construction worker trips, delivery trucks, and construction equipment. While the surrounding communities may experience adverse traffic impacts disproportionately during construction, the impacts would not be significant and only occur during construction. Upon completion, the Proposed Off-CTA Roadways of the Proposed Action would enhance circulation and reduce congestion near the Airport, resulting in an overall benefit to nearby populations in the long-term.

[53] See *Section 5.2.7* (Page 5-17) of the 2020 EA.

Based on the foregoing, the Proposed Action would not result in significant adverse impacts on environmental justice populations within the environmental justice Study Area.

Children's Environmental Health and Safety Risks Impacts

Based on a review of available data, the Proposed Action would not result in an elevated risk to health or safety concerns for children. While approximately 21 percent of the population within the Study Area are children, the only environmental resources with the potential to impact children's environmental health and safety are increases in air quality emissions and traffic, as described in the environmental justice section, above. Such impacts would be most evident in the immediate area of construction, and along major access routes, and not within local, residential roads within the Study Area.

There are 29 schools in the Study Area. Increases in traffic associated with construction of the Proposed Off-CTA Roadways would be focused north of the CTA on-Airport and off-Airport within NYSDOT ROW adjacent to the northern boundary of Airport property. Where traffic increases could occur, including near schools, minimization measures would be implemented to ensure the safety of children traveling to and attending those schools. These measures would be developed and implemented as part of a traffic management plan in close coordination with the NYCDOT, and could include signal timing modifications, signal phasing revisions, and lane utilization changes.

The nearest school to the Proposed Off-CTA Roadways is nearly a ½-mile northeast (P.S. 124 Osmand A. Church, #13 on ***Exhibit 4-10***). All other schools within the Study Area were evaluated in the 2020 EA, which determined the No Action would have no significant adverse impacts on children's environmental health and safety. Based on the foregoing, the Proposed Action would be unlikely to adversely impact children living in residential neighborhoods or attending schools within the Study Area and no significant adverse impacts to children's environmental health and safety risks are anticipated.

4.14.4 Conclusion - No Significant Socioeconomics, Environmental Justice, and Children's Health and Safety Risk Impacts

No induced growth, relocation of residences, or relocation of off-Airport businesses would occur as part of the Proposed Action. While construction of the Proposed Off-CTA Roadways may impact areas leased by the Port Authority to Airport tenants (see *Section 1.4.4* in this Supplemental EA). Neither construction and subsequent operation of the Proposed Off-CTA Roadways would require displacement of the businesses or significant impacts to the Airport tenants' day-to-day operations. Temporary impacts would occur off-Airport due to construction-related traffic. However, minimization measures would be implemented to reduce potential for impacts and the overall impacts would not be significant. Traffic impacts associated with the Proposed Action would be limited to construction vehicles, workers, and equipment using the roadway network in the vicinity of the Proposed Off-CTA Roadways. Traffic on local roadways would be less affected. Detailed traffic analyses found that construction of the Proposed Action would not result in significant traffic impacts within the CTA, along off-Airport roadways, and/or at intersections within the Study Area during typical weekday construction AM and PM peak periods. Therefore, the Proposed Action would have no significant adverse traffic impacts.

Impacts to traffic and air quality during construction would not be significant, either when considered alone or cumulatively, and after construction, impacts from air quality and traffic

would be beneficial. The Proposed Action would result in beneficial socioeconomic impacts due to the creation of jobs during construction. Further, the Proposed Action would improve circulation and reduce congestion near the Airport, resulting in an overall benefit to nearby populations in the long term. Therefore, no significant adverse impact to socioeconomics, environmental justice or children's environmental health and safety risks would occur.

4.14.5 Reduction, Avoidance and Minimization Measures

Appropriate traffic minimization measures would be implemented to prevent traffic related impacts, including signal timing modifications, signal phasing revisions, one lane assignment modifications, the monitoring and reporting of construction traffic conditions, and/or the implementation of an area-wide Transportation Management Program (TMP) to be developed in coordination with NYCDOT to improve traffic operations along surrounding access and egress roadways, including the Van Wyck Expressway.

It should be noted that the duration of the potential traffic impacts would be short, about one hour in the morning and one hour during the afternoon since construction worker trips are highly peaked. Moreover, additional minimization measures would entail frequent monitoring and reporting of off-Airport roadway construction traffic conditions to minimize adverse operational impacts along the surrounding access and egress roadways. If it becomes necessary under the anticipated peak year of construction traffic conditions (i.e., Year 2024), construction worker and truck routes will be modified and the potential use of TEAs at impacted intersections will be considered by the Port Authority for optimum traffic operations along the affected adjacent off-airport roadways.

With the above reduction, avoidance, and minimization measures in place, the Proposed Action would not result in any significant adverse impacts to socioeconomic, environmental justice, and/or children's health and safety risks.

4.15 Visual Effects

Section 4.13, Visual Effects (Affected Environment) and *Section 5.13, Visual Effects (Environmental Consequences)* of the 2020 EA describe existing visual resources and associated impacts in connection with the No Action, respectively. *Section 4.13* also outlines the relevant regulatory context and key definitions used to identify and assess potential impacts to visual resources, including those associated with light emissions and in consideration of existing DOT Section 4(f) resources and historical, architectural, archaeological, and cultural resources near the Airport. As described in *Section 5.13*, the analysis of potential visual effects includes impacts related to light emissions, visual resources, and visual character.[54]

4.15.1 Summary of 2020 EA Visual Effects Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As detailed in *Section 5.13* of the 2020 EA, the No Action involves minor changes in lighting and views within the Airport property. However, no changes to visual setting or light intensity would occur to residential areas. The No Action would not contrast with, or detract from, the visual resources and/or the visual character

[54] Visual effects include the extent to which a proposed action would produce light emissions that create annoyance or interfere with activities, or contrast with, or detract from, the visual resources and/or the visual character of the existing environment.

of the surrounding area. The nearest residential land uses to the 2020 EA Proposed Project Site are approximately 2,000 feet to the west. The No Action would not significantly alter, contrast, or obstruct the existing views from residential areas due to the distance and obstacles in the way. In addition, the No Action, which was limited to the Airport property, involves development similar in character to the existing CTA. Therefore, the 2020 EA concluded there would be no significant adverse impacts to visual resources as a result of the No Action.

4.15.2 Proposed Action vs. No Action

The Proposed CTA Roadways includes design modifications within the CTA; however, these improvements are within the boundaries of the Study Area evaluated in the 2020 EA and visually consistent with the No Action. Consistent with the CTA roadway network and GTC/JFK Central parking facility proposed in the No Action, the maximum height restrictions for buildings and structures, including the GTC/JFK Central, would be maintained within the Airport's requirements for building and structure height as part of the Proposed Action. Thus, the analysis related to visual resources presented in the 2020 EA are considered still applicable.

The analysis herein focuses on the Proposed Off-CTA Roadways. The Visual Effects Study Area for the purposes of this Supplemental EA is consistent with the Study Area (i.e., ½-mile Study Area from the Proposed Off-CTA Roadways) for both *Section 4.8, Department of Transportation Act Section 4(f) Resources* and *Section 4.10, Historical, Architectural, Archaeological, and Cultural Resources* in this Supplemental EA (see ***Exhibit 4-5*** for an illustration of the ½-mile Study Area boundary in relation to the Proposed Off-CTA Roadways). The Proposed Off-CTA and CTA Roadways establishes terminal splits earlier in the passenger journey, requiring terminal directory signs to be located further away from the CTA and along the Van Wyck Expressway, JFK Expressway, and Nassau Expressway (NY-878). The proposed off-Airport signage would provide updated directional signage for passengers accessing the CTA terminals outside of the Proposed Off-CTA Roadways direct impact area. The location of any new signage for the Proposed Action would be consistent with that of the existing signage and the general visual setting of the existing area.

In addition, the Direct Westbound Connection of the Proposed Action would introduce an elevated access ramp structure from the JFK Expressway, over the Eastbound Nassau Expressway (NY-878) Exit 2N access ramp and 150th Street proximate to its intersection with 149th Street. An additional Direct Westbound Connection elevated structure would be added over the Van Wyck Expressway at the on-Airport Federal Circle. The Van Wyck MUL Loop Ramp connects the southbound Van Wyck Expressway to the Eastbound Nassau Expressway (NY-878), approximately a ¼-mile north of Federal Circle. These structures would be similar to the roadway structures in the immediate area and would not contrast or obstruct existing views residential areas due to distance and the existing high-volume roadway network.

The improvements within the NYSDOT ROW are proximate to commercial and industrial developments, transportation infrastructure (i.e., highways and elevated AirTrain), and residential areas ranging from detached single-family to medium-density row houses and garden apartments, opposite the high-volume Belt Parkway, South Conduit Avenue (NY-27), Westbound Nassau Expressway (NY-878), and North Conduit Avenue (NY-27). Refer to ***Exhibit 4-11, Proposed Action Renderings*** for visualizations of the Proposed Off-CTA Roadways. Landside facilities at the Airport are the primary source of light emissions within this ½-mile Study Area, currently illuminated by various types of lighting, including from buildings,

roadways, and parking facilities. The area surrounding JFK, within a ½-mile radius, is considered an urbanized area; composed of other development that is also lighted and contributes to the overall light emissions in the area. The Proposed Off-CTA Roadways lighting would be consistent with existing roadway lighting within the Proposed Off-CTA Roadways and surrounding Study Area. Refer to Section 4.11, *Land Use* for additional information on Off-Airport land uses with a ½ mile of the Proposed Action Study Area.

Off-Airport land uses within this ½-mile Study Area consist of: Commercial and industrial developments, residential areas, public open spaces/parks (i.e., Baisley Pond Park, Police Officer Edward Byrne Park); and NYSDOT ROW bordering JFK's northern boundary. The NYSDOT ROW primarily consists of roadways with dispersed landscaped and undeveloped/vegetated land and roadway lighting poles located throughout the roadway network north of the Airport boundary (including the Eastbound Nassau Expressway (NY-878) on NYSDOT ROW).

4.15.3 Proposed Action - Visual Effects Impacts

Consistent with the evaluation of visual effects in the 2020 EA, no changes to visual setting or light intensity would occur to residential areas proximate to the Airport. The Proposed Action would not result in significant visual effects.

Light Emissions

Due to the highly urbanized, developed nature and associated existing light emissions in the immediate vicinity of the Proposed Off-CTA Roadways, light emissions are not expected to be noticeably different from existing lighting conditions. Light sources in the Study Area include existing commercial and industrial facilities, the Airport, and existing roadway lighting associated with the surrounding roadway network. Light emissions from the Proposed Off-CTA Roadways of the Proposed Action would not significantly increase the overall light emissions in the surrounding area due to their type, intensity, and distance from the nearest residential areas (approximately 1,000 feet north of the Proposed Off-CTA Roadways Site).

Visual Resources and Visual Character

In accordance with FHWA requirements, ***Exhibit 4-11*** provides a rendering of the proposed Direct Westbound Connection relative to the Van Wyck Expressway. A rendering of the Proposed Eastbound Nassau Expressway Auxiliary Lane is not required because it does not connect to an interstate highway. The Proposed Action would not contrast with, or detract from, the visual resources and/or the visual character of the surrounding area. Land uses in the immediate vicinity of the Proposed Off-CTA Roadways consist of airport-related commercial and industrial uses and roadway infrastructure. The nearest residential land uses to the Proposed Off-CTA Roadways are approximately 1,000 feet to the north, opposite the high-volume Belt Parkway, Nassau Expressway, and South and North Conduit Avenues (NY-27). The Proposed Action would not substantially alter, contrast, or obstruct the existing views from residential areas north of the Airport due to the distance, and existing high-volume roadways, and associated landscaping and natural vegetation within the intervening NYSDOT ROW. Based on the foregoing, it is anticipated that the Proposed Action would be compatible with and reinforce existing visual resources and visual character of the on- and off-Airport areas they are proposed in.

4.15.4 Conclusion - No Significant Visual Effects Impacts

Similar to the evaluation of visual effects in the 2020 EA, minor changes in lighting and views would occur on Airport property. The addition of the Proposed Off-CTA Roadways, to the Proposed Action, would result in minor changes in lighting and views at the Airport boundary between the JFK and Van Wyck Expressways, including the associated lighting and signage. However, no changes to visual setting or light intensity would occur to residential areas. Therefore, the Proposed Action would not result in significant visual effects.

4.15.5 Reduction, Avoidance and Minimization Measures

The Proposed Action would have no significant impact on visual effects; therefore, no mitigation measures are required and no avoidance and/or minimization measures are proposed.

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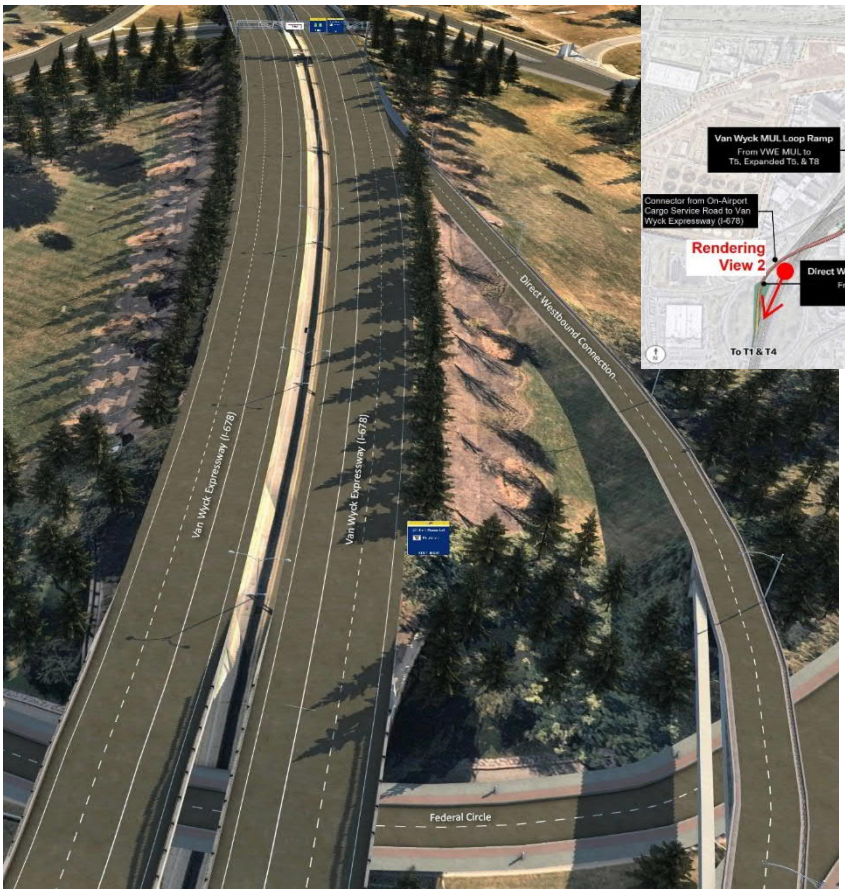
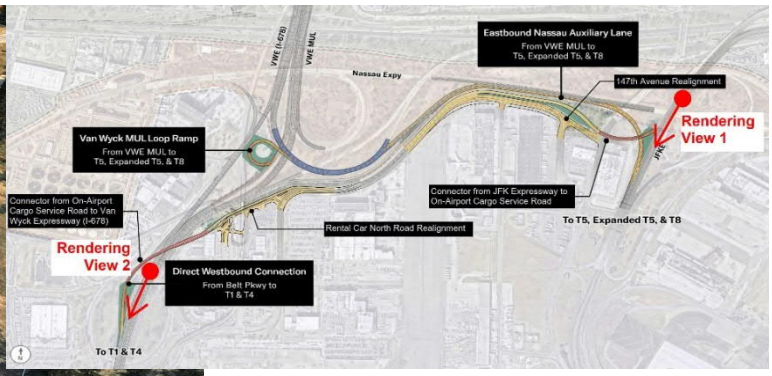
EXHIBIT 4-11 PROPOSED ACTION RENDERINGS

View 1:
JFK Expressway looking southbound toward Bridge J33 of the Direct Westbound Connection





View 2:
Direct Westbound Connection tie-in to Van Wyck Expressway southbound at Federal Circle

4.16 Water Resources

Water resources, which encompass wetlands, floodplains, surface water, and groundwater at/beneath the Airport and within the Study Area evaluated in the 2020 EA, are described in *Section 4.14, Water Resources (Affected Environment)* of the 2020 EA. *Section 4.14* also outlines the data sources reviewed, relevant regulations, and key definitions used to identify and assess potential impacts to water resources within the Study Area evaluated in the 2020 EA, which was limited to the areas of direct impact on the Airport. Potential impacts to water resources from the No Action are described in *Section 5.14, Water Resources (Environmental Consequences)*.

4.16.1 Summary of 2020 EA Water Resource Impacts

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. As detailed in *Section 5.14* of the 2020 EA, the No Action would have no direct impact on wetlands, floodplains, surface water or groundwater. The Study Area evaluated in the 2020 EA for water resources (i.e., the Airport and adjacent water bodies) is outside the 100-year floodplain and there are no freshwater or tidal wetlands or surface water features in the 2020 EA Proposed Project Site. Jamaica Bay, Bergen Basin, Thurston Basin, and Head of Bay are adjacent to the Airport but are at least 500 feet from the 2020 EA Proposed Project Site. Thurston Basin and Head of Bay are approximately 4,000 feet east of the CTA. Bergen Basin is approximately 1,600 feet northwest of the 2020 EA Proposed Project Site, at its nearest point.

The No Action has the potential to result in indirect impacts due to a small increase in impervious surface area (representing approximately 0.1 percent of the Airport property). However, given the existing and proposed stormwater management measures outlined in *Section 5.14* of the 2020 EA, the No Action would not result in noticeable adverse impacts to water resources. Specifically, the No Action includes minimization of potential stormwater related impacts through adherence to a project specific SWPPP consistent with the Airport's SPDES and NYSDEC requirements.

BMPs are incorporated in the No Action design to minimize erosion and sedimentation (E&S) during and after construction to reduce sedimentation and pollutants in receiving waters. Further, Low Impact Design (LID) approaches are included to the extent practicable to reduce runoff, promote groundwater recharge, and minimize post-construction impacts to water quality. Additionally, as part of the Port Authority's commitment to environmental stewardship, stormwater capture systems at the new terminals and glycol recovery systems at aircraft deicing facilities would be incorporated into the design where feasible. Based on this information, the 2020 EA confirmed there would be no significant adverse impacts to water resources as a result of the No Action.

4.16.2 Proposed Action vs. No Action

The Proposed Action expands the 2020 EA Proposed Project Site to include the Proposed Off-CTA Roadways both on- and off-Airport property at the Airport's northern boundary. A comparison of the CTA roadway network in the No Action and Proposed Off-CTA and CTA Roadways in the Proposed Action is provided in *Section 1.4.3, Comparison of the No Action and Proposed Action* in this Supplemental EA. For the purposes of this Supplemental EA, the

Proposed Action Study Area for water resources is the Study Area evaluated in the 2020 EA with the addition of the Proposed Off-CTA Roadways Site and 500 feet from the Proposed Off-CTA Roadways outermost boundary of the area planned to be disturbed. While the Proposed Action includes design modifications to the CTA Roadways within the Study Area evaluated in the 2020 EA, this area maintains its original proposed use and function (i.e., roadway and parking infrastructure) within the overall CTA boundaries as evaluated within the No Action and, therefore, is not reiterated in detail herein. Thus, the water resource analysis presented herein is focused on the Proposed Off-CTA Roadways.

Wetlands

There are no state-regulated freshwater wetlands or tidal wetlands within 500 feet of the Proposed Off-CTA Roadways.[55] The nearest state-regulated tidal wetland, Bergen Basin, is associated with Jamaica Bay (see ***Exhibit 4-12, State Designated Tidal Wetlands***). As discussed in the 2020 EA, the NYSDEC-regulated "tidal wetland adjacent area" extends up to 150 feet inland from the upper limit of the tidal wetlands in New York City. The westernmost portion of the Proposed Off-CTA Roadways Site is more than 1,100 feet from tidal wetlands and is therefore outside of the NYSDEC-regulated tidal wetland adjacent area, which is consistent with the 2020 EA Proposed Project Site.

The USFWS National Wetland Inventory (NWI) maps show a palustrine emergent freshwater wetland within the existing loop ramp from the Eastbound Nassau Expressway to the northbound Van Wyck Expressway off-Airport on NYSDOT owned property (see ***Exhibit 4-13, USFWS National Wetlands Inventory (NWI)***). Based on a review of recent wetland delineations that included this palustrine emergent freshwater wetland, the area does not meet the characteristics of a wetland as defined by USACE. Further, no drainage features, storm drains, or pipes that drain to or from this area were observed.[56] As such, there are no Federally regulated wetlands within or adjacent to the 500-foot Study Area around the Proposed Off-CTA Roadways.

Floodplains

Similar to the Study Area evaluated in the 2020 EA[57], the 500-foot Study Area for the Proposed Off-CTA Roadways is outside the one percent annual chance floodplain (i.e., 100-year floodplain). However, as shown in ***Exhibit 4-14, Preliminary Flood Insurance Rate Map (2015)***, a portion of the Proposed Off-CTA Roadways 500-foot Study Area is within the 0.2 percent annual chance floodplain (i.e., 500-year floodplain).

Surface Water

As identified in *Section 4.14.2* of the 2020 EA, the waters of Jamaica Bay and Head of Bay are classified by NYSDEC as Class SB waters; and Bergen Basin and Thurston Basin are classified as Class I waters.[58] Jamaica Bay, Bergen Basin and Thurston Basin are all on the New York

[55] Assessment is based on a review of online data sources provided in *Section 4.14, Water Resources (Affected Environment)* of the 2020 EA, and field verification.
[56] NYSDOT, *Van Wyck Expressway Capacity and Access Improvements to JFK Airport Project* FDR/FEIS, Wetland Identification and Delineation Report, April 19, 2018.
[57] FEMA's designated flood zones associated with the No Action are discussed in Section 4.14.2 of the 2020 EA.
[58] The best uses of Class SB waters are primary and secondary contact recreation and fishing; the best uses of Class I waters are secondary contact recreation and fishing. Class SB and Class I waters must be suitable for fish, shellfish, and wildlife propagation and survival.

State 2018 Section 303(d) List of Impaired/Total Maximum Daily Loads (TMDL) Waters. The list identifies those waters that do not support appropriate uses and that require development of a TMDL or other restoration strategy.[59]

Surface water runoff from roadways, walkways, and other paved/impervious surfaces within the Airport's CTA drain to a storm sewer system that discharges to Jamaica Bay and its tributaries through 26 outfalls in accordance with the requirements of the Airport's NYSDEC SPDES permit.[60] ***Exhibit 4-15, Existing Drainage and Outfalls*** depicts the locations of the existing outfalls and drainage areas at the Airport. There are no surface water features in or immediately adjacent to the 500-foot Study Area of the Proposed Off-CTA Roadways. The closest surface water feature is the Bergen Basin inlet of Jamaica Bay, more than 1,100 feet west of the Proposed Off-CTA Roadways' nearest point. Surface water runoff within 500-foot of the Proposed Off-CTA Roadways' Study Area is managed in one of two ways. For areas east of the Van Wyck Expressway, it is collected and conveyed into a NYC Department of Environmental Protection triple barrel combined storm sewer culvert under the Eastbound Nassau Expressway (NY-878). For areas west of the Van Wyck Expressway and south of the Belt Parkway, stormwater drains westerly between the Jamaica Wastewater Treatment Plant and Bergen Road, ultimately discharging to Bergen Basin.

Groundwater

Consistent with the Study Area evaluated in the 2020 EA, the Study Area for the Proposed Off-CTA Roadways is underlain by the Brooklyn/Queens groundwater aquifer system, which is part of the larger Long Island aquifer complex. The Brooklyn/Queens groundwater aquifer system is discussed in detail in *Section 4.14.2* of the 2020 EA.

Groundwater within the Proposed Off-CTA Roadways Site ranges from approximately 20 to 25 feet below ground surface and generally flows to the south toward Jamaica Bay and away from water supply wells in central Queens.[61, 62]

4.16.3 Proposed Action - Water Resource Impacts

The Proposed Action would result in the following impacts to the below mentioned water resource categories:

Surface Water and Wetlands

No physical alteration to surface waters, wetlands, or the 150-foot inland upper limit of tidal wetlands would occur due to the Proposed Action. The construction of the Proposed Off-CTA Roadways would require 4.1 acres of new impervious surfaces beyond the 5.9 acres of impervious surfaces anticipated as part of the No Action, for a total of approximately 10 acres of new impervious surfaces on- and off-Airport property in comparison to the Airport's overall footprint of 4,930 acres. The new pavement would be distributed throughout the Airport and off-

[59] New York State 2018 Section 303(d) List of Impaired/TMDL Waters. Available online at: https://www.dec.ny.gov/docs/water_pdf/section303d2018.pdf
[60] SPDES Permit No. NY 0008109.
[61] U.S. Geological Surface Long Island Depth to Water View 2013, accessed online at Available online at: https://ny.water.usgs.gov/maps/li-dtw/.
[62] U.S. Geological Survey, Prepared in cooperation with the New York State Department of Environmental Conservation, Division of Water Resources; Groundwater and Geohydrologic Conditions in Queens County, Long Island, New York; 2001.

Airport proximate to the JFK property boundary (i.e., direct impact area of the Proposed Off-CTA Roadways). Although the overall impervious surface area would be increased with the Proposed Action, the impervious areas are not connected, and stormwater can infiltrate the existing grassed infield areas and other vegetated spaces within the Proposed Action Site. Given the quantity of new pavement compared to the overall 4,930-acre footprint of the Airport, the increase in stormwater discharge over existing levels is anticipated to be relatively small. It is anticipated that the existing stormwater system has adequate capacity to accommodate this minimal increase in runoff in paved area.

With respect to water quality impacts, the Proposed Action would not result in noticeable indirect impacts on water resources because of the capacity of the existing stormwater management system on and near the Airport and the proposed measures to minimize impacts to existing water resources, such as a SWPPP, SPDES and NYSDEC requirements, and the Port Authority's *Sustainable Infrastructure Guidelines*. BMPs would also be incorporated into the Proposed Action design to minimize E&S during and after construction of the Proposed Action (see *Section 4.16.1, Summary of 2020 EA Water Resource Impacts* in this Supplemental EA and *Section 5.14* of the 2020 EA).

Floodplains

Since the Proposed Action is outside of the 100-year floodplain, there would be no fill within or other impact on the 100-year floodplain. While a small portion of the Study Area around the Proposed Off-CTA Roadways is within the 0.2 percent annual chance floodplain (i.e., 500-year floodplain), and a small amount of fill could be required, most of this area is already developed as part of the existing roadway network and it is not expected that such fill would affect flood storage capacity and/or flood values. As such, no direct adverse impact to floodplains would occur as a result of the Proposed Action. Potential sea level rise would be considered in future infrastructure and facility design for the Proposed Off-CTA and CTA Roadways, as needed. The Proposed Action would be designed and constructed so that all critical operational and design elements comply with the Port Authority's *Climate Resilience Design Guidelines*, as applicable, and in coordination with the NYSDOT and FHWA.

Groundwater

The Proposed Action is entirely in a well-developed area with public water available. Consistent with the Study Area in the 2020 EA, there are no drinking water wells or agricultural wells within the Study Area for the Proposed Action. Further, construction and operation of the Proposed Action would adhere to applicable regulations related to spill prevention and control to prevent significant adverse impacts to groundwater. Therefore, no adverse impacts to groundwater are anticipated as a result of the Proposed Action.

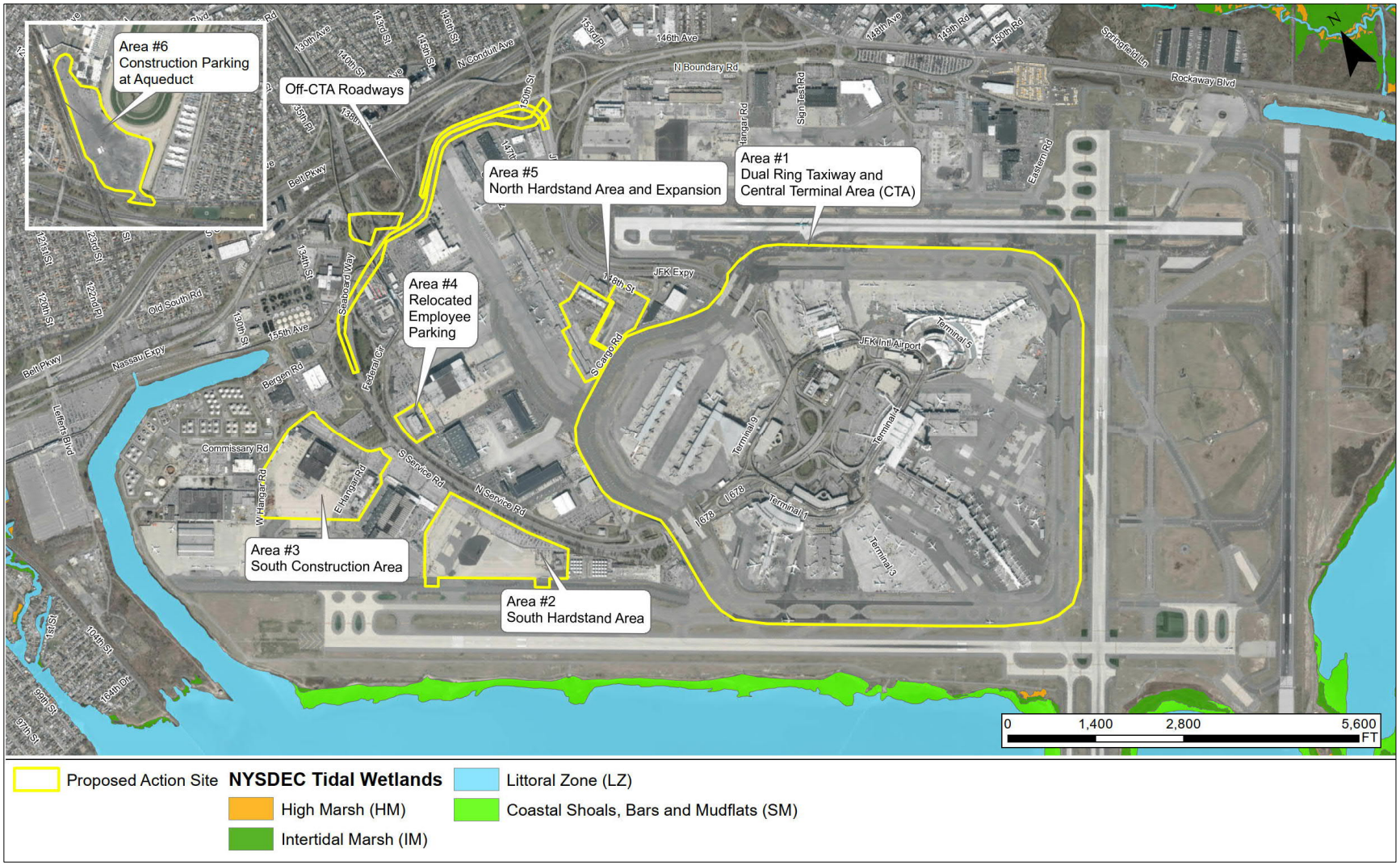
4.16.4 Conclusion - No Significant Water Resource Impacts

Based on the foregoing analyses and comparisons, the Proposed Action would have no direct impact on wetlands, floodplains, surface water or groundwater. The potential for indirect impacts exists due to increased impervious surface areas. However, given the existing and proposed stormwater management measures described above, none of the potential indirect impacts would result in noticeable adverse impacts to water resources. Therefore, the Proposed Action would not result in significant adverse impacts on water resources.

4.16.5 Reduction, Avoidance and Minimization Measures

The Proposed Action includes elements to minimize and avoid potential indirect adverse impacts to water resources, including the incorporation of LID and sustainability elements and adherence to applicable regulations and BMPs. Therefore, mitigation is not required. Minimization and avoidance measures described in *Section 5.14.2* of the 2020 EA for the No Action will be applied to the Proposed Action.

EXHIBIT 4-12 STATE DESIGNATED TIDAL WETLANDS



Source: New York State Department of Environmental Conservation Designated Tidal Wetlands (1974).

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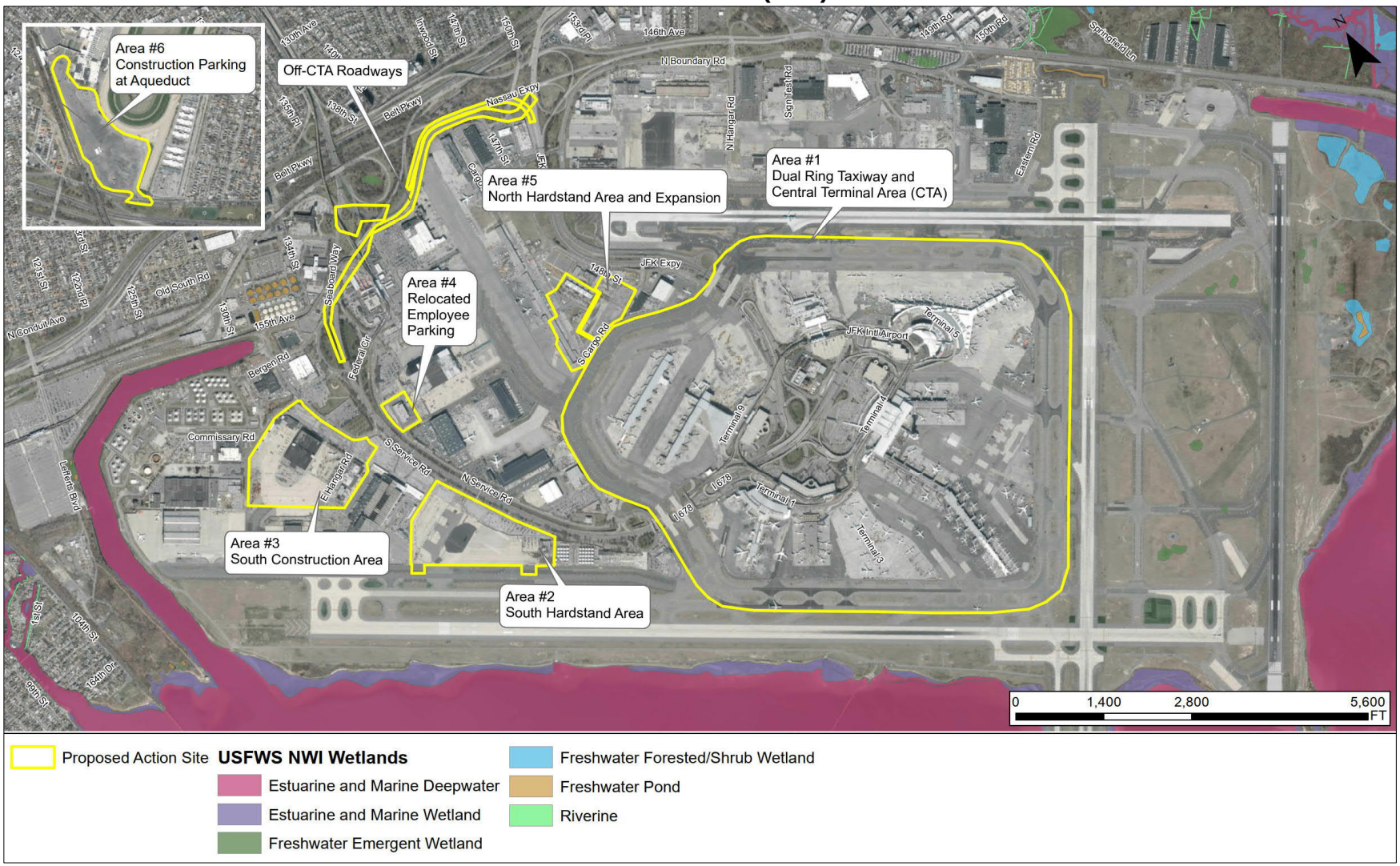
EXHIBIT 4-13 USFWS NATIONAL WETLAND INVENTORY (NWI)



Source: U.S. Fish and Wildlife Service National Wetland Inventory (NWI) Wetlands. Last revised May 2021.

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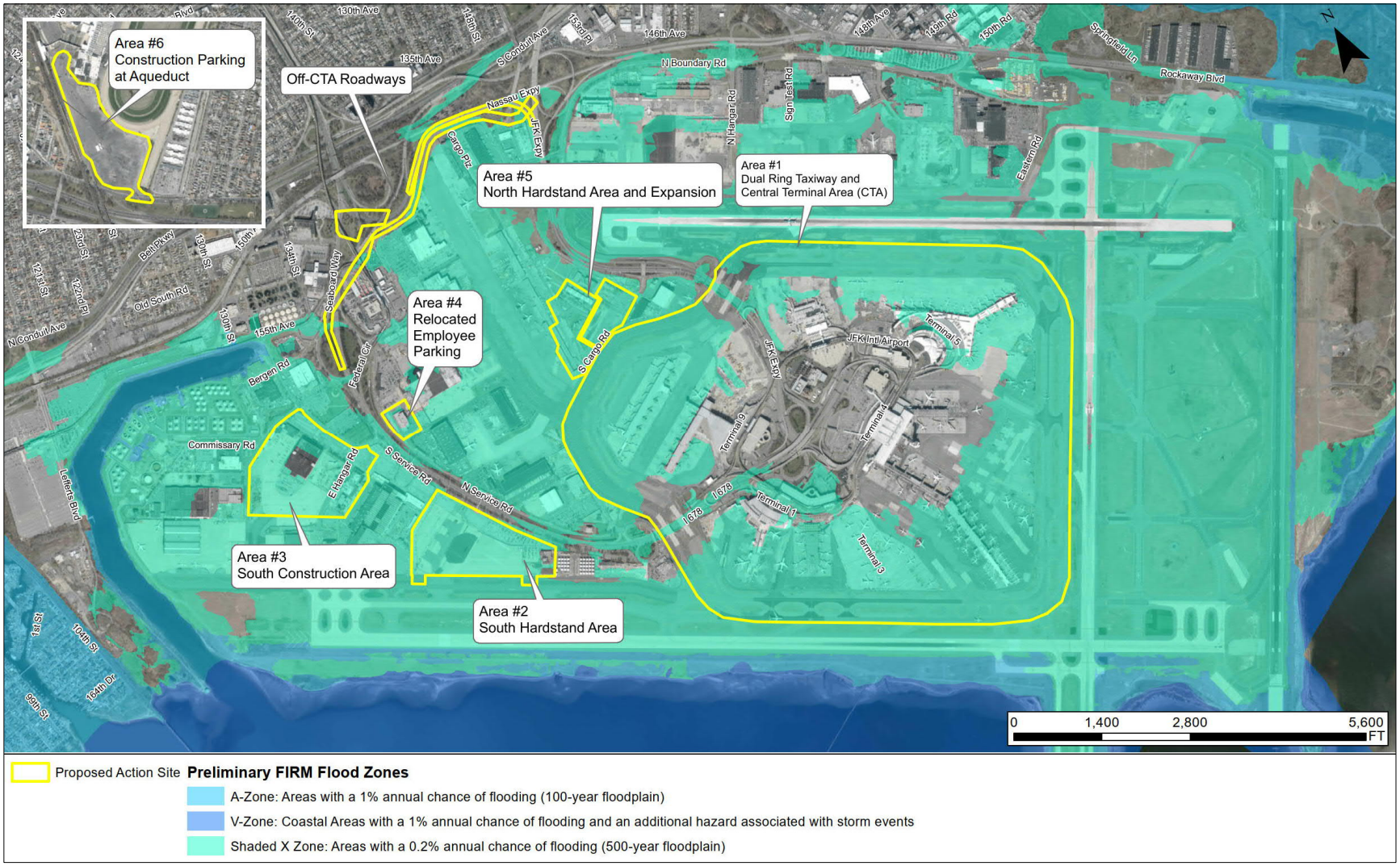
EXHIBIT 4-14 PRELIMINARY FLOOD INSURANCE RATE MAP



Source: FEMA Preliminary Flood Insurance Rate Map (FIRM), 2015.

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EXHIBIT 4-15 EXISTING DRAINAGE AND OUTFALLS, JOHN F. KENNEDY INTERNATIONAL AIRPORT

Source: New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) Permit No. 0008109.

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4.17 Cumulative Impacts Analysis

Pursuant to CEQ NEPA regulations (40 CFR 1508.7), a cumulative impact is defined as:

> "the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency, Federal or non-Federal, or person undertakes such other actions."

The following cumulative impact analysis was conducted to comply with the intent of FAA Order 1050.1F, DOT Order 5610.1C, and the CEQ guidance.

As previously mentioned, for the purposes of this Supplemental EA, the Proposed Project described in the 2020 EA is referred to as the No Action. Cumulative impacts were evaluated in *Section 5.15* of the 2020 EA. The evaluation assessed resources that could be impacted by the No Action and would contribute to the overall cumulative impact (whether adversely or beneficially) and concluded that the overall cumulative impact would not be significant.

Detail regarding the cumulative impact analysis is provided in ***Appendix F, Defining the Cumulative Impact*** of this Supplemental EA. In general, the past, present and reasonably foreseeable future actions discussed herein are the same as those considered in the cumulative impact analysis in the 2020 EA. However, due to the time elapsed since release of the 2020 EA FONSI/ROD for the No Action, and delays to other projects, including those related to the COVID-19 pandemic, construction timeframes for some of the past, present, and reasonably foreseeable actions, and the relationship to the Proposed Action have changed to some degree, and a few additional projects have been/are being planned in the immediate vicinity of the Proposed Action.

The Proposed Action in this Supplemental EA would have no noticeable impact on biological resources; climate; coastal resources; Department of Transportation Section 4f resources; hazardous materials, solid waste, and pollution prevention; historical, architectural, archaeological, and cultural resources; land use; noise; visual resources, or water resources. The following categories reviewed in the 2020 EA are evaluated in the context of the Proposed Off-CTA and CTA Roadways and GTC/JFK Central.

Air Quality

The 2020 EA noted the No Action would not increase aircraft activity beyond forecasted levels or cause a permanent change in runway use patterns. The No Action also would not cause an increase in the total number of motor vehicles traveling to and from JFK beyond that associated with forecasted growth. However, the No Action would generate air emissions associated with construction activities, alter surface traffic movements in the CTA, and reduce aircraft taxi/delay times on the airfield. Based on this information, and the detailed analysis summarized in *Section 5.2* of the 2020 EA, the No Action would be below *de minimis* under the CAA General Conformity Rule.[63] In addition, *Section 4.4, Air Quality* in this Supplemental EA confirms the expected annual construction emissions with the Proposed Action would be below *de minimis* thresholds under the CAA General Conformity Rule as well.

[63] 40 CFR 93 § 153 defines *de minimis* levels, that is, the minimum threshold for which a conformity determination must be performed, for various criteria pollutants in various areas.

Several past and present projects within the Study Area have resulted in adverse impacts on air quality, however, none of these projects, individually have resulted in significant adverse impacts. Further, in the case of past and most of present projects, the air quality impacts were associated with construction and would no longer be contributing to the overall cumulative impact during construction of the Proposed Action. Since the construction of some present and all the reasonably foreseeable future actions would overlap with the Proposed Action, these represent most of the cumulative impacts. Most of the reasonably foreseeable future projects that would be constructed simultaneous to the Proposed Action are smaller projects such as rehabilitation of taxiways and electrical system upgrades, limiting the cumulative air quality impact. It is anticipated that the reasonably foreseeable future actions would result in adverse air-quality impacts during construction at a minimum. The *VWE Capacity and Access Improvements to JFK Airport Project*, which is listed as a present action, could result in adverse impacts to air quality during construction from 2020 through 2025. However, according to the VWE FDR/FEIS, this potential impact would not be significant and construction work will be planned and executed in a manner that will minimize air emissions.

Based on the foregoing, the Proposed Action would contribute to the overall cumulative air quality impact during construction due to increased emissions associated with construction activities. This contribution could be noticeable when considered in conjunction with other past, present, and reasonably foreseeable future actions; however, it is not anticipated that the overall impact would be significant given that not all projects will be constructed at the same time and mitigation and minimization measures would be implemented to reduce overall impact of both the Proposed Action and other projects. In the long-term, the Proposed Action is not likely to noticeably contribute to an overall cumulative air quality impact. As described in *Section 4.4, Air Quality* in this Supplemental EA, the Proposed Action is likely to provide an air quality benefit through a reduction in aircraft and motor vehicle emissions due to improvements to the CTA taxiway and apron areas and design modifications that reduce VMT when compared to the No-Build Alternative.

Natural Resources & Energy Supply

The 2020 EA concluded the overall cumulative impact of the No Action on natural resources and energy supply, in conjunction with other past, present, and reasonably foreseeable future actions, would not be significant. In *Section 4.12, Natural Resources and Energy Supply* in this Supplemental EA, the Proposed Action would increase demand for electricity and natural gas energy during both construction and implementation, as well as increase demand for fuel during construction, which would impact local supplies. However, the Proposed CTA Roadways would be constructed in accordance with the Port Authority's *Sustainable Infrastructure Guidelines*, which leverages the Envision Rating System (Envision) and ensures the Port Authority's non-building projects are planned, designed, and constructed in alignment with the Port Authority's Environmental Sustainability Policy.

Both past and present projects within the Study Area have resulted in adverse impacts on natural resources and energy supply, however, none of these projects, individually, have resulted in significant adverse impacts on this resource. Further, impacts on natural resources and energy supply for the past projects and most of the present projects are primarily associated with construction activities and while they have removed natural resources from overall supplies, a majority of the past and present projects will no longer contribute to the overall cumulative impact during the construction duration of the Proposed Action. Reasonably

foreseeable future projects such as the JFK Electrical System Upgrade Project and JFK Kennedy International Airport Cogeneration (KIAC) Facility 1.5 Upgrade would benefit existing energy supplies in the long-term and improve reliability of the electrical system at JFK. Given the capacity of existing supplies and the nature of the other projects, which primarily benefit natural resources and energy supply or only adversely impact those resources during construction, the overall cumulative impact would not be significant.

Socioeconomics, Environmental Justice, and Children's Health and Safety Risks

As mentioned in the 2020 EA's *Section 5.15*, the overall impact on socioeconomic resources as a result of the No Action, in conjunction with other past, present, and reasonably foreseeable future actions, would not be significant, and from a job perspective would be beneficial. In *Section 4.14, Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks* in this Supplemental EA, no induced growth, relocation of residences, or relocation of off-Airport businesses would occur as part of the Proposed Action; there would be no substantial loss in community tax base, and there would be no impacts to Environmental Justice populations or children's health and safety. Temporary impacts would occur off-Airport due to construction-related traffic, though minimization measures would be implemented to reduce potential for impacts and the overall impacts would not be significant. Traffic impacts associated with the Proposed Action would be limited to construction vehicles, workers, and equipment using the roadway network in the vicinity of the Proposed Off-CTA Roadways. However, given the urban nature of the area surrounding the Airport, there should not be a noticeable adverse impact on the surrounding communities. Traffic on local roadways would be less affected. Further, temporary minor changes in traffic operations (i.e., signal timing modifications, signal phasing revisions, and lane utilization changes) would be implemented to further reduce adverse impacts related to traffic during construction. Impacts to traffic and air quality during construction would not be significant, and after construction, would be beneficial due to reduced traffic congestion both on and off-Airport. The Proposed Action would also result in beneficial socioeconomic impacts due to the creation of jobs during construction.

Past and present projects have not resulted in long-term adverse impacts on traffic or other socioeconomic resources. However, these projects created jobs in the short-term (during construction). Since the past and a majority of the present projects will have been completed before the elements of the Proposed Action considered in this Supplemental EA are constructed, the contribution of past and present projects to the overall cumulative socioeconomic impact would be limited. Projects such as the TWA Flight Center Hotel and the Resorts World Hotel will result in long-term beneficial impacts on socioeconomic resources due to job creation and contributions to the tax base.

Reasonably foreseeable future projects would also contribute to traffic impacts at and near the Airport in both the short-term (during construction) and long-term. Specifically, some projects would alter traffic patterns and volume along the same routes and during the same construction timeframe as the Proposed Action, including the *VWE Capacity and Access Improvements to JFK Airport Project*. The *VWE Capacity and Access Improvements to JFK Airport Project* would provide increased capacity by constructing an additional vehicular travel lane, and addressing operational, geometric, and structural deficiencies on the Van Wyck Expressway between the Kew Gardens Interchange and JFK. Construction of reasonably foreseeable future projects would also have the potential to benefit socioeconomic resources through job creation in the short-term.

Based on the foregoing, the Proposed Action could noticeably contribute to the cumulative impact on socioeconomic resources. This contribution would be most noticeable during construction when traffic patterns would be modified, and traffic volumes could incrementally increase, and when the Proposed Action would most beneficially contribute to the job base. In the long-term, the Proposed Action would beneficially contribute to the overall cumulative impact on socioeconomic resources, environmental justice, and children's environmental health and safety due to the reduction in traffic congestion, and associated improvements in air quality. Similar to the 2020 EA, when the Proposed Action is considered in conjunction with other past, present, and reasonably foreseeable future actions, the overall impact on socioeconomic resources would not be significant, and in the long-term would be beneficial.

4.18 Summary of Environmental Consequences

The following is a narrative summary of the primary environmental consequences associated with each resource category from the 2020 EA compared to the Proposed Action discussed in this Supplemental EA.

TABLE 4-11 SUMMARY OF ENVIRONMENTAL CONSEQUENCES
John F. Kennedy International Airport

RESOURCE CATEGORY	No Action (2020 EA)	Proposed Action (SEA)	No Action vs Proposed Action	Significance Determination
	Summary of Impact	Summary of Impact	Change in Level of Impact	Threshold Exceeded?
Air Quality	The No Action would not generate emissions in amounts that exceed the applicable criteria pollutant de minimis thresholds. Therefore, would conform to the State Implementation Plan (SIP) and the Clean Air Act (CAA) and it can be presumed that it would not create any new violation of the National Ambient Air Quality Standards (NAAQS), delay the attainment of any NAAQS, nor increase the frequency or severity of any existing violations of the NAAQS. As a result, no adverse impact on local or regional air quality is anticipated.	While the study area for the Proposed Action air quality analysis is larger than the No Action, and the Off-CTA Roadways introduce a new element affecting air quality, the analysis indicates the Proposed Action would not result in an adverse impact on local or regional air quality.	No change	No
Biological Resources	The No Action would have no adverse impact on ecological communities or vegetation; would not noticeably modify the limited wildlife habitat currently within the Proposed Project Site described in the 2020 EA; would have no effect on federally listed species and would be unlikely to have an adverse impact on state-listed species.	The Proposed Action Site for the biological resources analysis is larger than the No Action, given the inclusion of the Off-CTA Roadways. However, the Proposed Action would have no adverse impact on ecological communities or vegetation; would be unlikely to adversely impact wildlife; would have no effect on federally listed species and would be unlikely to have an adverse impact on state-listed species.	No change	No
Climate	Although there are currently no Federal standards for aviation-related greenhouse gas (GHG) emissions, it is well-established that GHG emissions contribute to climate change. GHG emissions are presented for disclosure purposes only. Measures are included in the construction and operation of the No Action that would minimize and help reduce GHGs. Examples include the mandatory use of no- or low-emission vehicles and equipment.	Despite design changes, measures are included in the construction and operation of the Proposed Action that would minimize and help reduce GHGs. Examples include the mandatory use of no- or low-emission vehicles and equipment. Further, it is anticipated that 20 to 25 percent of the parking spaces in the new GTC/JFK Central would be equipped with EV charging stations.	No change	No

RESOURCE CATEGORY	No Action (2020 EA)	Proposed Action (SEA)	No Action vs Proposed Action	Significance Determination
	Summary of Impact	Summary of Impact	Change in Level of Impact	Threshold Exceeded?
Coastal Resources	The No Action would not result in direct impacts to coastal resources. However, potential indirect impacts to coastal resources could result from increased runoff to nearby receiving waters, such as Jamaica Bay. Overall, the No Action would have a minimal indirect adverse impact on coastal resources and surface waters. The No Action would be consistent with federal, state, and local coastal zone policies, and would not otherwise affect coastal resources.	While portions of the 2020 EA Proposed Project Site for the No Action are within the coastal zone, the additional area included in the Proposed Action Site for the Proposed Action is not within the coastal zone but could drain to coastal resources. The Proposed Action would at most have a de minimis indirect adverse impact on coastal resources and surface waters with existing BMP and minimization measures. The Proposed Action would be consistent with federal, state, and local coastal zone policies, and would not otherwise affect coastal resources.	No Change	No
Department of Transportation Act Section 4(f) Resources	The No Action would not result in a direct physical use, as it would not adversely affect public parks or recreational facilities, or wildlife or waterfowl refuges. The No Action would also not result in a constructive use of Section 4(f) resources.	While the Proposed Action Site is larger than the Proposed Project Site described in the 2020 EA for the No Action, resulting in more Section 4(f) resources within the study area, the Proposed Action would have no direct or indirect adverse impacts on Section 4(f) resources. The Proposed Action would not likely result in a physical or constructive use of Section 4(f) resources.	No Change	No
Hazardous Materials, Solid Waste, and Pollution Prevention	Construction and implementation of the No Action may require the removal and/or the relocation of existing fuel tanks, hydrant fueling system, and underground fuel lines. Given the aviation use of the property, impacted soils and hazardous building materials such as asbestos, lead, polychlorinated biphenyls (PCBs) and mercury may be encountered and are not considered to be uncommon. Construction activities associated with the No Action are expected to include the short-term use of hazardous and non-hazardous materials and solid waste common to construction. These materials would be handled and stored in accordance with applicable federal, state, or local regulations.	Upon analysis of the larger Proposed Action Site associated with the Proposed Action, it was determined that no significant hazardous materials, pollution prevention, and solid waste impacts are anticipated for the Proposed Action. Removal of all contaminated soils and treatment of contaminated groundwater encountered during excavation activities would start prior to construction. The disposal of all construction and demolition debris would be done in accordance with a SPCC Plan and all applicable federal, state, tribal or local laws or regulations regarding hazardous materials.	No Change	No
Historical, Architectural, Archaeological,	The sole historic resource within the 2020 EA Proposed Project Site is the TWA Flight Center. The NY State Historic Preservation Office (SHPO)	While the study area for the Proposed Action is larger than that for the No Action and, therefore, required consideration of additional historical, architectural,	No Change	No

RESOURCE CATEGORY	No Action (2020 EA)	Proposed Action (SEA)	No Action vs Proposed Action	Significance Determination
	Summary of Impact	Summary of Impact	Change in Level of Impact	Threshold Exceeded?
and Cultural Resources	concluded that the Proposed Action would have No Adverse Effect on historic resources. Further, the NY SHPO response states that no other above ground resources within the APEs associated with the No Action are eligible for inclusion in the NRHP.	archaeological, and cultural resources (Ridgewood Aqueduct, Existing Monopole Cell Tower, Former International Hotel, and a residence at 133-12 131st Avenue South in Ozone Park), there would be no direct or indirect impact to inventoried, eligible, or listed cultural resources from the Proposed Action.		
Land use	No land acquisition would occur as part of the No Action. Therefore, the No Action would be compatible with the surrounding area and no impacts to land use would occur.	While the Proposed Action Site for the Proposed Action includes off-Airport areas, no land acquisition would occur as part of the Proposed Action. No impacts to land use would occur with implementation of the Proposed Action.	No Change	No
Natural Resources and Energy Supply	The increase natural resource and energy demand associated with construction activities could be met by current capacity and existing supplies would not be depleted. No change in the number of aircraft operations would occur under the No Action when compared to the No-Build Alternative. Fuel consumption is anticipated to decrease with the No Action due to the use of electric ground service equipment (eGSE) and more efficient aircraft operations. The No Action would not exceed the existing fuel supplies.	While the Proposed Action would increase the need for natural resources and energy supply, given the additional project elements, compared to the No Action, no unusual materials, or materials short in supply would be used for the construction of the Proposed Action. Therefore, the Proposed Action would not result in adverse impacts to energy supply or supply of natural resources.	No Change	No
Noise and Noise-Compatible Land Use	The No Action would not result in a change in aircraft operations, fleet mix, runway use, or flight tracks. Therefore, the No Action (2025 and 2030) Noise Exposure Contour would be the same as the No-Build Alternative (2025 and 2030) Noise Exposure Contour. During construction, noise minimization measures would be implemented, and a Noise Control Plan prepared to minimize the potential for adverse effects on the community.	The inclusion of the Proposed Off-CTA and CTA Roadways within the JFK Redevelopment Program would not individually or cumulatively introduce noise to a previously unaffected area, or significantly increase noise over a noise sensitive area. Further, the Proposed Action would not result in a change in aircraft operations, fleet mix, runway use, or flight tracks. Therefore, the Proposed Action Noise Exposure Contour would be the same as the No Action Noise Exposure Contour. During construction, noise minimization measures would be implemented, and a Noise Control Plan prepared to minimize the potential for adverse effects on the community.	No Change	No

RESOURCE CATEGORY	No Action (2020 EA)	Proposed Action (SEA)	No Action vs Proposed Action	Significance Determination
	Summary of Impact	Summary of Impact	Change in Level of Impact	Threshold Exceeded?
Socioeconomic, Environmental Justice, and Children's Health and Safety Risks	The No Action would not result in induced growth and would have no adverse impacts to economic growth, no disruption to an established community, no relocation of residences, no adverse impacts to the community tax base, and no adverse impacts to businesses. The No Action could result in some temporary increases in additional delays at several locations due to the additional traffic generated by worker trips, delivery trucks, and construction equipment, before improvements are completed. However, over the long term, would provide traffic and air quality benefits. The No Action would result in temporary, adverse impacts to environmental justice populations. In the long-term, intersection improvements would reduce congestion and result in a beneficial impact on the surrounding neighborhoods. The No Action would generate construction jobs in areas where minority populations are present. The No Action would not result in the release of or exposure to significant levels of harmful agents in the water, air, or soil that would affect children's health or safety.	Under the Proposed Action, no induced growth, relocation of residences, or relocation of off-Airport businesses would occur. While construction of the Proposed Off-CTA Roadways may impact areas leased by the Port Authority to Airport tenants (see Section 1.4.4), the Proposed Action would not require displacement of the businesses or significant impacts to the Airport tenants' day-to-day operations. Temporary impacts would occur off-Airport due to construction-related traffic. However, minimization measures would be implemented to reduce potential for impacts. Overall, impacts associated with air quality and traffic for the Proposed Action would be beneficial. The Proposed Action would result in beneficial socioeconomic impacts due to the creation of jobs during construction. Further, the Proposed Action would improve circulation and reduce congestion near the Airport, resulting in an overall benefit to nearby populations in the long term. Therefore, no significant adverse impact to socioeconomics, environmental justice or children's environmental health and safety risks would occur.	No Change	No
Visual Effects	Due to the existing light emissions at JFK, the light emissions from the No Action are not expected to be noticeably different from the Airport's existing lighting and would not cause annoyance or disrupt normal activities of the surrounding community. The No Action would not result in other adverse impacts to visual resources.	Due to the inclusion of the Off-CTA Roadways element of the Proposed Action, minor changes in lighting and views would occur in and around on- and off-Airport locations in areas of the Proposed Off-CTA Roadways, including the associated lighting and signage. However, no changes to visual setting or light intensity would occur to residential areas.	No Change	No
Water Resources	The No Action would have no notable impacts on groundwater resources; would not result in noticeable adverse impacts to water resources due to existing and proposed stormwater management measures; and would have no impact on floodplains.	Despite the expanded Proposed Action Site associated with the Proposed Action, the Proposed Action would have no direct impact on wetlands, floodplains, surface water or groundwater. The potential for indirect impacts exists due to increased impervious surface areas. However, given the existing and proposed stormwater management measures	No Change	No

RESOURCE CATEGORY	No Action (2020 EA)	Proposed Action (SEA)	No Action vs Proposed Action	Significance Determination
	Summary of Impact	Summary of Impact	Change in Level of Impact	Threshold Exceeded?
		described above, none of the potential indirect impacts would result in noticeable adverse impacts to water resources.		
Cumulative Impacts	The impacts of the No Action, when considered in conjunction with past, present, and reasonably foreseeable future actions, would not be expected to result in significant impacts to any of the environmental resources evaluated in the 2020 EA.	The impacts of the Proposed Action, when considered in conjunction with past, present, and reasonably foreseeable future actions, would not be expected to result in significant impacts to any of the environmental resources evaluated in this Supplemental EA.	No Change	No

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5 PUBLIC OUTREACH

In accordance with NEPA and the CEQ regulations, the Port Authority has and will continue to involve the public in the decision-making process for this Proposed Action. The Port Authority is committed to ensuring that stakeholders are informed about this Proposed Action and its benefits and potential impacts.

5.1 Agency Coordination

Applicable agency coordination correspondence is provided in the appendices. Agency coordination was initiated through letter correspondence with the following agencies:

5.1.1 Federal Agencies

U.S. Environmental Protection Agency Region 2
Peter D. Lopez
Regional Administrator
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, NY 10007-1866

U.S. Fish and Wildlife Service
Steve Sinkevich
U.S. Fish and Wildlife Service
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258

5.1.2 State Agencies

New York State Department of Environmental Conservation
Heidi Krahling
Invasive Species Information Manager
New York Natural Heritage Program
SUNY College of Environmental Science and Forestry
625 Broadway, 5th Floor
Albany, NY 12233-4757

New York State Department of State
Rebecca Ferres
Coastal Resources Specialist
Office of Planning, Development and
Community Infrastructure
One Commerce Plaza
99 Washington Avenue
Albany, NY 12231-0001

New York State Office of Parks, Recreation, and Historic Preservation
Olivia Brazee
Historic Site Restoration Coordinator
New York State Office of Parks, Recreation and Historic Preservation
Peebles Island Resource Center
One Delaware Ave North
Cohoes, NY 12047

5.1.3 City Agencies

New York City Landmarks Preservation Commission
Gina Santucci
New York City Landmarks Preservation Commission
Environmental Review Department
Municipal Building
1 Centre Street, 9th Floor
New York, NY 10007

New York City Department of City Planning
Michael Marrella
Waterfront and Open Space Division
New York City Waterfront Revitalization Program
120 Broadway, 31st Floor
New York, NY 10271

New York City Department of City Planning
Chris Wassif
Waterfront and Open Space Division
New York City Waterfront Revitalization Program
120 Broadway, 31st Floor
New York, NY 10271

5.2 Community Advisory Council

The JFK Redevelopment Community Advisory Council was formed in 2018. It was established to provide a single platform where the community, terminal developers, and Port Authority could work collaboratively to share information and address community concerns as it pertains to the Redevelopment Program. The 45-member advisory council is composed of elected officials, community boards, civic organizations, and faith-based community leaders. Three members of the Port Authority serve in an ex-officio capacity. The public is notified of meetings through email and an online posting at www.anewjfk.com, a website dedicated to the redevelopment program. Meeting minutes are posted online following the meeting. There is a dedicated email for the program at jfkredevelopment@panynj.gov.

The advisory council has four committees: Career/Workforce Development, Business Development, Environmental Stewardship, and Education Committees. Meetings are generally scheduled quarterly and are open to the public. The Environmental Stewardship Committee is composed of members of the JFK Redevelopment Advisory Council who discuss environmental issues related to the Redevelopment Program and JFK generally. All Environmental Stewardship Committee meetings are open to the public. Minutes are shared with committee members within days of the meeting. These minutes are also shared with the full advisory council at the quarterly meetings. The Port Authority accepts any comments and/or questions from the public in person at the quarterly advisory council meetings.

5.3 Public Outreach

The Port Authority published a local Notice of Availability and Request for Comment on the Draft Supplemental EA in the following local newspapers: Daily News (Queens), Greek National Herald, Newsday, and Sing Tao Daily, and weekly papers (El Especialito, Queens Chronicle, Queens Courier, Queens Gazette, Queens Ledger, and Queens Times Ledger). Copies of proofs of publication of the newspaper notice announcing the availability of the Draft Supplemental EA and opportunity for public comment will be provided in the appendices to the Final Supplemental EA.

The following information is the notice of availability and request for comment on the Draft Supplemental EA:

PORT AUTHORITY OF NY & NJ

NOTICE OF AVAILABILITY and REQUEST FOR COMMENT
DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
JFK Redevelopment Program
John F. Kennedy International Airport, Jamaica, New York

In accordance with the National Environmental Policy Act (NEPA), notice is hereby given that copies of a Draft Supplemental Environmental Assessment (EA) for the proposed John F. Kennedy International Airport Redevelopment Program at John F. Kennedy International Airport (JFK) are available for public review and comment at the following locations:

The Port Authority of NY & NJ
John F. Kennedy International Airport
General Manager's Office
Building 14, 2nd Floor
Jamaica, NY 11430
Hours: 08:00 am to 04:00 pm

The Port Authority of NY & NJ
Aviation Department
4 World Trade Center, 18th Floor
New York, NY 10007
Attn: Kathryn Lamond
Hours: 09:00 am to 05:00 pm

JFK Redevelopment Community
Information Center
144-33 Jamaica Avenue
Jamaica, NY 11435
Hours: 09:00 am to 04:00 pm

The Draft Supplemental EA document for this project will be available at these locations until the close of the comment period, which is 5:00 PM on Tuesday, January 17th, 2023. If you intend to view the document at the locations above, please contact Kathryn Lamond at klamond@panynj.gov to schedule an appointment at least one day before your visit. A copy of the Draft Supplemental EA may also be viewed online at: https://www.panynj.gov/studies-reports.

The Draft Supplemental EA responds to all of the requirements of the Federal Aviation Administration for preparation of a Supplemental EA under NEPA. The Port Authority of New York & New Jersey (Port Authority) is inviting the public to submit, in writing, comments on the Draft Supplemental EA prepared for the JFK Redevelopment Program. The Port Authority is accepting comments on this Draft Supplemental EA document until the official comment period closes on Tuesday, January 17th, 2023. Comments must be received by 5:00 PM on Tuesday, January 17th, 2023, in order to be considered. Written comments on the Draft Supplemental EA can be sent directly to Kathryn Lamond of the Port Authority, 4 World Trade Center, 18th Floor, New York, NY 10007. Additionally, comments may be emailed to JFKEA@panynj.gov with the subject heading "JFK Redevelopment Program." If you have any questions about this notice, please email Kathryn Lamond at klamond@panynj.gov.

Information Sessions

Information regarding this program and an opportunity to ask questions about the program will be available through the following Information Sessions listed below. Two (2) of the Information Sessions will be conducted via the Zoom platform and one (1) of the Information Sessions will be in-person. The details of the dates, times, and format of the Information Sessions are listed below.

IN-PERSON INFORMATION SESSION FORMAT: One (1) in-person Information Session will be conducted at the Crowne Plaza JFK Airport Hotel, as listed below:

DATE: Thursday, January 5th, 2023
TIME: 4:00PM - 7:00PM
LOCATION: Crowne Plaza JFK Airport Hotel
138-10 135th Avenue
Jamaica, NY 11436
Phone: (718) 530-1160

Sign language and translation services can be made available at the Information Sessions. If you are in need of assistance or require a reasonable accommodation, contact Kathryn Lamond at klamond@panynj.gov at least ten (10) days prior to the Information Sessions.

VIRTUAL INFORMATION SESSION FORMAT: The following two (2) Information Sessions will be conducted virtually via the Zoom platform and will be recorded for record keeping purposes.

DATE: Tuesday, January 3rd, 2023
TIME: 6:00PM - 9:00PM
LOCATION: Registration Link: https://bit.ly/JFKR_SEA

DATE: Wednesday, January 4th, 2023
TIME: 6:00PM - 9:00PM
LOCATION: Registration: https://bit.ly/JFKR_SEA

VIRTUAL INFORMATION SESSION ADVANCE REGISTRATION REQUIRED: Advance registration is required to obtain Information Session log-in information. If you do not have internet access and wish to participate, please call Kathryn Lamond at (212) 435-3783 to register and to receive access information.

CONTENT OF VIRTUAL INFORMATION SESSION: Each virtual Information Session will begin with a presentation that will include information regarding the Proposed Action's potential impacts associated with design modifications and schedule changes to the JFK roadway network and Ground Transportation Center (GTC)/JFK Central since a Finding of No Significant Impact and Record of Decision (FONSI/ROD) was issued by the FAA for the JFK Redevelopment Program in April 2020. Information Session attendees will be able to ask questions and engage with the Project Team using the virtual Zoom chat.

Written comments on the Draft Supplemental EA can be sent directly to Kathryn Lamond of the Port Authority, 4 World Trade Center, 18th Floor, New York, NY 10007 or at the in-person Information Session at the Crowne Plaza JFK Airport Hotel. Additionally, comments may be emailed to JFKEA@panynj.gov with the subject heading "JFK Redevelopment Program."

All comments submitted during the Draft Supplemental EA comment period and a response to each comment will be provided in the appendices to the Final Supplemental EA.

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6 LIST OF PREPARERS

The Port Authority of New York and New Jersey

- Jane Herndon – Manager, Environmental Programs, Aviation Department
- Kathryn Lamond, P.E. – Environmental and Sustainability Specialist

Avion Solutions Group

- Peter Byrne, Director

Crawford, Murphy, & Tilly Inc.

- Wayne Arner – Noise Analysis
- Robert Gross, Ph.D. – Air Quality Analysis
- Paolo Pringle – Air Quality Analysis

HNTB

- Andrew Chiurazzi – JFK Redevelopment Program

Matrix New World Engineering, Inc.

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- Matt Sloan, AICP – Environmental Analysis
- Kim Threlfall, PMP, LEED AP – Environmental Analysis and EA Reviewer
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- Jennifer Kohlsaat – QA/QC
- Jason Harkins, PLA – Geographic Information Systems/Graphics
- Aileen Mayhew, P.E. – QA/QC
- Elizabeth Thompson, AICP, LEED AP BD+C – Project Manager
- Robert Trepp Jr., LSRP – Hazardous Materials, Solid Waste, and Pollution Prevention

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7 REFERENCES

- Federal Aviation Act of 1958 recodified as 49 United States Code (U.S.C.) §§4010 et seq.
- Aviation Safety and Noise Abatement Act of 1979, 49 U.S.C. §§47501 et seq.
- The Airport and Airway Improvement Act of 1982, 49 U.S.C. §47108, as amended
- P.L. 91-190, 42 U.S.C. 4321, et. seq., National Environmental Policy Act (NEPA), 1969, Section 102(2)(c)
- The Department of Transportation Act, 49 U.S.C., §303 (formerly Section 4(f))
- Land and Water Conservation Fund Act of 1965, 16 U.S.C. §§4601 et seq.
- Coastal Zone Management Act of 1972, as amended through Pub. L. No. 109-58, the Energy Policy Act of 2005, Codified at 16 U.S.C. § 1452
- 49 U.S.C., §40114, as amended (codifying Public Law 103-272, Section 1(e), 1994) (Reports and Records)
- 49 U.S.C., §§47101 et seq. (codifying Public Law 103-272, Section 1(e), 1994) (Airport Improvement)
- National Historic Preservation Act, 16 U.S.C. §470(f), as amended
- 36 Code of Federal Regulations (CFR) Part 800, Advisory Council on Historic Preservation
- Archaeological and Historic Preservation Act, 16 U.S.C. §469(a)
- Archaeological Resource Protection Act, 16 U.S.C. §§470 et seq.
- Farmland Protection Policy Act, 7 U.S.C. §73, and implementing regulations at 7 CFR §658
- Federal Facilities Compliance Action, 42 U.S.C. §6961
- Hazardous Materials Transportation Act of 1975, 49 U.S.C. §§5101 et seq.
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Community Environmental Response Facilitation Act of 1992, 42 U.S.C. §§9601 et seq.
- Resource Conservation and Recovery Act of 1976, as amended by the Solid Waste Disposal Act of 1980, 42 U.S.C. §§6901 et seq.
- Clean Air Act, 42 U.S.C. §7401, et seq., and implementing regulations at 40 CFR Parts 51 and 93
- Clean Water Act, 33 U.S.C. §1251 et seq.
- 33 CFR Parts 320-330, Regulatory Programs of the Corps of Engineers
- Endangered Species Act, 16 U.S.C. §§661 et seq., as amended
- Magnuson-Stevens Fishery Conservation and Management Act of 1976, 16 U.S.C. §§1801 et seq., as amended
- Migratory Bird Treaty Act, 16 U.S.C. §§703 et seq.

- Energy Independence and Security Act, 42 U.S.C. §§17001 et seq.
- Executive Order 11990, Protection of Wetlands
- Executive Order 11988, Floodplain Management
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Council on Environmental Quality (CEQ) regulations codified at 40 CFR 1502.14
- Guidance Regarding NEPA Regulations, CEQ, 48 Federal Register 34263 (July 28, 1983)
- U.S. Department of Transportation (USDOT), Federal Aviation Administration (FAA). Order 5050.4C – NEPA Implementing Instructions for Airport Actions. Washington, DC. April 28, 2006.
- USDOT, FAA. Order 1050.1F - Environmental Impacts: Policies and Procedures. Washington, DC. July 16, 2015.
- FAA, 1050.1F Desk Reference, July 2015
- U.S. Environmental Protection Agency (USEPA), 40 CFR Part 81, Section 81.13, New Jersey-New York-Connecticut Intrastate Air Quality Control Region (December 23, 1980).
- Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act, 74 Fed Reg. 66495 et seq. (2009)
- USDOT Order 5610.2, Environmental Justice in Minority Populations and Low-Income Populations, was issued on April 15, 1997. Order 5610.2(a), USDOT Updated Environmental Justice Order, was issued on May 2, 2012
- U.S. Geological Survey, Prepared in cooperation with the New York State Department of Environmental Conservation, Division of Water Resources; Groundwater and Geohydrologic Conditions in Queens County, Long Island, New York; 2001
- USEPA; Sole Source Aquifers for Drinking Water; Online at: https://www.epa.gov/dwssa, Accessed April 2, 2018
- U.S. Army Corps of Engineers Wetlands Delineation Manual, January 1997
- USEPA, Nonattainment Status for Each county by Year for New York, (Current as of March 31, 2018). Accessed on 4/2/2018 via http://www.epa.gov/airquality/greenbook/anayo_ny.html
- FAA, Aviation Emissions and Air Quality Handbook Version 3 Update 1, January 2015
- FAA Advisory Circular (AC), Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control, AC 150/5370-10G (July 21, 2014)
- Order 5610.2a, USDOT Updated Environmental Justice Order, April 4, 2011
- A Vision Plan for JFK, Recommendations for a 21st Century Airport for the State of New York, January 4, 2017
- Environmental Assessment & USDOT Section 4(f) Evaluation; TWA Flight Center Hotel Project, John F. Kennedy International Airport, Queens, New York; Final, July 2016

- Federal Emergency Management Act, Region II Coastal Analysis and Mapping, Online at http://www.region2coastal.com/abfe-map-updates, Accessed April 10, 2018
- New York City Department of Planning, The New York City Waterfront Revitalization Program, June 2016.

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