Republic Airport

Stratosphere Development Co. LLC's Long-Term Development and Use of Five Development Parcels at Republic Airport, East Farmingdale, Town of Babylon, New York

Draft Environmental Assessment

PREPARED FOR

U.S. Department of Transportation, Federal Aviation Administration

New York State Department of Transportation, Republic Airport, Farmingdale, New York

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This Environmental Assessment becomes a Federal document when evaluated, signed and dated by the responsible FAA official.

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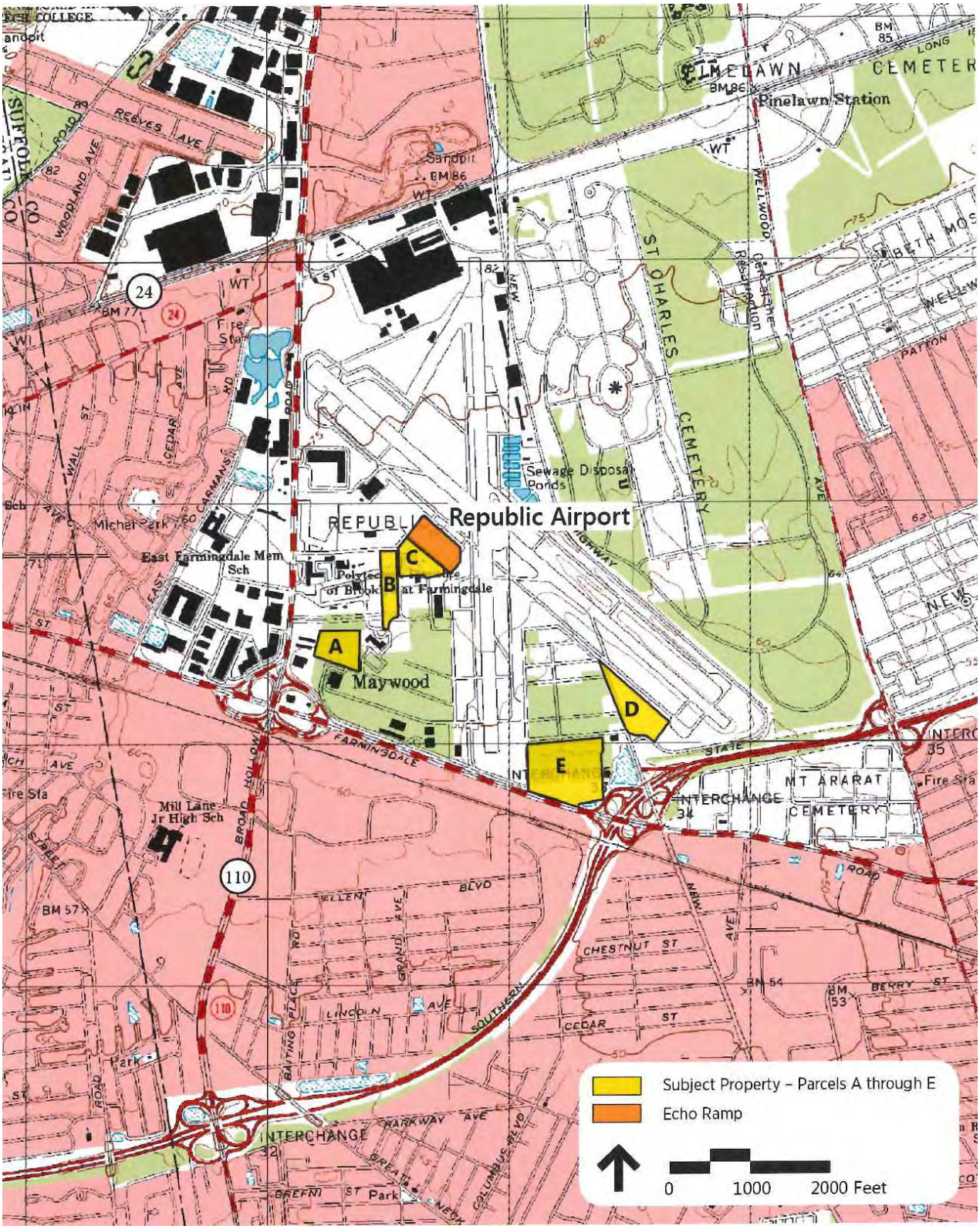
Purpose and Need

This chapter describes the Project and its location on Republic Airport (FRG) in the hamlet of East Farmingdale, Town of Babylon, Suffolk County, New York. Chapter 1 also details the background regarding the development of the Project site on the Airport, the purpose and need for the Proposed Project, and the required approvals for its implementation.

1.1 Introduction

Republic Airport is in the hamlet of East Farmingdale, Town of Babylon, in western Suffolk County, New York (Figure 1). The Airport is used for General Aviation, including business and corporate jet operations. Services on the Airport include fueling, flight training, charter services, aircraft parking and tiedowns, hangar space, aircraft maintenance and servicing, provided by the three on-site Fixed Based Operators (FBOs). The Airport is administered by the New York State Department of Transportation (NYSDOT) (known hereinafter as "the Sponsor") and the changes in Parcel use must be approved by NYSDOT, which requires review under the New York State (NYS) Environmental Quality Review Act (SEQRA) and the National Environmental Policy Act (NEPA) by the Federal Aviation Administration (FAA). Changes in Parcel use will also result in changes to the FRG Airport Layout Plan (ALP) and these changes require approval from the FAA as well. Due to both state and federal approval requirements, the Project is being subject to environmental review under both SEQRA by NYS and NEPA by the FAA.



Republic Airport Talon Parcel Development
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Project Location

Source: NYS Dept. of Environmental Conservation 7.5-minute Quad, Amityville, N.Y. November 30, 2000.

In February 2016, Empire State Development (ESD) issued a Request for Proposals (RFP) for a long-term ground lease and redevelopment of up to five Parcels at Republic Airport[1]. The RFP is included as Appendix G to this Environmental Assessment (EA). The Five Parcels are not contiguous and are designated as Parcels A through E. The RFP invited respondents to bid on one parcel; any combination of the five parcels; or all five parcels. The RFP also provided respondents the opportunity to include the adjacent Echo ramps in their proposal. The RFP specifically stated that the development of the sites must comply with FAA regulations, all applicable agreements, deed restrictions and State laws, rules and regulations.

The objectives of the procurement, as stated in the RFP[2], were to: maximize value to NYSDOT through monthly lease payments; enhance Republic Airport as an economic engine for Long Island; provide a source of quality jobs for area and New York State residents; maximize incorporation of green building and sustainable design practices; and feature meaningful participation of Minority-Owned Business Enterprises ("MBE"), Women-Owned Business Enterprises ("WBE") and Service-Disabled Veteran-Owned-Businesses ("SDVOB").

NYSDOT received three proposals, which were evaluated using the selection criteria publicly identified in the RFP. Based on the results of the evaluation, the State selected Stratosphere, the project proponent, as the developer for Parcels A through E, including Echo Ramp. Stratosphere's proposal was subsequently reviewed and approved by the New York State Attorney General and the New York State Office of the State Comptroller, who issued an extensive decision upholding the approval. Stratosphere's proposal has been reviewed by NYSDOT through the SEQRA process. and NYSDOT issued a Negative Declaration on August 2nd, 2017. The SEQRA documentation prepared for the project is included in Appendix I to this EA.[3]

Stratosphere, an FBO (fixed-base operator), seeks to expand its current operations, located in Hangars 6 and 7, to aviation-related development on the five Parcels. Redevelopment would occur under a long-term lease with NYSDOT for aviation purposes. The proposal is designed to accommodate aircraft activity occurring and

[1] New York Empire State Development, New York State Department of Transportation Request for Proposals for the Long-Term Lease of Five Development Parcels at Republic Airport, East Farmingdale, NY, Release Date: February 9, 2016.

[2] It should be noted that in the RFP, ESD allowed for the consideration of a variety of development alternatives for the five parcels. The following statement was included on page 3 of the RFP: *While aviation or aviation-related uses are preferred, prospective respondents may propose alternative but compatible uses for consideration. Residential uses will not be considered.*

[3] Between the SEQRA determination and completion of the EA, some minor changes in the proposed work (square feet of buildings and paved areas, utility locations) may have resulted from ongoing refinement of the design. There are differences in the criteria used to determine significance between NEPA and SEQRA; however, the two sets of documents are consistent.

projected to occur on the Airport by providing enhanced FBO services to corporate and general aviation customers. This proposed development includes ramp areas, FBO building, hangars, and auto parking areas. The proposed action would expand existing Stratosphere's facilities at Republic Airport from a total of approximately 6.05 acres to approximately 54 acres[4] within Republic Airport's existing 530 acres.

1.2 Organization of Chapters

The EA is organized as follows:

- Chapter 1 – Purpose and Need
- Chapter 2 – Analysis of Alternatives
- Chapter 3 – Affected Environment
- Chapter 4 – Environmental Consequences
- Chapter 5 – Public Involvement
- Chapter 6 – List of Preparers
- References
- Appendices

1.3 Description of the Proposed Action

As described in Section 1.1, Stratosphere, which is one of three existing FBOs at FRG, seeks to expand its current operations to aviation-related development on Parcels A through E. These Parcels are generally bounded by Conklin Street to the north, New Highway to the east, Farmingdale Road (NY-109) to the south, and Broad Hollow Road (NY-110) to the west, in East Farmingdale, and include a portion of an existing aircraft parking ramp (Echo Ramp). The Parcels and the associated portion of Echo Ramp are located within the southern one-third of the Airport (Figure 2; Appendix A, Photographs 1-18) and comprise approximately 54 acres of the 530 acres that make up FRG. The Proposed Project is designed to accommodate aircraft activity occurring on the Airport by providing modern and enhanced FBO services to corporate and general aviation customers. This proposed development includes ramp areas, an FBO building, hangars, and auto parking areas, to support general aviation, which is consistent with the current use of the Airport.

Through a comprehensive review of the economic and environmental impacts of developing the five vacant Parcels and Echo Ramp, Stratosphere has proposed a

[4] The original RFP issued by NYS ESD stated that the five parcels comprised 66.05 acres. After the proposal was submitted to ESD in April 2016, a detailed land survey was performed that indicated the five parcels actually comprised 54 acres.

coordinated development of all five Parcels, rather than a piece-meal redevelopment. In particular, Stratosphere envisions a contiguous development of Parcels B, C and the Echo Ramp. The proposed action is wholly on Airport property and consistent with the Airport deed, which states that the properties were conveyed to New York State for airport purposes. The proposed use is also consistent with the FAA's design guidelines, which mandate clear areas in proximity to runways and height limitations to prevent obstructions to air navigation.

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Subject Property - Parcels A through E

Echo Ramp

All Parcels and Full Echo Ramp

Sources:
1. Service Layer Credits: Image courtesy of USGS Earthstar Geographics SIO © 2017 Microsoft Corporation
2. Parcel Boundaries Courtesy of Empire State Development Corporation, Newmark Grubb Knight Frank, http://esd.ny.gov/corporateinformation/Data/RFPs/04132015_RA_AllParcels.pdf; 07/28/2015

The undeveloped and underutilized parcels are described below.

- **Parcel A:** An undeveloped Parcel with vegetation and isolated water ponding from previous grading activity; approximately 5.1 acres in size
- **Parcel B:** Parcel B is landscaped with grass, trees, and shrubs; previously crossed by a former taxiway; approximately 5.8 acres in size.
- **Parcel C:** Parcel C includes an abandoned restaurant building, auto parking lot, and landscaping; approximately 4.5 acres in size.
- **Parcel D:** An undeveloped grass-covered Parcel with active drainage structures; approximately 7.3 acres in size.
- **Parcel E:** An undeveloped Parcel with remains of residential housing foundations, an abandoned cesspool, debris piles, and a storage lot; approximately 18.5 acres in size.
- **Echo Ramp:** A paved and functioning aircraft parking ramp adjacent to Parcel C; approximately 6.5 acres in size.[5]

The redevelopment of the five Parcels would result in ground disturbance to depths ranging from 2 to 11 feet below cleared and recontoured ground surfaces. The depth of disturbance up to approximately 11 feet below ground surface would result from the emplacement of dry wells for storm drainage purposes. The proposed actions are summarized in Table 1.

[5] The existing Echo Ramp is approximately 17.4 acres in size, a portion of which (approximately 6.5 acres) is proposed to function together with Parcel C.

Table 1 Proposed Actions for Parcels A-E and Echo Ramp

Parcel/ Acreage	Proposed Actions	Utilities	Appendix A Photograph Numbers
Parcel A (approx. 5.1 acres)	Clear and grade Parcel. Realign Seversky Rd. to north end of Parcel. Re-purpose area adjacent to west side of existing Stratosphere Hangar 7 as ramp space to the north. Construct new (39,600 sf) hangar and (18,000 sf) hangar support spaces, an enlarged ramp to provide aircraft with direct access to taxiway, and associated parking areas.	Extend adjacent utility services into Parcel	1 – 3
Parcel B (approx. 5.8 acres)	Clear Parcel. Realign Republic Airport Rd. to west side of Parcel. Realign Grumman Lane. Construct hangar (51,660 sf), fixed base operator (FBO) office space (12,780 sf), hangar maintenance space (2,916 sf), 131 parking spaces, security gate, and landscaping to enhance and consolidate operations with improved access to roads and highways. The facility would be adjacent to Parcel C, which would provide five acres of ramp area with direct taxiway access.	Extend adjacent utility services into Parcel; stormwater drainage will be maintained.	4 – 7
Parcel C (approx. 4.5 acres)	Clear Parcel. Demolish existing building and parking lot. Reclaim Parcel as aviation ramp space and an additional taxiway connection with Parcel B. Install blast fences along south and northwest sides.	Existing utilities and drainage will remain intact.	8 - 12
Parcel D (approx. 7.3 acres)	Clear Parcel. Construct aviation ramp for roughly 64 general aviation (GA) aircraft tie-downs and 109 vehicle parking spaces. Provide paved connection to adjacent taxiway. Install self-fueling AV-gas pump. Add perimeter fence and security gate.	Connect utilities to existing adjacent service lines.	14
Parcel E (approx. 18.5 acres)	Clear Parcel. Construct connection to Runway 1 and proposed taxiway on west side of Parcel. Construct aircraft holding bay, 2 Type 1 hangar buildings (74,000 sf), 1 Type 2 hangar building (27,000 sf), and 5 Type 3 hangar buildings (95,000 sf), roughly 120 parking spaces, and roughly 7 aircraft tie-down spaces. Also, add self-fueling AV-gas pump, restroom facility, and security gate.	Connect new utilities to existing adjacent service lines.	15 - 18
Echo Ramp (approx. 6.5 acres)	Strip existing pavement and install new pavement. Construct taxiway to connect to runway.	None	13

Figures 1-3 through 1-7 present the proposed layouts of the various elements (except utilities) on the five Parcels. The area of Echo Ramp that will be used by Stratosphere is shown in Figure 5 (Parcel C).

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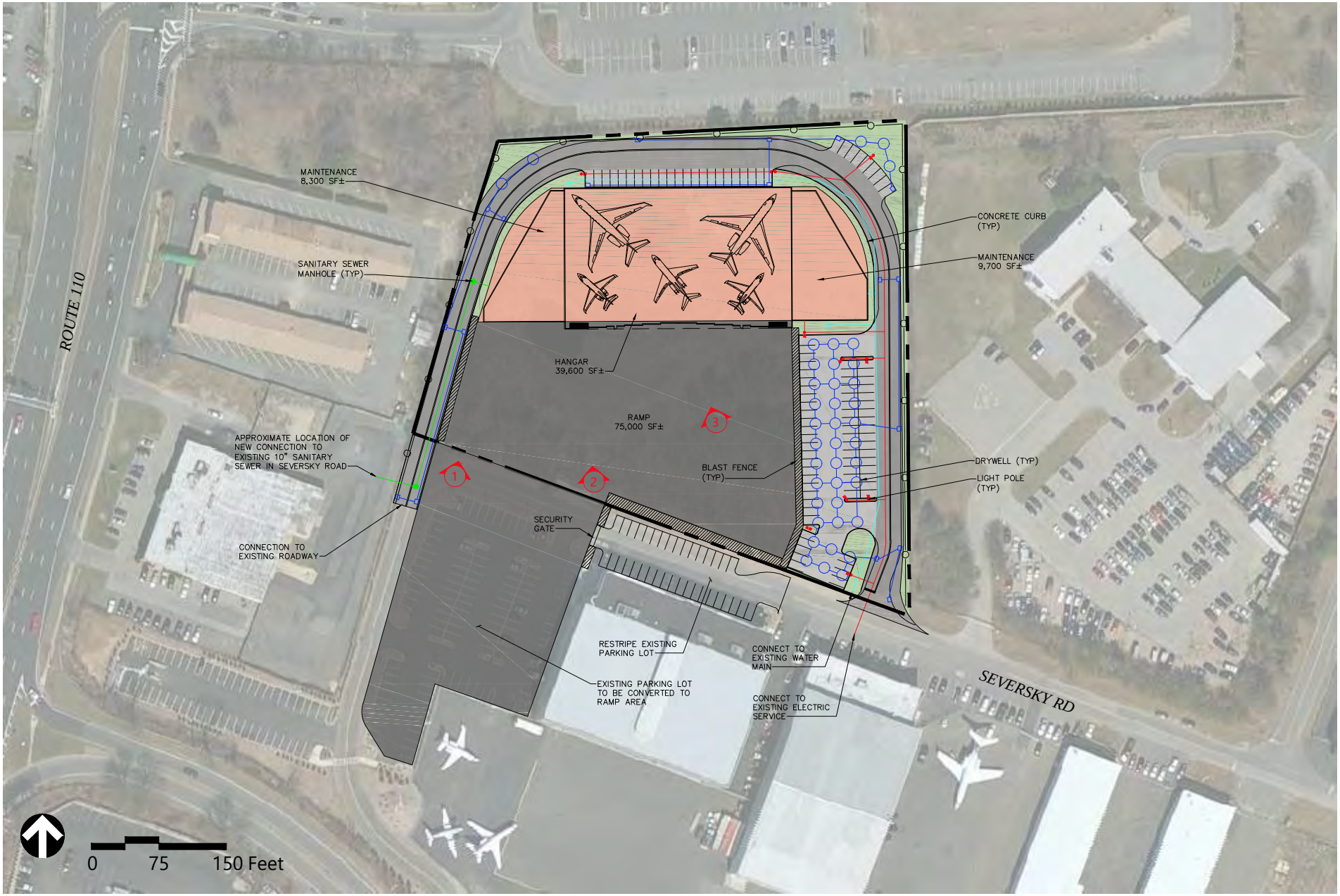

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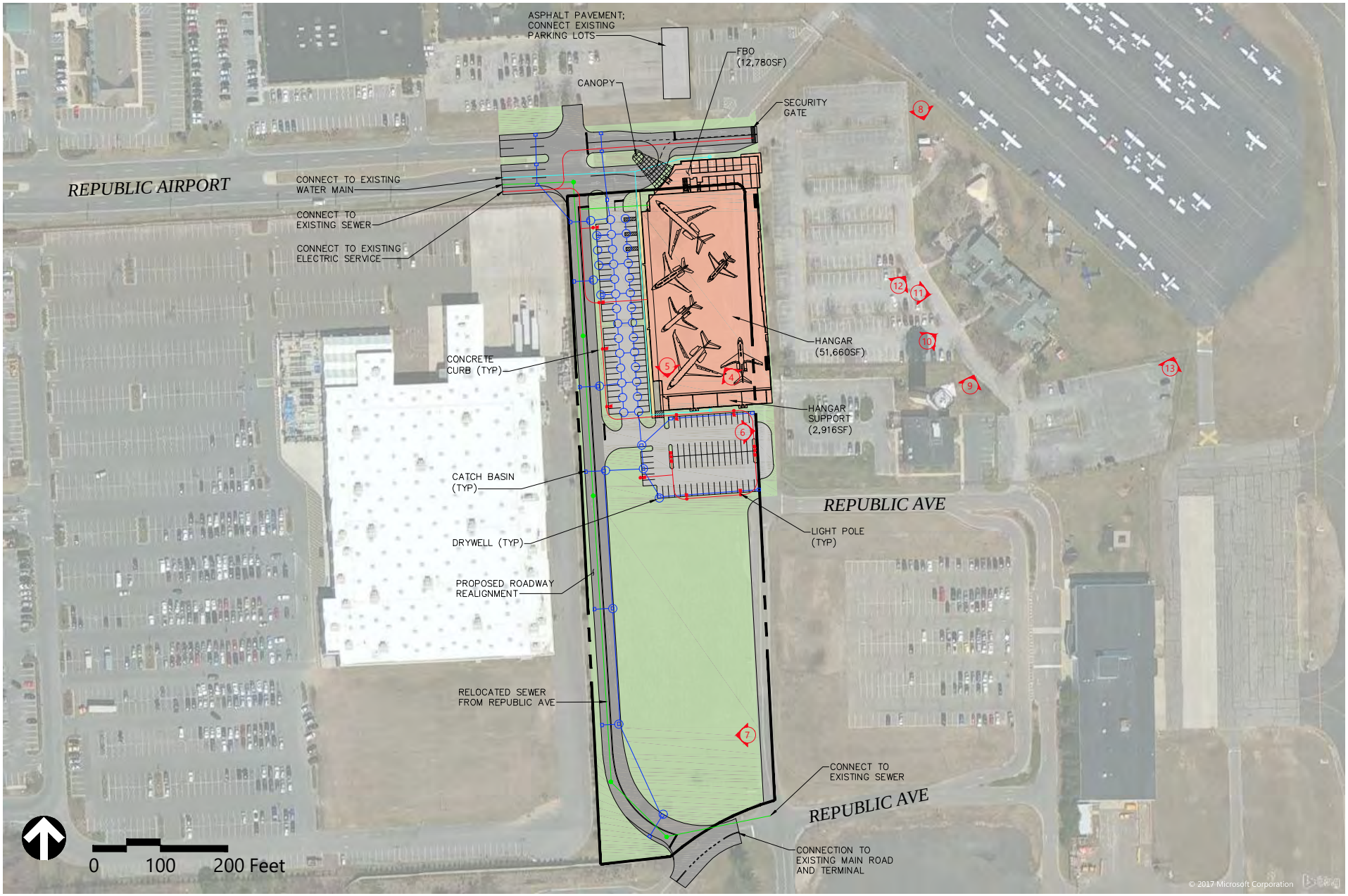
Figure 3: Parcel A Plan with Photo Key

Ramp Area
Access Roadway
Parking Area
Landscape Area
Hangar Building
Blast Fence
Drainage
Electric
Sanitary
Water
Security Fence
Parcel Boundary
Photo Number & Direction



Republic Airport
Farmingdale, NY

Figure 4: Parcels B, C and Echo Ramp with Parcel B Plan and Photo Keys

Ramp Area
Access Roadway
Parking Area
Landscape Area
Hangar Building
Concrete Sidewalk
Drainage
Electric
Sanitary
Water
Security Fence
Parcel Boundary
Photo Number & Direction

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Figure 5: Parcels B, C, and Echo Ramp with Parcel C and Ramp Plan and Photo Key

Ramp Area
Drainage
Electric
Blast Fence
Parcel Boundary
Photo Number & Direction

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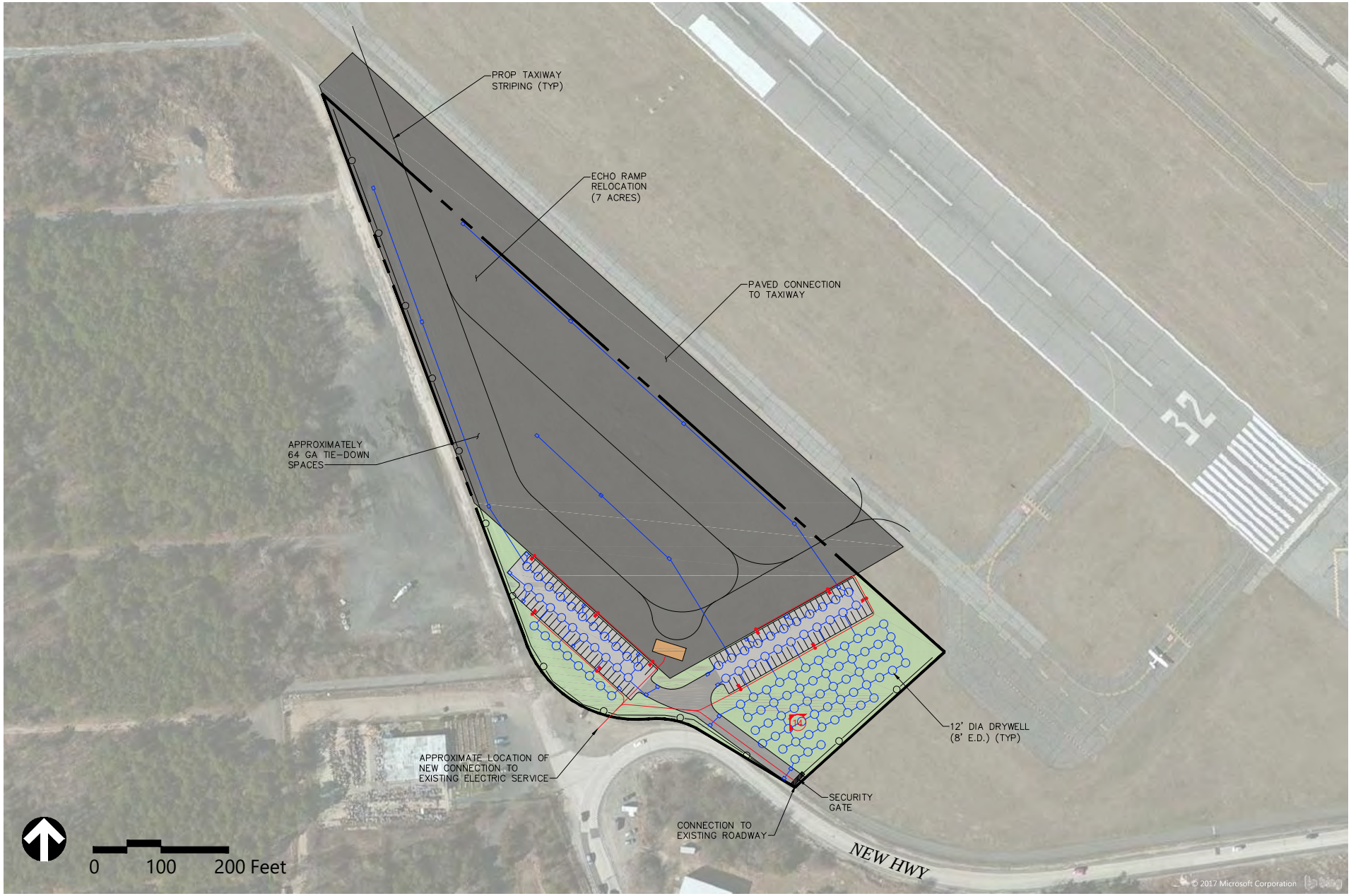

Republic Airport
Farmingdale, NY

Figure 6: Parcel D Plan with Photo Key

Ramp Area
Access Roadway
Parking Area
Landscape Area
Self Fueling AV Gas
Drainage
Electric
Security Fence
Parcel Boundary
Photo Number & Direction

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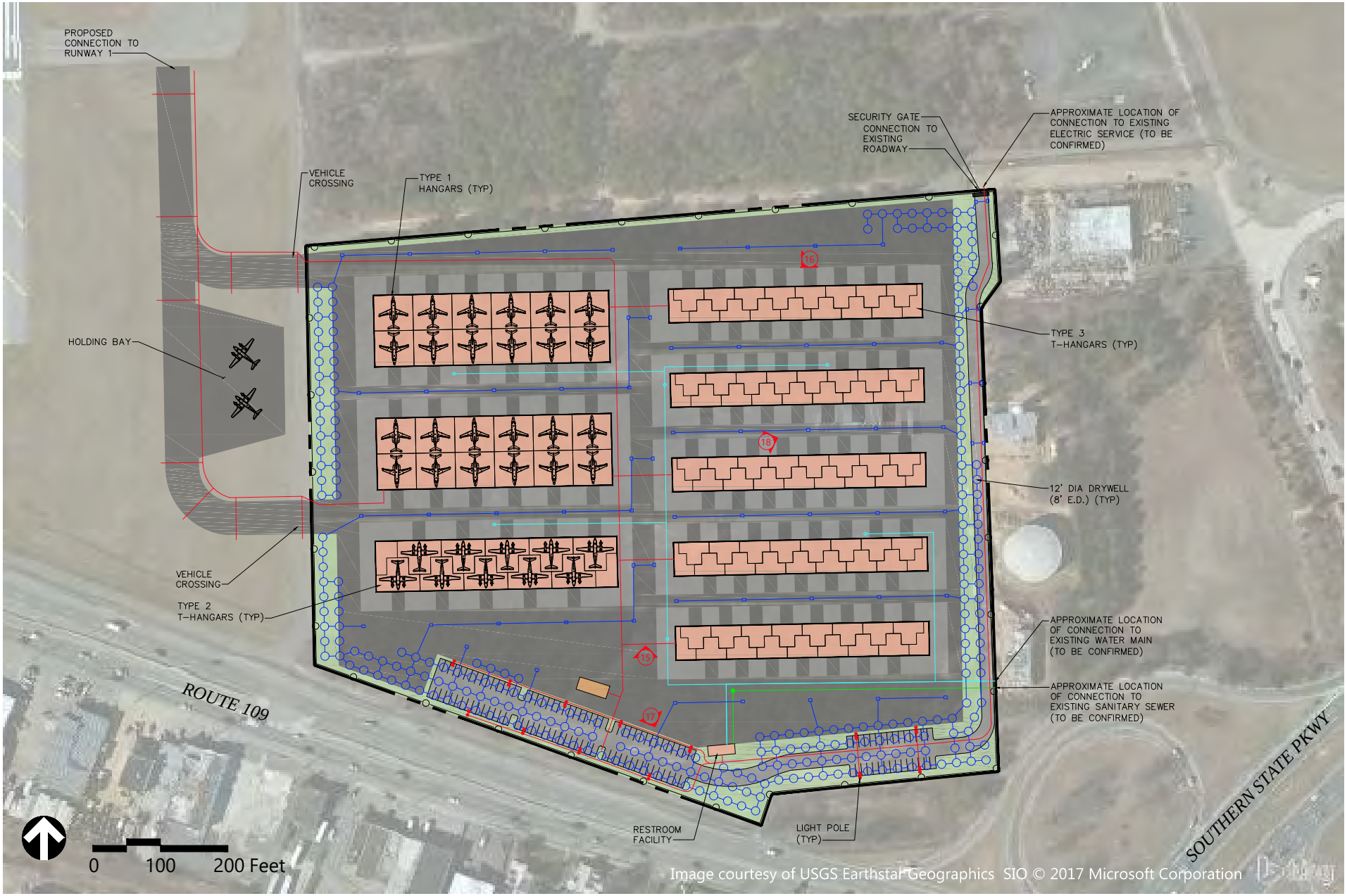


Republic Airport
Farmingdale, NY

Figure 7: Parcel E Plan with Photo Key

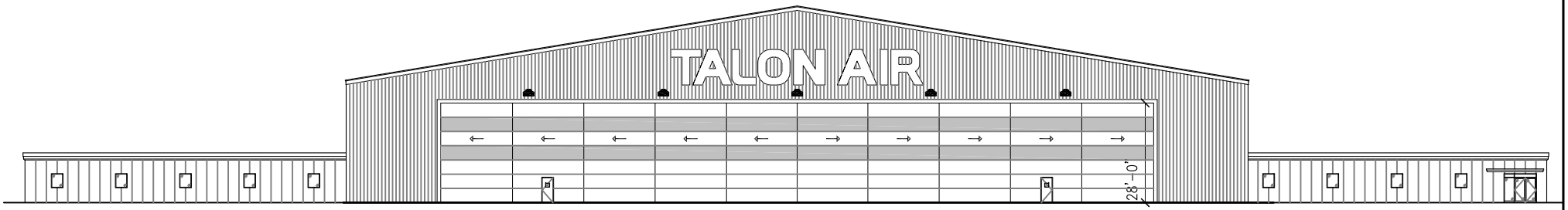
Ramp Area
Access Roadway / Standard Duty Pavement
Parking Area
Landscape Area
Hangar Building
Self-Fueling AV Gas
Drainage
Electric
Sanitary
Water
Security Fence
Parcel Boundary
Photo Number & Direction

Site preparation of the Project Parcel will require removal of existing vegetation, asphalt and pavement; removal of select sections of existing perimeter fencing and replacement with new fencing; removal or realignment of existing buried and above-ground utility lines and some stormwater drains; and removal of existing buried cesspools and other subsurface building elements like foundations.

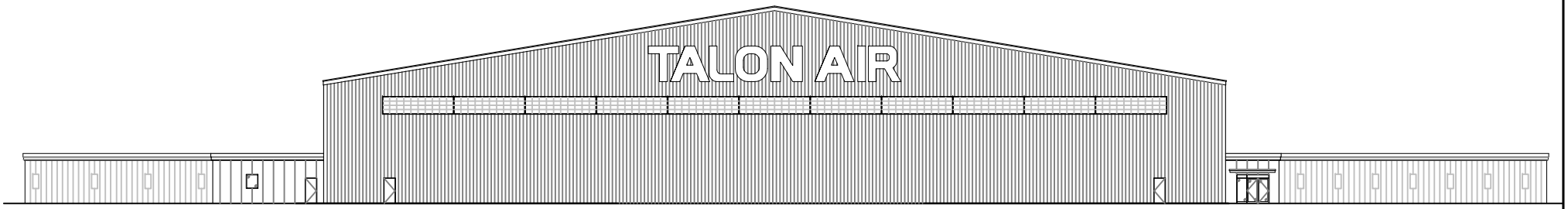
The proposed action includes construction of buildings, other structures, and miscellaneous items. The buildings include aircraft maintenance and office facilities and hangars and, in Parcel E, a stand-alone restroom. The structures include aircraft parking locations (aka ramps), general aviation (GA) tie-down locations, and vehicle (car, truck) parking lots and access roads. The miscellaneous elements include AV-Gas self-fueling pumps, blast and perimeter fences, realignment of existing roads, new street lights, taxiways and taxiway lighting, various utility (electrical, water, sanitary, and telecommunications) connections, and site drainage (catch basin, drainage lines, and dry wells) features. Each component of the proposed action is described below.

Aircraft Maintenance and Office Facilities. Aircraft maintenance, storage, and fixed-base operator (FBO) office facilities will be constructed on Parcels A and B. On Parcel A, the hangar support wings will be 14-feet high. On Parcel B, the north wing will be two stories high and reach an elevation of approximately 28 feet 6 inches. The south wing is a single story and it will be approximately 12 feet 9 inches tall. The buildings and the attached hangars will be built on concrete slabs. Table 1 lists the square feet of the proposed buildings and Figure 8 and Figure 9. show the architectural sections for both Parcels.

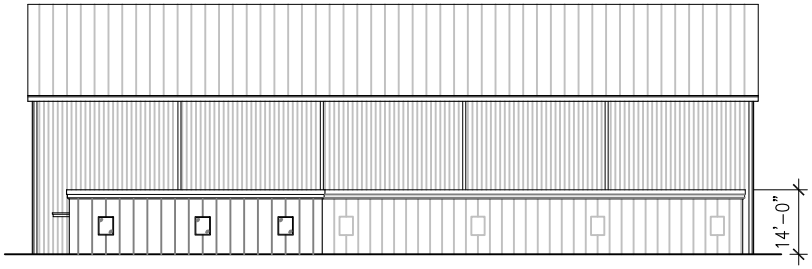
Figure 8: Parcel A Elevations



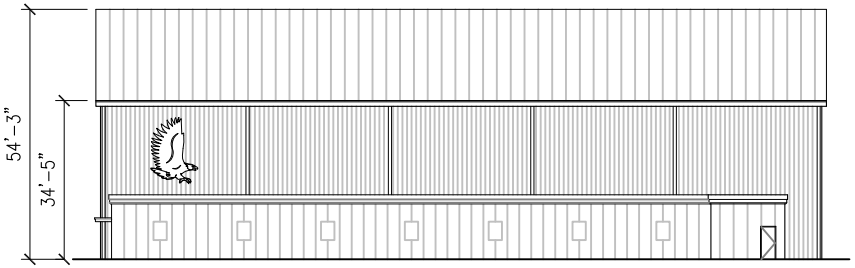
SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

SCALE
0 50 FT

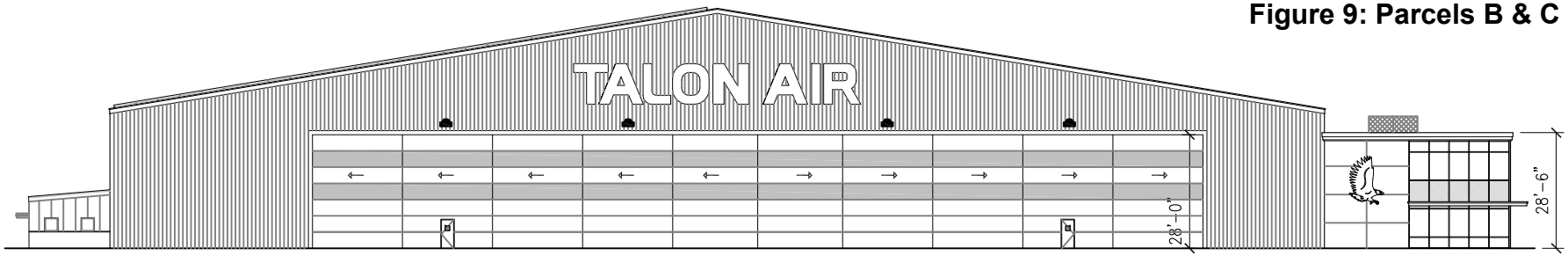
LEGEND

PARCEL NOTES:
AREA - 5.5 AC
HANGAR - 39,600 SQ. FT.
MAINTENANCE - 18,000 SQ. FT.
PARKING PROVISION - 133 SPACES

PARCEL A
PROPOSED BUILDING ELEVATIONS

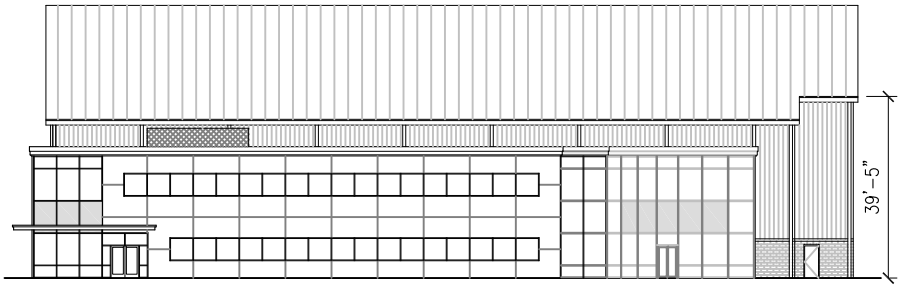
vhb

Figure 9: Parcels B & C Elevations

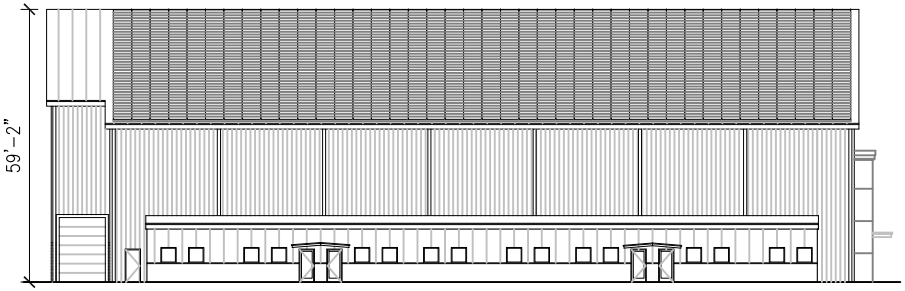


EAST ELEVATION

WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

SCALE
0 50 FT

LEGEND

PARCEL NOTES: PARCEL B
AREA - 6.0 AC
HANGAR - 51,660 SQ. FT.
FBO - 12,780 SQ. FT.
SUPPORT SPACE - 2,916 SQ. FT.

PARKING PROVISION - 131 SPACES

PARCEL NOTES: PARCEL C
RAMP AREA - 5.0 AC
ECHO RAMP - 6.2 AC
TOTAL RAMP - 11.2 AC

PARCELS B AND C

PROPOSED FBO & HANGAR ELEVATIONS

vhb

Hangars. Hangars will be constructed on Parcels A, B, and E. The hangars on Parcels A and B will house corporate aircraft of varying sizes and models. Each of these hangars has associated storage, maintenance and/or office areas (see section above). The Parcel A and Parcel B hangars will have side walls that would be approximately 35 feet 5 inches in height. Parcel A hangar's roof center apex would be approximately 54 feet above pavement finish grade. The Parcel B hangar (center apex of the hangar roof) would be approximately 59 feet above pavement finish grade. Parcel A will accommodate approximately five aircraft and Parcel B will accommodate approximately six aircraft.

In contrast, the T-hangars on Parcel E will be designed for light general aviation aircraft with 5 T-hangar buildings for light single-engine and twin-piston aircraft, 1 T-hangar building for light turbo-prop aircraft, and 2 T-hangar buildings for very light jet (VLJ) aircraft for a total of 8 hangar buildings. The three types of T-hangar buildings vary in square footage to accommodate the three different aircraft sizes.

As illustrated in Figure 7, there are two Type 1 VLJ T-hangar complexes on the west side of Parcel E. Each Type 1 VLJ T-hangar complex will accommodate a total of 12 VLJ aircraft composed of 2 rows of 6 hangars in each row, for a total of 12 hangars. Each individual VLJ hangar will measure approximately 58 by 53 feet with an overall footprint of 37,000 sf.

In addition, there is one Type 2 turbo-prop aircraft T-hangar building on the west side of Parcel E. A single row of turbo-prop aircraft hangars will accommodate up to 10 aircraft within a 27,000-sf space. The individual turbo-prop aircraft hangar measures approximately 50 feet by 65 feet.

Lastly, the five Type 3 T-hangar buildings on the east side of Parcel E will be arranged as five rows of buildings, each with a single row of light single-engine and twin-engine piston aircraft hangars that will accommodate 15 aircraft with a maximum dimension of 33 by 45 feet for each hangar. Overall, the footprint of the Type 3 light single-engine and twin-piston aircraft T-hangar building is approximately 19,000 sf. All T-hangar buildings in Parcel E will have electrical service. In total, Parcel E hangars will accommodate approximately 109 aircraft.

The hangars on Project Parcels A, B, and E will be set on 5-foot deep foundations and have 18-inch thick slab floors. The hangars on Parcels A and B and the T-hangars on Parcel E will be steel studs covered in aluminum siding. The T-hangars are not insulated.

The total proposed hangar space is summarized as follows:

Parcel A:	39,600 SF
Parcel B:	51,660 SF
Parcel E:	74,000 SF (Type I "VLJ"); 27,000 SF (Type II "Twin"); 95,000 SF (Type III "GA")

Restrooms. Parcels A and B hangars, maintenance and office spaces will have bathrooms. The restroom servicing the T-hangar complex on Parcel E would be a standalone building approximately 25 by 35 feet (875 sf). The building will be either stick frame built (wood or steel studs) or concrete blocks. The building foundation will be a 10-inch slab on grade with 6-inches of stone under the slab. Utility trenches serving the facility will be 30" to 60" deep.

Aircraft Parking Locations (Ramps and Tie-Downs). Two types of exterior, paved aircraft parking locations are proposed. These are ramps and tie-downs, and the two differ from one another in terms of the duration of plane occupancy. The ramp is that area where aircraft are parked and serviced. In these locations, both aircraft and cars/trucks may share space while aircraft are being serviced for maintenance or refueling. Often, the aircraft are parked only for a short-duration while they discharge passengers and are serviced for the next flight. In contrast, tie-down locations are spaces where planes are parked on a longer-term basis, such as over-night or for several days.

The pavement for both ramp and tie-down areas has a similar design – a 4-layer, heavy duty asphalt that will withstand aircraft movement and weight. The pavement thickness would be approximately 2-feet on ramps and in tie-down areas. Ramps will be constructed on Project Parcels A, B, C, and D and tie-downs will be present on Parcels D and E.

Vehicle Parking Lots. Vehicle parking lots will be constructed on the five Parcels. The parking lots will be asphalt paved to an average thickness of approximately 1.7 feet below construction grade.

Existing Road Realignment and Street Lights. Three existing public roads will be affected by the Project and require relocation to accommodate changes in the utilization of the Parcels. These are Grumman Lane, Republic Avenue, and Seversky Road. A new, re-aligned segment of the existing service access roads will be constructed using a standard road pavement that will be approximately 1.8 feet thick below grade. The new roads will be two-lanes wide.

Street lamps will be placed adjacent to the ingress/egress roads and the re-aligned Airport roads. The street lamps will be approximately 2 feet in diameter at their bases, 22 feet high above grade, and extend approximately 4 feet 6 inches below finished grade.

The Sponsor (NYSDOT) controls the internal roadways and streets within FRG and will not be required to coordinate with other agencies in connection with the proposed road realignment or street lighting improvements.

Taxiway Lighting. A new taxiway connector will be constructed from Parcel C/Echo Ramp to Taxiway B, and from Parcel E to Taxiway D. The taxiways will be equipped with elevated edge lights meeting FAA Type L-861T standards. The lights are omni-directional with a blue lens and are equipped with either a 30 or 45-watt bulb

providing 2 candelas minimum coverage from 0 to 6 degrees vertically. The light assemblage consists of an above ground fixture and a below-ground base.

The fixture would extend approximately 18 inches above final pavement grade. The below-ground base is a galvanized coated, steel cylinder encased with concrete. The light trench would be approximately 42-inches deep and 22 inches wide. The basal component will be a 12-inch thick aggregate base underlying a concrete footer that has an internal PVC drain pipe to evacuate water from the fixture base box.

Blast Fences. Blast fences will be located along the east and southeast edges of the Parcel A ramp and on the northwest and south edges of the Parcel C ramp. The blast fences will be approximately 8-feet tall from grade and will be post mounted. The post depth is not yet determined. The blast fences will be constructed of steel.

Perimeter Security Fences. The chain link security fences will be present in all five Parcels and will have security gate entrances to the main work areas of the Parcels. The fence is composed of four major parts: concrete post footer, fence post, chain link mesh with privacy slats, and barbed wire. The concrete footers will be 1-foot diameter and set 3 feet 4 inches below grade. The 4-inch diameter, SS40 high strength posts will be set on 8-foot centers and will be set in the concrete footers. The above-ground post will be 8-foot high with 2.25-inch chain link mesh between posts. Privacy slats will be woven into the chain link. Three strands of barbed wire will be tied to post extenders adhered to the fence posts.

AV-Gas self-fueling pumps. AV-Gas self-service fueling pumps are set on a concrete slab which is surrounded by bollards to protect the pumps. Two self-service AV-Gas fuel dispensing pumps will be constructed, one each on Parcels D and E. Fuel for the replenishment of these pumps would be stored in the existing Stratosphere Fuel Farm.

Utilities (Electrical, Sanitary, Telecommunications, Water). Various elements would require access to electrical, sanitary, telecommunications, and water services. Utility connections would be made to existing services already serving either Republic Airport in general or the Project. The current providers are discussed in Chapter 3, including PSE&G (electricity), Suffolk County Water Authority (potable water), National Grid (natural gas), and Cablevision, Light Path, or Verizon (telecommunications).

Site Drainage (Catch Basins, Stormwater Lines, and Dry Wells). Each of the Project Parcels has a standalone drainage system to capture and infiltrate stormwater runoff. Stormwater runoff will be collected through catch basins installed throughout each site and will be conveyed to drywells via a closed drain pipe system. Drywells will be located beneath landscape areas and vehicular parking and roadways. Drywells will be 12-feet in diameter and will vary in depth depending on location and depth to the estimated seasonal high-water table, as established during subsurface geotechnical investigation. Based on the available existing groundwater information at this time, it is anticipated that drywells on Parcels D and E will be

installed to a depth of 8-feet below grade and drywells on Parcels A, B, and C will be installed to a depth of 15-feet below grade. Catch basins and storm drain manholes will vary in depth and diameter but will typically be 11-feet deep and 4-feet in diameter. Trenches for storm drain piping will be approximately 6-feet deep and 3-feet wide.

Sustainable Design. The proposed development would be designed to meet or exceed the Sustainable Development Standards and Guidelines required by NYSDOT. The most prominent public feature of the proposed certification effort would be the large photovoltaic solar panel array mounted on the south side of the new hangar roof (Parcel B). In addition to on-site renewable energy systems, ultra-high efficiency boilers, daylighting of interior spaces, judicious use of recycled materials, and water-conserving plumbing fixtures will all be part of the internal strategy for sustainable compliance. At the "front" or land-side of the facility, relocation of the existing Airport entry access road would permit access to the FBO building and associated vehicle parking lots. Furthermore, the relocated road would allow landside access to the southern portion of Parcel B, which is not proposed to be redeveloped under the current application.

1.4 Project Purpose and Need

The purpose of the development plan for the five Parcels and Echo Ramp is to develop the vacant or underutilized Parcels in accordance with ESD and NYSDOT's vision of: (1) including aviation and aviation-related uses; (2) increasing revenues at the Airport; and (3) developing the Parcels in a sustainable manner.[6] FAA approval is needed for a change to the Republic Airport's ALP. Preliminary engineering for all five parcels, including Echo Ramp, is included in Appendix F.

Republic Airport is currently underutilized and operates at an economic loss. As reported by New York State, the Airport does not generate sufficient revenue to cover its own costs, and there are not enough hangars to satisfy demand based on a multi-year waiting list for hangar space. Furthermore, there is undeveloped land adjacent to aircraft operational areas; for example, the former 56th Fighter Group Restaurant, which is located on a prime parcel of land adjacent to an aircraft parking ramp, has been vacant and abandoned since 2012. In all, there are at least 50 acres of undeveloped land on an airport that comprises 530 acres. Refer to Appendix F for

[6] Request for Proposals, New York State Empire State Development (February 2016). (see Appendix G).

additional information that substantiates the current underutilization of Republic Airport.

The Proposed Project is needed to promote, accommodate, and enhance general aviation and economic development at the Airport. This will be accomplished by the construction of an FBO building, hangars, and ramp areas designed to enhance the aircraft servicing capability at the Airport. There is currently a waiting list for hangar aircraft parking at the Airport.[7] Stratosphere's Project proposes construction of hangars on Parcels A, B, and E to provide additional aircraft parking capacity.

In addition, the Project will maximize value to NYSDOT through monthly lease payments and fuel flowage fees and enhance the area economy by adding 197 temporary, full-time equivalent (FTE) construction-related jobs, of which 73 are expected to be local. These jobs would contribute to the local economy within the 1-mile Airport study area.[8]

Currently, approximately 210,000[9] annual operations occur at the Airport, based on FAA figures. Similar to the other FBOs at the Airport that are provided long-term leases by NYSDOT, Stratosphere's operation is tailored to accommodate aircraft that operate and are projected to operate at the Airport. Stratosphere currently serves approximately five to six aircraft per day that arrive and depart from the Airport. These aircraft could easily be served by the other FBOs at the Airport. However, the pilots of these aircraft choose to conduct their business with Stratosphere because of service quality, fuel prices, and other advantages offered by Stratosphere. Prior to Stratosphere becoming an FBO, those aircraft were serviced by one of the other FBOs at the Airport.

There are currently three FBOs on the Airport operated as private entities. Stratosphere (Republic Jet Center) is one of the FBOs. The presence of these three FBOs offers a competitive environment for fuel and services to aircraft operating at the Airport. As private businesses, the FBOs compete with each other to provide aircraft fueling and other related services. Currently, approximately 210,000 annual

[7] Atlantic Aviation (November 3, 2017)

[8] Economic Impact Analysis of the Long-Term Lease of Five Development Parcels at Republic Airport, Economic Development Research Group, Inc., April 8, 2016.

[9] FAA Air Traffic Activity Data System (ATADS) contains the official air traffic operations data available for public release. ATADS data are available after the 20th of the month for the previous month and can be accessed without a login. Site accessed on November 6th, 2017: http://aspm.faa.gov/opsnet/sys/opsnet-server-x.asp

aircraft operations occur on the Airport. These FBOs each compete to serve as many of these aircraft with fuel and services as possible. If the demand did not exist, these FBOs would not be in business. In fact, there is another company that is in the FBO certification process with New York State DOT and if certified, there would be a total of four FBOs at the Airport.

Regardless of whether this proposed project advances or not, the demand at the Airport for aircraft services will continue to grow. To meet the existing and projected demand for aircraft services, NYSDOT provides long-term leases to the FBOs currently at the Airport to serve aircraft that operate and are projected to operate from the Airport and are therefore dependent on the overall growth of operations at the Airport. In fact, in addition to Stratosphere's proposal, another FBO on the Airport, Sheltair, is in the process of constructing hangars and aircraft parking ramp areas. Sheltair's development will include six hangars totaling 155,000 square feet. If Stratosphere's proposed project does not advance, this would place Stratosphere at a competitive disadvantage relative to other FBOs at the Airport.

Forecasts and Anticipated Growth

Currently, approximately 210,000 annual operations occur at the Airport, based on FAA figures. This is data that was accessed from the FAA Terminal Area Forecast (TAF). The TAF is based on projections of activity that are driven by national economic data. The FAA updates the TAF on an annual basis. In addition to these projections, Stratosphere recently entered into FBO aircraft servicing agreements, unrelated to the proposed project, that could result in some aircraft coming to Republic that normally would not have come to the Airport. As a result of these servicing agreements, Stratosphere could potentially attract approximately six new aircraft operations per year that would not have operated at the Airport without Stratosphere. The addition of six new aircraft operations attracted by Stratosphere equates to an increase of approximately .003 percent (6 operations/210,000 total operations) of annual operations at the Airport.

It is anticipated that the Proposed Project will be operational by 2020, at which time annual operations at the Airport will be approximately 212,000, according to FAA estimates. These operations will occur regardless of whether the Proposed Project is advanced. In addition to those operations already projected to occur at the airport, it is anticipated that Stratosphere will be able to attract 10 new aircraft operations per year that would not have operated from the Airport without Stratosphere's facility. This slight increase in operations equates to a growth of approximately .005 percent of the total operations at the Airport (10 operations/212,000 total operations), or approximately one aircraft operation per month.

This induced growth would be in addition to the aircraft that Stratosphere normally services and that would come to the Airport anyway. For example, put in terms of

daily operations, Stratosphere currently serves 5-6 aircraft per day. At full build-out in 2020, Stratosphere would have the capacity (ability) to service 10-12 aircraft per day over the next one to two years, 15 aircraft per day in three to five years, and 20 aircraft per day after five years. The majority of these are aircraft that would come to the Airport for training, business or recreational reasons regardless of whether the Proposed Project is built.

Accordingly, the construction of additional hangars and parking would principally meet existing and projected demand for aircraft operations at the Airport. The Proposed Project is therefore expected to have a very modest impact on the number of aircraft being based at the Airport or operating at the Airport.

The Proposed Project will also maximize incorporation of green building and sustainable design practices to meet or exceed the Sustainable Design Standards and Guidelines required by NYSDOT, including a large photovoltaic solar panel array mounted on the south side of the new hangar roof, ultra-high efficiency boilers, daylighting of interior spaces, judicious use of recycled materials, and water-conserving plumbing fixtures. In addition, the Proposed Project will not have a significant effect on the community's current land use plans or goals.

1.5 Required Federal and Other Approvals

The federal action for this Project is the approval by the FAA of a change to the ALP. Therefore, this Project is submitted for review under NEPA. As a requirement of NEPA, Federal agencies must analyze and disclose the potential environmental impacts associated with a project, including any mitigation measures, which will be reviewed and considered by the appropriate regulatory agencies and interested parties.

A SEQRA Environmental Assessment Form (EAF) was submitted to NYSDOT on January 12, 2017. NYSDOT reviewed the EAF and requested additional information that was provided by Stratosphere. NYSDOT issued a Negative Declaration on July 20, 2017, which was published on August 2, 2017. As a result of the findings and considerations noted in the SEQRA Environmental Assessment, NYSDOT determined that the Proposed Project will not have a significant effect on the environment as set forth in 17 NYCRR Part 15.11. The SEQRA documentation is included as Appendix I to this EA.

Table 2 provides an overview of the government approvals and permitting at Republic Airport that were submitted in the SEQR Environmental Assessment Form to NYSDOT.

Table 2 Government Approvals Submitted in NYSDOT Environmental Assessment Form

Permit/Approval	Agency
7460-1 Approval	Federal Aviation Administration
Airport Layout Plan – Pen and Ink Changes	Federal Aviation Administration
New Construction – Airport Execution of Lease	New York State Department of Transportation
Aboveground Petroleum Storage Tanks (Potential)	New York State Department of Environmental Conservation
Sanitary Sewer Connection(s)	Suffolk County Department of Public Works
Sanitary System and Water Supply	Suffolk County Department of Health Services
Water Connections	East Farmingdale Water District

2

Analysis of Alternatives

This chapter describes the two alternatives identified by NYSDOT in response to ESD's RFP for the long-term ground lease and redevelopment of up to five non-contiguous Parcels and an Echo Ramp at Republic Airport. It also outlines the criteria for evaluating the two alternatives, the rationale for selecting one of the two alternatives, and whether the resulting alternative would be able to fulfill the Project's purpose and need. In addition to economic impacts, the two alternatives presented include the consideration of the affected environment and environmental consequences, which are detailed in Chapters 4 and 5 of this Environmental Assessment.

2.1 Proposed Action

The proposed action is necessary because Republic Airport is currently operating at an economic loss from year-to-year. The 54 (+) acres of vacant Parcels that NYSDOT plans to redevelop seeks to maximize utilization of the Airport's Parcels, increase value to NYSDOT through monthly lease payments and fuel flowage fees, and provide jobs, while maintaining aviation-related uses in a sustainable manner. NYSDOT, which is the principal agency responsible for carrying out or approving the Proposed Project at the state level, has approved the five Parcel redevelopment proposal and issued a Determination of No Significant Effect for the purposes of Article 8 of the Environmental Conservation Law of New York (SEQRA), which states that the proposal will not have a significant effect on the environment as set forth in 17 NYCRR Part 15.11.

Through a comprehensive review of the economic and environmental impacts of redeveloping the five vacant Parcels and Echo Ramp, the FBO, Stratosphere, proposed that a coordinated development of all five Parcels, rather than piece-meal redevelopment, was the most appropriate proposal to meet the objectives of ESD's RFP to maximize value to NYSDOT, enhance Republic Airport as an economic engine for Long Island, and provide a source of quality jobs for the area and state residents.

The proposed action is wholly on Airport property and consistent with the deed for the properties, which states that the properties were conveyed for airport purposes. The proposed use is also consistent with FAA's design guidelines, which mandate clear areas in proximity to runways and height limitations to prevent obstructions to air navigation. The Proposed Project seeks to use the Parcels subject to the proposed leases, generally, as follows:

- Parcel A – construction of a 57,600 square-foot storage hangar to accommodate approximately five aircraft and maintenance facility, as well as additional parking spaces.
- Parcel B – construction of a 67,356 square-foot hangar to accommodate approximately six aircraft as well as FBO/office/support areas.
- Parcel C – demolition of an abandoned restaurant and construction of an aircraft parking ramp area including a taxiway connection from Parcel C to the taxiway on Parcel B.
- Parcel D – construction of a general aviation ramp and tie-down area for approximately 64 aircraft to support the relocation of small aircraft currently located at the existing Echo Ramp.
- Parcel E – construction of a general aviation ramp and 196,000 square-feet of hangar space to accommodate approximately 109 aircraft and tie-down area for approximately 7 aircraft.
- Echo Ramp – pavement will be rehabilitated, but no additional construction is proposed.

Overall, the Proposed Project will add hangars and aircraft parking ramp to the Airport that will serve to enhance services, expand aircraft parking facilities, and improve the overall operations on the Airport. The hangar and ramp space capabilities are shown in Table 3 along with the Proposed Project:

Table 3 Summary of Existing and Proposed Hangar and Ramp Space with the Proposed Action

	Echo Ramp	Delta Ramp	Parcel D	Parcel E	Total Parking	Corporate Hangars	T-Hangar Buildings	Total Hangars
Existing Capacity	210	10	0	0	220	14	7	21
Proposed Change	-67	0	+64	+7	+4	+2 (to accommo-date 11 aircraft)	+8 (to accommo-date 109 aircraft)	+10
Total Resulting Capacity	143	10	64	7	224	16	15	31

2.2 Alternatives Considered in this Environmental Assessment

This Environmental Assessment considers a No Action Alternative and an Alternative A, the Preferred Alternative, that would redevelop the Airport's five vacant Parcels (A, B, C, D, and E) and Echo Ramp as described in Chapter 1 within the existing Airport boundaries. This section provides a description of these alternatives.

ESD considered other alternatives for developing the vacant Parcels that included aeronautical and non-aeronautical uses.[10] However, the proposal offered by Stratosphere was the most responsive and economically viable proposal that met the conditions contained in the RFP as defined by ESD. As described above, ESD evaluated multiple proposals as part of the RFP process and determined that Stratosphere's proposal most completely addressed the objectives of the RFP. As

[10] ESD allowed for the consideration of a variety of development alternatives for the five parcels. The following statement was included on page 3 of the RFP: While aviation or aviation-related uses are preferred, prospective respondents may propose alternative but compatible uses for consideration. Residential uses will not be considered.

part of the proposal, Stratosphere was required to provide a detailed development plan, which is now Alternative A (the Preferred Alternative). There are no other conflicting uses of the leased premises.

2.2.1 No Action Alternative

The No Action Alternative would result in no redevelopment of vacant or underutilized Parcels within Republic Airport. Airport cash flow is predicted to be at a modest loss from year-to-year with diminished monthly lease revenues to NYSDOT. Permanent direct aviation-related jobs, as well as construction jobs, would experience no to minimal growth at the Airport. Accordingly, the No Action Alternative would have an adverse impact on the local economy.

2.2.2 Alternative A (Preferred Alternative)

Under the Preferred Alternative, the five underutilized Parcels (A, B, C, D, and E), as well as Echo Ramp, would be redeveloped. This would allow for additional hangars, FBO office space, vehicle parking, general aviation tie-down spaces, aviation ramp space, taxiways, and AV-gas pumps. The proposed improvements are practical and reasonable. This would create improved utilization of Republic Airport by providing additional and enhanced services to the flying public on the Airport.

2.3 Alternatives Screening Process and Results

A multi-tiered screening process was established to assess the redevelopment approach of the five vacant Parcels to satisfy the Project's purpose and need as outlined in Chapter 1, Section 1.4. The screening process was based on the two alternatives outlined below:

A **No Action Alternative** was retained for detailed evaluation in the Environmental Assessment for comparative purposes pursuant to 40 CFR 1502.14(d) and FAA Orders 1050.1F, Change 1 and 5050.4B. The No Action Alternative is described further in this chapter.

Alternative A is the Preferred Alternative, which is the redevelopment of the five vacant Parcels (Parcels A through E) and Echo Ramp, within the existing Airport footprint, for operations under a long-term lease, as noted in Chapter 2, Section 2.1, Proposed Action.

2.3.1 Level 1 Screening and Results

The first level of screening was used to evaluate the potential environmental impacts from the proposed development of the five vacant or underutilized Parcels for aviation purposes. To conduct the first level of screening, seven applicable criteria or environmental resources were assessed and are described in detail in Chapters 3 and 4 of this Environmental Assessment.

- Air Quality and Climate
- Biological Resources (including fish, wildlife, and plants)
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Natural Resources and Energy Supply
- Noise and Noise-Compatible Land Use
- Visual Effects (light emissions, visual resources, and visual character)
- Water Resources (wetlands, floodplains, surface waters, groundwater)

As detailed in Chapter 4 Environmental Consequences, this Environmental Assessment concluded that there are no permanent, significant, adverse impacts on resources as a result of Alternative A when compared to the No Action Alternative. In addition, construction will be limited to areas that have been previously developed.

2.3.2 Level 2 Screening and Results

The second level of the screening process was designed to identify whether redevelopment of all five Parcels (A, B, C, D, and E) and the utilization of the Airport's Echo Ramp is necessary to fulfill the Project's purpose and need, as stated in Section 2.1, Proposed Action. Republic Airport is currently an economic engine for Long Island and New York. It has the highest economic benefit of any general aviation airport in New York with $147 million in direct expenditures from on-airport businesses and visitor spending and the creation of over 1,384 direct and indirect jobs. In keeping with its economic impact, NYSDOT seeks to leverage the Airport to create jobs and increase economic activity.[11]

This second level of screening complements NYSDOT's key economic objectives. The criteria used for this screening process is forecasted annual revenue, job creation, and proposed capital investment. Due to the proposed interdependence between the Parcels so they can be utilized in tandem to maximize usage, there is a limited range of alternatives for consideration as noted below:

- **No Action Alternative**. The No Action Alternative provides no improvements to the five vacant Parcels. Currently, the Parcels are undeveloped, including an abandoned cesspool and debris piles on Parcel E and an abandoned restaurant building and parking lot on Parcel C. Overall, Republic Airport is currently operating at a modest loss due to the underutilization of these Airport Parcels.

[11] Economic Development Research Group (EDR Group). Response to RFP for the Long-Term Use of Five Development Parcels at Republic Airport Exhibit M: *Economic Impact from Developing Parcels A-E and a Portion of the Echo Ramp.* April 14, 2016.

- **Alternative A**. Alternative A provides for the redevelopment of the five vacant Parcels and Echo Ramp, within the existing Airport footprint, for operation under a long-term lease. Alternative A is expected to generate approximately $1 million per year, which would eliminate the annual Airport operating deficit and allow the Airport to reinvest in Long Island's future. It would also create approximately 197 temporary, FTE construction-related jobs, of which 73 are expected to be local.[12]

2.3.3 Level 3 Screening and Results

The purpose of the first- and second-level screening processes was to assess whether the environmental and economic impacts warranted a no build (No Action Alternative) or build option for the proposed redevelopment. Based on the Level 1 and 2 screening, Alternative A was identified for further consideration in the Level 3 screening. The third level of screening considered the ability to meet or exceed the Sustainable Design Standards and Guidelines required by NYSDOT.

- **No Action Alternative.** The No Action Alternative provides for no improvement to the five vacant Parcels. Currently, the Parcels are undeveloped, including an abandoned cesspool and debris piles on Parcel E and an abandoned restaurant building and parking lot on Parcel C.
- **Alternative A.** The proposed development would be designed to meet or exceed the requirements of NYSDOT's GreenLITES Project Design Certification Program.[13] The most prominent public feature of the proposed certification effort would be a large photovoltaic solar panel array mounted on the south side of the new hangar roof. In addition to on-site renewable energy systems, ultra-high efficiency boilers, daylighting of interior spaces, judicious use of recycled materials, and water-conserving plumbing fixtures would all be part of the internal strategy for sustainable compliance. At the "front" or land-side of the facility, relocation of the existing airport entry access road would permit access to the FBO building and associated vehicle parking lots. Furthermore, the relocated road would allow landside access to the southern portion of Parcel B, which is not proposed to be redeveloped under the current application.

[12] Economic Development Research Group (EDR Group). Response to RFP for the Long-Term Use of Five Development Parcels at Republic Airport Exhibit M: *Economic Impact from Developing Parcels A-E and a Portion of the Echo Ramp.* April 14, 2016.

[13] New York State Department of Transportation, *NYSDOT GreenLITES Certification Program,* revised April 2010 (version 2.1.0).

3

Affected Environment

This Chapter identifies the natural and human environment within the Project's study area. FAA Order 1050.1F states that for analysis under the NEPA, an affected environment "succinctly describes the environmental conditions of the potentially affected geographic area or areas."[14] FAA Order 1050.1F details of those resource categories that should be considered, if applicable, in this analysis.

This chapter of the Environmental Assessment (EA) summarizes the existing (baseline) conditions for those resource categories present within the Project's study area. Because of the Project's characteristics and the location of the Airport, several resource categories were not applicable to this analysis. The reasons these categories have been dismissed from further consideration are presented in Section 3.2. The remaining resource categories are discussed in Section 3.3.

[14] Federal Aviation Administration. Order 1050.1F. Environmental Impacts: Policies and Procedures. July 16, 2015.

3.1 Study Area

Study areas are the locations that may be directly affected by a proposed action (for example, construction) or the indirect consequences of the implementation of those actions (for example, construction of a building may result in changes to an airport's lighting system). The environmental overview must capture the appropriate study area for the resources considered to adequately estimate the level of potential impacts of the alternatives that are being considered in the EA.

For this Project, the proposed action encompasses five Parcels (A through E) and an existing ramp (Echo Ramp) totaling approximately 54 (+) acres. The proposed actions include demolition of existing buildings and structures and the construction of buildings and structures. The associated study areas (1/2-mile and 1-mile radii around the Project area) were defined based on resource-specific guidance. Such guidance is cited in the resource-specific Affected Environment sections of this chapter.

3.2 Resources Categories Not Applicable

Seven resource categories were eliminated from further evaluation due to either the absence of such resources within the study area or because proposed activities would not affect the existing conditions of the resource category. Resources not present or that would not be affected by implementation of proposed activities are discussed below.

3.2.1 Coastal Resources

Coastal resources include coastal barriers and coastal zones. Applicable regulations that address these coastal resources are detailed in FAA Order 5050.4B, FAA Order 1050.1F, and guidance provided in the 1050.1F Desk Reference. Per Order 1050.1F, any proposed action that is within a coastal zone, on a barrier island, within a coral reef ecosystem, causes an unacceptable risk to human safety or property in a coastal zone, or causes adverse impacts to a coastal environment are factors that must be considered in evaluating this resource category. The Project area is not within a coral reef ecosystem or on a coastal barrier island, nor is the Project located within a Coastal Zone on the New York State Coastal Boundary map or within an area with a Local Waterfront Revitalization Program (Figure 10). Accordingly, coastal resources are not a relevant impact category.

3.2.2 Department of Transportation Act, Section 4(f)

Under Section 4(f) of the Department of Transportation Act of 1966 (currently codified as 49 USC Section 303 (c)), the US Department of Transportation (including FAA) may not approve a transportation program or project requiring the use of publicly owned land from a public park, recreation area, or wildlife and waterfowl

refuge of national, State, or local significance, or land of an historic site of national, State, or local significance unless there is no prudent and feasible alternative to using that land, and the program or project includes all possible planning to minimize harm to the resource resulting from the use.

To determine if there are any Section 4(f) resources present within or immediately adjacent to the Proposed Project Parcels, a 1-mile radius study area was defined, as recommended by the New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP) and its associated State Historic Preservation Office (NYSHPO).[15] No parks, recreational areas, wildlife or waterfowl refuges, or historic sites are present within or adjacent to the Parcels. Proposed Project Within the 1-mile study radius, there is one recreational area: Michel Park, a public soccer field currently used by the Farmingdale Soccer Club.[16] The park is approximately 2,800 feet from the closest Parcel, Parcel A. The project would not require a use of this park under Section 4(f) definitions.

[15] The New York Archaeological Council. 1994. Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State. Adopted by the New York State Office of Parks, Recreation and Historic Preservation.

[16] http://www.lijsoccer.com/pages/fieldDetail.php?id=113

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0 420 840 1680 Feet

Republic Airport Talon Parcel Development
Draft Environmental Assessment | East Farmingdale, Town of Babylon, NY

FEMA Floodplains

Zone X - Area of Minimal Flood Hazard
(FIRM Panel No. 36103C0835H (Panel Not Printed))

Source: FEMA Flood Map Service Center, National Flood Hazard Layer FIRMette

The 1-mile study area contains 24 previously inventoried archaeological sites, buildings, or structures. Of these 24 resources, five have been determined eligible to be listed on the State and National Registers of Historic Places. See section 3.3.5 below for additional information on the historic properties considered. The NYSHPO was contacted on April 4, 2017, regarding the Project and responded Proposed Project that, based on its review, "the New York SHPO has determined that no historic properties will be affected by this undertaking."[17] Therefore there would be no use of these properties under Section 4(f). Section 3.3.3 and Appendix D include more information on coordination with the NYSHPO.

3.2.3 Wild and Scenic Rivers

No surface waters that are listed under the federal Wild and Scenic Rivers Act (WSRA) and its implementing regulations (36 CFR part 297, subpart A) occur at or within a 1-mile radius of the Parcels. For that reason, a WSRA analysis is not necessary and therefore not presented herein as part of Water Resources. Nor are there any state protected rivers that would be affected by the Project.

3.3 Resources Present

The following resources were determined to be pertinent in the analysis of Alternative A (Preferred Alternative) and comparison to the No Action alternative.

3.3.1 Air Quality and Climate

This sub-section includes information on air quality management, relevant air quality regulations, and the current attainment/non-attainment status of Suffolk County. For this analysis, construction emissions associated with the development of the Parcels were computed for years 2019 through 2024.

3.3.1.1 Regulatory Agencies

Under the federal Clean Air Act (CAA), the United States Environmental Protection Agency (EPA) establishes the guiding principles and policies for protecting air quality conditions throughout the nation. EPA's primary responsibilities in this area include

[17] Michael F. Lynch. 2017. Letter: Lynch to Carol S. Weed, VHB, re: FAA, Proposed Long-term Lease of Five Development Parcels, Farmingdale Republic Airport, Babylon, NY 17PR02297.

promulgating the National Ambient Air Quality Standards (NAAQS)[18], as well as approving State Implementation Plans (SIPs).

The FAA is the primary agency involved in, and responsible for, ensuring that air quality impacts associated with airport projects and actions adhere to the reporting and disclosure requirements of the NEPA as well as the General Conformity rule of the CAA.

On the state level, the New York State Department of Environmental Conservation (NYSDEC) is responsible for enforcing the CAA, including compliance with the NAAQS, the issuance of air emission source permits, monitoring of air quality conditions, and preparing the SIP.

3.3.1.2 National Ambient Air Quality Standards

Pursuant to the requirements of the CAA, the EPA establishes, enforces, and periodically reviews the NAAQS. The NAAQS are set to safeguard public health and environmental welfare against the detrimental effects of ambient air pollution and are defined as primary and/or secondary standards. Primary NAAQS provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary NAAQS provide public welfare protection, including protection against decreased visibility and damage to animals, vegetation, and physical structures.

NAAQS have been established for six common air pollutants, referred to as criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), O_3, particulate matter (PM) which includes particulate matter with a diameter of 10 microns or less (PM_{10}) and a diameter of 2.5 microns or less ($PM_{2.5}$), and sulfur dioxide (SO_2). The NAAQS are listed in Table 4. The NYSDEC has adopted these same air quality standards.

[18] EPA, National Ambient Air Quality Standards (NAAQS) at https://www.epa.gov/criteria-air-pollutants/naaqs-table.

Table 4 National Ambient Air Quality (NAAQ) Standards

Pollutant	Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead (Pb)	Primary and Secondary	Rolling 3-month average	0.15 µg/m^3 [(1)]	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and Secondary	Annual	53 ppb [(2)]	Annual Mean
Ozone (O_3)	Primary and Secondary	8-hour	0.070 ppm [(3)]	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particulate Matter ($PM_{2.5}$)	Primary	Annual	12 µg/m^3	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m^3	Annual mean, averaged over 3 years
	Primary and Secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
Particulate Matter (PM_{10})	Primary and Secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)	Primary	1-hour	75 ppb [(4)]	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: EPA, NAAQS at http://www.epa.gov/air/criteria.html, April 2017.

Notes: ppb = parts per billion, ppm = parts per million, and µg/m^3 = micrograms per cubic meter of air.

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)), A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the require NAAQS.

3.3.1.3 Attainment/Nonattainment Status

The EPA also designates areas as either meeting or not meeting the NAAQS. An area with measured pollutant concentrations lower than the NAAQS is designated as an attainment area, and an area with measured pollutant concentrations that exceed the NAAQS is designated as a nonattainment area. Areas that are in transition back to attainment are designated as maintenance areas. Ozone nonattainment areas are further classified as extreme, severe, moderate, or marginal. An area is designated as attainment/unclassifiable when there is a lack of sufficient data to form the basis of an attainment status determination.

Suffolk County is currently designated by the EPA as a moderate nonattainment area for the 2008 8-hour O_3 standard and a maintenance area for the 2006 $PM_{2.5}$ standard. Table 5 summarizes and provides additional information regarding the EPA-designated nonattainment/maintenance status for the county.

Table 5 EPA-Designated Nonattainment/Maintenance Status for Project Area

County, State	Area Name	Pollutant	Classification	County NA Part/Whole? (1)
Suffolk County, New York	New York-N. New Jersey-Long Island	8-hour Ozone (2008 Standard)	Nonattainment (Moderate)	Whole
		PM-2.5 (2006)	Re-designated to Maintenance on 04/18/2014	

Source: EPA, Green Book at http://www.epa.gov/airquality/greenbook/, April 2017.
Notes: (1) The column "County NA Part/Whole" indicates whether only a part of the county or the whole county is designated nonattainment.

The CAA requires states with nonattainment designations to develop, update and maintain SIPs that will demonstrate compliance with the NAAQS. Common features of a SIP include attainment timeframes or milestones, area-wide emissions inventories and budgets and control/mitigation strategies that are to be employed to achieve attainment.

3.3.1.4 General Conformity Requirements

The General Conformity Rule of the federal CAA prohibits federal agencies (including the FAA) from permitting or funding projects that do not conform to an

applicable SIP. The General Conformity Rule applies only to areas that are designated nonattainment or maintenance.

As a means of demonstrating conformity with the SIP, project/action-related emissions of the applicable pollutants are compared to *de minimis* level thresholds.[19] If the emissions exceed the thresholds, a formal Conformity Determination is required to demonstrate that the action conforms to the applicable SIP. Conversely, if project-related emissions are below the *de minimis* levels the project is automatically assumed to conform to the SIP.

Regionally, New York State is part of the Ozone Transport Commission (OTC)[20]. This group is comprised of 13-states working with the EPA on regional ozone (O_3) conditions in the Northeast and Mid-Atlantic regions.[21] Because FRG is located in an ozone non-attainment and PM2.5 maintenance area, and is part of the OTC, the applicable de minimis levels are listed in Table 6. As shown, these thresholds apply to nitrogen oxides (NOx) and volatile organic compounds (VOCs) – the two primary precursors to ozone formation, and PM2.5.

Table 6 General Conformity De Minimis Levels

Pollutant	Tons/Year
Ozone	100 for NOx and 50 for VOCs
$PM_{2.5}$	100

Source : EPA, *De Minimis* Levels, https://www.epa.gov/general-conformity/de-minimis-emission-levels, April 2017.

3.3.1.5 Transportation Conformity Requirements

The Transportation Conformity Rule applies to projects funded and/or approved by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). The proposed improvements to FRG require only FAA approval, and the Transportation Conformity Rule does not apply.

[19] USEPA, De Minimis Levels, https://www.epa.gov/general-conformity/de-minimis-emission-levels, April 2017.

[20] Ozone Transport Commission (OTC), http://www.otcair.org/.

[21] OTC members include: Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia.

3.3.2 Biological Resources (including Fish, Wildlife and Plants)

Existing biological resources at Parcels A through E and the 6.5-acre portion of the larger Echo Ramp area were evaluated through review of Federal and New York State maps and records, FRG records, and previous environmental assessments at FRG.[22,23] Additionally, pursuant to the assessment procedures described in FAA Order 1050.1F, issued July 16, 2015,[24] field surveys of Parcels A through E were conducted on January 26 and May 3, 2017.

3.3.2.1 Ecological Communities and Vegetation

The New York Natural Heritage Program (NYNHP) publication "*Ecological Communities of New York State*"[25] (ECNYS) provides detailed descriptions and includes state rarity rankings for many habitats found within New York. Based upon a review of this resource and the 2017 field surveys, eight ECNYS upland communities occur at Parcels A through E and Echo Ramp. A summary of the eight ecological communities, including their respective distributions and New York State (NYS) rarity rankings, is provided in Table 7.

[22] Cameron Engineering and Associates, LLP. 2009. Environmental Assessment – Proposed Redevelopment of Lease Area for Stratosphere Development Company, Republic Airport, Farmingdale, Suffolk County, New York.

[23] VHB Engineering, Surveying and Landscape Architecture, P.C. 2015. National Environmental Policy Act – Final Environmental Assessment. Proposed Safety, Infrastructure and Tennant Improvement Projects, Republic Airport, Hamlet of Farmingdale, Town of Babylon, Suffolk County.

[24] FAA Order 1050.1F, Section 2.2.

[25] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State.* Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Table 7 Upland Ecological Communities, Parcels A through E and Echo Ramp

Ecological Communities of New York State (ECNYS) Community Type	New York State Rarity Ranking	Distribution	Parcel Locations
Pitch Pine-Oak Forest	S4 (Apparently secure in NYS)	Coastal Lowlands and Hudson Valley Ecozones	A, E
Successional Southern Hardwoods	S5 (Demonstrably secure in NYS)	Southern half of NYS	A
Successional Old Field	S5	Throughout NYS	A, E
Brushy Cleared Land	Unranked cultural community	Throughout NYS	E
Mowed Lawn	Unranked cultural community	Throughout NYS	B, C, D
Unpaved Road/Path	Unranked cultural community	Throughout NYS	E
Paved Road/Path	Unranked cultural community	Throughout NYS	C, Echo Ramp
Urban Structure Exterior	Unranked cultural community	Throughout NYS	C

As indicated in Table 7, three of the observed ecological communities (Pitch Pine-Oak Forest, Successional Southern Hardwoods, Successional Old Field) are considered "demonstrably secure" or "apparently secure" in NYS by the NYNHP. The five remaining ecological communities are characterized by the NYNHP as unranked cultural communities (i.e., communities created or altered by humans). These communities are distributed throughout New York State. As observed during the field surveys, the eight ecological communities all exhibit evidence of current and/or past disturbance resulting from current and historic site operations at both FRG and the historic residential community of Breslau Gardens.

The following provides a summary of the ecological communities and dominant vegetation at Parcels A through E and Echo Ramp.

Parcel A: Evidence of historical clearing and grading, including stockpiles, berms, pits and swales, was observed across most of Parcel A during the field survey. These disturbed areas now support early- and mid-successional ecological communities (Successional Old Field and Successional Southern Hardwoods) that have colonized the uneven terrain. Dominant vegetation within the two successional communities is

comprised of native and non-native species. The species include black locust (*Robinia pseudoacacia*), tree-of-heaven (*Ailanthus altissima*), Norway maple (*Acer* plantanoides), black cherry (*Prunus serotina*), bigtooth aspen (*Populus grandidentata*), blackberry (*Rubus allegheniensis*), multiflora rose (*Rosa multiflora*), greenbrier (*Smilax rotundifolia*), Japanese honeysuckle (*Lonicera japonica*), common reed (*Phragmites australis*), mugwort (*Artemesia vulgaris*), little bluestem (*Schizachyrium scoparium*), crab grasses (*Digitaria spp.*), switch grass (*Panicum virgatum*), and round-headed bush clover (*Lespedeza capitata*) among others.

The southeastern portion of Parcel A exhibits less evidence of historical ground disturbance than the remainder of the Parcel, as described above. A Pitch Pine-Oak Forest community occurs within the southeastern portion of the Parcel. Observed dominant species within this community include pitch pine (*Pinus rigida*), white oak (*Quercus alba*), scarlet oak (*Quercus coccinea*), blueberries (*Vaccinium spp.*), black huckleberry (*Gaylussacia baccata*), catbrier (*Smilax glabra*) and poison ivy (*Toxicodendron radicans*).

A small pond is present in the southwestern portion of Parcel A. This semi-permanently flooded feature appears to have been created as a result of historical grading within this area. Dominant vegetation within and along the pond margin includes pussy willow (*Salix discolor*), water pepper (*Polygonum hydropiper*) and soft rush (*Juncus effusus*). The pond is discussed in detail in Section 3.3.11 below.

Parcel B: The Parcel hosts an ECNYS Mowed Lawn community. The community is comprised of mowed turf grasses (e.g., fescues [*Festuca spp.],* rye grasses [*Lolium spp.*], bluegrasses [*Poa spp.*], crabgrasses and common "weedy" herbaceous plants (e.g., clovers [*Trifolium spp.*], plantains [*Plantanus spp.*], foxtails [*Setaria spp.*], yarrow [*achillea millefolium*], and common dandelion [*Taraxacum officinale*] etc.). Scattered planted ornamental trees, including eastern white pine (*Pinus strobus*), Norway spruce (*Picea abies*), basswood (*Tilia americana*), black cherry, and mimosa (*Albizia julibrissin*) occur in the northern and southern portions of the Parcel.

Parcel C: The Parcel is developed with cultural habitats. The area consists of a vacant restaurant building, parking areas and lawns/landscaping, representative of the ECNYS Urban Structure Exterior, Paved Road/Path, and Mowed Lawn communities, respectively. The former two communities are comprised of unvegetated, impervious surfaces, while the latter community includes mowed turf grasses with scattered ornamental trees and shrubs (e.g., sycamore [*Platanus occidentalis*], eastern white pine, boxwood [*Buxus spp.*], euonymus [*Euonymus japonicus*], and holly [*Ilex sp.*]).

Parcel D: The Parcel is comprised entirely of mowed turf grasses and weedy herbaceous plants like the flora observed at Parcel B. The observed vegetative community is representative of the ECNYS Mowed Lawn community.

Parcel E: Portions of Parcel E were historically developed with residential uses that were removed *circa* 1974. Currently, Parcel E supports predominantly wooded conditions that are characteristic of the ECNYS Pitch Pine-Oak Forest community.

The community is dominated by a canopy of mature pitch pine trees, with scattered white oak and scarlet oak trees. Understory vegetation is generally sparse and occurs sporadically, apparently because of historical disturbance within the community. Dominant understory species include white oak saplings, blueberries, black huckleberry and American holly (*Ilex opaca*).

A network of unpaved trails/roads and an unpaved materials storage area are located within the Pitch Pine-Oak Forest community. These largely unvegetated features are representative of the Unpaved Road/Path ecological community. Vegetation along the edges of the Unpaved Road/Path communities with the Pitch Pine-Oak Forest community includes various native and non-native trees, shrubs, vines and herbaceous plants, including black cherry, tree-of-heaven, gray birch (*Betula populifolia*), multiflora rose, brambles, Japanese honeysuckle, Asiatic bittersweet (*Celastrus orbiculatus*), mugwort, broom sedge (*Andropogon virginicus*) and Queen Anne's lace (*Daucus carota*).

The northernmost portion of Parcel E is composed of recently cleared land representative of the ECNYS Brushy Cleared Land community. This disturbed area is dominated by several pioneering herbaceous plant species interspersed among tree stumps and slash. Dominant plants include the non-native/invasive species Japanese knotweed (*Polygonum cuspidatum*), mugwort and garlic mustard (*Alliaria petiolata*), as well as native plants such as hemp dogbane (*Apocynum cannabinum*) and mullein (*Verbascum thapsus*).

An early successional community dominated by herbaceous plants and shrubs occurs within an area of uneven topography at the western portion of Parcel E and several historically cleared areas along the southern boundary of the Parcel. Dominant vegetation includes brambles, broom sedge, greenbrier, goldenrods (*Solidago spp*.) multiflora rose, mugwort, and others.

In sum, Parcel A through E ecological communities observed during the field surveys are either developed or otherwise disturbed due to current and historic site operations. The observed flora is comprised primarily of common trees, shrubs, vines and herbaceous plants that are characteristic of disturbed woodlands, successional communities and landscaped habitats. An inventory of the observed plant species is provided in Appendix C, Table D-1.

3.3.2.2 Wildlife

Pursuant to 14 CFR Part 139 (Airport Certification), wildlife populations at FRG are monitored and managed by FRG operations and maintenance staff to prevent or

reduce aircraft wildlife strikes. According to the *Republic Airport Wildlife Management Plan*[26] (WMP; see Appendix C for full plan), 60 wildlife strikes occurred at FRG between 1990 and 2012. The majority of the strikes involved several species of birds, as noted below.

Based on historical strike data, select avian populations are actively monitored at and within five miles of FRG. These include European starling (*Sturnus vulgaris*), ring-billed gull (*Larus delewarensis*), herring gull (*Larus argentatus*), rock dove (*Columba livia*) and Canada goose (*Branta canadensis*). When deemed a hazard, birds are managed through hazing and depredation.

Large mammals are monitored at FRG under the WMP through twice-monthly spotlight surveys and regular nighttime patrols. Large mammals observed on the airport property are managed through harassment and lethal means, when necessary. In addition, several feral cat colonies located just outside of the FRG perimeter fence are managed through capture and removal by animal control services.

In addition to the management methods summarized above, wildlife populations at FRG are also managed through various habitat modification methods detailed in the WMP. These include:

- Regular grass mowing.
- Planting of "non-wildlife attracting" grass seed mixes.
- Removal of shrubs and brushy areas that serve as habitat for birds and mammals.
- Removal of stone and soil stockpiles located within the FRG perimeter fence that serve as habitat for small mammals that attract raptors.
- Repairs to malfunctioning drainage ditches and filling of depressions, to avoid areas of standing water that attract birds.
- Monitoring of the perimeter fence to identify and repair gaps that serve as wildlife entry points.
- Review of all on-site construction projects by a qualified wildlife biologist to ensure that creation of hazardous wildlife habitat does not result from work methods or end results.

In general, higher wildlife species diversity is expected at Parcels A and E due to the lack of existing development and a predominance of unmaintained, vegetated

[26] Republic Airport and Loomacres Wildlife Management. 2013. *Republic Airport Wildlife Hazard Management Plan*. Prepared by Cody Baciuska, Airport Wildlife Biologist.

conditions in these two Parcels. Due to implementation of the WMP, however, the wildlife fauna at the Parcels, Echo Ramp and FRG is artificially maintained at levels below the theoretical carrying capacity of the property. Taking this factor into account, a summary of the observed and expected birds, mammals and herpetofauna (amphibians and reptiles) at Parcels A through E and Echo Ramp is provided below.

Birds: Forty bird species were reportedly identified at FRG during avian surveys conducted in association with the creation of the WMP.[27] However, beyond those species whose populations are actively managed at FRG, the WMP does not include a comprehensive inventory of the identified birds. In total, 31 avian species were observed (i.e., seen or heard) at or over FRG during the 2017 field surveys conducted for this assessment and/or are noted in the WMP as occurring at FRG. The observed avian fauna are comprised of songbirds and birds common to developed settings, brushy areas, woodland edges and lawns. The observed species include: house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), Carolina wren (*Thryothorus ludovicianus*), blue jay (*Cyanocitta cristata*), black-capped chickadee (*Poecile atricapillus*), song sparrow (*Melospiza melodia*), American robin (*Turdus migratorius*) and killdeer (*Charadrius vociferus*), among others. Also noted were three of the species that are actively monitored and managed at FRG under the WMP (European starling, rock dove and herring gull). Based on the 2017 field surveys, the pond located at Parcel A does not appear to represent a significant habitat area for waterfowl or other birds associated with surface water communities. An inventory of avian species observed during the 2017 surveys and noted in the WMP is provided in Appendix C, Table D-2**.**

To provide a detailed estimate of other avian species potentially occurring at FRG, The New York State Breeding Bird Atlas[28] (NYSBBA) was consulted. According to the NYSBBA, 56 bird species were identified within bird survey Block 6250B during the 2000-2005 breeding bird survey administered by the NYSDEC. Block 6250B encompasses the five Parcels and Echo Ramp. According to the NYSBBA, of the 56 avian species observed within Block 6250B during the survey, 29 are confirmed as breeding, 22 are listed as probably breeding and 5 are listed as possibly breeding. A copy of the atlas report is included in Appendix C.

Based on the 2017 field observations and the WMP and NYSBBA data, the eight ecological communities that comprise Parcels A through E and Echo Ramp represent

27 Republic Airport and Loomacres Wildlife Management, 2013, pg. 4.

28 McGowan, K.J. and K. Corwin, eds. 2008. *The Atlas of Breeding Birds in New York State*. Cornell University Press. Data also available online at http://www.dec.ny.gov/animals/51030.html . Accessed April 13, 2017.

potential habitat for avian species adapted to disturbed and developed habitats with high levels of noise and human activity associated with airport operations. Furthermore, the existing avian fauna at FRG is manipulated through hazing, depredation and habitat modifications under the WMP. Parcels A through E and Echo Ramp do not represent a significant habitat for native grassland birds, shoreline species or reclusive birds of woodland interiors.

Mammals: According to the WMP, resident large mammals at FRG include eastern cottontail (*Sylvilagus floridans*), racoon (*Procyon lotor*) and red fox (*Vulpes vulpes*). When observed, the latter two species are managed through harassment and lethal means, when necessary. As of 2013, whitetail deer (*Odocoileus virginianus*) had not been observed at FRG.

Eastern cottontail and eastern gray squirrel (*Sciurus carolinensis*) were observed at Parcels A and E during the 2017 field surveys. To determine other mammal species that may occur at the five Parcels, existing surveys of Long Island mammalian populations, including *The Mammals of Long Island, New York*[29] were consulted. Based on these resources, as well as an evaluation of existing ecological conditions, several other mammal species have been identified as potentially occurring at the five Parcels and Echo Ramp. An observed and expected mammal species inventory is included in Appendix C, Table D-3.

The small rodent species (e.g., mice, moles and shrews) included on the species inventory are expected to be the most abundant mammals at the five Parcels. However, due to their diminutive sizes and predominantly subterranean life histories, these species are not easily observed. Eastern chipmunk (*Tamias striatus*), Norway rat (*Rattus norvegicus*) and the primarily nocturnal Virginia opossum (*Didelphis virginiana*) may also occur at the five Parcels. Due to paved/unvegetated conditions, Echo Ramp does not represent a significant habitat area for mammals.

Herpetofauna: Due to paved/unvegetated conditions, Echo Ramp does not provide habitat for herpetofauna. To identify herpetofauna that may occur at Parcels A through E, an evaluation of existing conditions was performed during the 2017 field surveys. Additionally, the 1990-1995 New York State Amphibian and Reptile Atlas Project (NYSARAP) database[30] was consulted. The NYSARAP database lists 17 herpetofauna species as identified within the U.S. Geological Survey (USGS)

[29] Connor, Paul F. 1971. The Mammals of Long Island. New York State University of New York, New York Museum and Science Service.

[30] New York State Department of Environmental Conservation. 2014. New York State Amphibian and Reptile Atlas Project. Available online at: http://www.dec.ny.gov/animals/7140.html. Accessed April 14, 2017.

Amityville, New York Quadrangle between 1990 and 2007 (herpetofauna species list included in Appendix C, Table D-4.

Based on existing ecological conditions, Parcels A through E do not provide the necessary habitat requirements for many herpetofauna species on the NYSARAP inventory. Specifically, the developed conditions, landscaping and mowed turf grasses that characterize Parcels B, C and D preclude use of these Parcels by herpetofauna. The forested and successional communities at Parcel E represent potential habitat for several species. However, based on 2017 field observations, the Parcel and surrounding area do not include wetlands or surface waters required as year-round and/or breeding habitat by most of herpetofauna species on the NYSARAP inventory. Although a semi-permanently flooded pond exists at Parcel A, no adult life stages or evidence of herpetofauna breeding behavior (e.g., breeding calls, egg masses, larvae) were observed within or proximate to the pond during the May 3, 2017 field survey.

Taking the existing conditions described above into account, Parcels B, C, D and Echo Ramp do not represent significant habitat areas for herpetofauna. Parcels A and E provide potential habitat for two herpetofauna species on the NYSARAP inventory that commonly occur within dry, upland settings: eastern garter snake (*Thamnophis sirtalis*) and northern redback salamander (*Plethodon cinereus*).

3.3.2.3 Rare/Protected Species

Section 7 of the federal Endangered Species Act (ESA) (16 USC 1531-1544, implemented under 50 CFR Parts 17 and 402) requires federal agencies to determine "*whether any species which is listed or proposed to be listed may be present in the area of such proposed action*" for any project that is conducted, permitted, funded, or licensed by any Federal agency. Accordingly, Section 7 consultation with the United States Fish and Wildlife Service (USFWS) regarding federally listed species is required for the Proposed Project.

The Official USFWS Information for Planning and Consultation (IPaC) report for the Parcels and Echo Ramp indicates that habitat for three federally protected marine shorebirds, two plant species, and a bat may be present (see Appendix C for full report).[31] The three marine shorebirds are piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*) and roseate tern (*Sterna dougallii dougallii*). Also included in the report are sandplain gerardia (*Agalinis acuta*) and seabeach

[31] United States Fish and Wildlife Service. 2017. Information Planning and Consultation System Official Species List for Republic Airport – Stratosphere Parcel Development Project. Available online at: http://ecos.fws.gov/ipac/. Accessed May 8, 2017.

amaranth (*Amaranthus pumilus*), which are plants of undisturbed native grass prairies and marine shorelines, respectively. However, suitable habitat to support these five species does not exist at FRG, and therefore they are not expected to occur at Parcels A through E or Echo Ramp and were not observed during the 2017 field surveys.

The IPaC Report also includes the federally-threatened northern long-eared bat (*Myotis septenrionalis*). According to the USFWS *Northern Long-Eared Bat Fact Sheet*[32] this species is a medium-sized brown bat, ranging in size from 3 to 3.7 inches, with a wingspan of 9 to 10 inches. Winter hibernating habitat for northern long-eared bat occurs within caves, mines or similar habitats, while summer roosting habitat occurs either singly or in colonies, underneath the bark or in cavities or crevices of living or dead trees. At dusk, the bats emerge from roosts to feed on insects, which they catch in flight using echolocation or glean from vegetation and water surfaces. Foraging habitat includes forested understories, as well as the surfaces of aquatic habitats. Based on this life history and habitat description, the forested portions of FRG, including Parcels A and E, represent potential summer (roosting and foraging habitat for northern long-eared bat. USFWS defines the summer roosting and foraging season as extending from April 1 to October 31.

The northern long-eared bat is listed as federally threatened by the USFWS under section 4(d) of the ESA, due to significant population declines linked to white-nose syndrome fungal disease.[33] As Suffolk County is included among the counties containing hibernacula (winter hibernation sites) that are infected with white-nose syndrome, the provisions of the USFWS final 4(d) rule for northern long-eared bat, effective February 16, 2016[34] (hereinafter, "the final 4(d) rule"), are applicable to Suffolk County and FRG. The final 4(d) rule includes certain prohibitions against incidental take, which is defined as killing, wounding, harassing or otherwise disturbing a species that would occur incidental to, and is not the purpose of, an otherwise lawful activity. Pursuant to the final 4(d) rule, incidental take of northern long-eared bat within white-nose syndrome zone counties (i.e., Suffolk County) is prohibited if it occurs within a hibernaculum or if it results from tree removal activities that occur within 0.25-mile of a known, occupied hibernaculum. Incidental take of northern long-eared bat is also prohibited if it results from cutting or destroying a known, occupied maternity roost tree or other trees within a 150-foot

32 United States Fish and Wildlife Service. April 2015. Northern Long-Eared Bat (*Myotis septenrionalis*) Fact Sheet. Available online at: https://www.fws.gov/Midwest/Endangered/mammals/nleb/nlebFactSheet.html. Accessed April 14, 2017.

33 Federal Register Vol. 80, No. 63. Thursday, April 2, 2015.

34 Federal Register Vol. 81, No. 9. Thursday, January 14, 2016.

radius of a maternity roost tree during the pup season. The pup season duration is June 1 through July 31.

The final 4(d) rule further indicates that information for the locations of known, occupied hibernacula and maternity roost trees can be obtained from "*state Natural Heritage Inventory databases*." Accordingly, correspondence was submitted to the NYNHP to determine whether records exist for known, occupied northern long-eared bat occurrences at or in the immediate vicinity of Parcels A through E and Echo Ramp. In correspondence dated April 27, 2017, the NYNHP indicated that no such records currently exist (Appendix C, Agency Correspondence for NYNHP April 27, 2017 letter).

Based on the foregoing species summaries, habitat for the federally-listed piping plover, red knot, roseate tern, sandplain gerardia and seabeach amaranth does not occur at Parcels A through E or Echo Ramp. Based on existing vegetation communities, potentially suitable summer habitat for northern long-eared bat occurs at Parcels A and E. Despite suitable conditions, however, no NYNHP records for occurrences of this species exist for Parcels A through E, Echo Ramp and the immediate vicinity of these project areas.

New York State Endangered, Threatened and Special Concern wildlife species are listed and protected under 6 NYCRR §182, New York State and Endangered, Threatened and Rare plants are listed and protected under 6 NYCRR §193. According to the NYNHP, no records currently exist for known occurrences of rare or New York State-listed animals, plants or significant natural communities on or in the immediate vicinity of Parcels A through E and Echo Ramp. No such species were observed during the 2017 field surveys.

3.3.3 Farmlands

The Farmland Protection Policy Act (FPPA) of 1994 and its implementing regulations (7 Code of Federal Regulations (CFR), parts 657-658) regulate federal actions with the potential to convert farmland to non-agricultural uses. The FPPA assures that to the extent possible, federal programs are administered to be compatible with state and local units of government, and private programs and policies to protect farmland. The Parcels are located on the Airport property within a primarily industrial and commercial area.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) identifies the soil units underlying Parcels A, B, and C (Appendix D, Figure 8) and D and E (Appendix D, Figure 9). The southern end of Parcel B lies on Urban Land (Ur) and severely disrupted by the presence of two east-west oriented drainage structures. The northern half of Parcel B and all of Parcels A and C are within the Haven loam, 0-2 percent slope (HaA) soil unit. Parcel D lies within the HaA soil unit which, in that Parcel, is bounded by Riverhead sandy loam, 0 -3 percent slope (RdA) units. Parcel E, to the west of Parcel D, contains three soil

units. The northern two-thirds of the Parcel are marked by HaA and RdA units. The southern one-third, however, is characterized as Cut and Fill Land, gently sloping (CuB).

The Parcel B Ur and Parcel E CuB soil units are described as "not prime farmland" and are both disturbed. Soil units HaA (Prime Farmland) and RdA (Prime Farmland) are classified as by USDA NRCS as prime farmland. However, Parcels A, B, C, D and E all have been disturbed by prior development and their original top soils have been stripped or displaced by:

- Parcel A: development of a berm
- Parcel B: recontouring, taxiway, and storm drain development
- Parcel C: pavement and restaurant construction
- Parcel D: recontouring in support of taxiway and runway development
- Parcel E: Breslau Gardens residential subdivision, NYSDOT maintenance yard, and cut fill disturbance

Soil units classified in Suffolk County as Prime are present within the Airport boundary. However, the Airport was developed as a public facility in 1969 following its use as a private facility, which began in 1927. It is not located on or contiguous to active agricultural land. Accordingly, the Project would not convert pastureland, cropland, or forest considered to be important statewide or locally to non-agricultural use.

3.3.4 Hazardous Materials, Solid Waste, and Pollution Prevention

Requirements related to hazardous materials, solid waste and pollution prevention fall under various USEPA regulations, including the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (regulated under 40 CFR parts 300, 311, 355, 370 and 373), Resource Conservation and Recovery Act (RCRA) (regulated under 40 CFR parts 240-299), Toxic Substances Control Act (TSCA) (regulated under 40 CFR parts 745, 761 and 763), as well as NYSDEC regulations (including 6 NYCRR) and local regulations.

The FAA guidance requires that a Proposed Project be evaluated under this category for waste streams generated, potential hazardous materials that could be utilized during construction, the potential to encounter hazardous materials at contaminated sites during the Project and the potential to interfere with ongoing remediation of existing contaminated sites during the Project. An evaluation of these existing conditions at the Parcel level is provided below.

3.3.4.1 Parcel Review

A pedestrian walkover with visual inspection of the Parcels was conducted on April 5, 2017. A summary of observed conditions is provided, below.

Parcel A: Parcel A was observed to consist of wooded and wetland areas. Specific information regarding the wetlands on this Parcel is provided in Section 3.3.11. Minor amounts of debris were observed in several locations on this Parcel, which included tires, wood and refuse. Much of the debris was observed along the western property boundary, with refuse scattered in random locations.

Parcel B: Parcel B is landscaped with stormwater drainage structures. Stormwater drainage structures with at-grade grated covers were observed in the northern, central and southern sections of the Parcel. According to visual observations, the structures have a maximum depth of approximately 10 feet below ground surface (bgs). In addition, several utility manholes were identified in the southern portion of the Parcel, proximate to Republic Avenue. A taxiway intersected the northern portion of Parcel B from circa 1953 through circa 1985 according to the aerial photographs, although it was not necessarily in use between 1980 and 1984.

Parcel C: The abandoned "56th Fighter Group" Restaurant building (NYSHPO USN 10301.000836), an associated parking lot, and landscaped areas are present on Parcel C. The restaurant grouping was constructed in 1984. The restaurant closed in 2014 and a fire occurred after operations ceased. The building is not stable and no walkaround of its interior was permitted. Prior to the construction of the restaurant group, the Parcel was crossed by the same taxiway that intersected Parcel B. Historic aerial photographs dated 1953 through 1980 indicate that the taxiway was present. Numerous stormwater drainage structures were observed throughout the paved parking areas on this Parcel. There is no evidence that the drainage structures on Parcel C are connected to the drainage structures on Parcel B.

Parcel D: Parcel D was observed to consist of vacant landscaped areas adjacent to a runway. One manhole was observed on this Parcel, which appears to be a utility vault associated with a weather head/windsock.

Parcel E: Based upon a review of historic aerial photographs, several residences were historically present on Parcel E, with the first residence visible in aerial photographs from 1953. The 2007 archaeological report, authored by Weir et al., stated that the Parcel E area had residences as early as the 1930s.[35] These residences were part of the Breslau Gardens development that included Parcel E and extended to the north of Parcel E. Breslau Gardens Lots A, B, L, M, and N were present in the area now subsumed by Parcel E. The airport purchased the Breslau Gardens area in 1971 and between 1971 and 1973, the residences were demolished.

[35] William J. Weir, Jr., Roger L. Ciuffo and Hope E. Luhman. 2007. Reconnaissance (Phase I) Survey Republic Airport Development of Aircraft Hangar PIN 0903.55.101 Town of Babylon Suffolk County New York. Report submitted by The Louis Berger Group, Inc. to New York State Education Department for FAA/DOT.

During the April 5, 2017, visual inspection, several circular depressions were observed within the central and southeastern portion of Parcel E. These depressions were several feet in depth, with brick fragments along the bottom and edges, and a discharge pipe was observed entering one of the depressions. As such, it is assumed that these circular depressions are remnants of former cesspools associated with the historic residences. In addition, remnants of a potential concrete foundation were observed within the southeastern portion of Parcel E, which may also be associated with a former residential building.

Several large soil and debris piles were observed in the southeastern, southern and western portions of Parcel E. Many of the observed piles have been vegetated over, and as such, it could not be determined if former building materials are present within the piles. However, small mounds of concrete, piping and various building debris were observed throughout Parcel E. Cleared areas were observed along the westernmost and northwestern portions of the Parcel. Various refuse was also observed throughout Parcel E.

The northeastern portion of Parcel E is utilized as a NYSDOT storage lot. Various stored materials were observed on this Parcel, as well as several stockpiles of debris.

Three monitoring wells were identified adjacent to the northeast of Parcel E, which are associated with a groundwater plume which extends beneath Republic Airport (see Section 3.3.4.2 below).

Echo Ramp: The existing Echo Ramp is a paved area for aircraft parking and maneuvering and does not contain any occupied structures. Aircraft fueling operations occur at the existing Echo Ramp.

3.3.4.2 Background and Literature Review Documents

2017 EDR Database Report Review: Environmental Data Resources, Inc. (EDR) was retained to provide a computerized database search within an American Society of Testing and Materials (ASTM) Practice E1527-13-standard radius for the subject property (Appendix E). The database results were reviewed to determine if areas within the Parcels are present on any of the regulatory agency lists. Based upon the information provided in the EDR database report, although numerous releases have been identified for Republic Airport, no spills have been reported on the Parcels.

The Fairchild Republic site, located adjacent to the north and hydraulically upgradient of Republic Airport, is identified on the Superfund Enterprise Management System (SEMS) database. The SEMS database contains information on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of CERCLA. The SEMS database contains sites which are either proposed to, or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. This database was formerly known as the

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) until renamed to SEMS by the USEPA in 2015.

Based upon information provided in the EDR database report (see Appendix E) and information available on the NYSDEC online databases, Fairchild Republic manufactured aircraft parts from 1931 through 1987.[36] Historic activities at the site resulted in soil and groundwater contamination beneath the site, which included perchloroethylene (PCE) and trichloroethylene (TCE).

The contaminated groundwater plume migrated off the site, beneath Republic Airport. All properties serviced by private potable wells were connected to public water service or were given the opportunity to connect to public water. Among other investigation and remedial activities, a monitoring-well network was installed to monitor and remediate the contaminated groundwater plume. Currently, a groundwater pump and treat system is in operation on the property to the east of Parcel E and three of the groundwater wells utilized to monitor the plume are located to the northeast of Parcel E.

NYSDEC Records – 2017: The EDR database report listed information that indicated the Fairchild Republic site's contaminated groundwater plume was present beneath Republic Airport including parts of Parcels C, E, and Echo Ramp. To obtain information regarding current groundwater concentrations and information related to the size and location of the contaminated groundwater plume, the Sponsor submitted a Freedom of Information Law (FOIL) request on April 20, 2017 to the NYSDEC requesting recent records regarding this site. Following telephone and email conversations, on May 24, 2017, NYSDEC provided several reports to the Sponsor. The reports included a groundwater monitoring report[37] and an Operation, Maintenance, and Monitoring Plan for the Groundwater Remedy.[38] Each of these documents were reviewed in preparation of this section.

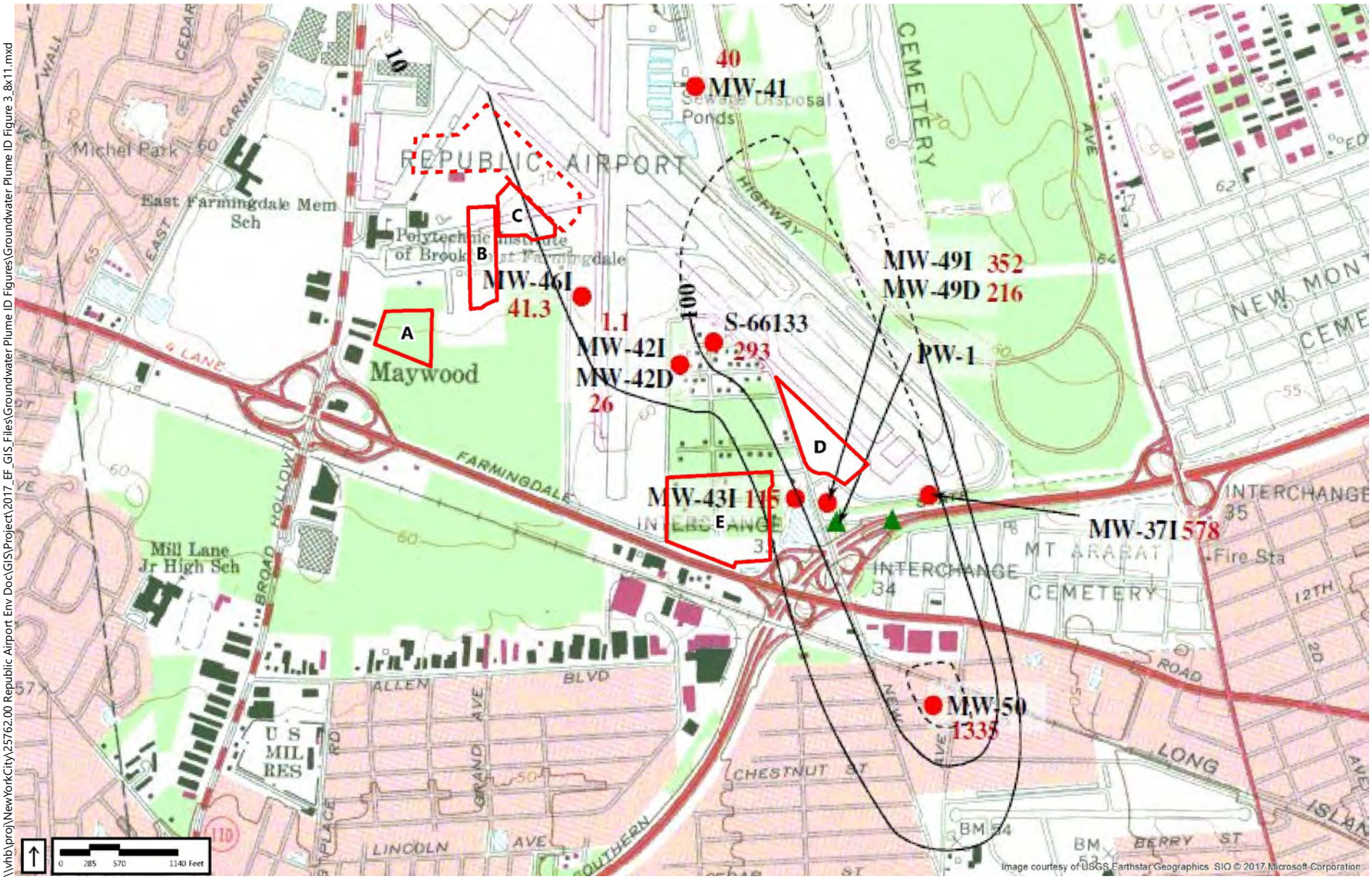
Maps depicting the groundwater plume associated with the Fairchild Republic site as of August 2016 are included as Figure 11 and Figure 12. Based upon the available information, groundwater beneath Republic Airport and specific areas of Parcels C, D, E, and Echo Ramp is affected by the chlorinated VOC plume associated with the Fairchild Republic site. However, Parcels A and B are located outside of the current footprint of the groundwater plume.

36 https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

37 Daniel J. St. Germain. 2017 (January 31). Letter Report: Mr. St. Germain to Mr. Robert Cocoran re: Fairchild Republic Main Plant Site, Town of Babylon, Suffolk County Site No. 1-523-130.

38 Malcolm Pirnie, Inc. 2009 (May). Operation, Maintenance, and Monitoring Plan of the Groundwater Remedy Fairchild Republic Main Plant Site East Farmingdale, New York, Site No. 1-52-130. Report prepared by Malcolm Pirnie, Inc., for Mairoll, Inc.

The eastern half of Parcel C, the entirety of Parcel D, the northeastern corner of Parcel E and the eastern half of Echo Ramp are located on the surface above the footprint of the plume. The groundwater beneath the eastern part of Parcel C, the northeastern corner of Parcel E and the eastern portion of Echo Ramp contains total VOC concentrations of between 10 and 100 micrograms per liter (ug/l) (aka parts per billion [ppb]). Groundwater beneath Parcel D contains total VOC concentrations between 100 and 1,000 ug/l. Each specific VOC has a different NYSDEC groundwater standard. However, the three wells located to the northeast of Parcel E, wells MW-43S, MW-43I and MW-43D, were installed to depths of approximately 80 feet bgs, 200 feet bgs and 350 feet bgs, respectively.



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Development Parcels A-E

Echo Ramp

Monitoring Well

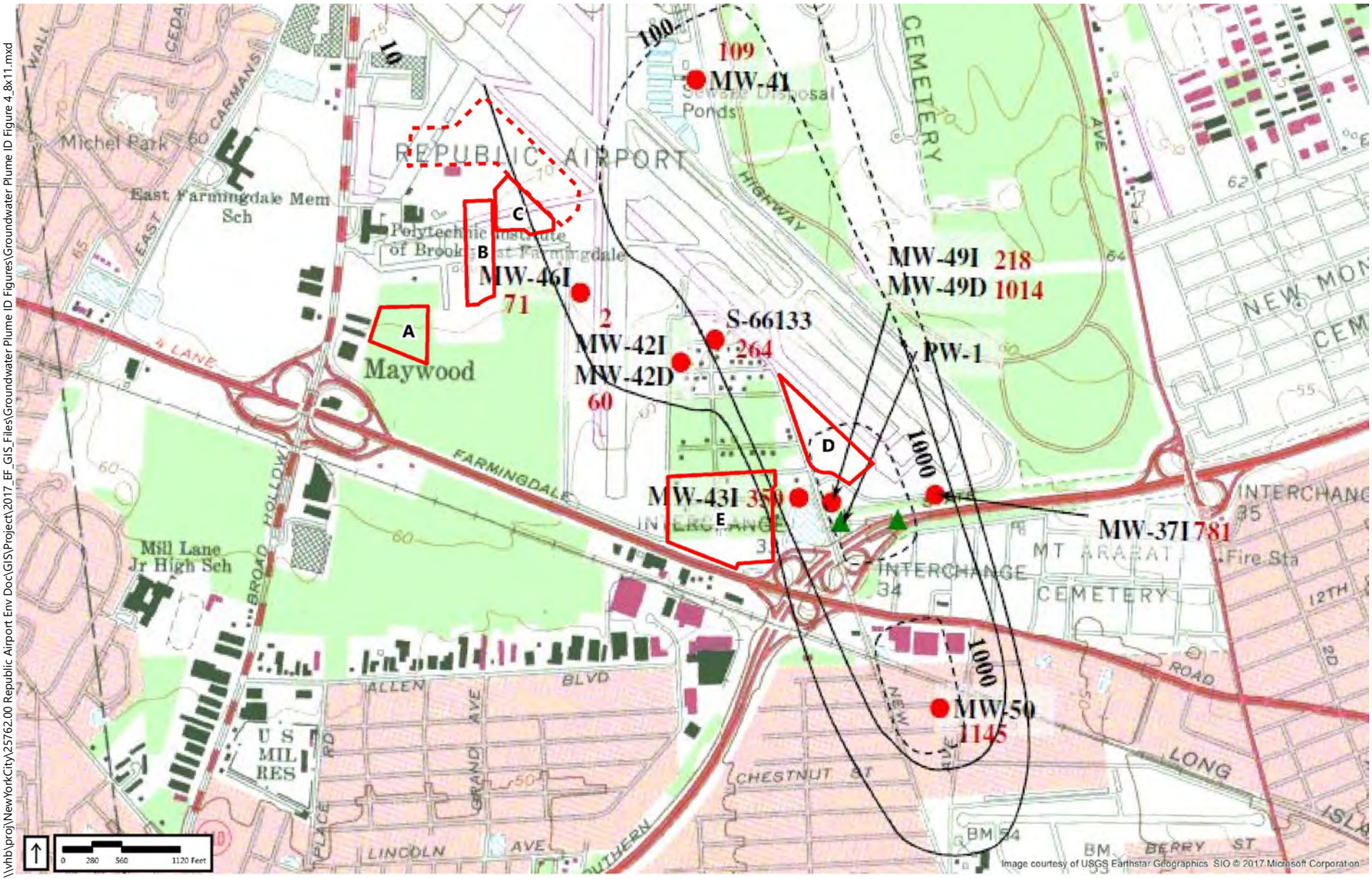
Recovery Well

1157 Total VOC (ug/L) (May include compounds at estimated ["J" qualifier] concentrations

Republic Airport Talon Parcel Development
Draft Environmental Assessment | East Farmingdale, Town of Babylon, NY

Site-Related Total Chlorinated VOC's, Intermediate Zone - November 2013

Source: Sources: Henningson, Durman, & Richardson Architecture & Engineering P.C. (HDR) Groundwater Sampling Report (January 31, 2017).



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Development Parcels A-E

Echo Ramp

Monitoring Well

Recovery Well

578 Total VOC (ug/L)

Republic Airport Talon Parcel Development
Draft Environmental Assessment | East Farmingdale, Town of Babylon, NY

Site-Related Total Chlorinated VOC's, Intermediate Zone - August 2016

Source: Sources: Henningson, Durman, & Richardson Architecture & Engineering P.C. (HDR) Groundwater Sampling Report (January 31, 2017).

According to the information provided by the NYSDEC, sediments beneath the plume are divided into three aquifers; the Upper Glacial aquifer, the Magothy aquifer and the Lloyd aquifer. The Upper Glacial aquifer is present from grade level to approximately 50 feet below mean sea level and consists of fine to coarse grained sand with minor deposits of silt and clay. Based upon the topographic gradients of the project area, the Upper Glacial aquifer is present to between 110 and 123 feet below grade surface (bgs) beneath Parcel A, between 112 and 120 feet bgs beneath Parcel B, between 115 and 122 feet bgs beneath Parcel C, between 105 and 110 feet bgs beneath Parcel D, between 104 and 115 feet bgs beneath Parcel E and between 115 and 122 feet bgs beneath Echo Ramp.

Gardiners Clay is present at the base of the Upper Glacial aquifer. The Magothy aquifer is located beneath the Gardiners Clay and extends to the top of Raritan Clay that is greater than 800 feet below ground surface. A clay layer is present within the Magothy aquifer which separates this aquifer into two separate hydraulic units. The Lloyd aquifer is located beneath the Magothy aquifer.

The groundwater wells utilized to monitor the plume are divided into three categories, referred to as wells screened in the "shallow aquifer," the "intermediate aquifer," and the "deep aquifer." The "shallow aquifer" is the Upper Glacial aquifer, the "intermediate aquifer" is the upper 175 feet of the Magothy aquifer, and the "deep aquifer" is the deeper portion of the Magothy aquifer.

The groundwater monitoring report provided by the NYSDEC indicates that the wells currently sampled to monitor the plume are screened in the intermediate aquifer. However, the current pump and treat remedy being utilized to address the groundwater contamination is designed to address total VOC concentrations greater than 200 ug/l. As such, there is a potential that wells screened in the shallow aquifer (the Upper Glacial aquifer) contain concentrations of VOCs below 200 ug/l but above applicable NYSDEC groundwater standards. Thus, although it is unlikely that vapors associated with the VOC plume would travel upward within soils to the surface or excavation depth of the Proposed Project at concentrations which could present a hazard, this potential cannot be entirely dismissed, as concentrations of VOCs in groundwater in the Upper Glacial aquifer are unknown. Notwithstanding the above potentially impacted groundwater will not be encountered during the Proposed Project activities.

Phase I Archaeological Survey – 2007: The Phase I archaeological report authored by Weir et al. in 2007 included the results of their systematic shovel testing and pedestrian survey in the Breslau Gardens area. As noted above, the 2007 survey area encompassed most of Parcel E and an area to the north of Parcel E that were previously part of the same residential development. Based upon the information provided in Weir et al., several foundation remnants and cesspool remnants were identified to the north of Parcel E. Berms and "push piles" of materials described as "construction debris" were identified on Parcel E. Various shovel tests identified the presence of asbestos shingles, mortar, concrete and refuse.

The Weir et al. 2007 shovel test and surface observations are consistent with the observations made during the April 5, 2017 visual inspection, discussed above.

3.3.4.3 Potential Hazardous Materials

The term "hazardous materials," which are also referred to as hazardous waste or hazardous substances, refers to contaminants, petroleum projects, dangerous goods and industrial waste. Based on historical data and field observations, the following potential hazardous materials or locations may or do occur on the Parcels: asbestos, lead-based paint, polychlorinated biphenyls (PCBs), and contaminated sediments within stormwater drainage structures, former cesspools, and potentially, an oil/water separator that may be located at the former restaurant.

Asbestos: Asbestos is the name given to a group of fibrous silicate materials, typically those of the serpentine group. The tensile strength, flexibility, and non-flammability of asbestos led to many uses including structural materials, brake linings, insulation and pipe manufacture. Asbestos is a concern as an air pollutant, because when it is inhaled, it may cause asbestosis, mesothelioma, and bronchogenic carcinoma. In 1989, the USEPA announced regulations that would phase out most uses of asbestos by 1996.

As the restaurant on Parcel C was constructed in 1984, there is a potential for remaining building materials to contain asbestos. With respect to Parcel E, previous residential buildings dated between the early 1930s and 1970 and demolished between 1971 and 1973 likely contained asbestos-containing materials. As there is evidence that the former residential structures were demolished in-place and/or materials associated with the former residences have been stockpiled on Parcel E, asbestos may be present within the on-site soils and stockpiles in this location.

Lead-Based Paint: In 1978, the U.S. Product Safety Commission issued a ban on paints or surface coatings that contain greater than 0.06 percent lead. Lead-based paint (LBP) is defined by the EPA and Housing and Urban Development (HUD) guidelines as paint or other surface coating that contains lead equal to or greater than 0.5 percent, 5,000 parts per million (ppm) or 1.0 milligram per square centimeter (mg/cm2) as measured by laboratory analysis or X-ray fluorescence (XRF). Because the restaurant on Parcel C was built in 1984, it is unlikely that lead-based paint is present within this building. In contrast, the residential structures formerly located on Parcel E dated as early as the 1930s. As these structures were likely demolished in-place and/or materials associated with the residences have been stockpiled on Parcel E, on-site soils and stockpiles on this Parcel may be impacted with lead.

Polychlorinated Biphenyls: PCBs were used until 1978 and are a group of compounds that have extremely high physical and chemical stabilities which led to their being used in many applications, including heat transfer fluids, hydraulic fluids, and dielectrics. PCBs are often found in transformers, capacitors and hydraulic

systems. Building materials, including window caulking, have the potential to contain PCBs. Electrical equipment containing PCBs are still in use and can pose a serious health hazard if fluids come in direct contact with humans, soil or groundwater. Fires involving electrical equipment containing PCBs can cause the material to be dispersed over a large area and potentially expose many people to a health risk. Because of the health hazard associated with PCBs, they are regulated under the Toxic Substances Control Act (TSCA).

The restaurant on Parcel C was constructed in 1984 and it is unlikely that building materials associated with the restaurant contain PCBs. The earlier residential structures on Parcel E were likely demolished in-place and/or materials associated with the residences were stockpiled on Parcel E. The on-site soils and stockpiles on this Parcel may be impacted with PCBs.

Stormwater Drainage Structures: Stormwater drainage structures with at-grade access were observed on Parcel B and Parcel C. Additional overflow drainage structures may be present beneath the surface of these Parcels. Sediments within the stormwater drainage structures on Parcel B have a low potential to be impacted with VOCs, semi-volatile organic compounds (SVOCs) and metals associated with typical runoff from the adjacent roadways, and with pesticides which may have been applied to the landscaped areas. Sediments within the stormwater drainage structures on Parcel C have a moderate to high potential to be impacted with VOCS, SVOCs and metals associated with typical runoff associated with normal usage of a parking lot on this Parcel.

Abandoned Cesspools: Evidence of several former cesspools was observed on Parcel E. While the presence of these cesspool remnants indicate that the former residences may have been demolished in place and that building materials associated with the former residences may remain on Parcel E, it is unlikely that sediments within the former cesspools are impacted with VOCs or SVOCs in association with the former residences. There is a potential that sediments within and surrounding the cesspools may be impacted with concentrations of asbestos, lead (associated with lead-based paint) and PCBs above applicable standards based upon the potential that the former residences were demolished in place.

Potential Oil/Water Separator: As access to the interior of the former restaurant was not possible, it is assumed that an oil/water separator may be present on Parcel C. The oil/water separator, if present, may be impacted with VOCs, SVOCs and/or metals.

3.3.4.4 Solid Waste

The Solid Waste Disposal Act (SWDA) of 1965 (42 USC Sections 6901 et Seq.) provides regulations regarding the disposal of solid waste to reduce danger to human health and the environment. Under the SWDA, solid waste includes garbage, refuse, and sludge from waste water treatment plants, water supply treatment

plants, and air pollution control facilities. The term also includes other discarded material, including solid, liquid, semisolid, or contained gaseous material generated from industrial, commercial, mining, agricultural and/or community activities.

No waste water treatment plants, water supply treatment plants, or air pollution control facilities are located on the Parcels.

Currently, garbage and refuse are not generated on any of the Parcels. Historically, garbage and refuse likely was generated by the restaurant on Parcel C and by the residences on Parcel E.

3.3.5 Historical, Architectural, Archaeological, and Cultural Resources

Historic and cultural resources are regulated under Section 106 of the National Historic Preservation Act (NHPA), as amended (54 USC 300101 et seq). The Act is codified in 36 CFR 800.16(d). Resources protected by the NHPA include archaeological sites, structures, buildings, objects, landscapes, and districts. The historical and cultural resources evaluations documented in this EA were conducted to support FAA's requirements for compliance with Section 106 in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures.* The assessment also considered the New York State Historic Preservation Act, Section 14.09 regulations.

The NHPA defines an Area of Potential Effect (APE) as the "geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." The APE for the proposed activities addresses direct impact locations. The direct impact area is all land that would be subject to disturbance during the preparation and implementation of the proposed activities. Direct impacts also may occur in locations that may be affected by the removal of existing fence and any other landscape actions that would require breaking ground.

Per NYOPRHP/New York Archaeological Council-prepared survey guidelines,[39] no APE for indirect effects was defined because the settings of the eligible buildings within the 1-mile radius do not contribute to the buildings' NRHP significance. Further, four of the five eligible properties are airport related and not affected by indirect impact categories such as air emissions and noise.

[39] The New York Archaeological Council. 1994. Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State. Adopted by the New York State Office of Parks, Recreation and Historic Preservation.

Based on available records at the NY SHPO, no systematic cultural resources survey has been conducted on any Parcel except Parcel E.[40] The only previously inventoried cultural resource, an archaeological scatter (NY SHPO USN 10301.000156), was identified during the 2007 Parcel E investigations and subsequently determined not eligible to the S/NR.

The 1-mile study area contains 24 previously inventoried archaeological sites, buildings, or structures. Of these 24 resources, five have been determined eligible to be listed on the State and National Registers of Historic Places (S/NR). These include the S/NR-listed Sisters of St. Dominic Motherhouse Complex, which is assigned a S/NR designation of 07NR05700, Republic Airport Hangar #2 (USN 10301.000327), Republic Airport Hangar #3 (USN 10301.000136), Republic Airport #4 (USN 10301.000137), and the Seversky Airplane Assembly Plant (USN 10301.000164). The three hangars are within the Airport ALP. The Seversky Plant is outside of the Airport boundary on Conklin Street but was historically tied to Airport development (see Appendix D for additional information about the listed and eligible properties).

The remaining sites and properties include the "56th Fighter Group" Restaurant, which was reported to NY SHPO in the NY SHPO Cultural Resources Information System (CRIS) project notification for this Project. The restaurant was constructed in 1984 and is located on Parcel C. NY SHPO assigned it USN 10301.000836 and determined the building not eligible to the S/NRHP. The archaeological site on Parcel E included brief descriptions of the thin artifact scatter, cesspits, and foundation remnants identified during the 2007 Louis Berger survey.

The other resources in the study area include:

- 5 private residences (USNs 05903.000663, 05903.000684, 10301.000091, 10301.000325, 10301.000566)
- 2 schools (USNs 05916.000008, 10301.000115),
- 2 Long Island Rail Road bridges (USNs 05916.000018, 10301.000094),
- 1 Southern State Parkway Exit [Exit 33] (USN 10301.000374), and
- 1 commercial building (USN 10301.000840)

None of the 13 sites listed above have been determined eligible to the S/NRHP.

The NYSHPO was notified on April 4, 2017 by electronic submission of the project and an APE for direct impacts. By electronic transmission dated April 5, 2017, the NY

[40] William J. Weir, Jr., Roger L. Ciuffo and Hope E. Luhman. 2007. Reconnaissance (Phase I) Survey Republic Airport Development of Aircraft Hangar PIN 0903.55.101 Town of Babylon Suffolk County New York. Report submitted by The Louis Berger Group, Inc., to New York State Education Department for FAA/DOT.

SHPO assigned Project Review number 17PR02297 to the Proposed Project (Appendix D). Subsequently, the NYSHPO commented that based on their review, "the New York SHPO has determined that no historic properties will be affected by this undertaking."[41] Accordingly, further assessment of this impact category is not warranted.

3.3.6 Land Use

FAA Order 1050.1F, Change 1 outlines FAA's responsibilities regarding the Aviation Safety and Noise Abatement Act of 1979, as amended (49 USC 47501-47507; 14 Code of Federal Regulations [CFR] Part 150). One aspect of compliance with the Act is that proposed activities should be compatible with existing and planned land uses at the proposed site of implementation.

Redevelopment actions are proposed for each of the five Parcels and Echo Ramp (see Section 1.4) that will be compatible with the existing operations of the airport facility. The Parcels and Echo Ramp are located solely within Republic Airport, which is approximately 530 acres in size. The land uses within a ½-mile radius of a polygon containing the five Parcels and Echo Ramp were identified as the study area. This distance was chosen because this area is the most likely to be experience visual or traffic effects or potential compatibility issues as a result of the Proposed Project. The study area included parts of the following civil divisions: East Farmingdale, Village of Lindenhurst, and Hamlet of North Amityville.

The Long Island Index classifies land uses within the ½-mile study area as transportation, industrial, cemetery, residential, commercial, vacant, utilities, and community facilities (Figure 13; Table 8). Transportation uses, including the Airport, account for 47.6 percent of the study area (587.9 acres).

[41] Michael F. Lynch. 2007. Letter: Lynch to Carol S. Weed, VHB, re: FAA, Proposed Long-term Lease of Five Development Parcels, Farmingdale Republic Airport, Babylon, NY 17PR02297.

Table 8 Land Use Classifications Within the ½-Mile Study Area

Land Use Classifications	Acres	Percentage
Transportation	587.99	47.60%
Industrial	287.7	23.29%
Cemetery	229.6	18.59%
Residential	69.0	5.59%
Commercial	38.8	3.14%
Vacant	15.8	1.28%
Utilities	3.5	0.28%
Community Facilities	2.9	0.23%
Total	**1,235.4**	**100%**

Source: Long Island Index.

Educational, institutional, and hotel uses operate within the Airport property and serve the aviation activities. However, if more than one use is present on a single parcel, the primary use is determined and assigned to that parcel, based on the relative intensity compared to the other uses.[42] In this case, transportation is the primary use, as the airport is the most intense use on the property.

Industrial (287.7 acres) and commercial uses (38.8 acres) are mixed throughout the study area, mainly along the NY-110 (Broadhollow Road) corridor and west of NY-110. Various industrial uses also exist south of both of NY-10 9 and the Long Island Railroad tracks. Small industrial uses abut Parcel E to the east. Some of the commercial uses are in the form of retail shopping centers, including a portion of Airport Plaza at the northern end of the study area and Republic Plaza, which abuts Parcel B to the east and Parcel A to south. Both commercial uses are located within the Republic Airport property boundary, along with another industrial use east of NY-110 and north of Grumman Lane. A pocket of industrial uses is also present directly east of the Southern State Parkway, between NY-109 and the railroad tracks, approximately 1,075 feet from the closest Parcel. Generally, the commercial establishments in the study area either sell retail goods or are service-based including restaurants, entertainment, and recreation uses among others.

The commercial and industrial uses, inside and outside the Airport boundary, are similar functionally.

[42] Suffolk County Department of Planning. 2007 Existing Land Use Inventory, Western Suffolk County. June 2007

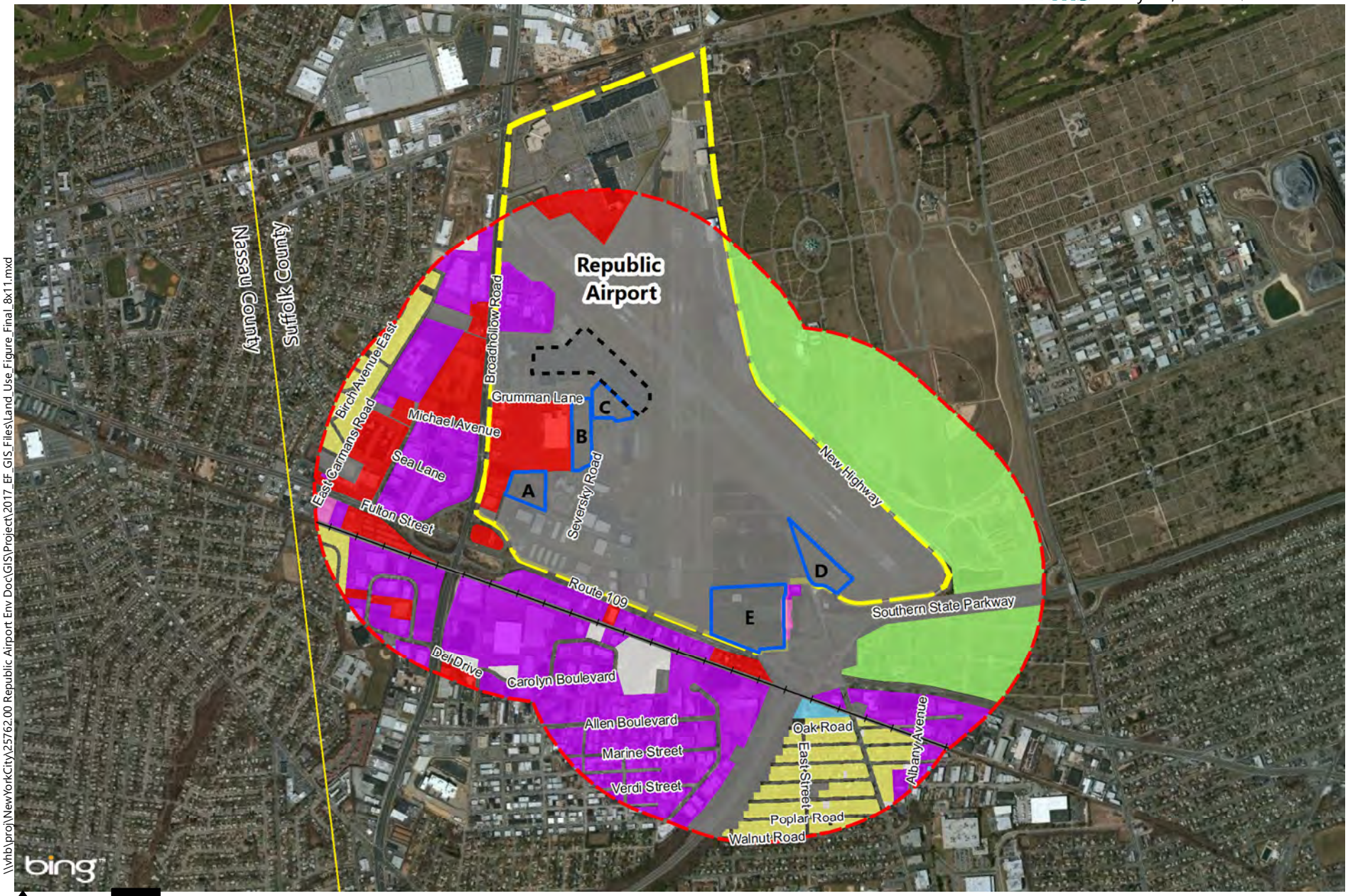
Public cemeteries (229.6 acres) are clustered northeast, east, and southeast of the Project. St. Charles/Resurrection, Catholic and Ararat cemeteries are approximately 1,050, 3,600 and 630 feet, respectively, from the nearest Parcel.

Residential uses (69.0 acres) are clustered in the southeast portion of the study area, east of the Southern State Parkway and towards the edge of the western boundary of the study area, south of the railroad tracks. These residential uses are mostly in the form of single-family detached homes. These residential areas were developed between 1948 and 1954,[43] over 20 years after the airport was established.

A small number of utility and vacant land parcels are scattered within the study area. Specifically, one utility use is found immediately north of the railroad tracks at the southwestern border of the study area and another abuts Parcel E to the east. The only community facilities use is Farmingdale First Baptist Church, located immediately south of the railroad tracks and approximately 845 feet from the nearest Parcel.

The land use classification of Parcels A, B, C, D, and E and Echo Ramp is Transportation. The redevelopment activities proposed within the five Parcels are consistent and compatible with this land use classification and the predominant land use classification in the study area. The activities proposed do not deviate from the existing functions on the FRG property and would support the operation of the Airport. Accordingly, no further assessment of this impact category is necessary.

[43] USGS Historical Topographic Map Explorer. USGS Amityville 7.5-minute quadrangle sheets, 1947 and 1954.



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0 0.125 0.25 0.5 Miles

Republic Airport Talon Parcel Development
Draft Environmental Assessment

East Farmingdale, Town of Babylon, NY

- Development Parcels A-E
- 1/2-Mile Radius
- Republic Airport Property Boundary
- Echo Ramp
- Commercial
- Community Services
- Industrial
- Cemetery Use
- Residential
- Transportation
- Utilities
- Vacant

Land Use

Source Info: (1) Long Island Index, Accessed March 2017, (2) 2013 Aerial: 2013 NYS Digital Ortho-imagery, NYSITS, 2013, (3) Streets: NYSITS, 2014

3.3.7 Natural Resources and Energy Supply

Under 40 CFR 1502.16 (e) and (f), consideration must be given to the energy requirements of the proposed activities and the use of natural or consumable resources. In the case of Preferred Alternative, three utility types and three natural and consumable resources would be used. The utilities are electricity, natural gas, and telecommunications. The natural resources are limited to potable water and sewer lines. However, sand and aggregate will be used in construction. The consumable resources that will be used during construction are asphalt and aluminum for structural frames.

Republic Airport and its operators receive electrical service from PSEG and natural gas from National Grid. Telecommunications service is customer based. The local service providers are Cablevision, Light Path, and Verizon.

The natural and consumable resource providers are in some cases contract-specific. The Suffolk County Water Authority provides potable water service to the Airport. Sand and aggregate providers are present in Suffolk and Nassau counties. Recent airplane ramp paving at Republic Airport was conducted by Posillico Asphalt, located in Farmingdale, just north of the Airport.

The existing conditions and utility services to the Parcels are summarized below.

3.3.7.1 Parcel Conditions and Connections

Of the five Parcels, only Parcel A is an unimproved Parcel. However, its surface has been recontoured to construct a berm around a pond. The Parcel is currently covered with trees and underbrush. The Parcel has no existing utility connections and no current energy usage. The nearest existing water main, sanitary sewer, and electrical service lines are located along Seversky Road.

Parcel B is a landscaped open space with trees that lies immediately south of Grumman Lane and west of Republic Avenue. The Parcel has two existing east-west trending stormwater drains in the southern one-third portion of the Parcel and existing roadway lights bound on its east and north sides. The nearest existing water main, sewer and electrical service lines are located along the bounding roads, Grumman Lane and Republic Avenue.

Parcel C contains the abandoned "56th Fighter Group" Restaurant and a parking lot. The parking lot is lit with pole structures and the Parcel is serviced by potable water, sewer, and electrical lines. The adjacent Echo Ramp has ramp lighting.

Parcel D is currently a grassy triangular Parcel that lies immediately west of Taxiway Alpha and the Airport perimeter road. The Parcel has existing stormwater drains and runway lights separate the Parcel from the adjacent taxiway and perimeter road. The Parcel has no existing other utilities and no independent energy usage. Existing

electrical service is available along New Highway and along the existing perimeter road and taxiway.

Parcel E now is mostly covered in woods with underbrush. A part of it along its east side is used as a NYSDOT maintenance yard. Between the early 1930s and 1974, the Parcel hosted part of a residential subdivision known as Breslau Gardens. The development was serviced by potable water and electrical lines. As far as is known, however, no sewer lines were present as the residences had lot specific cesspools (see Appendix D for detail on the historic-era occupation). Today, the nearest existing water main and sanitary sewer is located just north of the Southern State Parkway Ramp along the eastern Parcel boundary; electrical service connection is available along Jackson Street.

3.3.7.2 Energy/Water Usage at Existing Stratosphere Air Facilities

There are two existing Stratosphere facilities at Republic Airport that contain elements similar to those that are being proposed for the Project. The existing facilities are 1) the Hangar 6 Building, with 10,800 square feet (sf) of office space on two floors and an approximately 30,000-sf hangar; and 2) the Hangar 7 FBO Building, which has 22,600 square feet of office space on three floors and an approximately 30,000-sf hangar. One parking area is associated with the Hangar 7 FBO Building. The existing electricity, gas, and water usage for these two facilities are presented in Table 9.

Table 9 Annual Energy and Water Usage for Existing Stratosphere Facilities, 2016

	Electricity (kWh[a])[1]	Gas (Therms[b])[2]	Water (Gallons)[3]
Hangar 6 Maintenance Building Office Space (10,800 sf) Hangar (30,000 sf)	226,821	35,259	656,078
Hangar 7 FBO Building Office Space (22,600 sf) Hangar (30,000 sf)	478,671	23,888 T	

Source: Stratosphere

[a] kWh (kilowatt hour) = a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour.

[b] Therm = a measure of heat energy equivalent to 100,000 British thermal units.

[1] Electricity annual estimate based on the January 30-February 27, 2017 billing period

[2] Based on billing periods from January 24, 2016 to January 23, 2017

[3] Water Usage data provided for both the Hangar 6 and Hangar 7 buildings combined; based on billing periods from January 1, 2016 to December 31, 2016.

3.3.8 Noise and Noise-Compatible Land Use

The following was prepared to assess the potential increase in aircraft noise impacts from Stratosphere's proposed development at Republic Airport. The Sponsor used the Area Equivalent Method (AEM) to determine the potential change in noise levels (referred to as contours), based on the projected increase in the total aircraft operations[44] at the Airport resulting from the proposed action. The Sponsor's analysis demonstrates that the induced demand created by the proposed action will not result in a change in existing noise levels.

3.3.8.1 Current and Anticipated Aircraft Usage

NYSDOT provides leases to FBO's at FRG to accommodate aircraft that currently operate and are projected to operate at the Airport. The Proposed Project is principally designed to accommodate existing and projected demand.

Currently, approximately 210,000 annual operations occur at the Airport, based on FAA figures. In addition to the current number of operations at the Airport, Stratosphere has recently entered into aircraft servicing agreements, unrelated to the Proposed Project, that could result in some aircraft coming to Republic that normally would not have come to the Airport. As a result of these servicing agreements, Stratosphere may attract approximately 6 new aircraft operations per year that would not have operated at the Airport without Stratosphere. The addition of six aircraft operations attracted by Stratosphere equates to a growth of approximately .003 percent in total operations (6 operations/210,000 total operations).

Although the Proposed Project will principally meet existing and projected demand for aircraft operations at the Airport, it is estimated that the Proposed Project will result in some very modest induced growth in aircraft operations. It is anticipated that the Proposed Project will be operational by 2020 at which time annual operations at the Airport will be approximately 212,000, according to FAA estimates. At that time, the Proposed Project is anticipated to attract 10 new aircraft operations annually that would not have operated from the Airport without the new Project facility. This equates to a .005 percent increase in total operations at the Airport (10 operations/212,000 total operations), or approximately one aircraft operation per month.

[44] Aircraft Operation: a landing or a takeoff by an aircraft. Assuming an aircraft that arrives at FRG would at some point depart, each aircraft would result in two operations – a landing and a takeoff.

Put in terms of daily operations, the Stratosphere FBO currently serves[45] approximately 5 to 6 aircraft per day that arrive and depart from the Airport. Prior to Stratosphere becoming an FBO, those 5 to 6 aircraft were serviced by one of the other FBOs at the Airport. At full build-out in 2020, Stratosphere is estimated to be able to service 10-12 aircraft per day over the next one to two years, 15 aircraft per day in three to five years, and 20 aircraft per day after five years. This increase in Stratosphere's servicing capacity would principally meet existing and projected demand at the Airport.

Accordingly, the construction of additional hangars and parking is expected to principally meet existing and projected demand and have a very modest impact on the number of aircraft being based or operating at the Airport.

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

According to FAA Order 5050.4B and FAA Order 1050.1F and as discussed in the *Environmental Desk Reference for Airport Actions*, the FAA must evaluate proposed airport development actions to determine if they would cause social impacts. This evaluation should consider socioeconomic effects, effects on health and safety risks to children, and an assessment of the potential to cause disproportionate and adverse effects on low-income or minority populations. FAA guidance, which implements Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, requires all Federal agencies to identify and address disproportionate and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. For this analysis, the thresholds for defining environmental justice populations[46] are as follows:

Low-income community: 15% or more of a Census tract population is earning an income at or below the poverty level.

Minority community: 56% or more of the population is defined as persons who are American Indian and Alaska Native, Asian, Black or African American, Hispanic or Latino, and Native Hawaiian and other Pacific Islander.

[45] Stratosphere was certified by the New York State Department of Transportation as a Fixed Base Operator at Republic Airport in September 2015.

[46] Thresholds are based on the thresholds for defining environmental justice populations in the New York Metropolitan Transportation Council (NYMTC) Plan 2040: Appendix 4, Environmental Justice and Title VI (September 2013; "NYMTC Plan 2040"). NYMTC is the designated Metropolitan Planning Organization for the New York metropolitan area.

There are 12 Census tracts within a 1-mile radius of the Project.[47] Census tracts 1223.00, 1224.03, 1224.04, 1234.02, 1234.01, 1232.02, 1232.01 are in Suffolk County, New York, and Census tracts 5206.00, 5205.02, 5204.02, 5204.01, and 5201.00 are in adjacent Nassau County, New York, to the west. The Census tracts within Suffolk County span parts of East Farmingdale North Amityville, West Babylon, Wyandanch, and North Lindenhurst. In Nassau County, the Census tracts cover portions of South Farmingdale and the Village of Farmingdale. The Project site is located within Census Tract 1223.

The Project is expected to generate approximately 197 temporary, FTE construction-related jobs, of which 73 are expected to be local.[48] These jobs would contribute to the local economy without inducing substantial economic growth that may otherwise disrupt the community, impact housing availability, cause the relocation of businesses, reduce accessibility to the Airport, or produce a substantial change in the community tax base. The Project will not involve land acquisition.

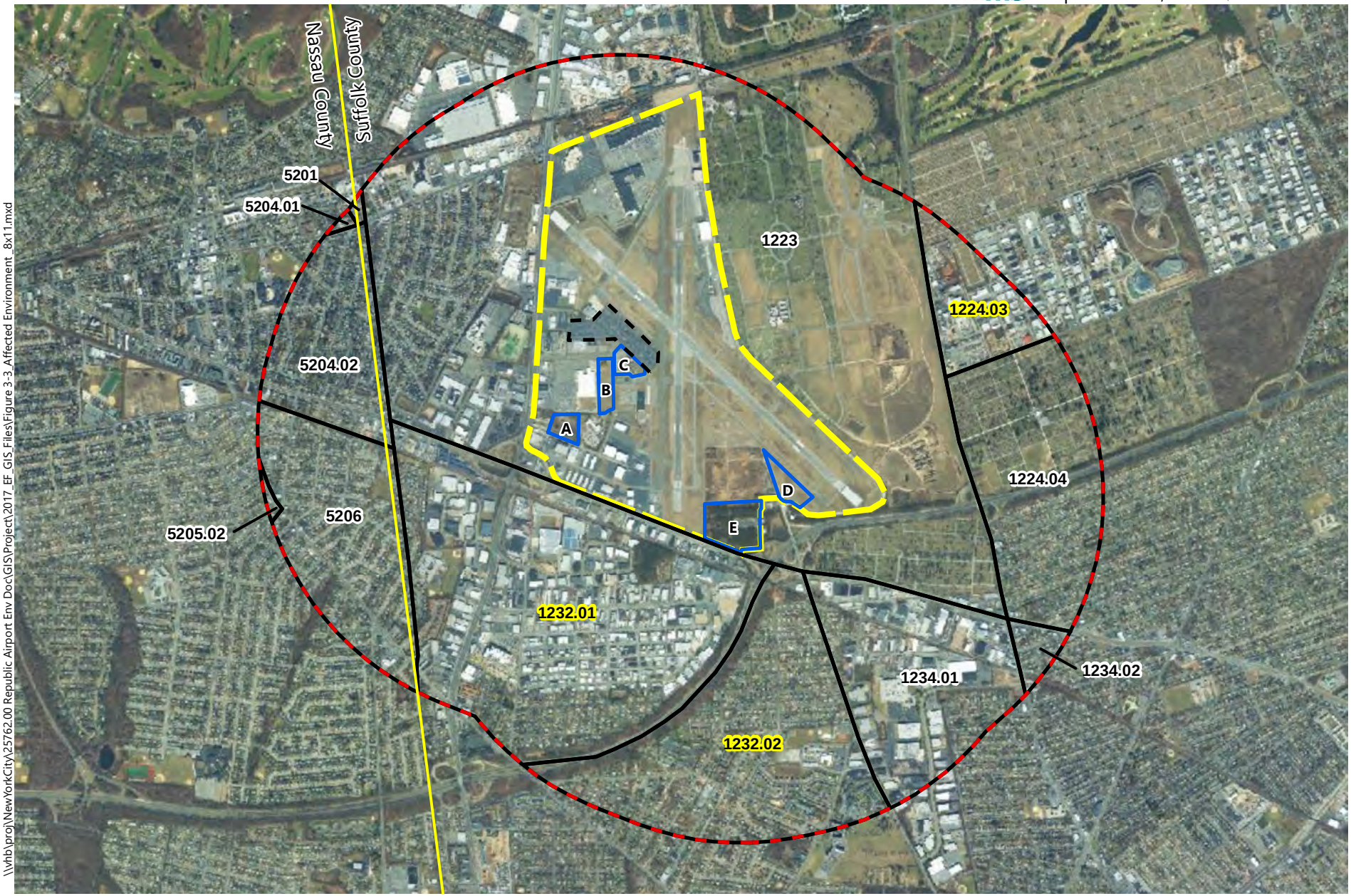
According to the U.S. Census Bureau's 2011-2015 American Community Survey 5-year estimates, none of the twelve Census Tracts contain a poverty-level population of 15% or above. Minority populations are defined as all racial or ethnic population groups except non-Hispanic White. Of the Census tracts identified within the 1-mile radius of the Project, three Census tracts in 2015 reported a minority population of 56% or greater (Census tracts 1224.03, 1231.01, and 1232.02). Census tract 1224.03 is located approximately 0.62 miles east of Parcel D. Census tract 1232.01 abuts the southern boundary of Parcel E, but the residential population per the Long Island Index is southwest of Parcel E (Figure 14). Census tract 1232.02 is approximately 460 feet south of Parcel E and its residential population is located south of Parcels D and E.

Although minority populations are present within a 1-mile radius of the Project site, the proposed activities would be confined to the immediate vicinity of the five Parcels and Echo Ramp, and therefore are not expected to create offsite impacts at a distance that would affect the census tracts with minority populations. As a result, the Proposed Project is not anticipated to have disproportionately high and adverse effects on these minority populations. Similarly, the Project is not expected to pose a disproportionate health or safety risk to children in the community because products and substances that a child is likely to encounter or ingest (such as air,

[47] United States Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Census Tracts geographically identified within a 1-mile radius of the Project Site via American Factfinder. Accessed 2017.

[48] Economic Impact Analysis of the Long-Term Lease of Five Development Parcels at Republic Airport, Economic Development Research Group, Inc., April 8, 2016.

food, drinking water, recreational waters, soil, or products they might be exposed to) would not be affected by the Project. Accordingly, further assessment of these impact categories is unnecessary.



\\vhb\proj\NewYorkCity\25762.00 Republic Airport Env Doc\GIS\Project\2017_EF_GIS_Files\Figure 3-3_Affected Environment_8x11.mxd

0 0.175 0.35 0.7 Miles

Development Parcels A-E
Echo Ramp
Republic Airport Property Boundary
One-Mile Radius
Census Tracts within a One-Mile Radius

Republic Airport Talon Parcel Development
Draft Environmental Assessment
East Farmingdale, Town of Babylon, NY

Affected Environment

Sources: (1) Census Boundary: United States Census Bureau (2016),
(2) Imagery: NYS Digital Ortho-imagery (2016)

3.3.10 Visual Effects (Light Emissions, Visual Resources and Visual Character)

According to FAA Order 1050.1F, issued July 16, 2015,[49] the FAA must consider the "degree to which the action would have the potential to create annoyance or interfere with normal activities from light emissions; and affect the visual character of the area due to light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources," as well as the "extent the action would have the potential to affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources; contract with the visual resources and/or visual character in the study area; and block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations."

This section identifies resources within and proximate to the Parcels and overall FRG that may be affected by light emissions or a change in the visual resources or visual character associated with the proposed action. Certain sensitive resources that might be affected by light emissions or visual changes include biological, Section 106, Section 4(f), and coastal resources, as well as Wild and Scenic Recreational Rivers. These resource categories are discussed in detail in the following document sections:

- Wildlife species and other biological resources are discussed in Section 3.3.2 of this document.
- Section 4(f) resources, as identified by the Department of Transportation Act, within a mile radius of the Parcels, are discussed in Section 3.2.2.
- Section 106 properties are discussed in Section 3.2.5.
- There are no applicable Coastal Resources (Section 3.2.1) or Wild and Scenic Rivers (Section 3.2.3) in the vicinity of the Parcels or overall FRG and no further discussion of these resources is warranted.

The Code of the Town of Babylon contains provisions and restrictions for lighting. Supplementary Zoning Regulations in Section 213-250.3 notes that all development in the Republic Airport Runway Protection Zone (RPZ) is to be consistent with FAA requirements.

[49] FAA Order 1050.1F, Paragraph 4-1.

3.3.10.1 Light Emissions

Existing light emissions at and adjacent to the Parcels that is associated with the overall FRG operations include airfield and apron/ramp flood lighting, navigational aids, hangar lighting, parking facility lighting, roadway lighting, and light generated from such launches. The existing lighting associated with the operations of FRG is designed to provide a safe environment for aircraft, vehicles and users. In addition, there are also light emissions associated with commercial uses located adjacent to FRG facilities. Such sources of light emissions include:

- External fixtures on all building sides and parking facility lighting with 24±-foot light poles with area/flood fixtures associated with the Molloy College – Suffolk Center and 28±-foot light poles with full cutoff fixtures in the parking area for the hotels located generally northwest of the Parcels, along Grumman Lane near the FRG main entrance at Broad Hollow Road/S.R. 110 (Appendix A, Photographs 19 and 20).
- External light fixtures on all building sides and parking facility lighting, consisting of 35±-foot light poles with full cutoff fixtures and 28±-foot light poles with fully shielded fixtures, associated with the commercial building located adjacent to, and west of, Parcel B (Appendix A, Photograph 21).
- Roadway light poles along Grumman Lane with area/flood fixtures at a height of 30± feet, located north of Parcel B and west of Parcel C (Appendix A, Photograph 22).
- Medium Intensity Runway Lights (MIRLs) and Runway End Identifier Lights (REILs), as well as Precision Approach Path Indicators (PAPIs) that serve Runway 14-32, Echo Ramp, Taxiway B, and Runway 1-19. Taxiway B is located adjacent to, and west of, Echo Ramp and proximate to Parcel C; Runway 14-32 is located adjacent to, and west of, Parcel E; and Runway 1-19 is located adjacent to, and east of, Parcel D.
- Apron area flood lighting on approximately 55-foot poles on Echo Ramp located north and northeast of Parcel C (Appendix A, Photograph 23).
- External fixtures on all building sides and parking facility lighting, consisting of 18±-foot light poles with full cutoff fixtures, associated with the New York State Police Department facility located adjacent to, and east of, Parcel A and adjacent to, and south of, Parcel B (Appendix A, Photograph 24).
- Parking facility lighting for the FRG main terminal, consisting of 30±-foot light poles with full cutoff fixtures, located east of Parcel B and south of Parcel C (Appendix A, Photograph 25).
- External flood light fixtures mounted at 28± on all sides of the existing Stratosphere Hangars; 17±-foot Stratosphere parking area light poles with area/flood fixtures, located adjacent to, and west and southwest of, Parcel A (Appendix A, Photographs 26 and 27).

› Vehicle headlights and any nighttime lighting on the north sides of the commercial properties along Farmingdale Road/SR 109, located adjacent to, and south of, Parcel E.

Although Parcel C contains a building and paved parking area with existing exterior light fixtures and light poles, Parcel C is currently unoccupied. There are no existing light emissions associated with the vacant commercial use.

The above-described existing lighting generates light emissions in the study area that have the potential to impact light-sensitive areas near the Parcels. The existing vegetated areas on Parcels A and E currently act as a buffer and reduces disturbance from light emissions to any wildlife, other biological, and wetland resources in the interior of those Parcels. The vegetation on Parcel A is expected to also provide some buffer to the eastern side of the existing commercial hotel/motel use from surrounding light sources. However, as indicated in Section 3.3.2, there are no light-sensitive unique wildlife species, or other biological resources, and there are no light-sensitive wetlands in the area.

There are also no Section 4(f) sites within or immediately adjacent to the Proposed Project, although parks and historic sites are present within the 1-mile study radius. These sites, however, will not be affected by potential light emissions as the proposed lighting associated with the actions is directed downward. In addition, there are no light-sensitive Section 106 resources within or near the Parcels or overall FRG that are affected by existing light emissions and/or would be affected by changes to light emissions. As mentioned, Section 4(f) and historic properties are discussed in detail in Sections 3.2.2 and 3.3.5 of this document.

Existing glare (i.e., light emission occurring from light reflected off a surface) could potentially occur at any existing surfaces on-site, such as window glass or other reflective building, vehicle or aircraft surfaces. However, as with light emissions from existing light fixtures, the FAA regulates operations at FRG, and it is expected that the FAA requires that glare that could impact air traffic control tower and aircraft activities on the overall FRG be mitigated. Therefore, it is unlikely there is substantial existing glare, particularly glare that would emanate eastward (toward the air traffic control tower) from the western portion of the site near Parcels A, B and C and the main FRG entrance.

There are residential land uses located within a half-mile radius of the Parcels, as discussed in Section 3.3.6 of this document. All residential uses are separated from the FRG by expansive transportation corridors (i.e., Farmingdale Road/SR 109; SR 110; and the Southern State Parkway) and commercial and/or industrial land uses. Therefore, the residences are subject to light emissions from along roadways and by adjacent commercial and/or industrial uses.

Finally, there are cemeteries located in the half-mile study area. Specifically, at its nearest point, Mount Ararat Cemetery, is approximately 630 feet southeast of Parcel D. St. Charles Cemetery is 1,050± feet northeast of Parcel D and Resurrection

Cemetery is approximately 3,600 feet northeast of Parcel D (the two cemeteries are known as the St. Charles/Resurrection Cemeteries). The aforementioned cemeteries do not have light restrictions on activities occurring outside of the cemeteries.

3.3.10.2 Visual Resources and Visual Character

Existing visual resources consisting of Section 4(f) and historic properties are discussed in in Sections 3.2.2 and 3.3.5 of this document. As described in those sections, there are no Section 4(f) or Section 106 properties that would be affected by the proposed action. As discussed in Section 3.3.5, there are historic properties within the 1-mile study area radius, but such resources would not be affected by changes to the existing visual character from the Project. Further, there are no Section 4(f) properties near the Parcels (i.e., within a 1-mile radius).

The existing vegetated areas on Parcels A and E currently block or obscure views within the site to and from the existing adjacent commercial and Airport-related uses. Although these vegetated areas could be considered as visual resources on the site, they are not used by the public for open space or recreation. In addition, the vegetated areas are located on an existing Airport property and surrounded by commercial, industrial, aviation, and transportation uses, and removal of such vegetation is not likely to affect overall visual character on-site or in the area.

Based on the above, there are no unique visual resources, either protected or unprotected, within the 1-mile study area that could be affected by changes to visual character.

Off-airport land uses proximate to the Parcels are commercial, industrial, transportation, and institutional, including cemeteries. As mentioned above, the nearest cemetery use is Mount Ararat Cemetery, which is approximately 630 feet southeast of Parcel D. Also, proximate to the FRG, are St. Charles Cemetery and Resurrection Cemetery, which are approximately 1,050 and 3,600 feet northeast of Parcel D, respectively. The existing visual character of the Parcels and the surrounding area is influenced by the current FRG improvements and by nearby land uses; thus, the existing viewshed of all land uses near the Parcels includes Airport, commercial, and industrial uses. The FRG is part of the visual environment that can be viewed from any adjacent land uses, including cemeteries, and other resources. Therefore, additional aviation elements would not result in a substantive visual change in the vicinity that would affect nearby land uses.

Within the half-mile study area, the visual character also includes single-family residential neighborhoods with an appearance typical of suburban areas in this part of Long Island. Due to the topography and intervening structures and transportation corridors, the on-ground operations at the FRG are not visible from the residences and are not part of the visual character within these neighborhoods.

3.3.11 Water Resources (Wetlands/Surface Waters, Floodplains, Groundwater)

This section introduces the water resources that may be affected by the Project, including wetlands/surface waters, floodplains, and groundwater. FAA Order 1050.1F, Exhibit 4-1, issued July 16, 2015, sets forth significance thresholds and factors to consider when evaluating potential impacts on these resources. These thresholds and factors are summarized below:

3.3.11.1 Wetlands/Surface Waters

At the federal level, Executive Order 1190, Protection of Wetlands; Department of Transportation (DOT) Order 5660.1A, Preservation of Wetlands; and Sections 401 and 404 of the Federal Clean Water Act (CWA, 33 USC, 1251 through 1387; implemented by 40 CFR parts 110-112, 116, 117, 122, 125, 129, 130, 131,136, and 403) protect wetlands. These laws direct federal agencies to avoid the destruction and modification of, or construction within, existing wetlands where there is a practicable alternative.

The United States Army Corps of Engineers (USACE) and the EPA jointly define wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."

In general, any uses or activities (e.g., draining, filling, dredging, discharges, outfalls, construction of structures, etc.) that directly impact federally-regulated wetlands or other "waters of the United States" require a permit from the USACE. If a Proposed Project would impact existing wetlands, DOT Order 5660.1A requires federal transportation agencies to make a finding that there is no practicable alternative. Section 404 of the CWA regulates the discharge of dredged or fill material within navigable waters and prohibits such discharge wherever the discharge of fill will have an unacceptable adverse effect on water supplies, shellfish beds and fishery areas, wildlife, or recreational areas. The EPA's Section 404(b)(1) guidelines state that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less of an adverse impact on the aquatic ecosystem and requires that appropriate and practicable steps be taken to minimize potential adverse impacts on the aquatic ecosystem.

The United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps depict the approximate boundaries of wetlands and surface waters. There are no NWI-mapped wetlands or surface waters located at or adjoining the Parcels and Echo Ramp (see Figure 15). As described by the USFWS, the NWI maps are intended as a guidance resource, rather than for regulatory use by the federal government or other government agencies in determining the jurisdictional status

of wetlands. Federal jurisdiction over wetlands is determined by the USACE on a case-by-case basis, through review of jurisdictional determination requests submitted to the USACE.

The New York State Department of Environmental Conservation (NYSDEC) defines freshwater wetlands as "… lands and submerged lands commonly called marshes, swamps, sloughs, bogs, and flats supporting aquatic or semi-aquatic vegetation". Freshwater wetlands are protected under Article 24 (Title 23 of Article 71) of the New York State Environmental Conservation Law ([NYSECL] "Freshwater Wetlands Act" and regulated by the NYSDEC under 6 NYS Codes, Rules and Regulations (NYCRR) Parts 663 through 665. The NYSDEC regulates freshwater wetlands that are 12.4 acres or larger, however, smaller wetlands are also regulated if considered to be "of unusual local importance". In general, many uses and activities within regulated wetlands or within the regulated 100-foot adjacent area require a permit from the NYSDEC. The regulated adjacent area may be extended beyond 100 feet at the discretion of the NYSDEC if a wetland is deemed to be "particularly sensitive." The NYSDEC also regulates surface waters under NYSECL Article 15 and its implementing regulations (6 NYCRR Part 608).

0 0.125 0.25 0.5 Miles

Development Parcels A-E

Echo Ramp

Republic Airport Property Boundary

Wetlands (NWI)

Republic Airport Talon Parcel Development
Draft Environmental Assessment

East Farmingdale
Town of Babylon, New York

NWI Wetlands

Sources: 2013 Aerial: 2013 NYS Digital Ortho-imagery, NYSITS, 2013; Wetlands (NWI) from US Wildlife Service (2016).

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Wetlands and surface waters that are regulated by New York State are shown on the NYSDEC Freshwater Wetlands Maps and the NYSDEC Environmental Resource Mapper (ERM) website, which depict the approximate boundaries of wetlands under agency jurisdiction. According to these two resources, there are no NYSDEC-regulated wetlands or surface waters located on the Parcels, Echo Ramp, or at FRG (Figure 16).

No wetlands or surface waters were observed at Parcels B through E or Echo Ramp during the January 26, 2017, field survey. A small (0.08-acre), isolated pond surrounded by earthen berms was observed in the southwestern portion of Parcel A during the January field survey. Based on review of historical aerial imagery, the pond is a semi-permanently flooded feature that was created between 2004 and 2006, apparently through excavation and grading activities that created the surrounding berms.

The pond was delineated on May 3, 2017, based upon an evaluation of vegetation, soils and hydrology conducted in accordance with the procedures set forth in the 1987 USACE Wetland Delineation Manual and the 2012 USACE Regional Supplement for the Northcentral and Northeast Region. During the wetland delineation, 11 numbered flags were placed along the wetland-upland boundary and located with a global positioning system (GPS) device. The location of the pond is shown on Figure 16, where it is identified as "Wetland W1".

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Talon Air - Parcel A
Republic Airport

East Farmingdale, Town of Babylon
Suffolk County, New York

Federal and State Mapped Wetlands

Sources: Aerial: 2013 NYS Digital Ortho-imagery, NYSITS (2013); Wetlands (NYSDEC) from NYSDEC (2002); Wetlands (NWI) from US Wildlife Service (2016); Streams (NHD) from USGS (2014); Streams (NYSDEC) from NYSDEC (2013).

As noted during the wetland delineation, the interior of the pond is largely unvegetated, with emergent wetland vegetation restricted to portions of the pond margin. Observed vegetation in these areas includes the wetland indicator species water pepper (*Polygonum hydropiper*), soft rush (*Juncus effusus*) and pussy willow (*Salix discolor*). Overall, the pond is sparsely vegetated, and the wetland plant community is characterized by low species diversity.

Soil borings collected along the pond margin exhibited hydric soil indicators consisting of depleted matrices measuring six inches or greater and starting within 10 inches of the soil surface. In addition, observed wetland hydrology indicators include surface inundation to a maximum depth of 16 inches, soil saturation to within one inch of the surface within soil borings, visible inundation on aerial photographs and the geomorphic position of the pond within a depression surrounded by higher terrain (berms). No natural inlets or outlets (e.g., creeks, steams etc.) occur between the pond and other surface waters or wetlands, and no artificial inlets or outlets (e.g., pipes, culverts, spillways, storm drains, etc.) were observed between the pond and stormwater drainage infrastructure at FRG. Based on the above observations, the pond is an isolated feature, and direct precipitation and surficial runoff from the immediate surrounding area appear to be the primary hydrological inputs to the pond. Due to the surrounding higher terrain and the absence of outlets, evapotranspiration appears to be the sole source of water loss from the pond. As such, water appears to be retained within the pond except during dry periods, resulting in the semi-permanently flooded conditions observed on historical aerial imagery.

Based on the foregoing field observations, the pond meets the federal definition of a wetland, as described above. With respect to federal jurisdiction, the USACE has determined that due to its anthropogenic origin and apparent isolation from other wetlands, surface waters, or drainage networks, the pond does not appear to meet the standards for federal jurisdiction (see jurisdictional determination documentation in Appendix C). As indicated previously, based on review of NYSDEC regulatory maps, the pond is not regulated as a wetland or surface water by the NYSDEC.

3.3.11.2 Stormwater and Drainage

Stormwater is generated by precipitation events and is divided into three components: surface runoff, interflow and base flow. Surface runoff is that portion of the stormwater that remains after a precipitation event and is not captured by depression storage or ponding, does not infiltrate the surface and is not lost to

evapotranspiration. Interflow is that portion of stormwater that infiltrates the surface into the soil zone and moves in a horizontal direction until reaching a surface water body. Finally, the base flow is that portion which infiltrates the surface and soil profile to reach groundwater.[50]

Per the USGS publication "Ground-Water-Recharge Rates in Nassau and Suffolk Counties, New York," 46.5 to 60.0 percent of precipitation falling on soil does not infiltrate into the sub-surface, rather, it is lost to the atmosphere due to evapotranspiration (a combination of evaporation and water uptake by vegetation). In contrast, only approximately 10 percent of precipitation falling on paved surfaces is lost to the atmosphere via evaporation, and no transpiration occurs. Thus, of the precipitation collected on impervious surface, approximately 90 percent is collected into stormwater drywells and recharged to the underlying aquifer.

Stormwater at the Republic Airport property is accommodated by drywells, other subsurface leaching structures (e.g., leaching pools), and/or recharged through grassy swales. Of the Parcels, four receive stormwater from the improved areas.

Republic Airport Stormwater Pollution Prevention Plans: Republic Airport maintains its own Stormwater Pollution Prevention Plan (SWPPP) for industrial and construction activities carried out by tenants and sub-lessees. The Republic Airport SWPPP identifies the potential sources of stormwater pollution at the Airport and outlines Best Management Practices (BMPs) to reduce such potential. It is important to note that many of the BMPs apply only to Airport management activities and not tenants.

Per the SWPPP, the activities that potentially could be sources of stormwater pollution are as follows:

- Aircraft Fueling
- Vehicle Fueling
- Aircraft Deicing
- Aircraft Maintenance
- Vehicle Maintenance
- Aircraft Washdown
- Vehicle Washdown
- Painting
- Significant Hazardous Materials Storage

[50] *Reducing Impacts of Stormwater Runoff from New Development*, NYSDEC.

› Tank Loading and Unloading

Descriptions of these activities are provided below.[51] None of the Parcels currently supports aircraft activities. Echo Ramp is active as a tie-down area.

Aircraft Fueling: Aircraft fueling operations occur at the existing Echo Ramp. Additionally, Stratosphere maintains aircraft fueling facilities at its existing ramp area. Stratosphere's aircraft fueling operation consists of three (3) 30,000-gallon Jet-A fuel tanks and one (1) 12,000-gallon avgas fuel tank. Jet-A fuel is delivered by truck at 10,500 gallons per load, approximately 4-6 times per week, and avgas is delivered by truck at 8,000 gallons per load, approximately 1-2 times per month. Fuel delivery trucks transfer their contents to a 12,000-gallon capacity transfer pad before transfer to the individual holding tanks. The Jet-A and avgas are driven by 5,000-gallon or 1,000-gallon trucks to fueling areas on the aircraft ramp. A spill kit is provided on each truck in-case of fuel spillage.

Vehicle Fueling: No vehicle fueling is currently conducted at the Parcels. Stratosphere maintains a vehicle fuel combination tank with storage capacity for 2,000 gallons of diesel and 1,000 gallons of vehicle gas, in its existing ramp area. Vehicle fueling is conducted by NYSDOT subcontractors, FBOs, and the New York State Police from aboveground bulk motor fuel storage tanks. Fueling is conducted using typical commercial fuel dispensing pumps and non-pressurized automotive service station nozzles.

Aircraft Deicing: Aircraft deicing is performed infrequently at Stratosphere – Hangar 7. None of the Parcels have deicing on them. The typical practice is to de-ice aircraft in heated hangars or by outdoor application of deicing fluids (propylene glycol solutions).

Deicing activities do not take place directly over storm drains. Within designated deicing areas, wash pads are used to filter solids from the deicing fluid runoff before entering storm drains. Accumulated spent deicing fluid is removed from paved areas (accumulation due to covered storm drains, snow banks that prevent drainage to grassy areas, and/or relatively slow drainage patterns) with appropriate equipment (e.g., sweeper/vacuum truck, hand-held squeegees/brooms).

Aircraft Maintenance: No aircraft maintenance activities are conducted on the Echo Ramp or the other Parcels.

[51] John Curley and Jason DiAntonio. 2017. Personal communication: Curley and DiAntonio to VHB, conference call May 9, 2017.

Vehicle Maintenance: Vehicle maintenance is not currently conducted at any of the Parcels.

Painting: Aircraft painting is limited to touch-up work with a spray can or small brush and occasional spray gun painting. Aircraft painting is not currently conducted on any of the Parcels.

Aircraft Wash-down: About six firms are used by all airport tenants for aircraft washing. These companies use pressure washers to clean the exterior of aircraft. Typically, cleaning consists of a pressure wash with a cleaning solution and/or detergent diluted in water and heated, hand scrubbing of surfaces, followed by a water rinse. Aircraft wash down is performed outdoors wherever aircraft are parked (i.e., the Echo Ramp).

Vehicle Wash-down: There are no vehicles washed at the Parcels.

Significant Hazardous Material Storage: "Significant materials" stored at Republic Airport include fuels, oils, hydraulic fluids, solvents, cleaning solutions, paints, deicing sand/salts, and their associated wastes. Significant materials are defined by the EPA to include hazardous substances designated under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), fuels, solvents, detergents, plastic pellets, raw materials, finished products, and Superfund Amendments and Reauthorization Act (SARA) Title III Section 313 chemicals. These materials are not currently stored on Parcels A through E or Echo Ramp.

Long Island Segment of the Nationwide Urban Runoff Program: Regarding stormwater runoff, the *Long Island Segment of the Nationwide Urban Runoff Program* (*NURP Study*) has made the following findings regarding groundwater:

- In general, except for lead and chloride, the concentrations of inorganic chemicals measured in stormwater runoff do not have the potential to adversely affect groundwater quality.
- Infiltration through the soil is generally an effective mechanism for reducing lead and probably chromium from runoff on Long Island. Although the *NURP Study* findings concerning chromium are not conclusive, data from a spill at Farmingdale indicate attenuation. Chloride is not attenuated. The effect of infiltration on nitrogen is undetermined.
- Coliform and fecal streptococcal indicator bacteria are removed from stormwater as it infiltrates through soil.

3.3.11.3 Floodplains

For floodplains, the FAA must consider whether the action "would cause notable adverse impacts on natural and beneficial floodplain values. Natural and beneficial

floodplain values are defined in Paragraph 4.k of DOT Order 5650.2, Floodplain Management and Protection."

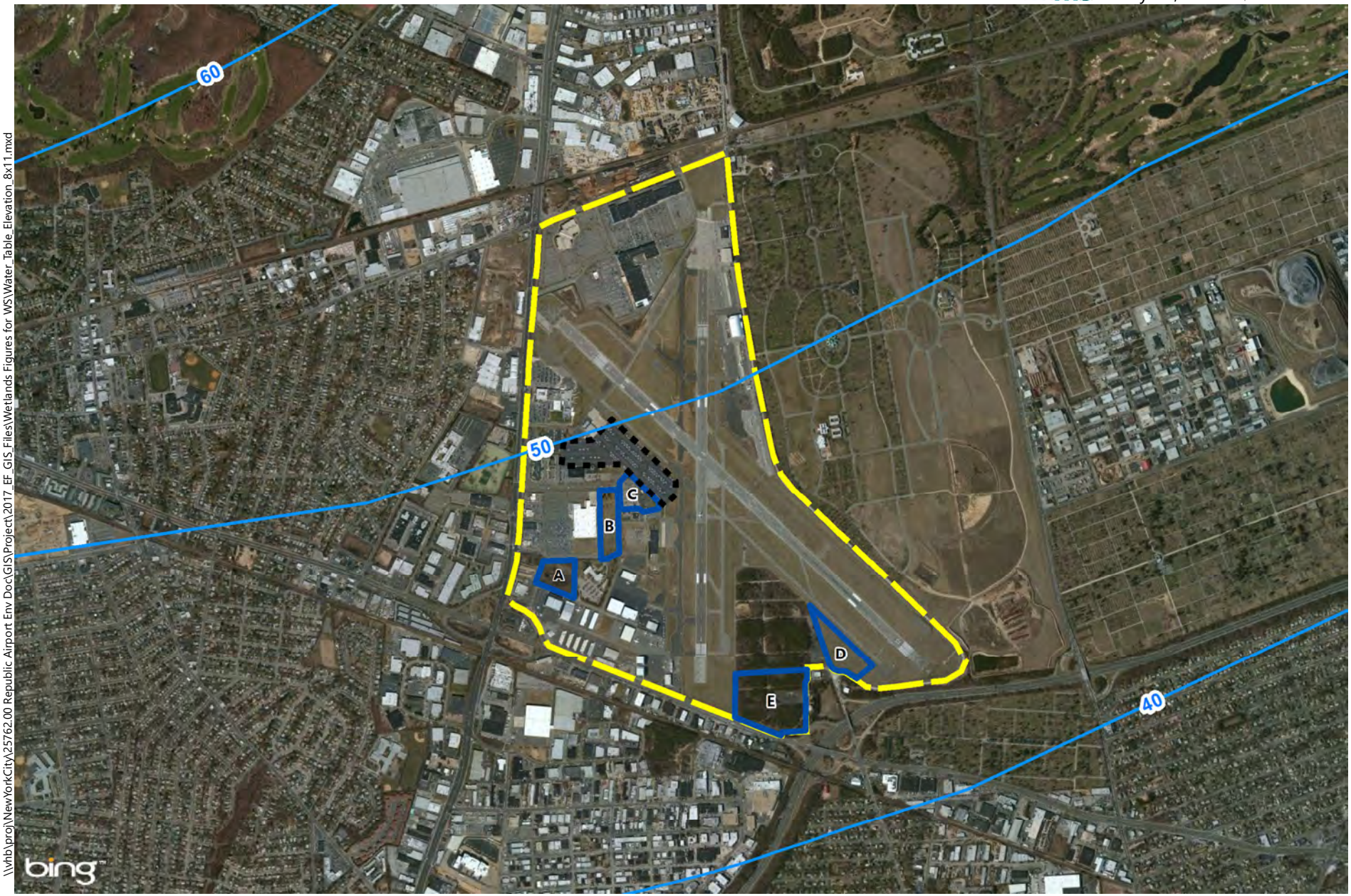
The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map No. 36103C0835H was consulted to determine whether the subject property lies within a flood zone. This panel is not printed, indicating that no areas on the panel lie within a special flood hazard area.

3.3.11.4 Groundwater

Republic Airport is located within the EPA-designated Nassau-Suffolk Sole Source Aquifer (SSA). Under the authority of Section 1424(e) of the Safe Drinking Water Act and pursuant to 40 CFR 149, the SSA designation protects drinking water supplies in areas with "few or no alternative sources to the groundwater resources, and where if contamination occurred, using an alternative source would be extremely expensive." The SSA designation requires the EPA to review all Proposed Projects within the designated areas that will receive federal funding, to ensure that they do not impair groundwater sources. The Proposed Project would not receive federal funding.

There are three major aquifers under Long Island: the Upper Glacial, the Magothy and the Lloyd. The Upper Glacial and Magothy are the significant water supply sources for most of Long Island. In recent years, suburbanization has caused contamination in areas of the Upper Glacial aquifer, since it is closest to the surface.

Per the April-May 2013 USGS Water-Table and Potentiometric Surface Altitudes in the Upper Glacial, Magothy, and Lloyd Aquifers of Long Island, New York, the water table beneath Republic Airport ranges from approximately 43± feet to 55± feet above mean sea level (amsl; Figure 17). The elevation of Republic Airport ranges from 55± feet to 85± feet amsl, with grades rising from generally south to north (see Figure 1). Thus, depth to groundwater beneath the Republic Airport ranges from 12± feet to 25± feet below grade surface (bgs), from generally south to north.



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0 0.125 0.25 0.5 Miles

Development Parcels A-E

Republic Airport Property Boundary

Echo Ramp

Water Table Elevation Contours (feet above mean sea level)

Republic Airport Talon Parcel Development
Draft Environmental Assessment | East Farmingdale, Town of Babylon, NY

Water Table Elevation Map

Sources: Como, M.D., Finkelstein, J.S., Monti, Jack, Jr., and Busciolano, Ronald, 2016, Geospatial dataset of water-table and potentiometric-surface altitudes in the upper glacial, Magothy, and Lloyd Aquifers of Long Island, New York, April-May 2013: U.S. Geological Survey data release, http://dx.doi.org/10.5066/F7RV0KSD.; 2013 Aerial: 2013 NYS Digital Ortho-imagery, NYSITS, 2013.

Groundwater flow direction near the Republic Airport is to the south, with minor easterly and westerly flow components.

As noted above, depth to groundwater beneath Republic Airport ranges from 12± feet to 25± feet bgs. Table 10 below presents the site-specific depth to groundwater range for each of the Parcels, based on the estimated water table elevation depicted in Figure 17 and topographic survey elevations.

Table 10 Depth to Water, Parcels

Parcel	Water Table Elevation (feet amsl)	Topographic Elevation (feet amsl)	Depth to Water (feet bgs)
A	48±	60± to 73±	12± to 25±
B	49±	62± to 70±	13± to 21±
C	49±	65± to 72±	16± to 23±
D	43±	55± to 60±	12± to 17±
E	42±	54± to 65±	12± to 23±
Echo Ramp	50±	65± to 72±	15± to 22±

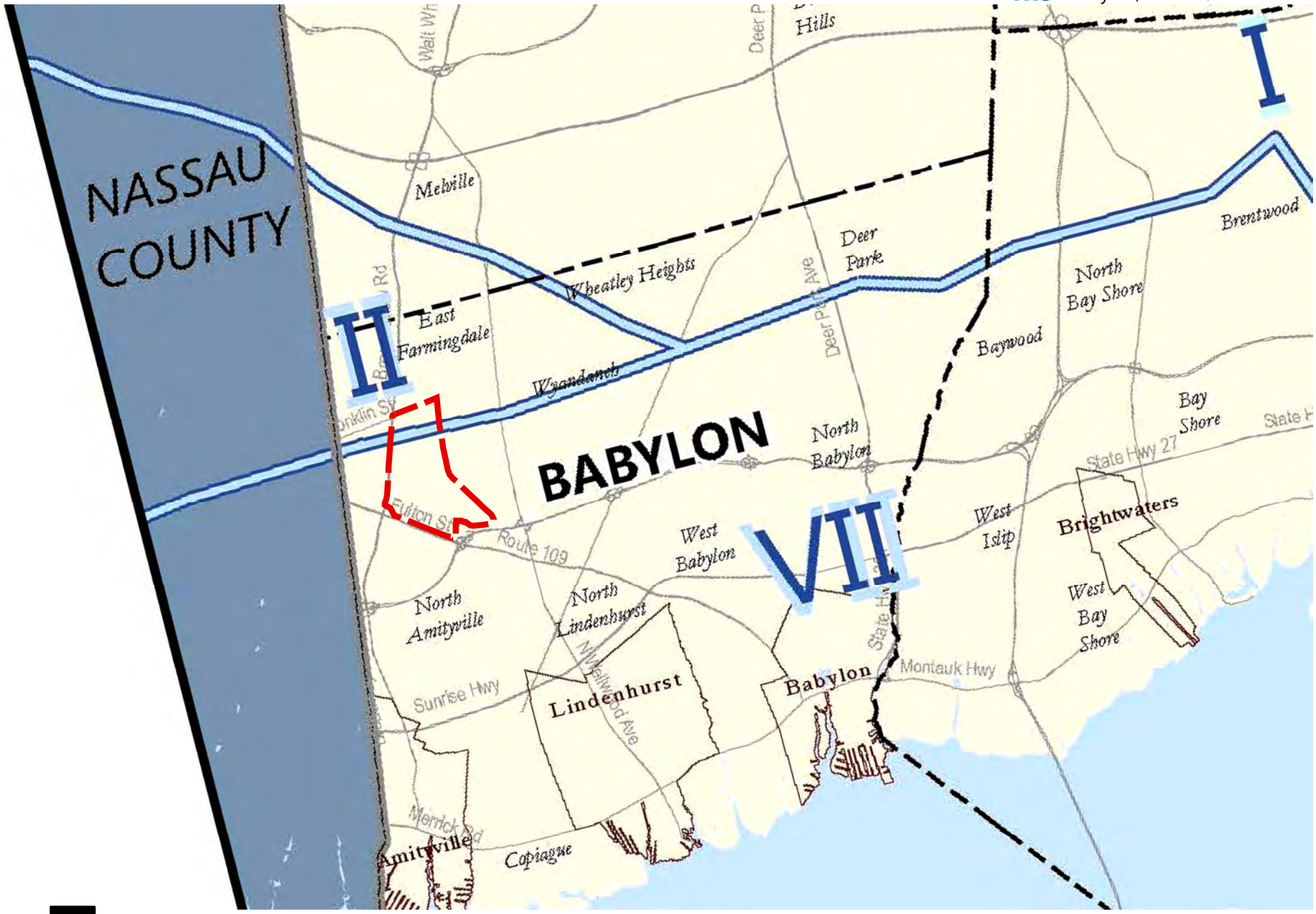
Sources: USGS, Water-Table and Potentiometric Surface Altitudes in the Upper Glacial, Magothy, and Lloyd Aquifers of Long Island, New York, April-May 2013.
Survey by Bladykas & Panetta L.S. & P.E., P.C., dated 2/15/17 (Parcels A-D), 1/27/17 (Parcel E).

The Long Island Comprehensive Waste Treatment Management Plan: In 1978, Long Island was divided into eight hydrogeologic zones in the Long Island Comprehensive Waste Treatment Management Plan (the "208 Study"). The subject property is situated within Hydrogeologic Zone VII, according to the 208 Study (page 46, Volume I) (Page 1-2) (Figure 18).

Zone VII is designated as the South Shore Flow System characterized by generally shallow and horizontal flow. This area is likely to contribute water only to the shallow groundwater system, which discharges to streams and saltwater bays, thus affecting the quality of the surface water. The relevant Highest Priority Areawide Alternatives for Zone VII include:

› Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to ground and surface waters.

Compliance with this recommendation is discussed in the Environmental Consequences section of this EA.



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Republic Airport Talon Parcel Development
Draft Environmental Assessment
East Farmingdale, Town of Babylon, NY

Hydrogeologic Zone Map

Sources: Hydrogeologic Zones - 208 Study, Suffolk County Department of Economic Development and Planning, 2014.

Long Island Special Groundwater Protection Area Plan: Special Groundwater Protection Areas (SGPAs) are significant, largely undeveloped or sparsely developed geographic areas of Long Island that provide recharge to portions of the deep flow system. They represent a unique final opportunity for comprehensive, preventive management to preclude or minimize land use activities that can have a deleterious impact on groundwater. Nine SGPAs are located on Long Island: North Hills; Oyster Bay; West Hills/Melville; Oak Brush Plains; South Setauket Woods; Central Suffolk; Southold; South Fork; and Hither Hills. Republic Airport is not located within an SGPA.

Suffolk County Sanitary Code: To protect the groundwater quality in Suffolk County, the Suffolk County Department of Health Services (SCDHS) adopted Articles 6, 7 and 12 of the Suffolk County Sanitary Code. Article 6, Realty Subdivisions, Developments and Other Construction Projects, contains several provisions relevant to this *Proposed Project*, as summarized below.

Article 6 (Sanitary Wastewater Discharge): Suffolk County has promulgated various regulations and standards that are designed to protect the water resources of Long Island. Article 6 of the Suffolk County Sanitary Code (SCSC) specifically governs sanitary wastewater discharges. The regulations contained in Article 6 protect water resources by limiting the "population density equivalent" within specific Groundwater Management Zones.

The *Proposed Project* is situated within Groundwater Management Zone VII, and therefore, pursuant to Article 6 of the SCSC, the maximum permitted sanitary discharge, if on-site sanitary systems are used, is 600 gallons per day (gpd) per acre. However, sanitary wastewater discharge from Republic Airport and its tenants is accommodated by the Suffolk County Sewer District 3 – Southwest Sewer District. Therefore, as there is no on-site discharge of sanitary waste, the density restrictions in Article 6 of the SCSC do not apply to Republic Airport.

Article 7 (Water Pollution Control): In 1985, Article 7 – Water Pollution Control, was adopted and added to the SCSC. The intent of this article was to protect the groundwater of Suffolk County, especially in the deep recharge areas of Zones I, II, III and V described in the 208 Study, from discharge of sewage, industrial wastes, toxic or other hazardous materials and stormwater runoff. Under Section 705 of this article, permits are required for the construction of new or alteration to existing disposal systems, except stormwater disposal.

Section 760-705 sets forth general restrictions and prohibitions relating to discharges, and the permits required. Pursuant to Section 760-705(B)(2), permits are not required for the discharge of sewage from a commercial or industrial facility to a municipal sewage system, or the discharge of stormwater to a disposal system, unless there is an actual discharge into the system of industrial wastes or toxic or hazardous materials or sewage. As indicated above, all sanitary discharge is accommodated by the Southwest Sewer District.

All hazardous materials that are currently used and stored at the existing Stratosphere facility and Parcels are described in Section 3.3.4. Section 760-706 provides restrictions on toxic and hazardous materials storage and discharge for those properties in the deep recharge zones and water supply sensitive areas. The subject property is located within Groundwater Management Zone VII, the South Shore Shallow Flow System, which contributes water to the shallow groundwater system, and not the deeper Magothy aquifer.

Pursuant to Section 760-703(W) of the SCSC, Water Supply Sensitive Areas are defined as follows: "(1) a groundwater area separated from a larger regional groundwater system where salty groundwater may occur within the Upper Glacial aquifer, and where deepening of private wells and/or development of community water supplies may be limited; (2) areas in close proximity to existing or identified future public water supply wellfields… for purposes of this Article 'close proximity' shall mean within 1,500 feet upgradient or 500 feet downgradient of public supply wells screened in the Upper Glacial aquifer."

The nearest public supply well is an East Farmingdale Water District well located immediately east of Parcel E and southwest of Parcel D. However, the East Farmingdale Water District wells are completed to depths of over 700-feet bgs in the Magothy aquifer, and an existing wellhead treatment system on the site treats contaminated groundwater as it is extracted from these wells. As such, because East Farmingdale Water District supply wells are not Upper Glacial wells, Parcels D and E are not considered to be within a Water Supply Sensitive Area.

Article 12 (Storage and Handling of Toxic and Hazardous Materials)

Article 12 of the SCSC relates to the storage and handling of toxic and hazardous materials to safeguard water resources from existing sources of contamination and to prevent further pollution from new sources. Article 12 requires that toxic and hazardous materials storage facilities be registered with the SCDHS. All petroleum storage tanks including fuel oil, gasoline, kerosene, diesel, waste oil, and lubricating oil tanks require a permit. The exceptions to this are fuel oil, kerosene, and diesel tanks with an individual or combined volume of less than 1,100 gallons that are used for on-site heating or intermittent power.

The NYSDOT maintains an SCDHS permit to operate a toxic or hazardous materials storage facility under Article 12 of the SCSC. The following tanks are registered for Stratosphere:

- Three (3) 30,000-gallon Jet-A fuel tanks
- One (1) 12,000-gallon AV-gas tank
- One combo tank with 2,000-gallon diesel storage and 1,000-gallon 93 octane vehicle gas
- 55-gallon barrels for waste oil and fuel waste

Pursuant to Section 760-1208(F), Article 12 does not require permits for the storage of toxic or hazardous materials in containers of five-gallon capacity or smaller where total capacity storage at any time does not exceed 250 gallons or where the dry storage in bags, bulk, or small containers does not exceed 2,000 pounds. Specific discussion related to hazardous materials is included in Section 3.3.4.

3.3.11.5 Sanitary Waste Generation

The Republic Airport currently discharges sanitary waste via connection to Suffolk County Sewer District No. 3 – Southwest Sewer District.

Currently, Parcels A, B, D and E are undeveloped. Parcel C contains an abandoned restaurant building and parking lot. The existing Echo Ramp is a paved area for aircraft parking and maneuvering and does not contain any occupied structures. Parcel E did contain residential lots and the occupants used cesspools. At present, the Parcels do not currently generate sanitary waste. Further information regarding the abandonment of the cesspools at Parcel E is provided in Section 3.3.4.

3.3.11.6 Water Supply and Usage

Potable water is supplied to Republic Airport by the East Farmingdale Water District. As indicated above, the Parcel are either undeveloped, abandoned, or used for aircraft parking and maneuvering. As such, the Parcels do not currently generate a demand for potable water. There is no on-site irrigation.

4

Environmental Consequences

This chapter describes the reasonably foreseeable impacts of the Preferred Alternative (Alternative A) as compared to the No Action Alternative on the natural and human environment. The CEQ regulations state that the environmental consequences analysis should include consideration of direct effects and their significance (Part 1502.16(a)) and indirect effects and their significance (Part 1502.16(b). FAA Order 1050.1F, *Desk Reference* summarizes FAA's position on cumulative effects and their significance in Section 15, paragraph 1, which references and expands upon CEQ's discussion of the "incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."

Seven resource categories were dismissed from consideration in Chapter 3 and are not addressed in this chapter. These resource categories are Coastal Resources, Farmlands, Historical and Cultural Resources, Land Use, Department of Transportation Act Section 4(f), Socioeconomics, and Wild and Scenic Rivers.

4.1 Air Quality and Climate

4.1.1 No Action Alternative

The No Action Alternative would not affect air quality and climate.

4.1.2 Preferred Alternative

4.1.2.1 Air Quality

Because the forecast shows growth only from 210,000 to 212,000 aircraft operations per year, an increase within a range of 0.003 percent to 0.005 percent, air quality emissions can correspondingly be expected to increase to the same degree. This amount represents an insignificant increase when compared to the No-Action Alternative. Also, traffic levels are not anticipated to change as a result of the Proposed Project.[52] Therefore, an air quality assessment of operational and traffic emissions is not required as such emissions will not significantly effect the human environment.

However, as the proposed improvements to FRG will involve a portion of an existing road (i.e., the re-alignment of Seversky Road), the Proposed Project was assessed for air quality impacts in accordance with the NYSDOT Environmental Procedures Manual (EPM) (Chapter 1.1/The Environmental Manual (TEM) Chapter 4.4.16). Based on the air quality screening criteria for potential air quality impacts at Section 9.A(i) and (ii) of the NYSDOT EPM/TEM manual, it has been determined that the proposed road re-alignment associated with the Proposed Proposed Project does not warrant any additional air quality analyses (i.e., CO Microscale Analysis, PM Microscale Analysis, Mesoscale Air Quality Analysis, or Mobile Source Air Toxics (MSAT) Analysis).[53] In conclusion, the *Proposed Project* will not increase traffic volumes, reduce source receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS or result in meaningful changes in MSAT emissions, energy consumption or greenhouse gas emissions.

Construction Emissions: Air emissions associated with the development of the five Parcels at FRG are viewed as temporary and variable depending on the phase of construction, level of activity and duration. Construction emissions occur predominantly as a result of engine exhaust from the operation of construction equipment and vehicles (e.g., scrapers, dozers, delivery trucks, etc.), but are also attributable to fugitive dust produced from construction materials staging, soil handling, and un-stabilized land and wind erosion.

[52] Patrick Lenihan. 2017. Republic Airport Stratosphere Development Co., LLC Traffic Analysis. Appendix B, State Environmental Quality Review Act Environmental Assessment July 2017 Long Term Lease of Five Development Parcels at Farmingdale Republic Airport Hamlet of East Farmingdale, Town of Babylon, Suffolk County, New York, by Ronald L. Epstein, July 19, 2017.

[53] The Proposed Project does not meet the criteria listed in Section 9.A(i) and (ii) of the NYSDOT EPM/TEM manual.

Construction equipment typically utilized in airport projects is comprised of both on-road (i.e., road-licensed) and non-road equipment (i.e., off-road). The former category of vehicles are used for the transport and delivery of supplies, material and equipment to and from the site, and also include construction worker vehicles. The latter categories of equipment are operated on-site for activities such as soil/material handling, site clearing and grubbing.

The Airport Construction Emissions Inventory Tool (ACEIT), developed by the Airport Cooperative Research Program (ACRP),[54] was used to estimate construction emissions. Project-specific details were used in the ACEIT to estimate construction activities/vehicle activity data (e.g., equipment mixes/operating times). Because the default emission factors used by ACEIT are outdated and do not reflect the latest EPA's Motor Vehicle Emissions Simulator (i.e., MOVES)[55] model, only activity data was extracted from the ACEIT. Emission factors were then developed using MOVES, which includes both on-road vehicles and off-road construction equipment. Fugitive dust emissions were instead calculated using emission factors within EPA's Compilation of Air Pollutant Emission Factors (AP-42)[56], and evaporative emissions were developed using EPA guidance on asphalt paving.[57]

Based on an anticipated construction period of January 2019 to December 2024, the assessment results are presented in Table 11. Again, for completeness and disclosure, construction emissions of SO_2, and PM_{10} are reported in addition to the CO, $PM_{2.5}$ and O_3 precursors of NOx and VOCs.

As shown, the total emissions associated with construction activities vary by year but are all well below the applicable General Conformity Rule *de minimis* thresholds of 100 tons per year for CO and $PM_{2.5}$, and 50 tons per year for NOx and VOCs. Accordingly, construction emissions will not increase the frequency or severity of ozone or particulate matter emissions, and thus will not result in a significant effect on the human environment. A general conformity determination is not required.

[54] Transportation Research Board (TRB), ACRP Report 102, Guidance for Estimating Airport Construction Emissions, 2014 http://www.trb.org/ACRP/Blurbs/170234.aspx.

[55] EPA's MOVES2014a is the latest version of MOVES, which includes the NONROAD model. Additional information on MOVE2014a is available at https://www.epa.gov/moves/moves2014a-latest-version-motor-vehicle-emission-simulator-moves.

[56] EPA, Emissions Factors & AP-42, *Compilation of Air Pollutant Emission Factors*, http://www.epa.gov/ttn/chief/ap42/index.html#toc.

[57] EPA, *Emission Inventory Improvement Program*, Asphalt Paving, Chapter 17 Volume III, April 2001.

Table 11 Criteria Pollutant Emissions from Construction Activities (tons per year)

Construction Year	CO	NOx	SO_2	PM_{10}	$PM_{2.5}$	VOC
2019	4	7	0.02	2	1	1
2020	11	20	0.10	6	2	2
2021	5	9	0.02	3	1	1
2022	7	12	0.03	4	1	1
2023	4	6	0.02	2	0.5	0.5
2024	3	4	0.01	2	0.3	0.3
De Minimis Threshold	100	50	NA	NA	100	50
Exceeds *De Minimis* Threshold? (Yes/No)	No	No	--	--	No	No

Note : NA = not applicable.
Source : EPA, *De Minimis* Levels, https://www.epa.gov/general-conformity/de-minimis-tables, January 2020.

4.1.2.2 Climate

On August 1, 2016, the Council on Environmental Quality (CEQ) issued the Final Guidance under NEPA describing how and when federal agencies should address the subject of GHG emissions and climate change in documents prepared pursuant to NEPA. As noted by the CEQ guidance document, "climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources, causation, mechanisms of action, and impacts; however, analyzing a proposed action's GHG emissions and the effects of climate change relevant to a proposed action—particularly how climate change may change an action's environmental effects—can provide useful information to decision makers and the public."[58] CEQ further recommends that "when addressing climate change agencies should consider: (1) the potential effects of a proposed action on climate change as indicated by assessing GHG emissions and, (2) the effects of climate change on a proposed action and its environmental impacts."[59]

For this analysis, GHG emissions associated with the construction activities at FRG are computed and disclosed. The emissions are presented in metric tons of CO_2 equivalent (CO_2e) relevant to their Global Warming Potentials (GWP), and are

[58] *Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, CEQ (August 2016),* https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.

[59] Ibid.

comprised of CO_2, methane (CH_4) and nitrous oxide (N_2O). CO_2e are based on GWP values of 1 for CO_2, 28 for CH_4, and 265 for N_2O (based on a 100 year period).[60]

The estimated GHG emissions from the Preferred Alternative are presented in Table 12.

Table 12 GHG Emissions from Construction Activities (MT of CO2e/per year)

Construction Year	CO_2	CH_4	N_2O	Total CO_2e
2019	2,368	3	6	2,377
2020	7,794	11	17	7,822
2021	3,741	5	6	3,751
2022	5,306	6	7	5,320
2023	3,086	4	4	3,094
2024	2,326	3	3	2,331

Source : KB Environnemental Sciences, Inc., September 2018.
Note: MT = metric ton; and CO_2e = carbon dioxide equivalent.

FRG is located in an area currently designated by the EPA as a moderate nonattainment area for the 2008 8-hour ozone standard and a maintenance area for the 2006 PM2.5 standard. Based upon the outcomes of this assessment, construction-related emissions associated with the proposed development of five Parcels at FRG are within (i.e., less than) the applicable General Conformity Rule de minimis thresholds for NOx and VOCs (the principal precursors to ozone formation), and PM2.5. Therefore, the proposed development will comply with the SIP. Accordingly, although the Preferred Alternative will result in greater emissions than the No Action Alternative, those emissions are nominal and will not have a significant effect on the human environment.

4.2 Biological Resources (including Fish, Wildlife and Plants)

4.2.1 No Action Alternative

Existing ecological communities, wildlife, and rare/protected species would not change from existing conditions under the No Action Alternative.

[60] Fifth Assessment Report (AR5), Intergovernmental Panel on Climate Change (IPCC) (2014).

4.2.2 Preferred Alternative

4.2.2.1 Ecological Communities and Vegetation

The Preferred Alternative would result in the clearing/removal of the eight existing ECNYS ecological communities at the Parcels A through E and Echo Ramp: Pitch Pine-Oak Forest, Successional Southern Hardwoods, Successional Old Field, Brushy Cleared Land, Mowed Lawn, Unpaved Road/Path, Paved Road/Path and Urban Structure Exterior. The No Action Alternative would not require clearing of any existing ecological communities.

As detailed in Section 3.3.2, Pitch Pine-Oak Forest, Successional Southern Hardwoods and Successional Old Field communities are considered "apparently secure" or "demonstrably secure" in New York State by the NYNHP. The five remaining ecological communities are characterized by the NYNHP as unranked cultural communities that are distributed throughout New York State.

The Parcels and Echo Ramp have been subject to disturbance, clearing and development in association with facility operations as an Airport, or for historical residential development (i.e., portions of Parcel E). As observed during the field surveys, the eight ecological communities that comprise the Parcels and Echo Ramp all exhibit evidence of current and/or past disturbance. The most vegetation would be removed on Parcels A and E, as these two Parcels contain unmaintained forest communities that support tree canopy cover (e.g., Pitch Pine-Oak Forest and Successional Southern Hardwoods). Both communities, however, have been subject to significant disturbance, including clearing and grading at Parcel A and recent clearing, materials storage and historical residential development at Parcel E. Given the disturbed nature of the two communities and their "secure" NYNHP rankings, clearing of Parcels A and E is not expected to result in a substantial loss of habitat for native plants or their populations, as such habitats are regionally abundant.

As Parcels B, C, D and Echo Ramp are currently comprised of maintained turf grasses, landscaping, buildings, and/or pavement, the effect on overall vegetated habitat at and in the general surrounding area of FRG due to clearing of these areas is expected to be minimal. Removal of scattered ornamental landscape trees would occur at Parcels B and C; however forested conditions do not occur at either Parcel and therefore forest communities would not be impacted. Given that Parcels B, C and D are considered unranked cultural communities that are distributed throughout New York State, there will be no significant effect on rare or otherwise significant natural habitats as a result of the Preferred Alternative.

Following implementation of the Preferred Alternative, the Parcels and Echo Ramp would be comprised primarily of unvegetated impervious surfaces, as represented by the ECNYS Paved Road/Path and Urban Structure Exterior communities. Additionally, Parcel B would include landscaped areas, as represented by the ECNYS Mowed Lawn and Mowed Lawn with Trees ecological communities. As such, following implementation of the Preferred Alternative, the Parcels and Echo Ramp

would support ECNYS cultural communities, with no forested or otherwise naturally-vegetated communities present. Because the Preferred Alternative will not result in the loss of rare or otherwise significant natural habitats, it will not have a significant effect.

4.2.2.2 Wildlife

As detailed in Section 3.3.2, wildlife, including birds and mammals, are actively managed at FRG and the surrounding area under the WMP. As a result, wildlife populations are artificially maintained at levels below the theoretical carrying capacity of the property and are manipulated through hazing, depredation and habitat modifications. The Parcels and Echo Ramp are inhabited or frequented primarily by common wildlife species adapted to disturbed and developed habitats with high levels of noise and human activity associated with Airport operations. In general, higher wildlife species diversity is expected at Parcels A and E as compared to the remainder of the Parcels and Echo Ramp, due to the lack of existing development and a predominance of unmaintained, vegetated conditions at the former two Parcels.

Under the Preferred Alternative, the clearing of all existing ecological communities at the Parcels and Echo Ramp would result in the loss of habitat, which as described above, is neither rare nor significant habitat. Clearing of existing communities and resulting habitat loss and displacement would not occur under the No Action Alternative. The expected fauna includes common avian species (e.g. American robin, house sparrow, mourning dove, rock dove, etc.) and a few mammals (e.g., eastern gray squirrel and other rodents) that occur within the ECNYS Paved Road/Path, Urban Structure Exterior, Mowed Lawn and Mowed Lawn with Trees communities.

The primary impact of clearing under the Preferred Alternative would be a temporary increase in wildlife populations at other portions of FRG and the surrounding area, due to emigration of birds and mammals from the cleared areas. Subsequently, it is anticipated that inter- and intra-specific competition for available resources within these surrounding habitats would result in a net decrease in the population size for most species in the immediate area, until equilibrium between wildlife populations and available resources is achieved. However, the Preferred Alternative is not expected to result in the extirpation of species, which are common regionally, or impact any particular species' ability to sustain existing regional population levels. Moreover, habitat availability at the Parcels and Echo Ramp is already limited and wildlife populations are already actively managed at FRG. Accordingly, no significant effects on regional wildlife species diversity are anticipated as a result of the Preferred Alternative.

4.2.2.3 Rare/Protected Species

Section 7 of the federal ESA requires federal agencies to "*request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action*" for any project that is conducted, permitted, funded, or licensed by any Federal agency. Accordingly, Section 7 consultations with the United States Fish and Wildlife Service (USFWS) regarding federally-listed species are required for the Proposed Project.

As part of this Environmental Consequences assessment, the Sponsor has made preliminary determinations for the Preferred Alternative with respect to the six federally-listed species that appear on the Official USFWS IPaC report for FRG.

Suitable habitats to support piping plover, red knot, roseate tern, sandplain gerardia and seabeach amaranth do not exist at FRG. Therefore, they are not expected to occur at the Parcels and Echo Ramp and were not observed during the 2017 field surveys. Based on these data, no significant adverse effects to these five federally-listed species are anticipated under the Preferred Alternative. Accordingly, the Sponsor has made preliminary "*no effect*" determinations for each.

The Preferred Alternative would result in clearing of potential summer (i.e., April 1 to October 31) roosting and foraging habitat at Parcels A and E for the federally threatened northern long-eared bat, which is protected under section 4(d) of the federal ESA. However, as indicated in Section 3.3.2, correspondence from the NYNHP indicates that no records currently exist for northern long-eared bat occurrences at or in the immediate vicinity of the Parcels and Echo Ramp. In addition, to further avoid any potential impacts to this species, tree clearing will be limited to November 1 to March 31, which is the winter hibernation period for northern long-eared bat. Based on the NYNHP correspondence, limited available forested habitat at Parcels A and E and conducting tree clearing during the winter hibernation period, the Sponsor and the FAA have made the determination that this action "*may affect but is unlikely to adversely affect*" the northern long-eared bat, indicating that all anticipated effects of the Preferred Alternative are "*beneficial, insignificant, or discountable.*" The FAA issued a Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form determining that the Preferred Alternative project may affect the northern long-eared bat but that any resulting incidental take is not prohibited. This determination has been reviewed by the USFWS, which indicated its concurrence with the FAA determination. Copies of the Consultation Form and the USFWS concurrence are located in Appendix C. Accordingly, as with the No Action Alternative, no significant effects are anticipated for Federally-listed species as a result of the Preferred Alternative.

According to the NYNHP, no records currently exist for known occurrences of rare or New York State-listed animals, plants or significant natural communities on or in the immediate vicinity of the Parcels and Echo Ramp, and no such species were observed during the 2017 field surveys. Accordingly, as with the No Action

Alternative, no significant effects are anticipated for New York State-listed species due to the Preferred Alternative.

4.3 Hazardous Materials, Solid Waste, and Pollution Prevention

4.3.1 No Action Alternative

The No Action Alternative would not change existing hazardous material conditions, solid waste, or pollution prevention activities. However, without development there would be fewer potential opportunities to remediate existing contamination at the site.

4.3.2 Preferred Alternative

4.3.2.1 Existing Groundwater Plume

As discussed in Section 3.3.1, three groundwater wells are present adjacent to the northeast of Parcel E. As a precaution, based upon the presence of these groundwater wells, and the presence of a documented groundwater contamination plume, the NYSDEC will be consulted prior to construction to confirm that no oversight of the proposed activities is required.

As previously discussed in Section 3.3.1, the groundwater wells utilized to monitor the groundwater contamination plume are divided into three categories, referred to as wells screened in the "shallow aquifer," the "intermediate aquifer," and the "deep aquifer." The "shallow aquifer" is the Upper Glacial aquifer, the "intermediate aquifer" is the upper 175 feet of the Magothy aquifer, and the "deep aquifer" is the deeper portion of the Magothy aquifer.

Although wells screened in the shallow aquifer are not currently sampled to monitor the plume, there is a potential that wells screened in this aquifer contain concentrations of VOCs below 200 ug/l, but above applicable NYSDEC groundwater standards. Although it is unlikely, the potential cannot be entirely dismissed that VOC vapors associated with the plume could travel upward within soils to the excavation depth of the Proposed Project.

Occupiable structures are not proposed to be constructed within the footprint of the groundwater plume. As such, potential vapor intrusion issues are not a concern following the completion of construction activities. However, in order to ensure the safety of on-site personnel during construction activities, air monitoring for VOC vapors will be conducted during soil excavation activities. The proposed air monitoring activities will be outlined in a Soil Vapor Monitoring Plan, or equivalent, prior to the start of excavation activities, and will be in compliance with all applicable NYSDEC, NYSDOH and OSHA regulations.

Notwithstanding, the above potentially impacted groundwater will not be encountered during the Proposed Project activities.

A self-fueling AV-gas pump is proposed to be installed on Parcel D. Since the installation of the gas pump will be in compliance with all applicable regulations (including 6 NYCRR Part 613 and FAA 1050.16A), the installation of the gas pump will not constitute an adverse impact on the existing groundwater plume.

4.3.2.2 Asbestos

Asbestos-containing materials may be present within the former restaurant building on Parcel C. An appropriate survey for asbestos will be conducted and abatement activities will be conducted in accordance with applicable regulations prior to demolition activities. If a survey cannot be conducted due to structural concerns, the building may be demolished in place with all materials transported off-site and disposed as asbestos-containing materials in accordance with prevailing regulations. Thus, the demolition of the former restaurant building would not be expected to have a significant effect on the environment or adversely affect public health or safety.

Notwithstanding the above, the regulations for removal of building debris differ from regulations regarding potentially contaminated soils. A fire damaged parts of the restaurant after it was abandoned. If there are any areas inside the building where soils are currently exposed through the foundation, there would be a potential for asbestos containing materials to have come in contact with surface soils. If present, exposed soils within the building will be sampled to determine if these soils contain asbestos. In the event that asbestos is found to be present in amounts above applicable standards, the impacted soils will be removed by a Part 364 permitted environmental contractor and disposed of at an appropriately-licensed disposal facility.

Surficial soils, stockpiles and debris piles located on Parcel E have the potential to contain asbestos as the result of the demolition of the Breslau Gardens residential buildings and structures. Materials to be removed from this Parcel will be sampled in accordance with applicable NYSDEC regulations for waste characterization and debris will be properly segregated by type. If asbestos is identified, the impacted soils/materials will be removed and disposed of in accordance with applicable regulations, and as outlined above. As such, proposed activities on Parcel E would not be expected to have a significant effect on the environment or adversely affect public health or safety. To the extent contamination is present above regulatory thresholds, unlike the Preferred Alternative, the No Action Alternative would result in contamination remaining onsite.

Asbestos is not anticipated to be present on Parcel A, Parcel B, Parcel D or Echo Ramp.

4.3.2.3 Lead-Based Paint

In 1978, the U.S. Product Safety Commission issued a ban on paints or surface coatings that contain greater than 0.06 percent lead. Because the restaurant on Parcel C was built in 1984, it is unlikely that lead-based paint is present within this building.

Surficial soils, stockpiles and debris piles located on Parcel E have the potential to be impacted with lead as the result of the demolition of the Breslau Gardens residential buildings and structures. Materials to be removed from this Parcel will be sampled in accordance with applicable NYSDEC regulations for waste characterization and debris will be properly segregated by type. If lead is identified, the impacted soils/materials will be removed and disposed in accordance with applicable regulations. As such, proposed activities on Parcel E would not be expected to have a significant effect on the environment or adversely affect public health or safety. To the extent contamination is present above regulatory thresholds, unlike the Preferred Alternative, the No Action Alternative would result in contamination remaining onsite.

Impacts associated with lead-based paint are not anticipated to be present on Parcel A, Parcel B, Parcel C, Parcel D and Echo Ramp.

4.3.2.4 PCBs

PCBs were only utilized in building materials until 1978 and the restaurant on Parcel C was constructed in 1984. Therefore, it is unlikely that building materials associated with the restaurant contain PCBs.

Because of the construction period for the buildings and structures originally present on Parcel E, surficial soils, stockpiles and debris piles located on the Parcel have the potential to be impacted with PCBs. Materials to be removed from this Parcel will be sampled in accordance with applicable NYSDEC regulations for waste characterization and debris will be properly segregated by type. If PCBs are identified, the impacted soils/materials will be removed and disposed in accordance with applicable regulations. As such, proposed activities on Parcel E would not be expected to have a significant effect on the environment or adversely affect public health or safety. To the extent contamination is present above regulatory thresholds, unlike the Preferred Alternative, the No Action Alternative would result in contamination remaining onsite.

Impacts associated with PCBs in building materials are not anticipated to be present on Parcel A, Parcel B, Parcel C, Parcel D and Echo Ramp.

4.3.2.5 Stormwater Drainage Structures

As previously discussed, stormwater drainage structures with at-grade covers were identified on Parcel B and Parcel C. Existing stormwater drains on these Parcels, and if encountered on any other Parcels, that will be removed as part of the proposed

action will be sampled in accordance with applicable EPA and SCDHS UIC regulations, and any necessary remediation will be completed prior to the removal of the impacted structures.

All new storms drains installed as part of the proposed action on the Parcels will comply with applicable state and local regulations and these installation activities are not expected to have a significant effect on the environment or adversely affect public health or safety.

4.3.2.6 Former Cesspools

Remnants of former cesspools were identified on Parcel E in association with the former Breslau Gardens development. It is unlikely that the former cesspools are impacted with VOCs or SVOCs in association with the former residences. However, as previously indicated, sediments within the former cesspools, as well as in other areas on Parcel E, may be impacted with asbestos, lead from lead-based paint and PCBs at concentrations above applicable standards. The implication of these potential impacts is discussed under the appropriate sections, above.

4.3.2.7 Potential Oil/Water Separator

If an oil/water separator is discovered on Parcel C in association with the former restaurant, the structure will be sampled in accordance with applicable EPA and SCDHS UIC regulations. Any materials present within the structure will then be removed and disposed and the structure will be properly excavated, in accordance with all applicable regulations.

4.3.2.8 Unanticipated Impacts

There is no indication that soils on the Parcels are impacted with other potential contaminants. However, if evidence of unanticipated impacts or a petroleum release is identified during construction activities (i.e., staining, odors, etc.), impacted soils will be separately stockpiled, will be appropriately sampled for waste characterization. If contamination is confirmed through laboratory analytical results, impacted soils will be removed by a Part 364 permitted environmental contractor and disposed at an appropriately-licensed disposal facility with manifests. In addition, all applicable regulations regarding reporting requirements will be followed.

4.3.2.9 Solid Waste

The Proposed Action will generate solid wastes consistent with existing airport operations which will not result in an appreciably different quantity or type of solid waste with the potential to adversely impact human health or the environment.

4.4 Natural Resources and Energy Supply

4.4.1 No Action Alternative

No natural resources would be used, and no energy would be required, under the No Action Alternative.

4.4.2 Preferred Alternative

Three utility types and three natural and consumable resources would be used under the Preferred Alternative. The utilities are electricity, natural gas, and telecommunications. Natural resources would be limited to potable water and sewer, as well as sand and aggregate that will be used in construction. The consumable resources that would be used during construction are aluminum and steel, for structural frames, and asphalt.

Energy and natural resource requirement increases will be largely attributable to the increased consumption from stationary facilities. In general, construction of new hangars and maintenance or operations buildings will require additional electricity for lighting and powering of operational technology, as well as heating, cooling, telecommunications and water/sewer service. Heating of the new buildings will be accomplished via natural gas. Parking facilities and proposed taxiways require some minimal electricity for lighting to facilitate vehicle and aircraft safety and maneuvering. Security gates also require minimal electricity for operation.

Under NYSDOT Sustainable design standards, sustainable resource practices will be employed. The most prominent public feature of the proposed certification effort will be the large photovoltaic solar panel array mounted on the south side of the new hangar roof (Parcel B). In addition to on-site renewable energy systems, ultra-high efficiency boilers, daylighting of interior spaces, judicious use of recycled materials, and water-conserving plumbing fixtures will be considered as part of the internal strategy for sustainable compliance.

The Preferred Alternative will also temporarily increase the use of consumable materials associated with the construction of the proposed improvements to the Parcels and the expansion of parking and blast and perimeter fencing. The hangar buildings will likely be constructed with aluminum frames. Construction-related energy usage for implementation of the Preferred Alternative would be temporary and primarily would include fuel to operate construction-vehicles and equipment and building materials.

Proposed improvements to each Parcel, along with anticipated energy and utility service demand increases, are summarized below.

4.4.2.1 Parcel Improvements and Resource Demands

Parcel A: The proposed redevelopment of Parcel A includes the construction of a new 57,600 square-foot (SF) Group II aircraft storage hangar and maintenance facility (39,600- SF hangar and 18,000-SF hangar support spaces), the addition of 75,500 SF of heavy-duty asphalt ramp area, and the development of an additional 133 parking spaces. Blast fences will also be incorporated along with the extension of existing secure Airport perimeter fencing. The maintenance building will include restrooms, office space and a kitchenette, and will require telecommunications. This proposed site work will require extension of utility services into Parcel A, including water, sanitary sewer, and electrical service.

Parcel B: The proposed redevelopment of Parcel B includes the construction of a 12,780-SF, two-story Fixed-Base Operator (FBO) building adjacent to a 51,660-SF, clear-span aircraft hangar bay with an additional 2,916-SF, one-story support space, for a total 67,356-SF facility. The FBO building would include restrooms, a kitchen and office space, requiring telecommunications. Parcel B would also include 131 parking spaces. Extension of water, sewer, and electrical service into Parcel B will be necessary, however the Parcel B FBO building will have roof-top solar panels on the south side of the roof.

Parcel C and Echo Ramp: The proposed redevelopment of Parcel C and the Echo Ramp includes the construction of an aircraft parking ramp area that would be adjacent to the FBO development on Parcel B. Redevelopment on Parcel C would support FBO activities by providing aircraft parking and movement areas. The redevelopment of Parcel C would also include a new taxiway connection from Parcel C to the taxiway located on Parcel B.

The entirety of Parcel C would be paved with heavy-duty asphalt mix, designed to support ultra-long-range turbine aircraft operations. The redevelopment of Parcel C would also include blast fencing as required to contain aircraft operation and a new secure vehicular entry gate incorporated into a reconfigured perimeter security fence.

The existing utilities on Parcel C would remain intact to support LED elevated taxiway edge lighting along the proposed taxiway.

Parcel D: The proposed redevelopment of Parcel D includes the construction of a general aviation ramp designed for light aircraft. A small, self-fueling AV-Gas apparatus will be maintained on-site which will be on wheels and parked in a designated zone. A security gate will be incorporated into the existing fence-line as part of the redevelopment of Parcel D. A majority of Parcel D will consist of impervious surfaces, with some hydroseeded pervious areas. Parking for 109 vehicles will also be included.

Parcel D redevelopment will require extension of electrical service lines along the proposed taxiway connection to support LED lighting for the parking areas.

Parcel E: The proposed redevelopment of Parcel E includes the construction of a general aviation ramp and 196,000 SF of hangar space designed for light single-engine and twin-piston aircraft, light turbo-prop aircraft and light jets. A new taxiway will be included, connecting the Parcel E development to existing Taxiway G. A security gate will be incorporated into the existing fence-line to prevent unauthorized access onto the ramp area. A small restroom facility is also proposed, along with 120 parking spaces.

Utility service connections, including sanitary sewer, water, and electrical service into Parcel E are also proposed, and a small, self-fueling AV-Gas apparatus will be maintained on-site. Water and sewer will service the proposed restroom facility. Electrical service will be provided to each single-aircraft hangar for lighting and a convenience outlet.

4.4.2.2 Anticipated Energy and Resource Demands

Consumption rates for each resource are variable depending on structural design, structural insulation, building use and the intensity of the activity, among other factors. For the purposes of this analysis, consumption rates were calculated based on the annual consumption at the existing Stratosphere facilities at Republic Airport per square foot. To factor in the variation in facility types, different rates were calculated for the different building uses (hangar space or office/maintenance space).

Table 13 summarizes the anticipated annual consumption on each of the Parcels based on the estimated consumption rates. As indicated in the table below, it is anticipated that the highest consumption of resources and energy will occur on Parcel B, with an anticipated electrical load of 470,106 kilowatt-hours (kWh) per year, gas load of 59,148 therms per year and an anticipated 472,839 gallons of water usage per year.

Table 13 Anticipated Annual Resource and Energy Demand by Parcel

Resource	PARCEL A	PARCEL B	PARCEL C	PARCEL D	PARCEL E
Water (gallons/yr.)	404,352	472,839	n/a	n/a	n/a
Electricity (kWh/yr.)	320,256	470,106	n/a	n/a	171,696
Gas (therms/yr.)	48,384	59,148	n/a	n/a	n/a

kWh (kilowatt hour) = a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour.
Therm = a measure of heat energy equivalent to 100,000 British thermal units.

No buildings are proposed to be constructed on Parcels C and D. As mentioned above, the parking and taxiway lighting and well as the security gates and fencing

proposed for Parcels C and D will increase energy consumption on those Parcels. However, this consumption is anticipated to be minimal and has not been quantified in Table 13.

As described above, proposed redevelopment on Parcel E will include 196,000 SF of single-aircraft hangar space, which will require some electrical service to each unit. Single-aircraft hangars are much smaller than the other proposed hangars for the Parcels and will not be used actively for much of the time (mostly for aircraft storage, not requiring electricity); therefore, it anticipated that the consumption rate of electricity would be much less. Accordingly, electricity use on Parcel E was calculated separately, factoring in the low intensity of activity (see Table 13). Based on this calculation, it is anticipated that 171,696 kWh per year will be used annually on Parcel E. Water and gas consumption on Parcel E is anticipated to be minimal.

Based on the foregoing analysis, although the Preferred Alternative will result in an increase in energy and resource demand compared with the No Action Alternative, it will not result in usage that will exceed available or future supplies of these resources. Accordingly, the Preferred Alternative will not significantly impact the human environment.

4.5 Noise and Noise-Compatible Land Use

To assess the potential noise exposure from the proposed development, the Sponsor utilized the FAA's Area Equivalent Method (AEM) Version 7.0d61 to determine the potential change in noise contour area due to the proposed action based on an increase in aircraft operations. The AEM is an initial analysis that is used to determine the need for further noise analysis using the more comprehensive Aviation Environmental Design Tool (AEDT).[62]

The AEM uses calculations to estimate the change in the 65 DNL[63] noise contour area based on changes in aircraft operations. DNL, day-night average sound level, is the standard metric used by the FAA and the Department of Housing and Urban Development for identifying noise impacts. The FAA threshold for significant noise impact is defined as when the proposed action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above DNL 65 dB, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater

[61] https://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/

[62] The FAA replaced the Integrated Noise Model (INM) with the AEDT model in 2015. The INM was used on the most recent FAA Environmental Assessment at Republic Airport that was completed and approved in June 2015.

[63] Day-Night Average Sound Level (DNL) is a 24-hour equivalent sound level. DNL is expressed as an average noise level based on annual aircraft operations for a calendar year.

increase, when compared to the no action alternative for the same timeframe.[64] This threshold is when a significant number of people would be annoyed by the change in noise. Under 14 CFR Part 150, noise levels that exceed 65, 70, and 75 DNL are considered incompatible with residential, commercial, and industrial uses, respectively.

Based on the AEM, the FAA identifies a 17 percent increase in the noise contour area as a significant increase that could result in a DNL 1.5 dBA[65] or greater increase in noise exposure, which would then trigger the need for further noise analyses using the AEDT.

In preparing the 2017 noise analysis, the Sponsor utilized the inputs[66] developed for the noise analysis that was included in a 2015 FAA Environmental Impact Statement[67] for previous improvements at FRG, as that information is current and reflective of the existing operations at the Airport. The FAA's Terminal Area Forecast (TAF), included as Appendix H to this EA, predicts total annual operations at FRG in 2020 to be 211,849. The AEM uses Landing and Take-off cycles (LTOs) to calculate the change in noise contour area. An LTO is an aircraft arrival *and* departure (i.e., an operational cycle). Total aircraft operations are divided in half to determine the total LTOs. The LTO for each aircraft is then entered into the AEM accordingly.

4.5.1 No Action Alternative

Based on the 2015 EIS, there would be 211,849 annual operations at FRG under the No Action Alternative. This level of operations was the baseline used in determining whether increased operations under the Preferred Alternative would reach the significance threshold of a 17 percent increase in the noise contour area.

[64] Federal Aviation Administration. (2015). Environmental Impacts: Policies and Procedures Order 1050.1F. Washington DC: FAA AEE-400.

[65] dBA A-weighted decibels, abbreviated dBA, is an expression of the relative loudness of sounds in air as perceived by the human ear.

[66] Inputs refers to the aircraft types, engine types, and day time and night time operations occurring at the Airport. The 2015 EIS included a comprehensive noise analysis and this data would not have changed since 2015. Therefore, it is suitable to use for the AEM analysis.

[67] FINAL ENVIRONMENTAL IMPACT STATEMENT, REPUBLIC AIRPORT, SAFETY, INFRASTRUCTURE AND TENANT IMPROVEMENT PROJECTS, HAMLET OF EAST FARMINGDALE, TOWN OF BABYLON, SUFFOLK COUNTY, NEW YORK: Filed April 2015.

4.5.2 Preferred Alternative

The AEM was used to compare the Future 2020 No Action Alternative[68] to the Future 2020 Preferred Alternative[69]. The Preferred Alternative includes an assumed increment of induced growth. Development at FRG would induce ten (10) additional operations from the implementation of the proposed Stratosphere Project. The following steps were taken to determine the potential effect on the noise contour using AEM:

1. Operational data from the 2013 INM study that was included in the 2015 FAA Environmental Assessment was adjusted to equal the FAA TAF 2020 total projections (211,849 annual operations) for the 2020 No Action Alternative. The fleet mix (percentage of operations by each aircraft type) from the 2013 INM study was used for the 2020 No Action Alternative and the 2020 Preferred Alternative.
2. LTOs were calculated by dividing the annual operations for each aircraft by two.
3. The 2020 No Action Alternative LTOs for each aircraft were entered into the AEM tool.
4. Ten (10) additional operations were assigned to the LEAR35[70] aircraft to account for the induced growth associated with the proposed development. The LTO for the LEAR35 was then calculated and entered into the AEM Tool to determine the level of impact to the noise contour area.

Assuming the worst-case scenario, the AEM tool identified an increase of 0 percent in the total acreage of the 65 DNL noise contour area. Because the change is less than 17 percent, there would be no significant noise impact resulting from the proposed development. Accordingly, no additional noise analyses are necessary.

4.6 Visual Effects (Light Emissions, Visual Resources and Visual Character)

This section identifies potential impacts from light emissions or a change in the visual resources or visual character associated with the proposed action on resources within and proximate to the Project Parcels and overall FRG. Potential impacts on

[68] No-Build: This pertains to an assumption that the Proposed Project is not built in the future (year 2020).

[69] Build: This pertains to an assumption that the Project is built in the future (year 2020).

[70] Manufactured between 1970 and 1994, the LEAR35 is powered by two turbofan engines and is one of the loudest aircraft in the AEM aircraft profile that could potentially operate at FRG. To provide for a worst-case scenario, it was assumed that all operations resulting from the Proposed Project would be the LEAR35 aircraft.

certain sensitive resources, such as biological resources, that might be affected by light emissions or visual changes are discussed in detail above in Chapter 3. Although light emissions and visual changes have the potential to impact land use, historic properties, Section 4(f) properties, coastal resources, and wild and scenic rivers, these categories were dismissed from consideration in Chapter 3 because they either were not present or they would not be affected by the Proposed Project actions.

4.6.1 No Action Alternative

The No Action Alternative would not change light emissions, visual resources, or visual character in the study area.

4.6.2 Preferred Alternative

4.6.2.1 Light Emissions

As indicated in Section 3.3.10, there are existing light emissions associated with the overall FRG operations at, and proximate to, the Project Parcels. As with the existing lighting associated with the operations of FRG, the proposed lighting would be designed to provide a safe environment for aircraft, vehicles and users.

The proposed lighting would generate additional light emissions on the Project Parcels/in the study area that would have the potential to impact light-sensitive areas in the vicinity of the Project Parcels. Such sources of light emissions include:

Parcel A: The proposed aircraft maintenance, storage, and FBO facilities and the proposed hangar would have exterior mounted light fixtures similar to the external fixtures on buildings and hangars throughout the FRG and on nearby commercial properties. Landside perimeter lighting, consisting of flood lights at a height of 15± feet to 20± feet, would be installed on the proposed ramp, similar to the lighting on existing FRG ramps. Light poles with area/flood fixtures at a height of 22± feet would be installed within the proposed parking area.

In the existing condition, the vegetation on Parcel A acts as a buffer and reduces disturbance from light emissions to any wildlife, other biological, and wetland resources in the interior of the Parcel, as well as to the eastern side of the adjacent commercial hotel/motel use. The commercial hotel/motel use is located along Broad Hollow Road/S.R. 110; because the proposed site lighting would be shielded and downward-facing to reduce potential light spill, it is not anticipated that the proposed lighting on Parcel A would represent a significant source of light emissions over what is already experienced. Refer to Section 4.2 for a discussion of potential impacts on any wildlife, other biological, and wetland resources on Parcel A.

Parcel B: The lawn area on the northern portion of Parcel B would be developed under the proposed action. The aircraft maintenance, storage, and FBO facilities and the proposed hangar would have exterior mounted light fixtures similar to the

external fixtures on buildings and hangars throughout the FRG and on nearby commercial properties, such as the Walmart located immediately west of Parcel B. Rooftop solar panels would be installed on the south side of the new hangar roof on Parcel B. As the air traffic control tower is located east of Parcel B, it is not expected that potential glare from the solar panels would impact operation of the tower. However, during the design process, documentation regarding the proposed solar panels will be submitted to the FAA for airspace review and to assess the potential impacts of the solar panels on safety or air navigation.[71]

Landside perimeter lighting, consisting of flood lights at a height of 15± feet to 20± feet, would be installed on the proposed ramp, similar to the lighting on existing FRG ramps. Lighting in the parking area would consist of light poles with area/flood fixtures at a height of 22± feet. However, as with light emissions from existing light fixtures, the FAA regulates operations at FRG, and it is expected that the FAA requires that glare that could impact air traffic control tower and aircraft activities on the overall FRG be mitigated. Therefore, it is unlikely there is substantial existing glare, particularly glare that would emanate eastward (toward the air traffic control tower) from the western portion of the site in the vicinity of Project Parcels A, B and C and the main FRG entrance.

Parcel C and Echo Ramp: There would not be any lighting installed on the proposed airside ramp. The new taxiway connection from Parcel C to the taxiway located on Parcel B would include in-ground pavement omnidirectional elevated lights per the FAA specification for such lighting for safety/maneuvering. Light poles with area/flood fixtures at a height of 22± feet would be installed in the parking area on Parcel C.

Parcel D: There would not be any lighting installed on the proposed airside ramp. The proposed tie-down would not have any lighting. The proposed taxiway connection would include in-ground omnidirectional elevated lights per the FAA specification for such lighting for safety/maneuvering and the proposed parking areas would have light poles with area/flood fixtures at a height of 22± feet.

Parcel E: Landside perimeter lighting, consisting of flood lights at a height of 15± feet to 20± feet, would be installed on the proposed ramp, similar to existing lighting on ramps at FRG. The proposed hangar would have a single lightbulb/fixture, mounted on the façade exterior, similar to the external fixtures on existing small hangars at FRG. There would be in-ground omnidirectional elevated lights per the FAA specification for such lighting adjacent to the new taxiway that would connect the Parcel E development to existing Taxiway G for

[71] Federal Aviation Administration, *Technical Guidance for Evaluating Selected Solar Technologies on Airports*. November 2010.

safety/maneuvering. The parking areas would have light poles with area/flood fixtures at a height of 22± feet. In the existing condition, the vegetation on Parcel E acts as a buffer and reduces disturbance from light emissions to any wildlife, other biological, and wetland resources in the interior of the Parcel. Refer to Section 4.2 for a discussion of potential impacts on any wildlife, other biological, and wetland resources on Parcel E.

Because the Proposed Project area includes various light fixtures and poles in the existing condition, the light emissions introduced in the proposed action would not represent a substantial change in light levels.

As mentioned in Section 3.3.10, all lighting associated with the proposed action would comply with the Supplementary Zoning Regulations in Section 213-250.3 of the Code of the Town of Babylon, which requires development in the Republic Airport Runway Protection Zone (RPZ) is to be consistent with FAA requirements.

Existing vegetation is present on Parcels A and E would remain in the No Action Alternative. However, as indicated in Sections 3.3.2 and 3.3.11, respectively, of this EA, there are no light-sensitive unique wildlife species, or other biological resources, and there are no light-sensitive wetlands in the area. The lawn area on the northern portion of Parcel B would also remain in the No Action Alternative. Further, under the No Action alternative, Parcel C would remain unoccupied and, thus, would not have lighting.

During overnight hours, the overall FRG operation currently includes lighting; therefore, any new lighting that may create emissions overnight would also not cause annoyance or disrupt normal activities. Overall, light emissions from lighting included in the proposed action is not expected to create an annoyance for people in the study area, interfere with normal activities, or have a substantial impact on the environment.

4.6.2.2 Visual Resources and Visual Character

As the proposed action would be consistent with the visual character of the overall FRG and surrounding area (i.e., an airport), implementation of same would not result in a decrease in the aesthetic quality of the area.

The existing vegetated areas on Parcels A and E that currently block or obscure views within the site to and from the existing adjacent commercial and Airport-related uses will be removed by the proposed action. A portion of the lawn area on Parcel B would also be developed under the proposed action. The existing vegetation and lawn area on Parcels A and E and B, respectively, would not be removed under the No Action Alternative. However, none of the Project Parcels are used by the public for open space or recreation. In addition, the vegetated areas are located on an existing Airport property and surrounded by commercial, industrial, aviation, and transportation uses, and removal of such vegetation is not likely to affect overall visual character on-site or in the area.

Overall, because the FRG is part of the visual environment, the additional aviation elements would not contrast with the existing visual character of the area, affect the visual character of the area, or block or obstruct views of visual resources. Accordingly, the Preferred Alternative will not have a significant impact on visual resources or character.

4.7 Water Resources (Wetlands/Surface Waters, Floodplains, Groundwater)

4.7.1 No Action Alternative

The No Action Alternative would not affect wetlands, surface waters, floodplains, or groundwater within the study area.

4.7.2 Preferred Alternative

4.7.2.1 Wetlands/Surface Waters

The Preferred Alternative would result in filling of the 0.08-acre pond to facilitate the development of Parcel A. Filling of the pond would result in the permanent loss of wetlands/surface waters. As a consequence, permanent loss of habitat for wetland-adapted flora and fauna would also occur. However, the pond is isolated and man-made, is not regulated by the USACE or NYSDEC, and, as described in Section 3.3.10, the existing wetland flora within the pond is sparse and characterized by low species diversity. As noted in Section 3.3.2, no adult life stages or evidence of herpetofauna breeding behavior (e.g., breeding calls, egg masses, larvae) were observed within or proximate to the pond during the May 3, 2017 field survey. Similarly, based on the 2017 field surveys, the pond does not appear to represent a significant habitat area for waterfowl or other birds associated with surface water communities.

Given these factors, and considering the small size (0.08 acre), anthropogenic origin, and disturbed condition of the pond, the proposed filling of this feature would not adversely affect the maintenance of natural systems supporting wildlife or fish habitat. Nor does the pond have an effect on municipal water supplies, which are derived from groundwater sources, or on area hydrology, as it is isolated from other water features. Filling of this feature would not threaten public health or safety in connection with the management of floodwaters and stormwater runoff.

As summarized in Section 3.3.10, the pond meets the federal definition of a wetland. With respect to federal jurisdiction, due to its anthropogenic origin and apparent isolation from other wetlands, surface waters or drainage networks, the pond is not subject to federal jurisdiction. USACE has confirmed this finding in a Jurisdictional Determination dated December 6, 2017 (see Appendix C). Additionally, as indicated previously, based on review of NYSDEC regulatory maps, the pond is not regulated

as a wetland or surface water by the NYSDEC. As such, NYSDEC consultations or permitting would not be required to fill the pond.

4.7.2.2 Groundwater

Groundwater monitoring is in place under Parcels C and E. It is recommended that consultation be conducted with NYSDEC to ensure that the proposed action would not disturb the monitoring scheme.

4.8 Cumulative Impacts

The CEQ NEPA regulations (40 CFR 1508.7) define a cumulative impact 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. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

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

The past, other present and reasonably-foreseeable future actions evaluated for the potential cumulative impacts of these actions on affected resources are as follows:

Past Projects:

1. Installation of EMAS beds at both ends of Runway 14-32: NEPA CatEx determinations on April 20, 2011 and November 3, 2010; Completed in 2013
2. Northeastern Aviation Hangar: NEPA FONSI/ROD issued on August 2, 2007; Completed in 2008
3. Stratosphere Hangar 7: NEPA FONSI/ROD issued on March 20, 2009; Completed in 2012
4. Stratosphere Fuel Farm and On-Site Aircraft Maintenance Facilities: NEPA FONSI issued on August 19, 2013; Completed in 2015.

Present Projects:

1. **Runway Safety Area Project:** Republic Airport is currently implementing a runway improvement project to comply with a congressional mandate. The project involves improvements to the Runway Safety Area (RSA) of runway 1/19. The RSA is an area surrounding the Runway, intended to reduce the risk of damage to an aircraft in the event of a runway excursion. The standard RSA extends 1,000 feet beyond the Runway ends. In 2015, the FAA awarded Republic Airport a $21 million grant for design and construction.

   The project is currently in the late design stages. An Environmental Assessment/Environmental Impact Statement for the project was completed in

2015. The NYSDOT has been working with the FAA to complete the design of the project.

2. **Sheltair Breslau Leasehold Area:** Sheltair improvement project was evaluated and was subject to environmental review in the 2015 EA and EIS. Construction on this Project has been initiated. As of May 2019, Sheltair has constructed three hangars of approximately 36,400 square feet each, associated drainage, utility and infrastructure work, and vehicular and aircraft apron pavement areas in its 41-acre lease area has begun. The ultimate build-out over multiple years, as demand allows, will be for a total of six hangars and an FBO headquarters. Site grading and clearing for the additional hangars was started in the Spring of 2019.

Reasonably Foreseeable Projects:

1. **Northeastern Aviation Hangar:** Northeastern Aviation has submitted plans for the Construction of a hangar/with lean-to of approximately 38,325 square foot, associated utility and infrastructure work, and vehicular and aircraft apron pavement areas in its leasehold. Northeastern has also applied to change its status from a Specialized Aviation Service Operator (SSO) to an FBO, which is under consideration by the NYSDOT at the present time. Future construction phases are still in the planning stage, including construction of a Fuel Farm and the construction of parking areas.
2. **Long Island Railroad (LIRR) New Republic Station on Main Line:** This Project would reopen the currently closed LIRR station that is located to the north of the Airport, between Conklin Avenue and the existing LIRR line. According to the MTA, this Project will include two new 12-car platforms, along with staircases, new ADA ramps, platform railings, platform shelters, ticket vending machines, as well as lighting, communication and security systems, and site improvements.[72] There is no schedule posted for construction start of this Project or for a scheduled date for the station reopening.

Beyond the development of the five Parcels that is the subject of this EA, there are no other projects contemplated at the Airport at this time. Based on this list, it is anticipated that one project, the Sheltair improvement project, will be on-going during the similar period as the Stratosphere Project. Parcels A through C would not conflict with Sheltair's construction activities. Construction on Parcels D and E by

[72] LIRR Capital Plan (2015 to 2019) Dashboard. Site accessed on September 20th, 2017: http://web.mta.info/capitaldashboard/allframenew_head.html?PROJNUM=I70204uz&PLTYPE=1

Stratosphere may need to be coordinated with construction on the Sheltair site to avoid conflicts by construction vehicles.

Other resource categories that were considered included air quality, noise, and traffic. As the analyses in this EA and in the 2015 EA for the Sheltair project demonstrate, both of these projects would have nominal impacts on traffic, air quality and noise, even assuming a slight increase in aircraft operations; the cumulative impact is thus not significant. The air quality analyses in the respective EAs for these projects show that each is far below *de minimis* levels. Even if elements of the Stratosphere Project and the Sheltair project occur simultaneously, there is no threat of exceedances or a significant contribution to the overall impact on resources.

Specifically with respect to air quality impacts, the latest construction emissions projections for the Sheltair project (prepared in 2013) anticipated a five-year construction plan from 2015-2019. Dividing the total construction emissions from the Sheltair project for each pollutant evaluated (CO, VOC, NOx, PM) over the five-year period, and adding them to the 2019 Stratosphere Project emissions (i.e., the only year they would overlap), the combined emissions would be well below the applicable *de minimis* thresholds, as follows:

Table 14 Combined Emissions

Project	Year	CO	VOC	NOx	PM
SheltAir	2019	6	<1	1	<1
Stratosphere	2019	4	1	7	2
	Total	**10**	**1**	**8**	**2**
	De Minimis Threshold	**100**	**50**	**50**	**100**
	Exceeds De Minimis Threshold (Yes/No)	**No**	**No**	**No**	**No**

4.9 Conclusion

There are no significant permanent environmental effects as a result of the Preferred Alternative when compared to the No Action alternative. Environmental impacts from construction would be limited to areas that have been previously developed. Impacts for all resource categories identified by the FAA's Order 1050.1F that are present at the Proposed Project site are summarized in Table 15, along with recommended mitigation measures, if applicable, that specifically address the Preferred Alternative's environmental impacts. As noted in Table 15, the only potential adverse environmental impact is hazardous materials, solid waste, and

pollution prevention. All other environmental impact categories are either not affected or not applicable.

Table 15 Summary of Impacts of the Preferred Alternative

Environmental Impact Category**	Potential Environmental Impacts	Measures to Prevent Effects	Notes
Air Quality	Not Affected*	Limit equipment idling times and implement fugitive dust and equipment exhaust controls	
Biological Resources (including fish, wildlife, & plants)	Not Affected	N/A*	
Climate	Not Affected	N/A	
Coastal Resources	Not Applicable*	N/A	
Department of Transportation Act Section 4(f)	Not Applicable	N/A	
Farmlands	Not Applicable	N/A	
Hazardous Materials, Solid Waste, & Pollution Prevention	Disturbed soils & dump piles disturbed or removed may contain contaminants that exceed applicable standards	Manage soils and dump site, including potential testing for regulated substances, as part of a Soil and Groundwater Management Plan	
Historic, Architectural, Archaeological, & Cultural Resources	Not Applicable	N/A	NY SHPO determined no effect on historic properties (April 11, 2017)
Land Use	Not Applicable	N/A	
Natural Resources & Energy Supply	Not Applicable	N/A	
Noise & Noise-Compatible Land Use	Not Applicable	N/A	
Socioeconomics, EJ and Children's Environmental Health & Safety Risks	Not Applicable	N/A	
Visual Effects (Light Emissions & Visual Resources/ Visual Character)	Not Applicable	N/A	
Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, & Wild and Scenic Rivers)	Not Affected	N/A	

* "Not applicable" refers to resources that do not apply for the *Proposed Project*."Not affected" refers to resources considered for the *Proposed Project* but were found to not be affected by the *Proposed Project*.
"N/A" refers to resources that do not have a recommended mitigation measure.
** The following documents were referenced for the identification of resources:
FAA Order 5050.4B National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions
FAA Order 1050.1F, Environmental Impacts: Policies and Procedures
FAA Environmental Desk Reference for Airport Actions
Council on Environmental Quality (CEQ) 40 CFR 1500 and Relevant Guidance

4.10 Mitigation Measures

While the Preferred Alternative would not result in significant adverse impacts to any resources that require mitigation, the following measures are recommended to further reduce unavoidable impacts:

- **Air Quality:** Limit equipment idling times and implement fugitive dust and equipment exhaust controls.
- **Hazardous Materials, Solid Waste, and Pollution Prevention:** Additional subsurface investigation may be implemented with the procedures to be outlined in the Soil and Groundwater Management Plan, which would be prepared prior to construction, for review by the NYSDOT and the Federal Aviation Administration.
- In order to ensure the safety of on-site personnel during construction activities, air monitoring for VOC vapors will be conducted during soil excavation activities. The proposed air monitoring activities will be outlined in a Soil Vapor Monitoring Plan, or equivalent, prior to the start of excavation activities, and will be in compliance with all applicable NYSDEC, NYSDOH and OSHA regulations.

5

Public Involvement

5.1 Agency Coordination

Applicable correspondence is provided in Appendices C, D, and E. Agency coordination was initiated through letter correspondence with the following agencies:

- New York State Department of Environmental Conservation, New York Natural Heritage Program
- New York State Department of Environmental Conservation, FOIL REQUEST
- New York State Department of State, Division of Coastal Resources
- New York State Office of Parks, Recreation, and Historic Preservation
- United States Army Corps of Engineers, Wetlands Determination

5.2 Public Outreach

The Federal Aviation Administration published a Notice of Availability of the Draft Environmental Assessment (EA), providing the public an opportunity to review and comment on the Proposed Project at Republic Airport. Notice was published in a local newspaper of general circulation and on the Airport's website http://www.republicairport.net. A copy of the Notice of Availability is shown below:

New York State Department of Transportation

NOTICE OF AVAILABILITY and REQUEST FOR COMMENT

DRAFT ENVIRONMENTAL ASSESSMENT
Stratosphere Development Co. LLC's Long-Term Development and Use of Five Development Parcels at Republic Airport, East Farmingdale, Town of Babylon, New York

In accordance with the National Environmental Policy Act (NEPA), notice is hereby given that a copy of the *Draft Environmental Assessment (EA) for the proposed Stratosphere Development Co. LLC's Long-Term Development and Use of Five Development Parcels at Republic Airport* is available for public review and comment at the following location:

Republic Airport – Terminal Building
7150 Republic Airport Rm 216,
Farmingdale, NY 11735
Hours: 9:00 am to 4:00 pm

In addition, electronic copies are available at the following locations:

- Amityville Public Library,
- Babylon Public Library,
- Deer Park Public Library,
- Farmingdale Public Library,
- Half Hollow Hills Community Libraries – Dix Hills and Melville,
- Huntington Public Library – Huntington and Huntington Station,
- Lindenhurst Memorial Library,
- Massapequa Public Library – Bar Harbour Building,
- North Babylon Public Library,
- Oyster Bay-East Norwich Public Library,
- Plainview-Old Bethpage Public Library,
- South Huntington Public Library, and
- West Babylon Public Library.

The Draft EA document for this project will be available at these locations until the close of the comment period, which is 5:00 PM on Monday, August 31, 2020. If you intend to view the document at the Republic Airport Terminal Building, please contact Ms. Judith Zalewski, New York State Department of Transportation at: (631) 752-7707 or Judith.Zalewski@dot.ny.gov to schedule an appointment at least one day before your visit. A copy of the Draft EA may also be viewed online at: http://www.republicairport.net

The Draft EA responds to all of the requirements of the Federal Aviation Administration for preparation of an EA under NEPA. The New York State Department of Transportation (NYSDOT) is inviting the public to submit, in writing, comments on the Draft EA prepared for the Stratosphere Development Co. LLC's Long-Term Development and Use of Five Development Parcels at Republic Airport. The NYSDOT is accepting comments on this Draft EA document until the official comment period closes on Monday, August 31, 2020. Comments must be received by 5:00 PM on August 31, 2020, in order to be considered. Additionally, a copy of the Draft EA will be provided to interested parties if requested by August 31, 2020. Written comments on the Draft EA or to a request a copy of the document should be emailed to aviation@dot.ny.gov or sent to:

NYS Department of Transportation
Office of Integrated Modal Services
Aviation Bureau
50 Wolf Road, POD 5-4

Albany, New York 12232
ATTN: Stratosphere Development Comments

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References

Bartos, Virginia L. 2007. National Register of Historic Places Registration Form with Continuation Pages, Sisters of St. Dominic Motherhouse Complex, 555 Albany Avenue, North Amityville, NY, 07NR05700. On file, NYOPRHP, form accessed March 23, 2017.

Bartos, Virginia L. 2010. NYOPRHP Resource Evaluation (Revised), Hangars 2, 3, and 4, Republic Airport, East Farmingdale (USN 10301.000137). On file, NYOPRHP, form downloaded March 14, 2017.

Cameron Engineering and Associates, LLP. 2009. *Environmental Assessment – Proposed Redevelopment of Lease Area for Stratosphere Development Company, Republic Airport, Farmingdale, Suffolk County, New York*.

Code of Federal Regulations, Title 40 Protection of the Environment, Part 93 Determining Conformity of Federal Actions to State or Federal Implementation Plans. Available at: http://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol21/xml/CFR-2012-title40-vol21-part93.xml.

Code of Federal Regulations, Title 40 Protection of the Environment, Part 1500 Council on Environmental Quality. Available online at: http://www.ecfr.gov/cgi-bin/textdx?SID=f692340d9fb95887fe267231fb7cc093&node=pt40.33.1500&rgn=div5.

Code of Federal Regulations, Title 49 Transportation, Part 1542 Airport Security. Electronic Code of Federal Regulations. Available online at: http://www.ecfr.gov/cgi-bin/textidx?SID=51e2a7334dcc33da80ee5ba569d55939&node=pt49.9.1542&rgn=div5#se49.9.1542_1203. Accessed November 17, 2014.

Connor, Paul F. 1971. *The Mammals of Long Island. New York* State University of New York, New York Museum and Science Service.

Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. *Ecological Communities of New York State.* Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

Empire State Development Corporation, New York State Department of Transportation. Republic Airport Development Sites, presentation at Republic Airport, East Farmingdale, NY. March 2, 2017.

Environmental Protection Agency. National Ambient Air Quality Standards (NAAQS). Available at: http://www.epa.gov/air/criteria.html. 2015.

Epstein, Ronald L., 2017 (July 20). Long-Term Lease of Five Development Parcels at Farmingdale Republic Airport New York State Department of Transportation town of Babylon [sic], Suffolk County Determination.

Federal Aviation Administration. Advisory Circular 150/5070 and the ALP checklist. Available online at: http://www.faa.gov/airports/eastern/planning_capacity/media/alp_checklist.pdf.

Federal Aviation Administration. Advisory Circular 150/5320-5d. Airport Drainage Design – Paragraph 7-5.2

Federal Aviation Administration. Advisory Circular 150/5370-10G. Item F-162 Chain-Link Fence and Item F-163 Wildlife Deterrent Fence Skirt. July 21, 2014.

Federal Aviation Administration. *Environmental Desk Reference for Airport Actions*. October 5, 2007.

Federal Aviation Administration. Order 1050.1E, Change 1, *Environmental Impacts: Policies and Procedures*. March 20, 2006.

Federal Aviation Administration. Order 1050.1F, *Environmental Impacts: Policies and Procedures*. July 16, 2015.

Federal Aviation Administration. Order 5050.4B, *National Environmental Policy Implementing Instructions for Airport Actions*. April 26, 2006

Federal Emergency Management Agency. Flood zone designations. Available online at: https://www.fema.gov/floodplain-management/flood-zones. Accessed January 10, 2015.

Lenihan, Patrick. 2017. Republic Airport Stratosphere Development Co., LLC Traffic Analysis. Appendix B, State Environmental Quality Review Act Environmental Assessment July 2017 Long Term Lease of Five Development Parcels at Farmingdale Republic Airport Hamlet of East Farmingdale, Town of Babylon, Suffolk County, New York, by Ronald L. Epstein, July 19, 2017.

Long Island Index. Accessed March 2017. Last updated in 2013.

National Register of Historic Places, Registration Form. Sisters of St. Dominic Motherhouse Complex. 3/28/2007. Accessed April 2017

New York State Department of Environmental Conservation. Environmental Resource Mapper. Available online at http://www.dec.ny.gov/imsmaps/ERM/viewer.htm. Accessed April 13, 2017.

New York State Department of Environmental Conservation. List of Rivers Protected in the Wild, Scenic and Recreational Rivers Act, Available online at: http://www.dec.ny.gov/permits/32739.html. Accessed April 13, 2017.

New York State Department of Environmental Conservation. New York Natural Heritage Program. 2011. Online Conservation Guides. Available at: http://www.dec.ny.gov/natureexplorer/app/. Accessed April 28, 2017.

New York State Department of Environmental Conservation. New York Nature Explorer. Available online at: http://www.dec.ny.gov/natureexplorer/app/. 2009. Accessed April 28, 2017.

New York State Department of Environmental Conservation. New York State Amphibian and Reptile Atlas Project. Available online at: http://www.dec.ny.gov/animals/7140.html. Accessed April 14, 2017.

New York State Department of Environmental Conservation. New York State Breeding Bird Atlas. Available online at: http://www.dec.ny.gov/animals/7312.html. Accessed April 14, 2017.

New York State Department of Environmental Conservation. New York State Major Drainage Basins. October 2012. Available online at: http://www.dec.ny.gov/docs/water_pdf/drainagebasins.pdf. Accessed February 26, 2013.

New York State Department of Environmental Conservation. 2017 (August 2). Region 1 Notices, Negative Declaration, Suffolk County, Long-Term Lease of Five Development Parcels at the Farmingdale Republic Airport. Available online at: http://www.dec.ny.gov/enb/20170802.not1.html.

New York State Office of Parks, Recreation, and Historic Preservation. Resource Evaluation. 09PR04668. 2/9/2010. Accessed April 2017.

New York State Office of Parks, Recreation and Historic Preservation, Cultural Resources Information System. 2017 (March 14). USN 10301.000327 Hangar

#2/Republic Airport, 1230 New Highway, Babylon, NY. NYOPRHP, Photo file only, downloaded March 14, 2017.

New York State Office of Parks, Recreation and Historic Preservation, Cultural Resources Information System. 2017 (March 14). USN 10301.000136 Hangar #3/Republic Airport, 1230 New Highway, Babylon, NY. NYOPRHP, Photo file only, downloaded March 14, 2017.

New York State Office of Parks, Recreation and Historic Preservation, Cultural Resources Information System. 2017 (March 14). Plotting, USN 10301.000164 Seversky Airplane Assembly Building, Conklin Street, Babylon, Eligible. NYOPRHP, building information downloaded March 23, 2017.

New York State Environmental Conservation Law. Article 15, Title 27, Wild Scenic and Recreational Rivers Act.

New York State Freshwater Wetlands Act. New York State Environmental Conservation Law, Article 24.

McGowan, K.J. and K. Corwin, eds. 2008. *The Atlas of Breeding Birds in New York State*. Cornell University Press. Data also available online at http://www.dec.ny.gov/animals/51030.html. Accessed April 13, 2017.

Republic Airport and Loomacres Wildlife Management. 2013. *Republic Airport Wildlife Hazard Management Plan*. Prepared by Cody Baciuska, Airport Wildlife Biologist.

Robinson, Pam. 2012. *Farmingdale Patch*, https://patch.com/new-york/farmingdale/56th-fighter-group-restaurant-to-shut-down-bed9ef5f

Suffolk County Department of Planning. 2007 Existing Land Use Inventory, Western Suffolk County. June 2007.

Transportation Research Board, ACRP Report 102, Guidance for Estimating Airport Construction Emissions. Available online at: http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_102.pdf. 2014.

United States Army Corps of Engineers. 1987. *Wetlands Delineation Manual*, Wetlands Research Program Technical Report Y-87-01.

United States Census Bureau, 2011-2015 American Community Survey 5-Year Estimates. Census Tracts geographically identified within a 1-mile radius of the Project Site via American Factfinder. Accessed 2017.

United States Department of Agriculture Natural Resources Conservation Service. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed May 1, 2017.

United States Environmental Protection Agency. Clean Air Act – National Ambient Air Quality Standards.

United States Fish and Wildlife Service National Wetlands Inventory. Available online at: http://www.fws.gov/wetlands/Data/mapper.html. Accessed May 1, 2017.

United States Fish and Wildlife Service (New York Field Office). Indiana Bat Project Review Fact Sheet. Available online at: http://www.fws.gov/northeast/nyfo/es/ibat.htm. Accessed April 28, 2017.

United States Geological Survey. Historical Topographic Map Explorer. Amityville 1947 and 1954.

VHB Engineering, Surveying and Landscape Architecture, P.C. 2015. *National Environmental Policy Act – Final Environmental Assessment. Proposed Safety, Infrastructure and Tennant Improvement Projects, Republic Airport, Hamlet of Farmingdale, Town of Babylon, Suffolk County*.

Weir, William J., Roger L. Ciuffo and Hope E. Luhman. 2007. Reconnaissance (Phase I) Survey Republic Airport Development of Aircraft Hangar PIN 0903.55.101 Town of Babylon Suffolk County New York. Report submitted by The Louis Berger Group, Inc. to New York State Education Department for FAA/DOT.

Wortman, David M., 2017 (January 12). Proposed Long-Term Lease of Five Development Parcels Farmingdale Republic Airport, Hamlet of East Farmingdale, Town of Babylon, Suffolk County Environmental Assessment Form – Part 1 with Attachment. EAF prepared by VHB for submission to NYSDOT