

# ***Draft Environmental Assessment***

***NEW AIRSIDE D***

***TAMPA INTERNATIONAL AIRPORT (TPA)***

***TAMPA, HILLSBOROUGH COUNTY, FLORIDA***

Prepared for:

Hillsborough County Aviation Authority

and

U.S. Department of Transportation

Federal Aviation Administration

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by:

RS&H, Inc.

***February 23, 2024***

This environmental assessment becomes a federal document when evaluated, signed, and dated by the responsible FAA official.

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(Responsible FAA Official)

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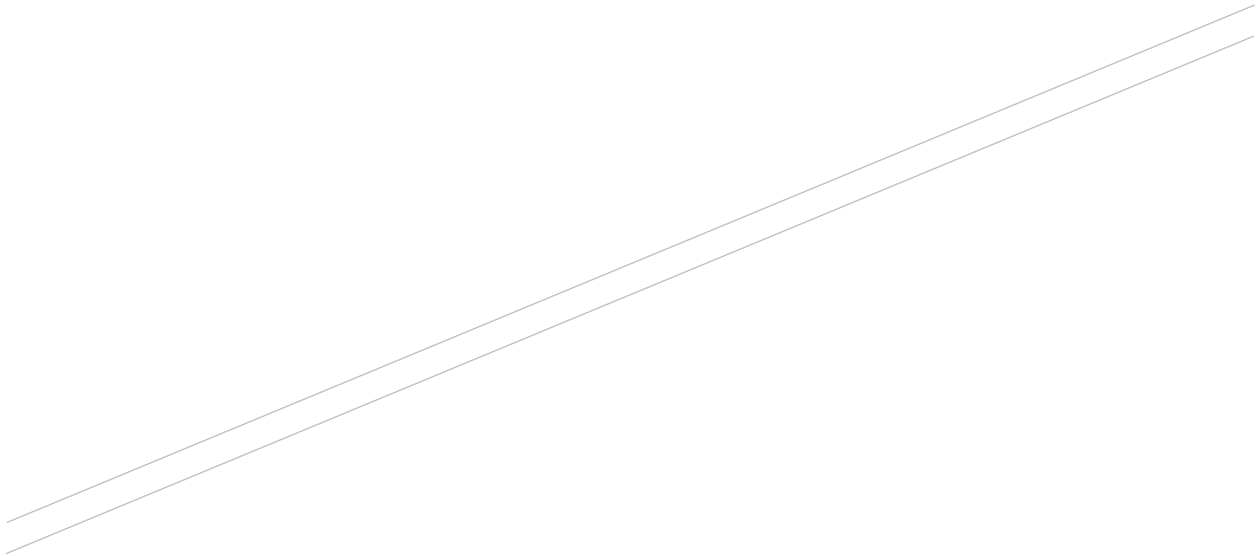
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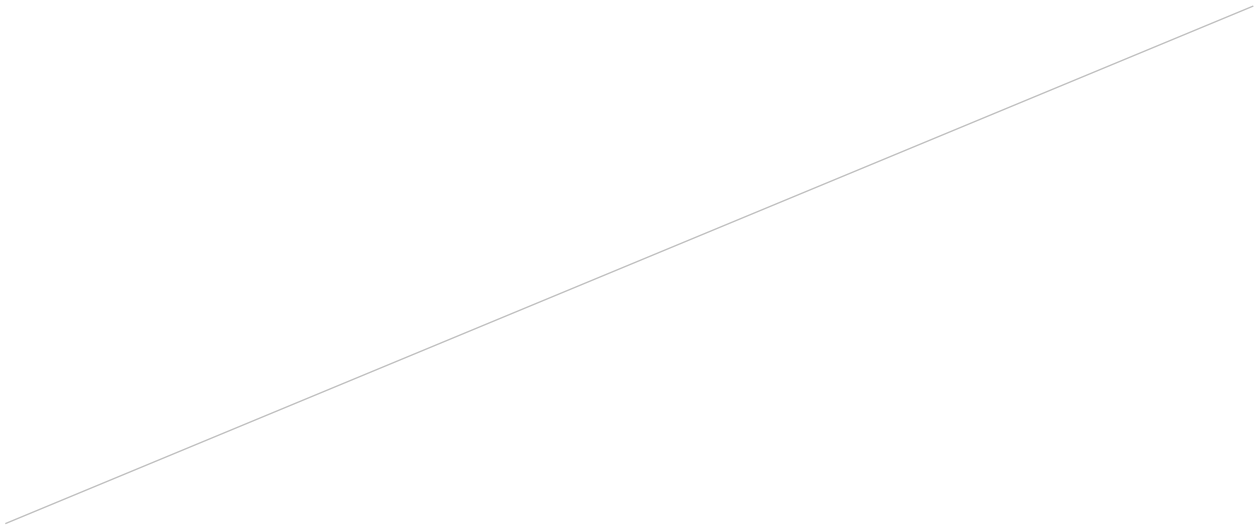
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*1*

*PROPOSED PROJECT /  
PURPOSE AND NEED*



The Hillsborough County Aviation Authority (HCAA or Authority) has undertaken an Environmental Assessment (EA) for the construction and operation of a new Airside D (AS-D) (i.e., Proposed Project) at Tampa International Airport (TPA or Airport). The EA has been prepared pursuant to the National Environmental Policy Act of 1969 (NEPA) and per *Federal Aviation Administration (FAA) Order 1050.1F, Environmental Impacts: Policies and Procedures*, and *FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

This EA follows the document format described in FAA Orders 1050.1F and 5050.4B. In addition, this document follows the 2020 Council on Environmental Quality (CEQ) National Environmental Policy Act Implementing Regulations regarding an EA not exceeding 75 pages,<sup>1</sup> not including appendices. (CEQ, 2020). **Table 1-1** lists the EA’s chapters and describes the information contained within each.

**Table 1-1: Document Organization**

Chapter	Description
Chapter 1: Proposed Project / Purpose and Need	This chapter provides an overview of the Airport, a description of the Proposed Project, and discusses the purpose and need of the project.
Chapter 2: Alternatives	This chapter presents the No Action Alternative and alternatives considered in this EA.
Chapter 3: Affected Environment / Environmental Consequences	This chapter presents an overview of the existing environment in the EA’s project study area. It describes the potential effects the alternative would have on each environmental resource identified in the FAA Order 5050.4B.
Chapter 4: Agency and Public Involvement	This chapter summarizes the agency and public involvement conducted for this EA.
Chapter 5: List of Preparers	This chapter lists the FAA, HCAA, Airport, and consulting associates who researched, wrote, reviewed, and documented the EA.
Chapter 6: References	This chapter identifies the reference materials used to prepare the EA.
Appendices	The appendices present relevant material, exhibits, and technical reports developed to prepare the EA.

Source: RS&H, 2022.

<sup>1</sup> “Page” means 500 words and does not include explanatory maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information.

## 1.1 BACKGROUND

Tampa International Airport opened as a commercial airport in 1971 to replace Drew Field (Tampa International Airport, 2021). The Airport is owned and operated by the HCAA, which the State of Florida established in 1945 (Tampa International Airport, n.d.). The HCAA oversees multiple airports within Hillsborough County. TPA is about five miles northwest of downtown Tampa. The Airport has three runways, with the longest Runway 01L/19R measuring 11,002 feet (see *Figure 1-1*).

TPA supports the local community by providing commercial air services and cargo operations to the west coast region of Florida. Additionally, TPA has multiple fixed-based operators (FBO) and maintenance, repair, and overhaul (MRO) facilities. The TPA Airport Layout Plan (ALP) is shown in *Figure 1-2*.

The Airport's Main Terminal is a nine-level building constructed in 1971 that contains vehicle parking, ticketing, baggage claim, hotel, restrooms, concessions, and passengers' services (Ricondo, 2022). The Main Terminal is approximately 800,000 square feet (Ricondo, 2022). TPA currently has four airside at the Airport, supporting airlines (Tampa International Airport, 2022). They include Airside A, Airside C, Airside E, and Airside F. These airside connect to the Main Terminal at the Airport via automated people movers (APM).

- » Airside A is a three-level building commissioned in 1995. Airside A has 14 gates<sup>2</sup> supporting JetBlue, Silver Airways, Spirit Airlines, and United. Airside A is approximately 270,000 square feet and contains gates, holdrooms, concessions, circulation, restrooms, airport security, and an APM station for passengers (Ricondo, Master Plan Update (draft), 2022).
- » Airside C is a two-level building commissioned in 2005. Airside C has 16 gates, each with a passenger boarding bridge, supporting Alaska Airlines, Avelo Airlines, Breeze Airways, Southwest Airlines, and Sun Country airlines. Airside C is approximately 320,000 square feet and includes holdrooms, concessions, circulation, restrooms, airport security, and an APM station for passengers (Ricondo, 2022).
- » Airside E is a three-level building that was commissioned in 2002. Airside E has 13 gates, each with a passenger boarding bridge, supporting Air Canada, Delta Airlines, and Frontier Airlines. Airside E is approximately 318,000 square feet, which contains gates and includes holdrooms, concessions, circulation, restrooms, airport security, and an APM station for passengers (Ricondo, 2022).

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<sup>2</sup> Excludes Gate A1, which will be decommissioned by the TSA checkpoint building addition and Gate A3 because the apron is used for Silver Airways commuter aircraft parking.



Figure 1-1: Airport Location



Sources: ESRI, 2022; RS&H, 2022

**Legend**

 Airport Location



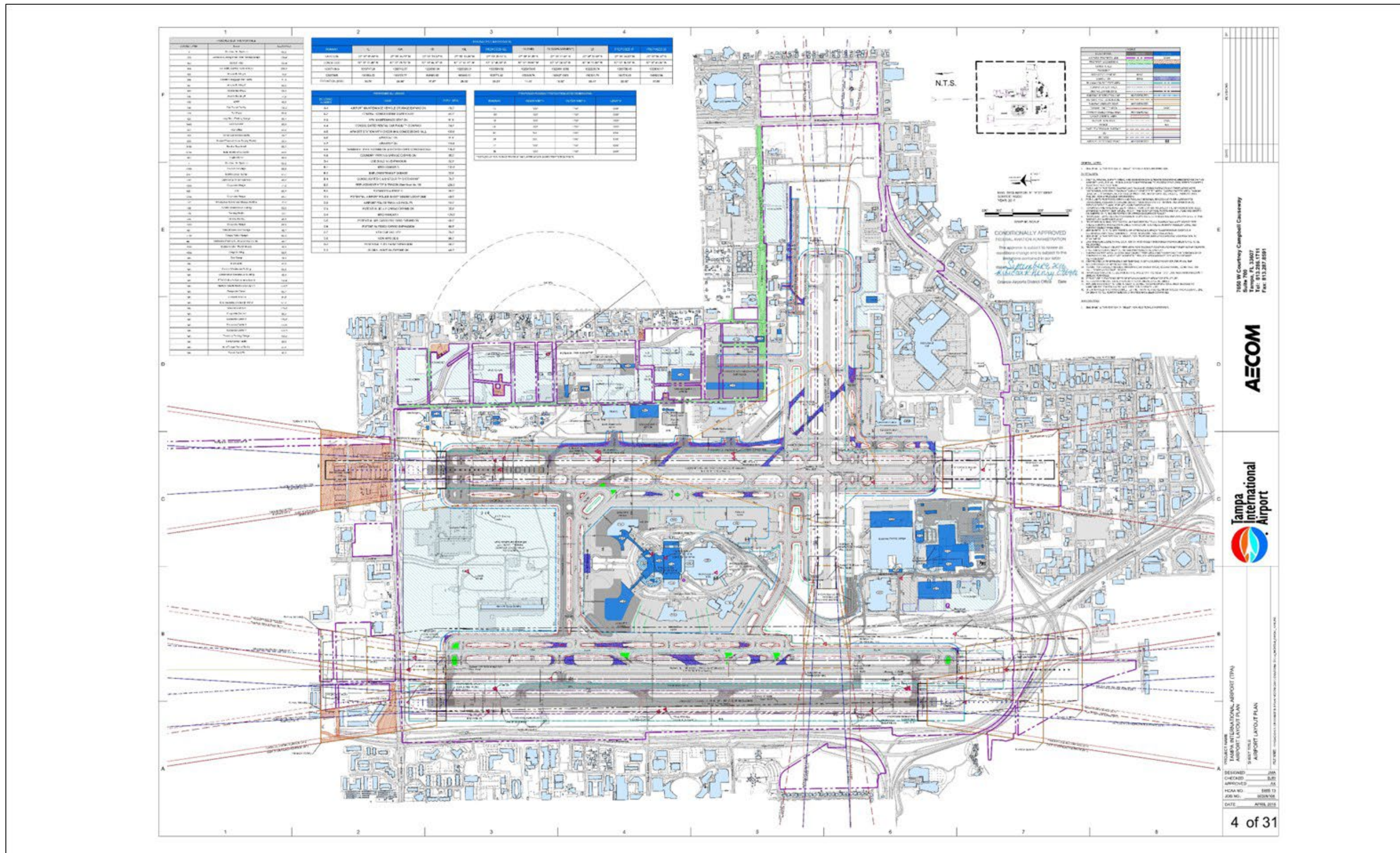
- » Airside F is a three-level building that was commissioned in 1997. Airside F has 13 gates, each with a passenger boarding bridge, supporting American Airlines, British Airways, Cayman Airways, Copa Airlines, Edelweiss Air, Eurowings Discover, Havana Air, Invicta Air, and WestJet airlines. Airside F is approximately 300,000 square feet and contains holdrooms, concessions, circulation, restrooms, airport security, and an APM station for passengers (Ricondo, 2022).

The interstate highway system, a toll road, and major north-south and east-west arterial roadways provide regional access to TPA. Most roadways connect directly to the George J. Bean Parkway, the primary roadway for accessing the Main Terminal complex. Bessie Coleman Boulevard is a service road between George J. Bean Parkway and the Aircraft Operations Area (AOA) fence. It is primarily used by delivery and service vehicles to access the airside buildings through control gates. Hoover Boulevard, also a controlled service road, runs along the east side of the Airside D site and crosses under Taxiway B to provide access to the cargo and support facilities located on the Airport's north side.

The Airport has a significant economic impact on the local economy. The Airport has streamlined access to Interstate 75 and Interstate 4, allowing for the quick movement of goods within the State of Florida. The Airport's economic impact supports the employment of approximately 120,000 jobs, which provides \$4.5 billion in personal income. The total economic output of the Airport is approximately \$14.5 billion (Florida Department of Transportation, 2019).

Airport aircraft operations include corporate/business, general aviation, charter, recreational, and military flights. **Table 1-2** shows the FAA's Terminal Area Forecast (TAF) summarizing the Airport's historical and forecasted itinerant, local, and total operations from 2021 to 2032.

Figure 1-2: FAA-Conditionally Approved Tampa International Airport Layout Plan



Source: AECOM, 2016



**Table 1-1-2: FAA Terminal Area Forecast – Airport Operations**

Year	Itinerant Operations	Local Operations	Total Operations	Based Aircraft
2022	205,824	27	205,851	79
2023	238,913	27	238,940	79
2024	254,211	27	254,238	79
2025	258,264	27	258,291	79
2026	262,821	27	262,848	79
2027	267,878	27	267,905	79
2028	272,870	27	272,897	79
2029	277,538	27	277,565	79
2030	281,943	27	281,970	79
2031	286,361	27	286,388	79
2032	290,947	27	290,974	79

Source: (FAA, 2022)

The original Airside D had a Y-shaped footprint, and its two concourses could accommodate 10 Boeing 727-200 aircraft. Airside D ceased operation in 2005 because the airside had exceeded its useful life, and airlines relocated to the then-new Airside C. The previous Airside D was the last of the original airside and was demolished in 2007 (see [Figure 1-3](#)). Since then, improvements have been made to convert the former Airside D site into hardstands for airline and cargo aircraft parking. In 2022, UPS and Amazon cargo operations used the Hardstand D.

**Figure 1-3: Airside D – 2005 and 2022**



## 1.2 PROPOSED PROJECT

The HCAA proposes constructing and operating a new 563,000-square-foot Airside D (AS-D) to meet its projected demand for operations and passengers (Proposed Project). This includes a three-level airside and 16 contact gates with passenger boarding bridges. The preferred functional arrangement of AS-D by floor level would be as follows:

- » Floor Level 1: primarily accommodates explosive detection system, baggage, building service functions, and airline support.
- » Floor Level 2: accommodates the AS-D APM station, Transportation Security Administration (TSA) security screening checkpoint (SSCP), and passenger pre-boarding functions (holdrooms, restrooms, dining, shops, passenger boarding bridges).
- » Floor Level 3: accommodates the AS-D federal inspection services (FIS) and airline club(s) (Ricondo, Tampa International Airport New Airside D Project Definition Document, 2019).

The aircraft parking capabilities of Airside D would be as follows and illustrated in *Figure 1-4*.

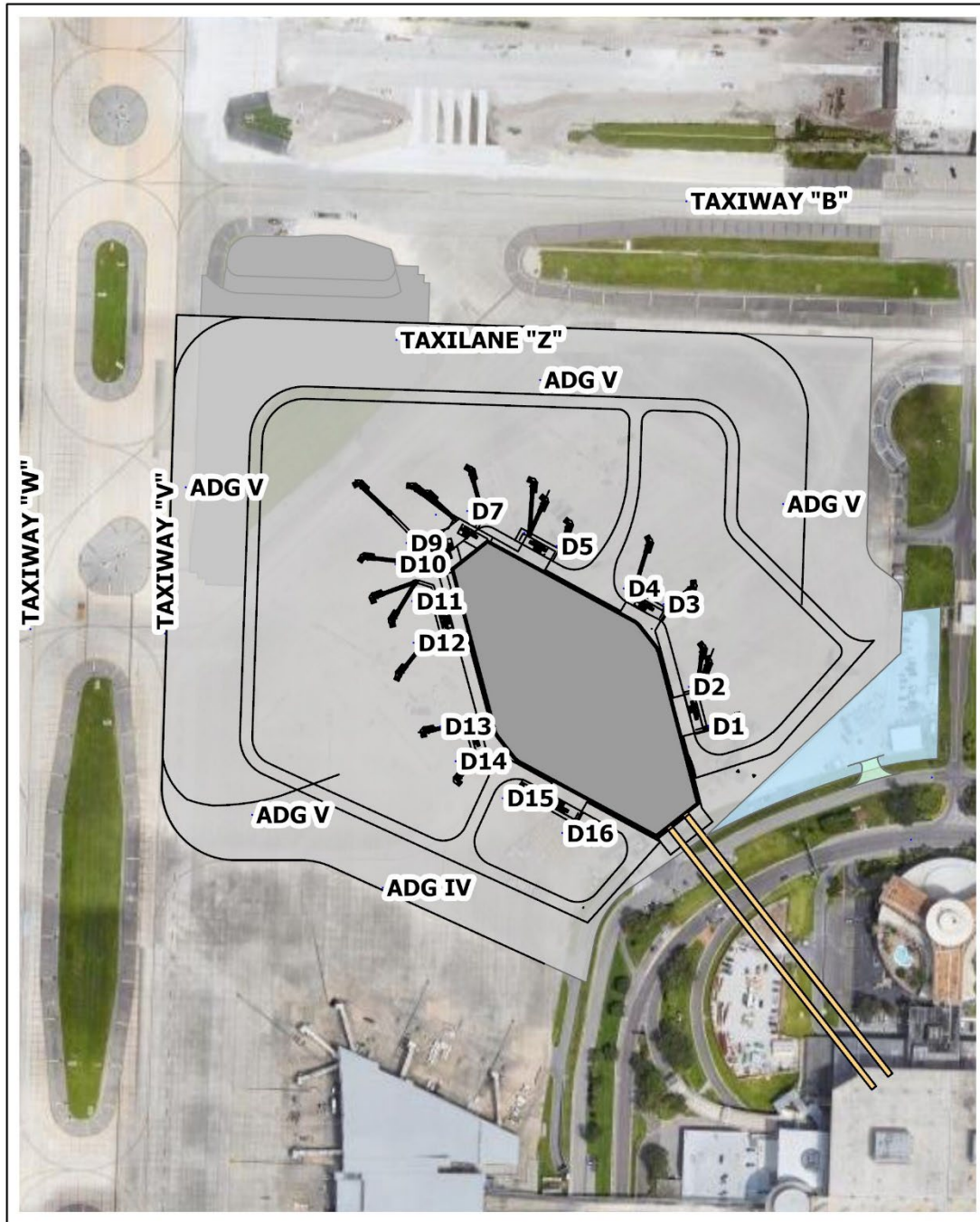
- » The maximum narrowbody-only configuration would yield 16 contact gates, with 8 narrowbody gates designed as Multiple Aircraft Ramp Systems (MARS) gates that provide capabilities for either two narrowbody aircraft or a single widebody aircraft in place of the two narrowbody aircraft. To the extent possible, MARS gates will be designed to provide dual passenger boarding bridge (PBB) service to widebody aircraft.
- » Maximum widebody configuration would yield 12 contact gates, with 8 widebody and 4 narrowbody gates.
- » Maximum narrowbody/widebody mix configuration would yield 16 contact gates, with 4 widebody and 12 narrowbody gates.

Narrowbody gates would accommodate aircraft as large as the Boeing 737-900 or Airbus A321, and widebody gates would accommodate aircraft as large as the Airbus A350-900.

Additional project components that support the Proposed Project include reconstruction of the apron, new hydrant fuel system, construction and operation of a 450-foot-long-dual-guideway automated people mover system (APM) to transport passengers to/from the new airside and main terminal, and an Airport-personnel vehicle parking area with an access gate connected to the existing Airport Access Road. The airside APM station would be outside the sterile airside zone. The APM stations can support up to a pair of two-car trains. Each car can carry 76 passengers. The APM maintenance facility would be located beneath the airside APM station.

*Figure 1-4* shows the Proposed Project and connected actions.

Figure 1-4: Proposed Project



Sources: HCAA 2022; ESRI 2022; RS&H 2022.

0 125 250 500 Feet

**Legend**

- Airside D
- Apron
- Access Gate
- Automated People Mover
- Parking





## 1.3 PURPOSE AND NEED

The purpose and need for an FAA federal action (ALP approval) is to ensure that proposed improvements do not adversely affect the safety, utility, or efficiency of the Airport. Pursuant to 49 U.S.C. § 47107(a)(16), the FAA Administrator (under authority delegated from the Secretary of Transportation) must approve any revisions or modifications to an ALP before a revision or modification takes effect.

According to FAA Order 1050.1F, Section 6-2.1(c), the purpose and need briefly describe the purpose and need for the federal action and provides the foundation for identifying reasonable alternatives to a proposed project. The purpose and need identify the problem facing the airport sponsor (i.e., the “need” for the project) and describes what would be achieved by the proposed project (i.e., the “purpose” of the project).

### 1.3.1 Need

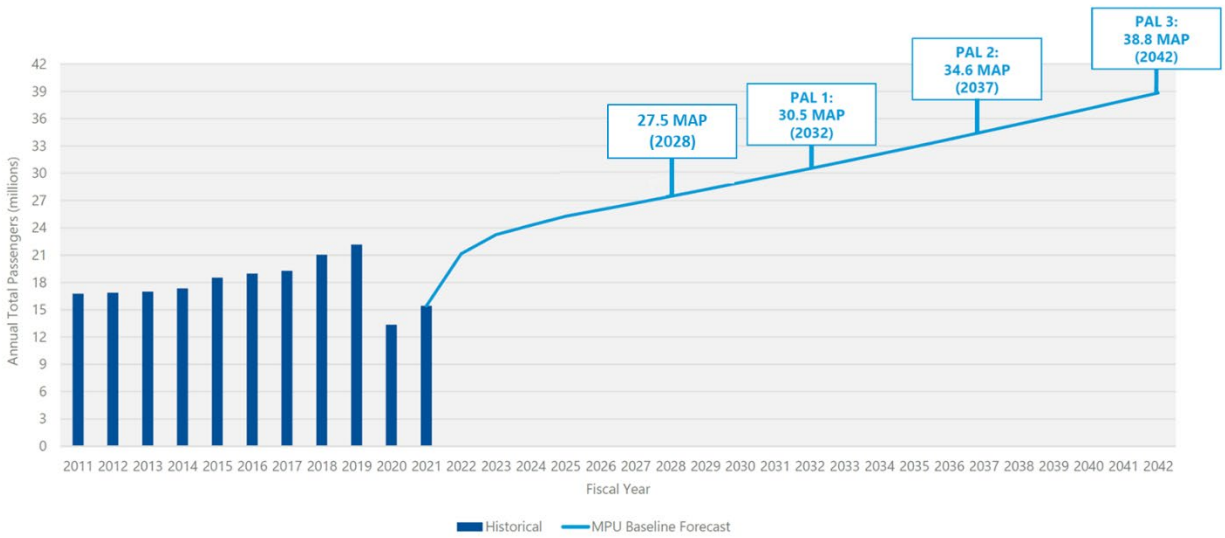
This section presents the HCAA’s need for additional contact gates and related passenger handling facilities to accommodate the forecast airline activity.

#### 1.3.1.1 Aviation Forecast

The FAA-approved 2022 TPA Master Plan Update (MPU) forecast for passengers and operations, shown in *Figures 1-5 and 1-6*, is within the required 10 percent of the FAA’s TAF, which is the variance level deemed acceptable by the FAA and gives the forecasts credibility for impact analysis purposes within a National Environmental Policy Act (NEPA) document. The 2022 TPA MPU forecast projects a quick recovery from the pandemic, followed by a steady increase in total passengers and aircraft. As at all U.S. airports, the pandemic severely disrupted passenger airline capacity and aviation demand at TPA. By May 2020, which represented the low point in passenger airline capacity offered, scheduled departing seats decreased to 24.0 percent of May 2019 capacity for all U.S. airports and 24.9 percent of May 2019 capacity at TPA. Airline capacity started to recover in June 2021, particularly in areas with access to sun and leisure activities, such as Florida. Demand for travel to or from TPA outpaced the rest of the nation in FY 2021 and the beginning of fiscal year (FY) 2022. At TPA, scheduled departing seats in January 2022 represented 102.4 percent of January 2019 departing seats, while nationwide, January 2022 was 92.8 percent of January 2019 volumes.

The pandemic temporarily disrupted the relationships between passenger volumes and drivers traditionally used to project demand, such as Gross Domestic Product (GDP), employment, and other socioeconomic factors. As modeled, overall growth continues even though pandemic-related influences affect some segments of passenger activity through 2025.

**Figure 1-5: 2022 MPU Planning Activity Levels (PALS)**



Source: Ricondo and Associates, 2022.

**Figure 1-6: Total Aircraft Operations Forecast Comparison – 2022 TAF**



Sources: Hillsborough County Aviation Authority (historical), November 2021; FAA 2021 Terminal Area Forecast, March 2022; Ricondo & Associates, Inc. (forecast), November 2021. 2022 Tampa International Airport Master Plan Update (MPU)

Source: Ricondo and Associates, 2022.

The TPA forecast considered the following during the period when passengers and operations would still be influenced by the effects of the pandemic:

- » airline capacity and load factor recovery at TPA;
- » airline capacity recovery at airports served by TPA and in the industry overall;
- » economic recovery forecast for the region and in regions served from TPA;
- » the historical revenue produced by passengers in the individual markets served from TPA;
- » input from (Fall/Winter 2021) the primary passenger and air cargo carriers that operate at the Airport to gather information on nationwide and local market trends, future flight schedules, existing and future aircraft fleet mix, etc.; and
- » other forecasts developed for the Airport (specifically the FAA Terminal Area Forecast).

As the pandemic's influences on passenger demand diminish, the traditional relationships between demand and socioeconomics will drive long-term passenger growth, especially economic and demographic changes in the Airport Service Area. Specific trends and events that drive economic activity within the greater Tampa Bay area were identified as follows:

- » Nine companies have relocated their headquarters to the Tampa Bay region since January 2021<sup>3</sup>
- » Tampa Bay is among the nation's ten fastest-growing metro areas for entrepreneurs<sup>4</sup>
- » Tampa Bay is ranked third nationally in terms of workforce confidence<sup>5</sup>
- » The Tampa-St. Petersburg-Clearwater MSA places in the first quintile of employment growth since calendar year (CY) 2018<sup>6</sup>
- » The cruise industry resumed operations from Port Tampa Bay in October 2021, with over 100 cruise ship departures scheduled for the 2021-2022 season.<sup>7</sup>

Long-term forecasts were developed based on origin and destination (O&D) passenger itinerary type to determine a passenger's true journey and forecast using socioeconomic regression analysis techniques that identified predictive statistical relationships between TPA's historical domestic and international O&D passenger volumes and socioeconomic variables (such as population, employment, per capita personal income).<sup>5</sup> The resulting regression equations were then populated with independent forecasts of the relevant socioeconomic variables,<sup>5</sup>

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<sup>3</sup> <https://www.bizjournals.com/tampabay/news/2021/10/14/st-pete-fortune-500-relocation-incentives.html>, accessed November 2021.

<sup>4</sup> <https://www.bizjournals.com/orlando/news/2021/10/25/orlando-entrepreneurs-fastest-growing.html>, accessed November 2021.

<sup>5</sup> <https://www.linkedin.com/feed/update/urn:li:activity:6725097956262989824>, accessed November 2021.

<sup>6</sup> Moody's Analytics, Inc., "Précis U.S. Metro - Tampa-St. Petersburg-Clearwater FL," October 2021.

<sup>7</sup> <https://www.cruiseandferry.net/articles/cruise-operations-to-resume-at-port-tampa-bay-in-october-1>, accessed October 2021.

yielding a range of potential O&D passenger growth. The relationships selected for use in this forecast of O&D passengers include local personal income per capita and gross regional product (GRP), as well as U.S. total earnings and GDP, with additional trends considered for international O&D passengers. The forecast methodology describes that each airline's connecting passengers as a percentage of its total passengers would remain constant during the forecast period due to the Airport's geographic location and lack of a carrier that uses TPA as a hub for its operations.

### 1.3.1.2 Inadequate Passenger Contact Gates

As described earlier, TPA has 57 total narrowbody contact gates<sup>8</sup> in four airside (A, C, E, and F). In conjunction with the annual forecasts, Design Day Flight Schedules (DDFS) were developed for 2023, and the three planning activity levels are noted in *Figure 1-5*. DDFS represents the Airport's daily pattern for airline service on an average weekday of the peak month, providing information on a flight-by-flight basis pertaining to the time of aircraft arrival or departure, airline, aircraft type, domestic/international designation, O&D, seat capacity, load factor, and originating/terminating passenger percentages. The DDFS also assigned flights to specific gates to ensure the extent that flights and aircraft types were accommodated on existing gates and to identify new gates or hardstand requirements required to meet demand. Gating is done iteratively, and specific assumptions are applied to address gate utilization and reflect the Airport's unique physical, operational, and air service environment. The TPA FAA-approved MPU annual forecast and the resulting DDFS indicate that TPA would have a deficit of 8 gates by 2028, 13 gates by 2032, and 19 gates by 2042.

The CY 2022 DDFS, based on schedules published by the airlines, reported 540 passenger airline operations, with 20 airlines providing scheduled passenger service. Of these airlines, 13 were U.S. airlines, and seven were foreign airlines. The Airport has the benefit of a stable air carrier base. For example, of the airlines currently serving the Airport, nine have continually operated at the Airport since FY 2012, and 14 have operated at the Airport since FY 2016. The Airport's top 20 domestic O&D markets represent nearly two-thirds of total domestic O&D demand. These top markets are served by a broad base of airlines, which supports competitive air fares. Of the top 20 domestic markets, all were served on a nonstop basis by more than one carrier, and 16 were served nonstop by at least three airlines. Notable airlines growing at the Airport include ultra-low-cost carriers Spirit Airlines and Frontier Airlines, which more than doubled their enplaned passenger volumes between FY 2017 and FY 2019. The combined market share of the ultra-low-cost carriers accounted for 17.02 percent of total passengers in FY 2021.

Based on input from the primary airlines, a 2023 DDFS was developed. It reflected a 7.4 percent compounded annual growth rate (CAGR) from 2022 operations or 580 total passenger airline

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<sup>8</sup> Contact gate provides access to a parked aircraft by way of a passenger boarding bridge from an adjacent concourse/airside.

operations from 22 airlines providing passenger service. **Table 1-3** summarizes the gate utilization metrics from the 2023 DDFS.

**Table 1-3** shows the average number of turns (a flight arrival or departure) per gate for Airsides A, C, and E, ranging between 5.7 and 6.9 turns. Based on research conducted by ACRP,<sup>9</sup> many airports define full gate utilization at 6-8 turns per gate. Airside F experiences fewer turns per gate because Airside F serves all TPA's non-precleared international flights. International service, particularly widebody aircraft used for long-haul flights, inherently requires longer ground times.

**Table 1-3: 2023 Design Day Flight Schedule Gate Utilization Summary**

Airside	Narrowbody Gate Inventory	Daily Flights	Turns per Gate	Peak Period Gates in Use
Airside A	14	97	6.9	14
Airside C	16	96	6.0	15
Airside E	13	74	5.7	11
Airside F	13	59	4.5	9

Source: Ricondo and Associates, Inc. 2023

**Table 1-3** also shows Peak Period Gates in Use, representing the highest number of gates simultaneously being used to enplane or deplane aircraft at each Airside. Peak periods could occur multiple times each day depending on the Airside but do not include periods when gates are used for remain-overnight aircraft. Airside A gates are used 100% during the peak periods, and Airsides C and E gates use 94 percent and 85 percent of their gates during peak periods, respectively. **Table 1-3** shows Airside F utilizing 9 out of its 13 narrowbody gates; however, widebody aircraft used by European airlines (British Airways, Edelweiss Air, and Eurowings) are the equivalent of one and one-half to two narrowbody gates, depending on which Airside F gates are used to park widebody aircraft. The 2023 DDFS included 3 widebody aircraft simultaneously on the ground, leaving 8 gates to accommodate narrowbody aircraft. This widebody/narrowbody gate configuration results in a total gate count of 11 gates under the widebody/narrowbody configuration compared to 13 gates under a narrowbody only configuration. Airside F gate capacity is limited to 4 international widebody aircraft based on apron depth, line-of-sight from the ATCT, and gates connected to the Customs and Border Protection sterile corridor that must be used by deplaning passengers to access the ramp level Federal Inspection Service (FIS) facilities. In this 4 widebody configuration, Airside F could simultaneously accommodate 6 narrowbody aircraft, which results in a total gate count of 10

<sup>9</sup> Airport Cooperative Research Program, Report 30-Reference Guide on Understanding Common Use at Airports

gates in this widebody/narrowbody aircraft configuration compared to 13 gates under a narrowbody only configuration. **Table 1-3** summarizes the Airside F DDFS peak period demand for gates considering the mix of widebody and narrowbody aircraft on the ground normalized to narrowbody equivalent gates.

**Table 1-4** shows that 100% of Airside F gates could be utilized during the peak period, according to the DDFS. Airside F will have a shortfall equivalent to 2 narrowbody gates by 2028, which will increase to 8 gates by 2042. **Table 1-5** summarizes narrowbody equivalent gate requirements based on DDFS correlating to the FAA-approved MPU forecast for annual passengers and operations.

TPA's four physically and operationally separate Airsides greatly limit TPA's opportunities to increase gate utilization in terms of increasing the number of turns per gate or shifting individual flights to take advantage of offset peak gate demand periods among the four airsides. Historically, TPA has moved airlines among the airsides to meet growing demand from existing and entrant airlines; however, there are no future opportunities to rebalance gates without dividing a single airline's flight operations between two or multiple airsides. This will result in confusing wayfinding for departing passengers and is highly objectional to the airlines from an operational efficiency standpoint. Further the Main Terminal's outbound baggage handling system is a point-to-point system, which limits outbound bag delivery between the Main Terminal ticket counter islands to a specific Airside.

**Table 1-4: Airside F DDFS Peak Period Demand for Gates**

Forecast Year	Widebody	Narrowbody	Narrowbody Equivalent Demand	Narrowbody Equivalent Capacity	Narrowbody Equivalent Surplus or (Deficit)
2023	3	6	13	13	0
2028	5	7	15	13	(2)
2032	0	17	17	13	(4)
2037	1	18	20	13	(7)
2042	7	9	21	13	(8)

Source: Ricondo and Associates, Inc. 2023.

**Table 1-5: TPA Narrowbody Equivalent Gate Requirements**

Airside	Existing Gates	2028	2032	2037	2042
Airside A	14	17	18	18	21
Airside C	16	17	18	18	20
Airside E	13	15	16	16	20
Airside F	13	15	17	20	21
Total	56	64	69	75	82
Surplus/(Deficit)		<b>(8)</b>	<b>(13)</b>	<b>(19)</b>	<b>(26)</b>

Source: Ricondo and Associates, Inc. 2023.

### 1.3.1.3 Meet Federal Inspection Services Gate and Facilities Requirements

Strong international growth has resulted in the Authority reaching capacity with its existing international arrivals facilities in Airside F. International passengers arriving at the Airport are subject to inspection by Customs and Border Protection (CBP) officers for compliance with immigration, customs, and agriculture regulations. CBP inspections are currently conducted upon arrival at the Airside F Federal Inspection Services (FIS) facility. CBP provides guidelines (i.e., Airport Technical Design Standard) to airports that prescribe requirements for specific spaces, square footage of spaces, and equipment based on the expected peak hour volume of arriving international passengers. The existing Airside F FIS can support 900 peak hour passengers. Based on CBP guidelines, the requirements for the existing FIS facility should be increased to accommodate 1,850 peak hour passengers, which is double the capacity of the existing FIS.

### 1.3.2 Purpose

The purpose describes how a proposed project would provide a solution to the needs the Airport is facing. The HCAA is proposing improvements at the Airport that would meet projected passenger and airline (domestic and international) demand and proactively prevent near-future congestion.

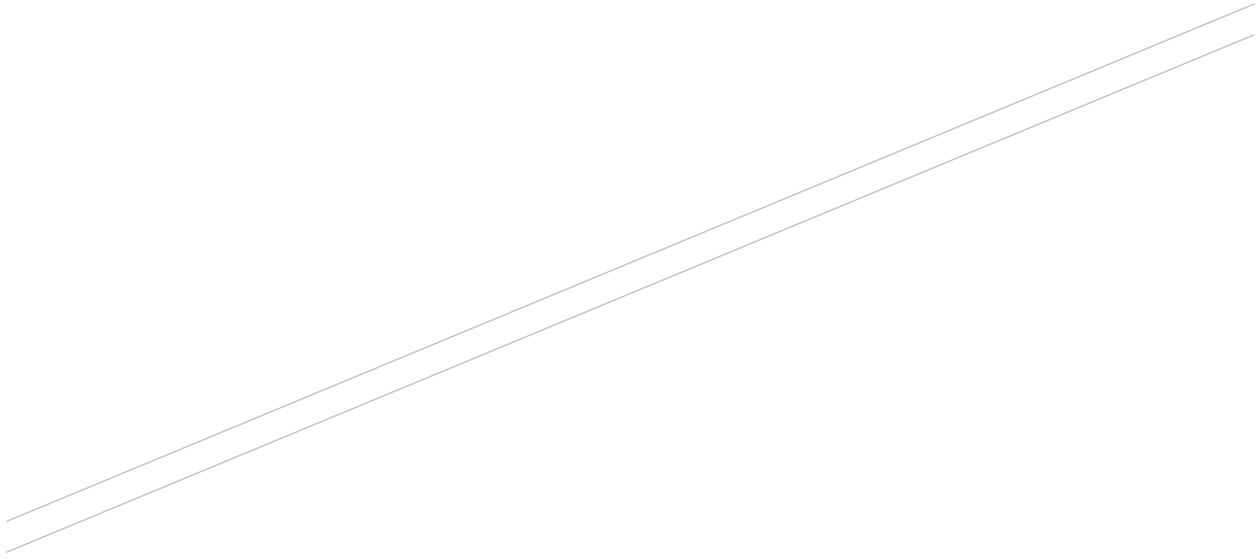
## 1.4 REQUESTED FEDERAL ACTIONS

The increasing demand for domestic and international flights necessitates the development of additional gates and associated airside passenger facilities to accommodate future growth effectively. The HCAA is proposing improvements at the Airport that would meet projected passenger and airline (domestic and international) demand and proactively prevent near-future congestion (i.e., Proposed Project).

The following are the federal actions for the Proposed Project.

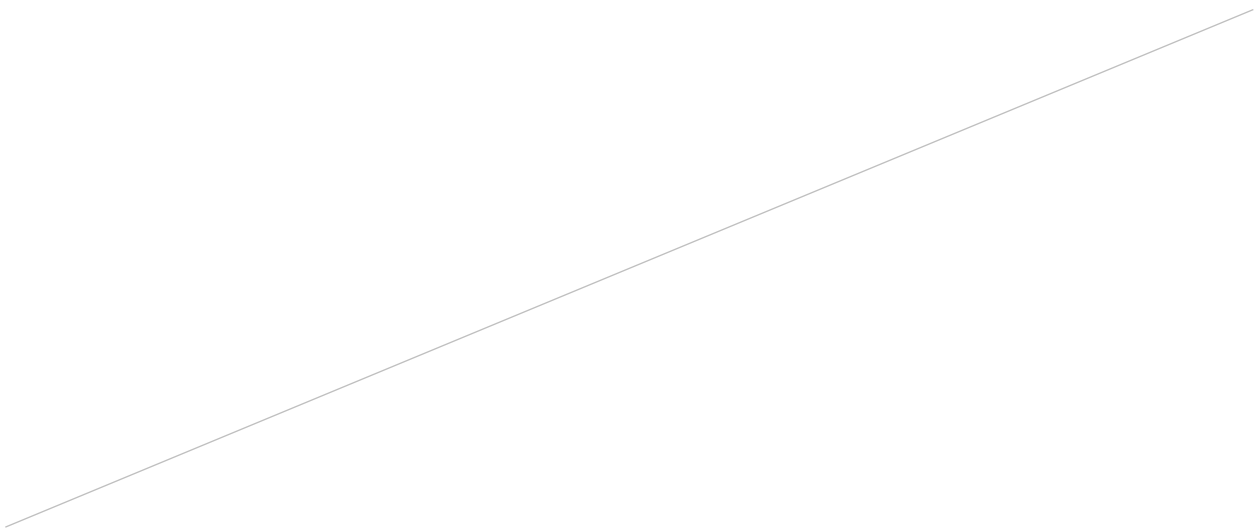
- » Unconditional approval of the Airport Layout Plan (ALP) to depict the proposed improvements pursuant to 49 USC § 40103(b) and 47107(a)(16).
- » Determination under 49 USC § 44502(b) that the airport development is reasonably necessary for use in air commerce or in the interests of national defense.
- » Approval of a Construction Safety and Phasing Plan to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular (AC) 150/5370-2, Operational Safety on Airports During Construction (14 CFR Part 139 [49 USC § 44706]).
- » Determinations under 49 USC 47106 and 47107 relating to the eligibility of the Proposed Project for federal funding under the Airport Improvement Program (AIP) and/or determinations under 49 USC 40117, as implemented by 14 CFR 158.25, to impose and use passenger facility charges (PFCs) collected at the airport to assist with construction of potentially eligible development items shown on the ALP including the proposed construction of Airside D and associated actions.





2

*ALTERNATIVES*



This chapter describes the Proposed Project (i.e., the proposed new Airside D) and the alternatives considered. CEQ regulations (Title 40 Code of Federal Regulations [C.F.R.] Section 1502.14) regarding implementation of the National Environmental Policy Act (NEPA) require that federal agencies rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives which were eliminated from detailed study briefly discuss the reasons for elimination.

As stated in Federal Aviation Administration (FAA) Order 5050.4B, paragraph 706 (d)(7), an alternative can be eliminated from further consideration when the alternative has been judged “not reasonable.” Whether a proposed alternative is reasonable depends, in large part, upon the extent to which it meets the purpose and need for the Proposed Action (FAA Order 1050.1F, paragraph 7-1.1[e]). In addition, 40 C.F.R. 1502.14(c)[2020] requires the evaluation of the No Action Alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.

## 2.1 ALTERNATIVES CONSIDERED

This section describes the alternatives considered to the Proposed Project. **Table 2-1** lists the alternatives. In addition, NEPA requires agencies to include a “no action” alternative in NEPA analyses and to compare the effects of not taking action with the effects of the action alternative(s). The No Action Alternative is a baseline for assessing the Proposed Project's effects.

**Table 2-1: Alternatives Considered**

Title	Description
No Action Alternative	“Do nothing” alternative
Proposed Project	Construction and Operation of Airside D
Alternative 1	Use of Hardstands A and D
Alternative 2	Demolition of Existing Baggage Sorting Facility and Construction of a New Airside
Alternative 3	Construction and Operation of a New North Terminal

Source: RS&H, Inc. 2023

### 2.1.1 No Action Alternative

Under the No Action Alternative, the Proposed Project (i.e., a new Airside D) would not be constructed. The Airport would operate its passenger handling processes with current Airsides A, C, E, and F, with passengers and flight crews accessing commercial passenger aircraft through 57 contact gates. This alternative would not involve airside improvements beyond those already programmed or that the Airport will undertake for safety, security, or maintenance reasons. Programmed airside improvements to improve the Airport’s passenger handling facilities underway during this EA include expanding Airsides A and E buildings’ footprint to

improve the SSCP operations by 2024 (see **Section 3.5**, Cumulative Projects, for further details). The No Action Alternative would not satisfy the Purpose and Need of the project.

## 2.1.2 Alternatives Considered but Eliminated from Further Consideration

According to NEPA, alternatives considered but not found to be technically feasible or reasonable should be presented briefly, along with the reasons they were eliminated from further analysis. Examples of reasons for elimination are (1) failure of the alternative to meet the requirements of the purpose of and need for the action, (2) the alternative cannot be technically implemented, or (3) the alternative cannot be reasonably implemented. This EA's alternatives evaluation considers meeting the Purpose and Need and the alternatives' safety, economic, technical, and engineering factors.

### 2.1.2.1 Alternative 1: Use of Hardstands A and D

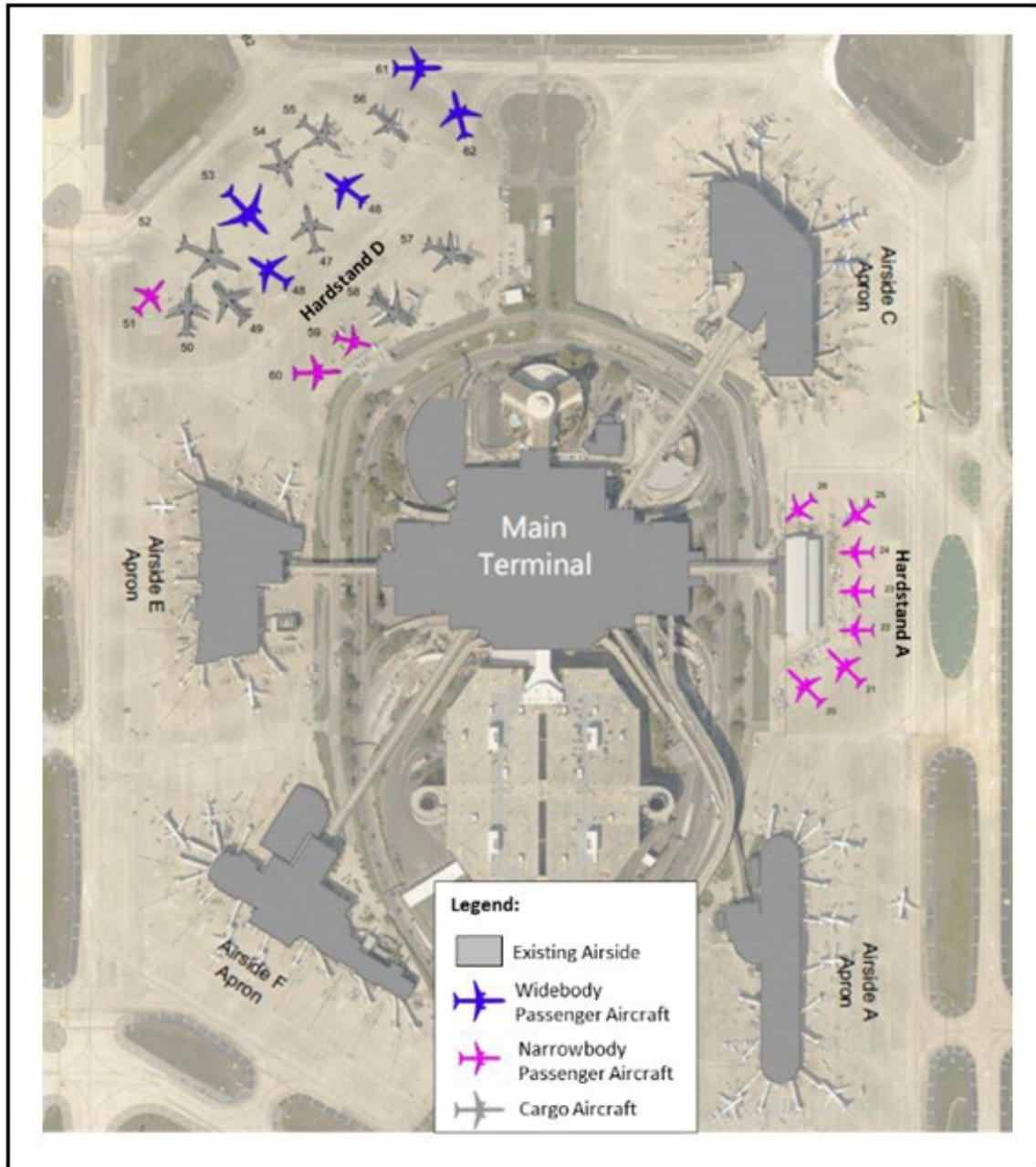
Alternative 1, the use of Hardstands D and A, was considered to accommodate the forecast of passengers (see **Figure 2-1**). Hardstand D currently accommodates 17 aircraft (5 - widebody passenger aircraft, 3 – narrowbody passenger aircraft, and 9 – cargo aircraft (8 widebody and 1 narrowbody gates)). The A Hardstand currently accommodates 7 narrowbody aircraft.

Passengers boarding and deplaning aircraft on A and D Hardstands would need to be bussed to another airside and existing gate to transfer to the Main Terminal, affecting airfield operations, passenger safety, and passenger experience. TPA does not have existing available gates for these hardstand operations. The use of A and D Hardstands for passenger boarding and deplaning would require the use of functional areas<sup>10</sup> at another TPA airside, however, the Airport does not have the functional area capacity to manage these passengers. In addition, this will result in confusing wayfinding for departing passengers and is highly objectional to the airlines from an operational efficiency standpoint.

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<sup>10</sup> Functional areas include security screening checkpoints (SSCP), holdroom space, baggage-makeup, restrooms, food/beverage, and retail.

Figure 2-1: Alternative 1: Use of Hardstands A and D



Sources: Tampa International Airport, 2021 (aerial photography); AECOM, Tampa International Airport, Airport Layout Plan, April 2016; Ricondo, 2022



Hardstand A and D operations would also affect the function of the existing airside and airfield, passenger safety, as well as the passenger experience both for the passengers that would need to “share” the functional areas in other TPA airside as well as for the passengers using aircraft parked at hardstands. There are several reasons why Alternative 1 is not reasonable, including the following:

- » Maintain Compliance with the Americans with Disabilities Act of 1990 (ADA) - The efficient, convenient, and comfortable transfer of passengers with disabilities between the airside facilities and aircraft is considered a quality of service offered by airport facilities. Title III of the ADA requires places of public accommodation to be designed, constructed, and altered in compliance with established accessibility standards. Contact gates preclude the need for disabled passengers to utilize and navigate circuitous pathways, ramps, and stairways that, by design, offer challenges to transferring passengers with disabilities. The vertical transfer of passengers between the airside departure level and the apron loading area utilizing walkers, wheelchairs, or motorized carts requires specialized lifts to provide safe passenger access to certain airside doorways or aircraft cabin door sills. The seasonal summer meteorological conditions (i.e., rain, lightning) experienced at TPA would further exacerbate discomfort for disabled passengers using Hardstand A and D remote gates instead of contact gates.
- » Limit Use of Aircraft Auxiliary Power Units (APU) - The availability of pre-conditioned air and electrical service at a contact gate and within parked aircraft during the enplane/deplane operations reduces the need for portable air conditioning and power-generating units. Hardstand A and D gate positions require an extensive network of portable or permanent apron-based auxiliary power and air conditioner units. In addition, the use of portable generating units and air conditioners would result in an increased level of onsite air emissions and noise levels for passengers and Airport and airline personnel. Limited On-Demand Hardstand Positions and Safety – The Hardstand A and D gate system offers limited freedom in the on-demand relocation of hardstand gate positions. It takes up apron areas required for aircraft taxi movement and service vehicle access. The added presence of objects and mobile carts could present a safety hazard when moving around the active apron areas.
- » Limit Use of Ground-Based Passenger Transport Vehicles - Using Hardstand A and D gate positions at locations distant to the departure level hold room would require using transport vehicles such as buses or trams. Hardstand gate-positioned aircraft would result in airfield operational delays generated by vehicular traffic on and around the airside apron, apron-area taxilanes, and aircraft taxi areas.
- » Provide a Secure Environment for Airside Operations - The increasing level of airside security concerns within the airside and apron areas at airports impose further restrictions and considerations for limiting airside-to-aircraft passenger transfer using

hardstand gate positions. When such activities occur, additional airline, Airport, and security personnel are required to escort and monitor the movements of each passenger along pre-planned routes between the airside and the aircraft. This results in additional airfield operational delays at the Airport.

- » Maximize Utilization of Contact Gates for Passenger Processing - The Airport's existing system of contact gates offers airline passengers the greatest level of comfort and convenience. The ability to shelter TPA passengers from the seasonal summer meteorological conditions is a primary consideration. Maintaining the level of service to Airport users consistent with that historically provided by the Airport, airside development should incorporate departure-level contact gates.

The use of Hardstands A and D is not reasonable or prudent. Alternative 1 would not meet ADA requirements, require extraordinary APUs, decrease security and safety, severely disrupt airfield operations, result in an unreasonable financial burden on the Authority, and affect passenger experiences. Therefore, Alternative 1: Use of Hardstands A and D was eliminated from further consideration.

#### **2.1.2.2 Alternative 2: Demolition of Existing Baggage Sorting Facility and Construction of a New Airside**

Alternative 2 includes demolishing the existing baggage sorting facility between Airsides A and C, relocation of Hardstand A, construction of a new 563,000-square-foot and 16-contact gate airside on that site, and construction of a new baggage sorting facility. The area necessary for a new 563,000-square-foot building with 16 contact gates and an apron area for aircraft movements is about 30 acres. The existing baggage sorting facility and Hardstand A area are about 10 acres (see *Figure 2-2*). Therefore, a new airside and apron to accommodate the forecast demand could not be accommodated between Airsides A and C. In addition, construction at this on-Airport location, with the same square footage needs as the Proposed Project, would significantly affect the airfield operations. The Airport would need to close/relocate taxiway connectors, Taxiway G, and Taxiway C. Relocating Taxiway C would require the relocation of Runway 19L/1R to the east. This would affect the entire infrastructure on the east side of the Airport, along with aircraft operations on Runway 19L/1R.



Demolishing and relocating the existing baggage sorting facility would impact airport infrastructure. Currently, passenger baggage from Airsides E and F is transferred from their respective aircraft by ground support equipment via a tunnel from the westside to the eastside of the Airport to the baggage sorting facility. Baggage from Airsides A and C are also transferred to the baggage sorting facility via ground support equipment. The baggage sorting facility transfers passenger baggage to the Main Terminal baggage claim areas. Without the baggage sorting facility and associated transfer tunnel system, all baggage sorting would be affected by additional ground support equipment in the aircraft operating areas. This would decrease safety and potentially affect aircraft ground operations (i.e., taxiing to and from the airside). In addition, relocating to a new baggage sorting facility is an unnecessary financial burden for the Authority.

The construction and operation of a new airside with a 563,000-square-foot building and 16 contact gates between Airside A and Airside C is not prudent. This alternative would require extraordinary infrastructure modifications, severely disrupt airfield operations, result in an unreasonable financial burden on the Authority, and affect passenger experiences. Therefore, this alternative was eliminated from further consideration.

### **2.1.2.3 Alternative 3: Construction and Operation of a New North Terminal**

Alternative 3 is for the construction and operation of a new north terminal. Construction and operation of this North Terminal would include an area to facilitate a 563,000 square-foot building, 16 contact gates along with additional square footage for on-Airport roads, passenger arrival and departure curbs, baggage claim and baggage offices, airline check-in facilities, TSA, concessions, and restrooms (see *Figure 2-2*). This alternative would also require the construction of parking areas to relocate the employee parking on the north side of the Airport along Hillsborough Avenue. As for necessary airfield improvements, this alternative would include a new apron, taxiways, and taxiways connecting to the existing airfield. New utility lines (e.g., water, electricity, and gas) would need to be connected to existing services.

The extensive construction of this alternative would not be completed when the forecast of demand surpasses the existing airside capacity. This alternative would meet the Purpose and Need. However, the need for extensive terminal and airfield improvements, relocation of tenants and employee parking, and surface transportation improvements would not be reasonable or prudent. Two duplicate terminals (north terminal/existing terminal) would increase the Authority's annual operations and maintenance operating costs and result in difficulties for customers navigating two different terminal complexes. Therefore, Alternative 3, Construction and Operation of a New North Terminal, was eliminated from further consideration.



### 2.1.3 Unresolved Conflicts Concerning Alternative Uses of Available Resources

According to FAA Order 5050.4B Paragraph 706(d)(5)(a), “Unresolved conflicts may exist between the project proponent and those wishing to use affected environmental resources for non-airport purposes. An unresolved conflict typically exists when an airport development project involves one or more special purpose law.” In addition, if there are no unresolved conflicts and alternative uses of available resources, the range of alternatives may be limited to the No Action and Proposed Project (FAA, 2006).

**Chapter 3** describes the Proposed Project’s potential environmental impacts in accordance with NEPA, as amended, *Council of Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA*, *FAA Order 1050.1F, Environmental Impacts: Policies and Procedures*, *1050.1F Desk Reference*, and *FAA Order 5050.4B, National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, applicable Executive Orders (EOs), and other applicable federal, state, and local requirements.

Over 90% of the Proposed Project site, northwest of the Main Terminal, is currently paved concrete and used as a hardstand for air cargo operations. The air cargo operations on the existing Hardstand D would be moved to other parts of TPA to new facilities for processing air cargo.

As described in **Chapter 3**, the Proposed Project would result in minor temporary construction-related impacts associated with air pollutant emissions, solid waste, surface transportation, and stormwater. Compared to a No Action Alternative, the Proposed Project would not result in direct environmental impacts (e.g., floodplains, wetlands, threatened and endangered species). The Proposed Project would have socioeconomic benefits associated with airport and airline employment (e.g., airline staff, janitorial staff, food/beverage concessions, and retail staff). The Proposed Project would result in impacts to aircraft noise, air quality, natural resources, solid waste, visual, and water resources (i.e., stormwater) that do not exceed FAA’s significance threshold (see **Chapter 3** for further details).

The Proposed Project would add approximately 4.5 acres of impervious surface (i.e., concrete) east of Taxiway V and south of Taxiway B. This area is currently airport-maintained airfield grass and stormwater control. The Airport’s stormwater system would need to be slightly modified (e.g., deepened and widened existing stormwater conveyance) to accommodate rainfall runoff from the Proposed Project’s additional impervious apron (see **Chapter 3**).

Therefore, the Proposed Project would not result in unresolved conflicts concerning alternative uses of available resources.

## 2.2 ALTERNATIVES RETAINED FOR FURTHER CONSIDERATION

Paragraph 6-2.1 of FAA Order 1050.1F states in part: “There is no requirement for a specific number of alternatives or a specific range of alternatives to be included in an EA. An EA may limit the range of alternatives to the proposed action and no action when there are no unresolved conflicts concerning alternative uses of available resources. Alternatives are to be considered to the degree commensurate with the nature of the proposed action and agency experience with the environmental issues involved.”

Since there are no anticipated significant adverse impacts to any natural or human resource or unresolved resource conflicts associated with the Proposed Project, only the No Action Alternative and Proposed Project are retained for further consideration. No further “build” alternatives are retained for detailed consideration.

### 2.2.1 No Action Alternative

The EA retains the No Action Alternative for environmental baseline comparative purposes, to fulfill CEQ regulations (40 CFR Part 1502) implementing NEPA, and to comply with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Therefore, the No Action Alternative is retained as the base against which the Proposed Project's potential environmental effects can be assessed.

### 2.2.2 Proposed Project

The Proposed Project (see **Chapter 1**) would meet the Purpose and Need to meet the forecast of operations and passengers by providing the airside gate capacity required during the planning horizon and meeting federal inspection service requirements.

The site of the Proposed Project is the only functional location on Airport property connecting to the existing Main Terminal that could accommodate a new airside and require no extraordinary infrastructure modifications to existing TPA facilities (i.e., demolition and relocation of the existing baggage sorting facility and Hardstand A in between Airsides A and C or significant airfield modifications) before the forecast of demand surpasses the existing airside capacity.

Therefore, the Proposed Project is retained for further consideration in this EA.



3

*AFFECTED ENVIRONMENT /  
ENVIRONMENTAL CONSEQUENCES*



**RS&H**

As per the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Implementing Regulations 40 CFR Parts 1500 -1508, dated 2020, FAA Orders *1050.1F Environmental Impacts: Policies and Procedures*, and *5050.4B National Environmental Policy Act Implementing Instructions for Airport Actions*, this chapter describes the existing environmental condition (i.e., Affected Environment) as well as environmental resources that the Proposed Project may affect (i.e., Environmental Consequences). The analysis of each resource category includes the following:

- » Affected Environment: describes the existing natural, ecological, cultural, social, and economic conditions that could be affected by the Proposed Project.
- » Environmental Consequences: describes the potential effects of the Proposed Project (compared to a No Action Alternative using the FAA’s significance thresholds) and the potential mitigation measures to minimize the effects, if necessary.
  - Potential Effects: The analysis of the Proposed Project’s impacts compared to the No Action Alternative’s impacts is based on the information known during this EA’s preparation.
  - Significance Threshold: Significance thresholds for each resource category described in FAA Order 1050.1F, Exhibit 4-1 aided the analysis provided in this chapter.
  - Mitigation Measures: describes potential mitigation measures related to anticipated impacts.

Data used to determine the Affected Environment was collected by reviewing existing documentation provided by the Airport Sponsor, public databases, consulting with agencies with specific knowledge of a resource category, and conducting field investigations.

As described in **Chapter 2**, the No Action Alternative is evaluated and compared to the Proposed Project. Not only is the No Action Alternative required to be analyzed in further detail by CEQ regulations<sup>11</sup>, but it also provides a baseline comparison for potential impacts resulting from implementing the Proposed Project.

The environmental analyses in this chapter are consistent with FAA Orders *1050.1F* and *5050.4B* and disclose the potential impacts for the projected future conditions in 2027 and 2032. The EA uses 2027 as the projected opening year for the Proposed Project. The 2032 study year is 5 years beyond the proposed opening year and is used for future aircraft noise analyses and potential effects. Compared to the No Action Alternative, the Proposed Project would increase the number of airline operations at the Airport by approximately 462 in 2027 and 2,000 in 2032.

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<sup>11</sup> 40 CFR § 1502.14(c)

### 3.1 PROJECT STUDY AREAS

According to the Desk Reference for FAA Order 1050.1F, a study area can vary based on the impact category being analyzed. A Direct Study Area was established for this EA to identify the environmental resources that may be directly affected by the construction and operation of the Proposed Project within the limits of disturbance. *Figure 3-1* shows the Direct Study Area.

The Direct Study Area is located within the Airport property and at the former Hardstand D area, northwest of the Main Terminal. The size of the Direct Study Area is approximately 58 acres and consists of paved concrete and a small drainage swale/airfield turf in the northwest corner. The Direct Study Area contains portions of existing Taxiways B, V, V5, U, and Taxilane Z.

The Indirect Study Area is located on and off the Airport property to evaluate the potential impacts on water resources, visual effects, and surface transportation. The Indirect Study Area is approximately 4,169 acres and comprises aeronautical, residential, and commercial development land uses. *Figure 3-2* shows the Indirect Study Area.

To evaluate potential impacts, the analyses in this chapter overlay the components of the Proposed Project and No Action Alternative onto the conditions within the project study areas for each environmental impact category described in FAA Orders 1050.1F and 5050.4B.

### 3.2 NO ACTION ALTERNATIVE

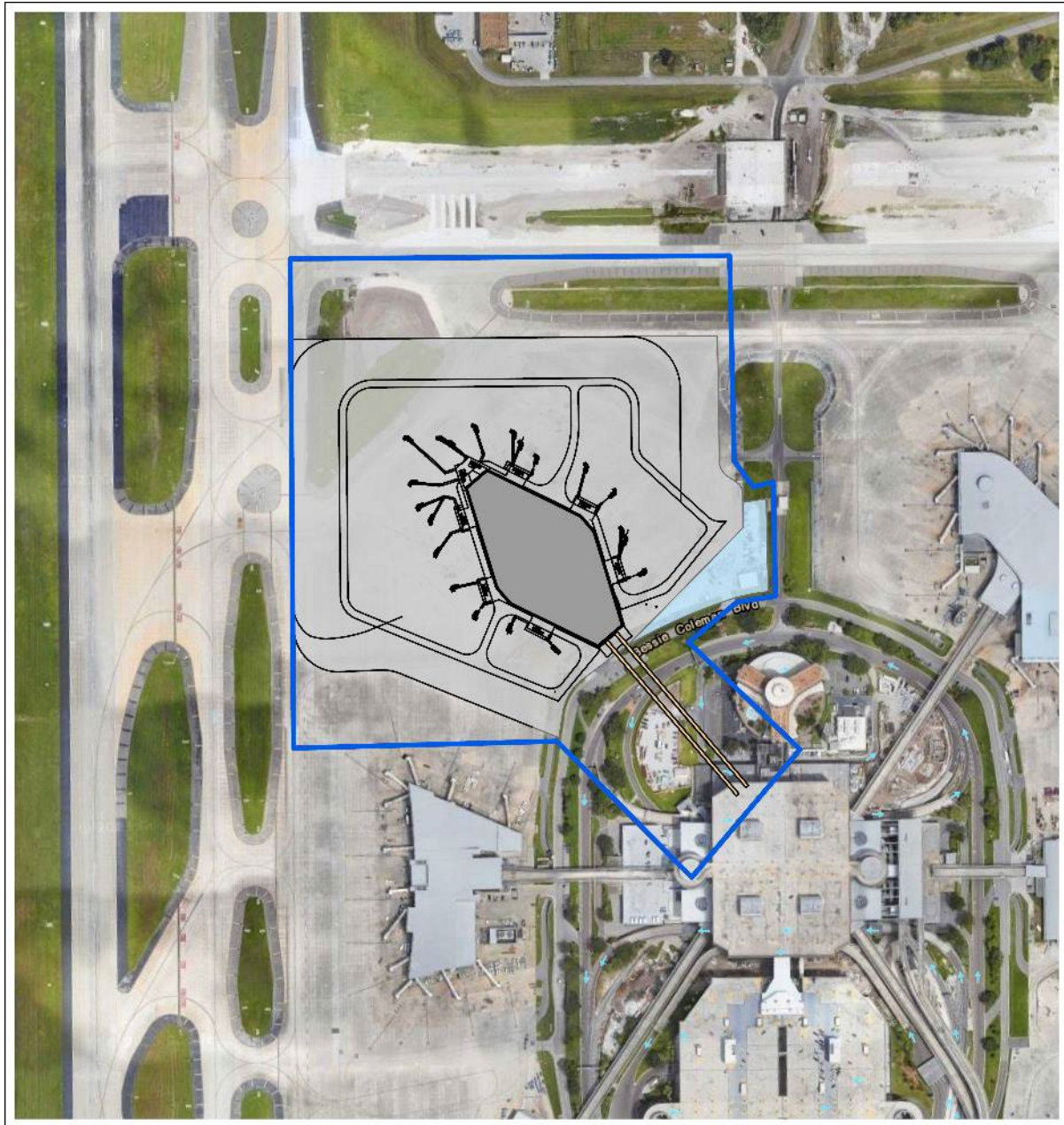
Under the No Action Alternative, the construction and operation of the proposed Airside D would not occur. The affected environment of the Study Areas under the No Action Alternative would not differ from existing conditions.

Because there would be no anticipated construction or change in Airport facilities under the No Action Alternative, no impacts would be expected to occur related to Air Quality; Biological Resources; Climate; Coastal Resources; DOT Section 4(f) Resources; Hazardous Materials, Solid Waste, and Pollution Prevention; Historical, Architectural, Archaeological, and Cultural Resources; Land Use; Natural Resources and Energy Supply; Noise and Noise-Compatible Land Use; Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks; Visual Effects; or Water Resources in the Direct or Indirect Study Area.

### 3.3 RESOURCES NOT AFFECTED

The FAA Order 1050.1F describes environmental resource categories evaluated in an EA. The No Action Alternative or the Proposed Project would not affect some listed environmental resource categories. This section briefly explains those environmental resource categories; however, they are not discussed further in this EA because they are not in or near the Direct Study Area.

Figure 3-1: Direct Study Area



Sources: ESRI 2023; RS&H 2023

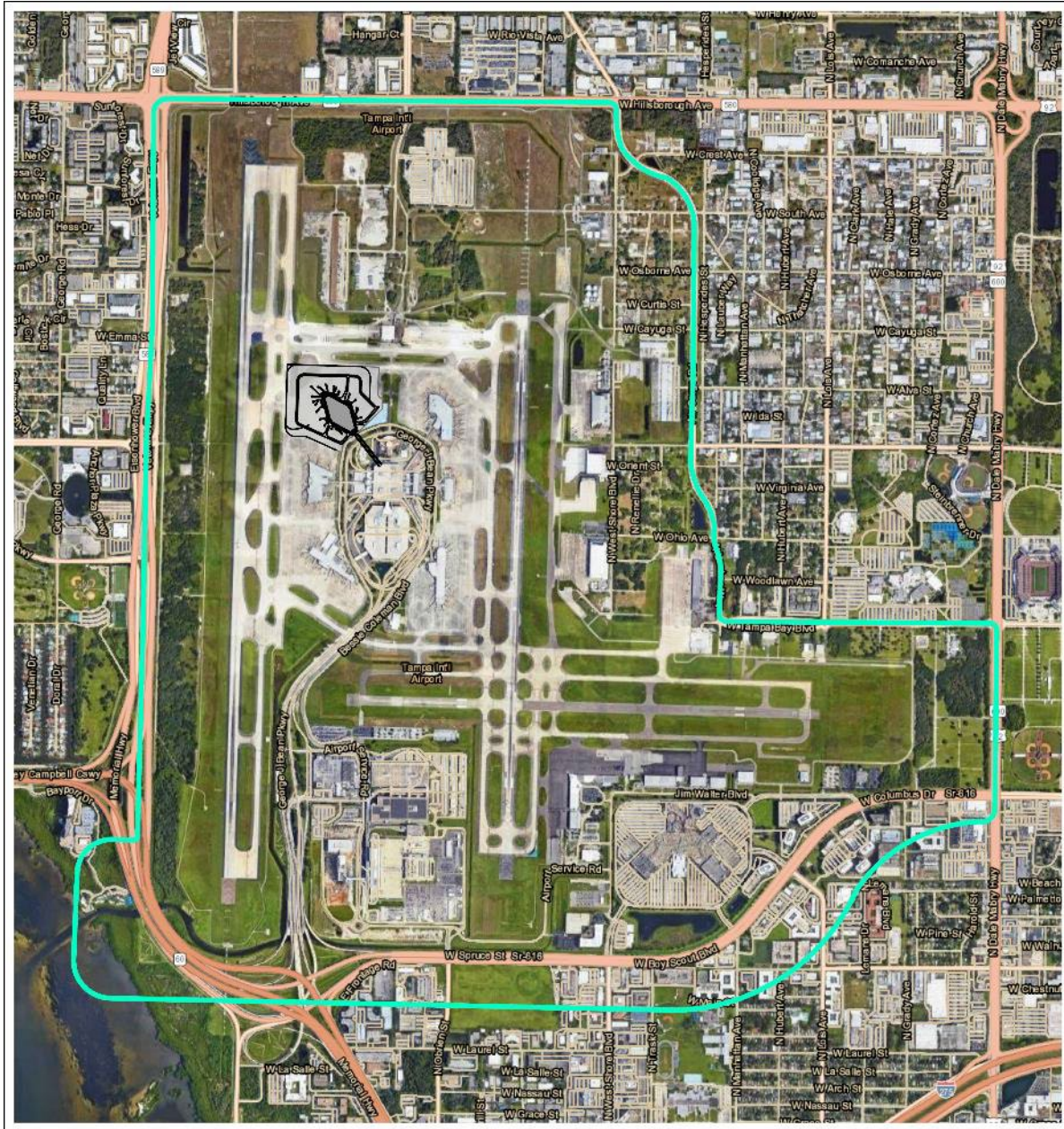
0 250 500 US Feet

**Legend**

 Direct Study Area  Proposed Project  Parking



Figure 3-2: Indirect Study Area



Sources: ESRI 2023; RS&H 2023



Legend

- Indirect Study Area
- Proposed Project
- Parking



Compared to the No Action Alternative, the Proposed Project would not affect the following environmental impact categories:

- » Biological Resources (**Section 3.3.1**)
- » Coastal Resources (**Section 3.3.2**)
- » Children’s Environmental Health and Safety Risks (**Section 3.3.3**)
- » Environmental Justice (**Section 3.3.4**)
- » Farmlands (**Section 3.3.5**)
- » Land Use (**Section 3.3.6**)
- » Water Resources (**Section 3.3.7**)

### 3.3.1 Biological Resources

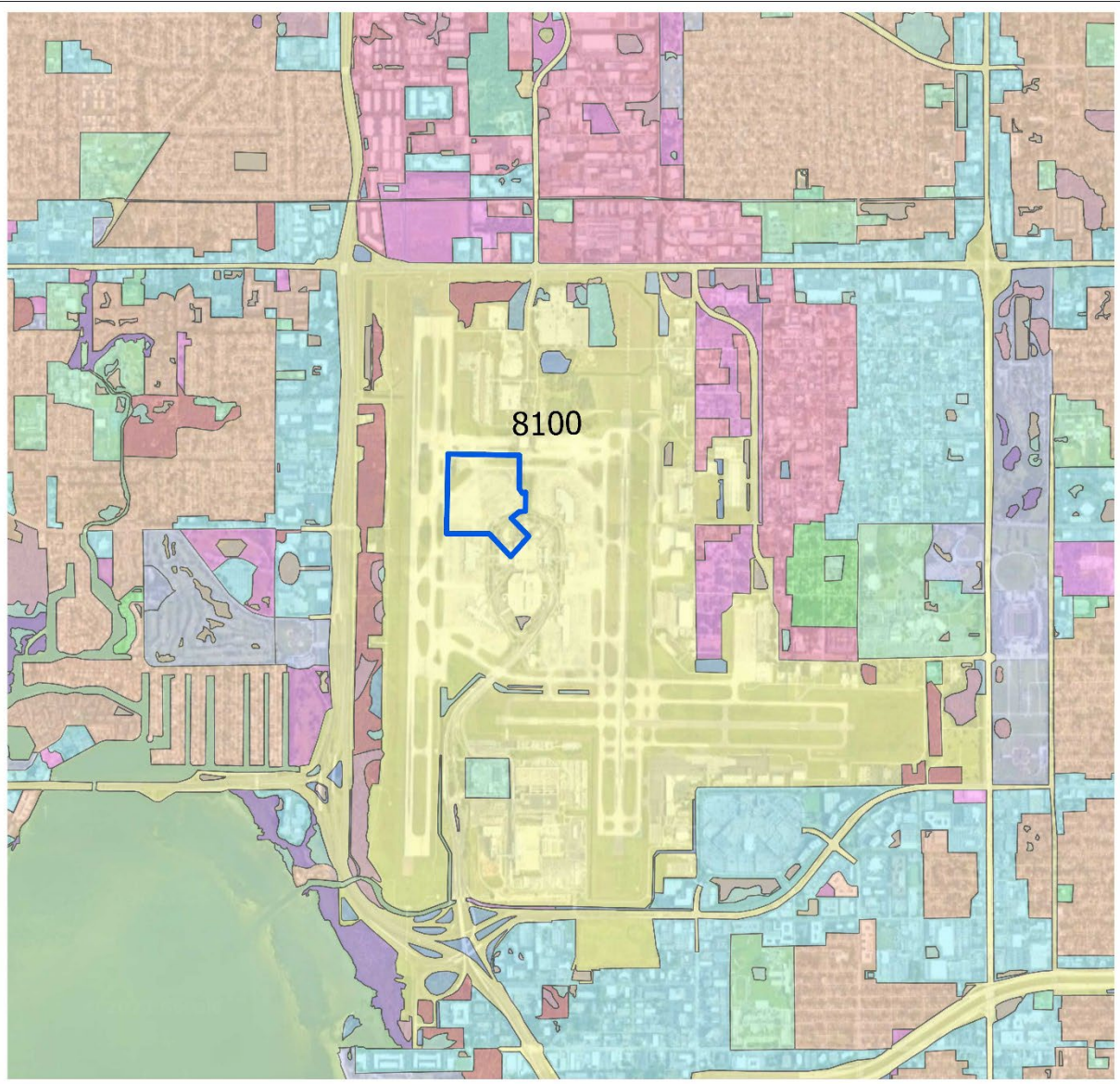
Habitat within the Direct Study Area was inspected in 2023 and classified by the Florida Department of Transportation (FDOT) Florida Land Use, Cover and Forms Classification System (FLUCCS-DOT 1999). As shown in **Figure 3-3**, the Florida Land Use, Cover and Forms Classification System (FLUCCS) shows the Direct Study Area as 8100 Airport (i.e., runways, intervening land, terminals, service buildings, navigational aids, fuel storage, parking lots and a limited buffer zone).

According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC), there are federal species with the potential to occur within Hillsborough County, which includes the Direct Study Area (U.S. Fish and Wildlife Service, 2022). State-protected species within the Direct Study Area were obtained from the Florida Fish and Wildlife Conservation Commission (FWC) and Florida Natural Areas Inventory (FNAI). **Table 3-1** identifies the federal and state-protected species and their status. **Appendix D** includes the USFWS IPaC and FWC/FNAI lists of federal and state-protected species.

The Direct Study Area is primarily paved concrete and a drainage swale, heavily disturbed, contains no natural habitat, and is not located within a critical habitat area for any threatened and endangered species. None of the listed threatened or endangered species have been observed within the Direct Study Area. **Table 3-1** documents the effects determination for each federal and state-listed species.



Figure 3-3: FLUCCS Map of Direct Study Area



Sources: FDEP 2023; ESRI 2023; RS&H 2023.



**Table 3-1: Federal and State Protected Species Potentially Within the Direct Study Area**

Common Name	Scientific Name	Status	Effects Determination
<b>Federal</b>			
Crested Caracara	<i>Polyborus plancus audubonii</i>	Threatened	No Effect
Eastern Black Rail	<i>Laterallus jamaicensis ssp. jamaicensis</i>	Threatened	No Effect
Everglade Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	Endangered	No Effect
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	No Effect
Wood Stork	<i>Mycteria americana</i>	Threatened	No Effect
American Crocodile	<i>Crocodylus acutus</i>	Threatened	No Effect
Eastern Indigo Snake	<i>Drymarchon couperi</i>	Threatened	No Effect
Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	Endangered	No Effect
Monarch Butterfly	<i>Danaus plexippus</i>	Candidate	No Effect
Florida Golden Aster	<i>Chrysopsis floridana</i>	Endangered	No Effect
Pygmy Fringe-tree	<i>Chionanthus pygmaeus</i>	Endangered	No Effect
<b>State</b>			
Gopher Tortoise	<i>Gopherus polyphemus</i>	Threatened	No Effect Anticipated
Short-tailed Snake	<i>Lampropeltis extenuata</i>	Threatened	No Effect Anticipated
Pine Snake	<i>Pituophis melanoleucus</i>	Threatened	No Effect Anticipated
Florida Sandhill Crane	<i>Antigone canadensis pratensis</i>	Threatened	No Effect Anticipated
Florida Burrowing Owl	<i>Athene cunicularia floridana</i>	Threatened	No Effect Anticipated
Snowy Plover	<i>Charadrius nivosus</i>	Threatened	No Effect Anticipated
Little Blue Heron	<i>Egretta caerulea</i>	Threatened	No Effect Anticipated
Reddish Egret	<i>Egretta rufescens</i>	Threatened	No Effect Anticipated
Tricolored Heron	<i>Egretta tricolor</i>	Threatened	No Effect Anticipated
American Oystercatcher	<i>Haematopus palliatus</i>	Threatened	No Effect Anticipated
Roseate Spoonbill	<i>Platalea ajaja</i>	Threatened	No Effect Anticipated
Black Skimmer	<i>Rynchops niger</i>	Threatened	No Effect Anticipated
Least Tern	<i>Sternula antillarum</i>	Threatened	No Effect Anticipated

Source: IPaC 2023, FWC 2023, FNAI 2023.

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) protects bald and golden eagles. Although the bald eagle was de-listed under the ESA, it is still afforded protection under the Migratory Bird Treaty Act (MBTA) and the BGEPA. The closest USFWS documented Bald Eagle nest is Nest ID HL 981a, about 3,326 feet from the Direct Study Area (Audubon Center for Birds of Prey, 2022). Management guidelines apply when activity is proposed within 660 feet of a nest; therefore, the Proposed Project would not affect Bald Eagle nests. Due to the highly disturbed nature of the Direct Study Area and the distance to Nest HL 981a, the Bald Eagle would not be adversely affected by the Proposed Project.

According to the FNAI and USFWS, the closest Wood Stork rookery is approximately six miles northwest of the Direct Study Area (USFWS, 2022). The existing characteristics of the Direct Study Area do not provide suitable nesting (e.g., hardwood swamps) for Wood Storks. The Direct Study Area also does not contain suitable foraging habitats, including wetlands that have shallow, open, calm water areas with a water depth between 2 to 15 inches (USFWS, 2010). Wood Storks, protected under the ESA and MBTA, are also highly mobile. According to the USFWS' IPaC's Wood Stork Determination Key, a determination of not applicable for species was determined (see [Appendix D](#)). Therefore, there will be *no effect* on this species.

The FWC Environmental Sensitivity Index (ESI) was reviewed for land mammals, reptiles, invertebrates, and regional habitats. The data sets contain sensitive biological resource data for threatened or endangered terrestrial mammals, sea turtles, mangrove terrapins, and marine and estuarine invertebrate species in Florida. The ESI Habitat Regions in Florida describes sensitive biological resource data for threatened/endangered/rare terrestrial plants and communities in Florida. According to the FWC ESI data sets, no land mammal, reptile, or invertebrate habitat areas, or listed plants are within the Direct Study Area (Florida Fish and Wildlife Conservation Commission, 2022). See [Appendix D](#) for more information regarding Biological Resources.

#### 3.3.2 Coastal Resources

The Florida Department of Environmental Protection Office of Resilience and Coastal Protection considers all of Florida as part of the state's coastal zone. The closest USFWS Coastal Barrier Resources (CBRS) unit is Cockroach Bay (FL-83), located approximately 18 miles south of the Direct Study Area (U.S. Fish and Wildlife Service, 2022). The Proposed Project is located near two FDEP Office of Resilience and Coastal Protection managed areas. Boca Ciega Bay is located approximately 20 miles southwest of the Direct Study Area, and Cockroach Bay is approximately 18 miles south of the Direct Study Area (FDEP Office of Resilience and Coastal Protection, 2021). The Proposed Project would not affect coastal resources, create plans to direct future agency actions, or propose rulemaking that alters uses of a coastal zone that are inconsistent with the Coastal Management Program.

### 3.3.3 Children's Environmental Health and Safety Risks

Construction and operation of the Proposed Project would occur entirely on Airport property and would not require the relocation of residents. The closest schools are Pierce Middle School and Alexander Elementary School, located approximately 1.70 miles northeast of the Direct Study Area. **Figure 3-4** shows the location of Pierce Middle School and Alexander Elementary School in relation to the Direct Study Area.

Since all construction activities would occur on Airport property, the Proposed Project would not directly affect surrounding communities.

An Area Equivalent Method (AEM) noise analysis was conducted for this EA (see **Section 3.4.6** of this EA). Compared to the No Action Alternative, the Proposed Project's potential change in the DNL 65 dBA contour is 0.6% in 2032 (or approximately 19 acres of a total 2,336-acre contour). According to FAA Order 1050.1F Desk Reference, "If the AEM calculations indicate that the action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas, and no further noise analysis would be required" (Federal Aviation Administration, 2020). Therefore, the Proposed Project would not indirectly affect these schools.

Due to the distance to the two closest schools, the Proposed Project would not increase the exposure of environmental contaminants to children in the surrounding community. Therefore, the Proposed Project would not affect children's environmental health and safety risks.

### 3.3.4 Environmental Justice

Construction and operation of the Proposed Project would occur entirely on Airport property for aeronautical use and would not require relocating residents or businesses. No minority and/or low-income populations are in or near the Direct Study Area. The closest minority-populated area is located approximately one mile to the east of the Direct Study Area within the Indirect Study Area (EPA, 2022). However, the minority-populated area within the Indirect Study Area primarily comprises commercial development land use. The closest low-income area is approximately one-mile northeast of the Direct Study Area (EPA, 2022). There would be no direct impacts on the surrounding community as the Proposed Project would occur entirely on Airport property.

As described in **Section 3.4.1**, the construction and operation of the Proposed Project would not significantly affect air quality or violate local, state, tribal, or federal air quality standards under the Clean Air Act Amendments of 1990 nor indirectly affect minority and/or low-income populations.

An AEM noise analysis was conducted for this EA (see **Section 3.4.6** of this EA). Compared to the No Action Alternative, the Proposed Project's potential change in noise in the DNL 65 dBA contour is 0.6% in 2032. According to FAA Order 1050.1F Desk Reference, "If the AEM

calculations indicate that the action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas, and no further noise analysis would be required” (Federal Aviation Administration, 2020). Therefore, there would be no indirect impacts on Environmental Justice communities.

### 3.3.5 Farmlands

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), soil types within and near the Direct Study Area are not classified as prime or unique farmland or farmland of statewide importance (see [Appendix E](#)). This area is not used to cultivate crops (NRCS, 2022). The Proposed Project would not affect prime, unique, or state-significant farmland.

### 3.3.6 Land Use

According to the City of Tampa, existing land use in the Direct Study Area is classified as an Airport Compatibility District (City of Tampa, 2022). The Proposed Project’s construction would occur entirely on Airport property and would be compatible with the existing Airport environment. The Proposed Project would be consistent with future plans. It would not cause any incompatibilities or inconsistencies with local land use plans. In addition, the Proposed Project would not create a new wildlife attractant or create an obstruction to navigation airspace per 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. The Proposed Project would not significantly affect other resources that could indirectly affect land use (e.g., the Proposed Project would not disrupt communities, affect DOT Section 4(f) resources, etc.). Therefore, no significant land use impacts would occur with the implementation of the Proposed Project.

### 3.3.7 Water Resources

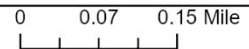
**Wetlands** – According to the Airport’s Stormwater Master Plan, no wetlands are in the Direct Study Area. In 2023, a field check was conducted to determine the presence of wetlands. No wetlands exist in the Direct Study Area. Therefore, the Proposed Project would not affect wetlands.

**Surface Water and Groundwater** – Most of the Direct Study Area is paved with concrete, and rainfall runoff is treated in the Airport’s existing stormwater system. The Proposed Project would add about 4.25 acres of new pavement for additional apron and taxiway use affecting an existing permitted stormwater pond (permit no. 49008387-037). Based on the SWFWMD permit criteria for water quality treatment, the existing downstream permitted pond (see [Figure 3-4](#)) was designed with the capacity to accommodate and treat the additional runoff (less than 0.375 acre/feet). Therefore, the existing stormwater system would treat rainfall-runoff of the additional impervious surface, and the Proposed Project would not result in surface water impacts.





Figure 3-4: Segment of Existing Stormwater System



Sources: HCAA 2023; FEMA 2023; ESRI 2023; RS&H 2023



**Legend**

-  Direct Study Area
-  Airside D
-  Existing Stormwater Treatment Area
-  Segment of Existing Stormwater Drainage System



The Airport is located within the Floridian aquifer system (Crandall, 2007). The Floridian aquifer consists of connected carbonate rock that spans multiple southern states (Crandall, 2007). The portion of the Floridian aquifer in the Tampa region consists of sand, clay, and limestone, which make up the surficial deposits within the Floridian aquifer system (Crandall, 2007). The Bedrock is thick carbonate from 650 feet to 1,300 feet below ground level (Crandall, 2007). While engineering plans have not been finalized, construction of the Proposed Project's support system is estimated to be constructed to depths 30-50 feet below ground level and would not affect the aquifer.

The Proposed Project would not be located in a sole source aquifer (SSA) as the closest SSA is the Biscayne Aquifer, located approximately 65 miles east of the Direct Study Area (see *Figure 3-5*) (EPA, 2022). The Proposed Project would be designed and permitted to meet water quality standards. Since there is no SSA in the area and construction of the Proposed Project would have no physical interaction with the Floridian aquifer due to its depth, there would be no contamination of the public water supply. Also, the SWPPP plan and BMPs/other pollution control measures would be implemented during and after construction. Therefore, the Proposed Project would not exceed federal, state, local, or tribal water quality standards. It would not contaminate an aquifer used for public water supply.

***Wild and Scenic Rivers*** – The closest Wild and Scenic River is the Wekiva River, located approximately 94 miles to the northeast (National Wild and Scenic Rivers System, 2022). The closest Nationwide Rivers Inventory (NRI) river segment is the Hillsborough River, located approximately 11 miles northeast of the Direct Study Area (National Park Service, 2022). Construction and operation of the Proposed Project would not affect any Wild and Scenic River segments or NRI river segments.

**Figure 3-5: Sole Source Aquifers**



NEPAssist 2023; RS&H 2023

Not to scale. Graphics use only.

**Legend**

 Sole Source Aquifers





## 3.4 RESOURCES POTENTIALLY AFFECTED

The environmental resource categories that are potentially affected and analyzed are:

- » Air Quality / Climate (**Section 3.4.1**)
- » Department of Transportation Act, Section 4(f) (**Section 3.4.2**)
- » Hazardous Materials, Solid Waste and Pollution Prevention (**Section 3.4.3**)
- » Historic, Architectural, Archaeological, and Cultural Resources (**Section 3.4.4**)
- » Natural Resources and Energy Supply (**Section 3.4.5**)
- » Noise and Noise – Compatible Land Use (**Section 3.4.6**)
- » Socioeconomics (**Section 3.4.7**)
- » Visual Effects (**Section 3.4.8**)
- » Water Resources (Floodplains) (**Section 3.4.9**)

### 3.4.1 Air Quality / Climate

The sections below describe the existing conditions, significance threshold(s) pertaining to air quality and climate, and the potential air quality and climate effects of the Proposed Project compared to the No Action Alternative.

#### 3.4.1.1 Affected Environment

**Air Quality** – The United States Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and environmental welfare. The USEPA has identified the following six criteria air pollutants for which NAAQS are applicable: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). USEPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels (USEPA, 2022).

The USEPA has three classifications for areas regarding their ability or inability to meet the NAAQS. “Nonattainment” areas are geographic areas that violate one or more NAAQS. “Attainment” areas are geographic areas where concentrations of the criteria pollutants are below (i.e., within) the NAAQS. Lastly, “maintenance” areas are geographic areas with prior nonattainment status that have since transitioned to attainment.

The Direct Study Area is located entirely within Hillsborough County. The Direct Study Area is an “attainment” area for all National Ambient Air Quality Standards (NAAQS) (EPA Greenbook, 2022).<sup>12</sup>

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<sup>12</sup> NAAQS are six criteria pollutants: carbon monoxide, lead, ozone, sulfur dioxide, nitrogen dioxide, and ozone.

According to the USEPA, lead (2008 standard) for a portion of the County is classified as “maintenance” (i.e., about 10 miles east of the Airport) (EPA, 2022). Also, sulfur dioxide 1-hour (2010 standard) for a portion of the County is classified as “maintenance” (i.e., Gibsonton and Riverview areas, over 10 miles southeast of the Airport) (EPA, 2022).

**Climate** - Greenhouse gases (GHG) trap heat in the earth’s atmosphere. Naturally occurring and man-made GHGs include water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Activities that require fuel or power are the primary stationary sources of GHGs at airports. Aircraft and ground access vehicles, which are not under the control of an airport, typically generate more GHG emissions than airport-controlled sources.

Research has shown a direct correlation between fuel combustion and greenhouse gas emissions. In terms of U.S. contributions, the U.S. Government Accountability Office (GAO) reports that "domestic aviation contributes about three percent of total carbon dioxide (CO<sub>2</sub>) emissions, according to USEPA data," compared with other industrial sources, including the remainder of the transportation sector (20 percent) and power generation (41 percent) (GAO, 2009) The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally (Melrose, 2010) Climate change due to GHG emissions is a global phenomenon. Hence, the affected environment is the global climate (USEPA, 2009).

The scientific community is continuing efforts to understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in several efforts to clarify commercial aviation's role in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, USEPA, and U.S. Department of Energy), has developed the Aviation Climate Change Research Initiative to advance scientific understanding of regional and global climate impacts from aircraft emissions. The FAA also funds the Partnership for Air Transportation Noise & Emissions Reduction Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and U.S. climate and atmospheric composition. ICAO is examining similar research topics at the international level (Maurice & Lee, 2007).

Carbon dioxide is the primary GHG emitted by human activity, making up about 80% of all GHG emissions. Greenhouse gas emissions are often measured in carbon dioxide equivalent (CO<sub>2e</sub>). In 2020, the GHG emissions for the U.S. were 5,981 million metric tons (MMT)<sup>13</sup> of CO<sub>2e</sub>, and the State of Florida was 262 MMT of O<sub>2e</sub> (EPA, 2022).

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<sup>13</sup> According to the USEPA, a million metric tons is equal to about 2.2 billion pounds (EPA, 2022).

### 3.4.1.2 Environmental Consequences

#### **Significance Threshold**

**Air Quality** - FAA Order 1050.1F, Exhibit 4-1, provides the FAA's significance threshold for air quality, which states, "The action would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the USEPA under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations."

**Climate** – According to FAA 1050.1F, Desk Reference, "There are no significance thresholds for aviation or commercial space launch GHG emissions, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions. There are currently no accepted methods of determining significance applicable to aviation or commercial space launch projects given the small percentage of emissions they contribute." While FAA 1050.1F Desk Reference does not provide a significance threshold for aviation-related GHG emissions, the projected increase in GHG emissions from the Proposed Project is discussed in the context of the State of Florida and national GHG emissions from all sources.

In January 2023, CEQ provided interim guidance to assist agencies in analyzing GHG and climate change effects for proposed actions under NEPA (CEQ, 2023). However, the FAA does not have any guidance or descriptions of significance threshold for this topic at the time of this EA.

#### **Potential Impacts**

**Air Quality** – Construction of the Proposed Project would cause a minor increase in surface vehicles using area roadways to access the construction site. However, this would be temporary, lasting the duration of construction. A Construction Emissions Inventory (CEI) of the Proposed Project was conducted through the USEPA's MOVES3 program. The CEI was evaluated using the estimated duration of construction, the Proposed Project dimensions, and the model's assumption of construction vehicles and equipment across that time frame.

**Table 3-2** shows the construction emissions inventory results and greenhouse gas (GHG) emissions. As mentioned above, the Direct Study Area is in attainment for all NAAQS emissions categories; therefore, the CEI results would not need to be within the EPA *de minimis* threshold rates for projects within maintenance and non-attainment areas. The CEI results concluded that no NAAQS emissions category would approach or surpass any *de minimis* threshold. See **Appendix A** for detailed CEI results.

When compared to the No Action Alternative, the Proposed Project would result in an increase in aircraft operations in 2027 and 2032. As the 2032 study year has the larger increase in aircraft operations (i.e., 2,000), the aircraft emissions due to the 2032 Proposed Project were compared to the Hillsborough County total emissions. As previously described, the Direct Study Area is in "attainment" for all NAAQS. Therefore, air quality *de minimis* thresholds do not apply.

**Table 3-2: Construction Emission Inventory (tons)**

	CO	VOC	NOx	SOx	PM2.5	PM10
No Action Alternative	1,581.45	207.31	1,766.42	145.01	18.65	18.72
Proposed Project	1,590.39	208.42	1,776.07	145.88	18.78	18.85
Difference	8.94	1.11	9.65	0.87	0.13	0.13
Hillsborough County Total	149,296	46,505	24,761	8,244	6,911	26,365
Percent of County Total	0.006%	0.002%	0.039%	0.011%	0.002%	0.001%

Notes: <sup>1</sup> – Nonroad: Emissions from construction equipment (e.g., bulldozer); <sup>2</sup> – Onroad: Emissions from cars, trucks, and buses; <sup>3</sup> – Fugitive: Emissions of particulate matter from vehicles driving over paved roads.

Source: MOVES3.1, RS&H, 2023.

However, for informational purposes, **Table 3-3** shows the 2032 Proposed Project’s aircraft emissions compared to the total emissions by criteria pollutant reported for Hillsborough County.<sup>14</sup> The Proposed Project would not significantly affect air quality or violate local, state, tribal, or federal air quality standards under the Clean Air Act Amendments of 1990.

**Table 3-3: 2032 Annual Aircraft Emissions (tons per year)**

	NAAQS						GHGs		
2025-2026	CO	VOC	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	SOx	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
<b>NONROAD<sup>1</sup></b>	4.24	0.60	16.69	0.67	0.65	0.03	12,431.19	0.00	0.00
<b>ONROAD<sup>2</sup></b>	13.71	0.10	0.36	0.01	0.01	0.01	1,025.47	0.03	0.00
<b>FUGITIVE<sup>3</sup></b>	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00
<b>TOTAL (TPY)</b>	17.95	0.70	17.05	0.68	0.67	0.04	13,456.66	0.03	0.00
<b>HILLSBOROUGH COUNTY TOTAL</b>	149,296	46,505	24,761	26,365	6,911	8,244	N/A	N/A	N/A
<b>% OF COUNTY</b>	0.012%	0.001%	0.068%	0.025%	0.009%	0.0005%	N/A	N/A	N/A

Note: Aircraft operation emissions were calculated up to the 3,000-foot mixing height.

Source: 2017 EPA National Emissions Report; <https://gispub.epa.gov/neireport/2017/>; RS&H, AEDT, 2023.

It is important to note that this aircraft emissions analysis does not include a potential future decrease in emissions due to technological advancements or regulations.

**Climate** - GHG emissions would occur during the construction and operation of the Proposed Project. Using fossil fuel-powered machinery during the construction of the Proposed Project would emit GHGs such as CO<sub>2</sub>. These emissions would only last as long as construction

<sup>14</sup> Hillsborough County data for 2017 is the most recent data included in EPA’s National Emissions Inventory.

activities. When compared with the 2027 No Action Alternative, the 2027 Proposed Project would increase passengers traveling to and from the Airport by 43 average daily trips. In 2032, the Proposed Project would increase the average daily trips to 186 per day greater than the 2032 No Action Alternative. As a result, the increase in average daily trips would increase vehicle-related GHG emissions in the Direct Study Area.<sup>15</sup> Most passengers live in the Tampa Bay area. According to the HCAA, 77.3% of local passengers reside in Hillsborough, Pinellas, and Pasco counties (HCAA, 2023). Also, according to the HCAA, approximately 93% of the Airport employees reside in zip codes in these same three counties (HCAA, 2023). . Therefore, the vehicle-related GHG emissions in the area would not significantly change for the region.

In addition, the Proposed Project would increase the number of aircraft operating at the Airport. However, the Proposed Project's aircraft operations emissions would not significantly affect GHG emissions for the State of Florida or the U.S. (see **Appendix A** for further details).

With the Proposed Project, total energy use would increase. An HCAA goal is to reduce energy use intensity (EUI), or the energy used per square foot, in these spaces by 10% relative to the HCAA's 2018 baseline. Recent energy efficiency efforts have reduced EUI by 2%. HCAA's focus on energy efficiency is essential for sustainable development at the Airport. It is the most cost-effective method for reducing greenhouse gas emissions (HCAA, 2023). The HCAA has implemented various sustainability initiatives at the Airport. The 2024 Sustainability Master Plan (SMP) sets the direction for the next ten years of sustainable and resilient development for the HCAA airports, including the Airport. The HCAA has installed 176,000 square feet of solar arrays and various LED fixtures in the terminal and airfield to lower electricity usage (Tampa International Airport, 2023). Water use at the Airport has been reduced with reclaimed water for irrigation and cooling towers as needed (Tampa International Airport, 2023). Additionally, the Airport uses rainwater harvesting and low-impact landscape maintenance to lower water demands (Tampa International Airport, 2022). Therefore, following the 2024 SMP and existing energy-saving infrastructure at the Airport, GHG emissions are expected to be reduced.

### **Social Costs of Greenhouse Gases (SC-GHGs)**

In January 2023, the Council on Environmental Quality (CEQ) issued interim guidance, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, to assist agencies in analyzing greenhouse gas emissions (GHG) and climate change effects of a proposed project under NEPA. The CEQ identified Social Cost-Greenhouse Gases (SC-GHG) as the metric for assessing potential climate impacts and represents the monetary

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<sup>15</sup> According to the TPA MPU, the 2022 average daily trips for George Bean Parkway was 17,400.

These totals do not include employee or tenants. Since they are a fraction of the number of passengers, a 5% increase in trips is disclosed (2027 Proposed Project including employees and tenants would be 45 additional trips and the 2032 Proposed Project would be 195 additional trips including employees and tenants).

estimate of the effect associated with each additional metric ton of carbon dioxide released into the air (Interagency Working Group, 2021).

To calculate SC-GHG, the carbon dioxide equivalent CO<sub>2</sub>e<sup>16</sup> must be calculated first. CO<sub>2</sub>e is calculated using the Global Warming Potential (GWP) metric to compare a gas's impact on the global climate concerning CO<sub>2</sub>. GWP values are based on the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) (IPCC, 2023).

The Interagency Working Group (IWG) developed average discount rates to assess possible climate impacts over time. The higher the discount rate, the lower the social climate cost (SCC) for future generations. Three climate models were used to develop discount rates that were based on the results from three economic models used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University) (Interagency Working Group, 2021). The IWG average discount rates are 5 percent, 3 percent, and 2.5 percent, and the 95<sup>th</sup> percentile estimate at the 3 percent discount rate represents the potential for low-probability catastrophic climate impacts. The IWG average discount rates represent a range of possible climate impacts to future generations. For example, the 5 percent average rate represents a situation where future generations are best suited to handle potential climate impacts from the Proposed Project, leading to a minimal social cost impact. The IWG determined the social cost of CO<sub>2</sub> (SC-CO<sub>2</sub>) through 2050 and assigned a monetary value<sup>17</sup> for each additional metric ton of CO<sub>2</sub> produced. SC-CO<sub>2</sub> is equivalent to SC-GHGs and represents the social costs of the total greenhouse gases converted to the CO<sub>2</sub>e equivalent. The SC-CO<sub>2</sub> helps weigh the benefits of climate mitigation against its costs.

The calculated social costs are estimates only and subject to change depending on various factors (i.e., flooding, energy supply).<sup>18</sup> **Table 3-4** calculations are for information purposes only and represent the potential social costs from construction emissions in years 2025 and 2026 and operational emissions in years 2027 and 2032. The social cost calculations represent a range of possibilities and are not guaranteed to occur. Advances in technology and operational practices could lead to lower social impacts than disclosed. This range represents the potential social costs of adding GHGs to the global atmosphere in a given year (Interagency Working Group, 2021). The range of potential social costs for 2025 from construction emissions is approximately \$78,000 – \$780,000; for 2026, the potential social cost is approximately \$150,000 – \$1,500,000. For operational emissions in 2027, the potential social cost ranges from \$16,000 – \$157,000; for 2032, the potential social cost ranges from \$81,000 - \$750,000. It is

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<sup>16</sup> CO<sub>2</sub>e: Number of metric tons of CO<sub>2</sub> emissions with the same global warming potential as one metric ton of another greenhouse gas.

<sup>17</sup> These monetary values are based on the results from three economic models used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University).

<sup>18</sup> [https://costofcarbon.org/files/Omitted\\_Damages\\_Whats\\_Missing\\_From\\_the\\_Social\\_Cost\\_of\\_Carbon.pdf](https://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf); Accessed November 2023

important to note that this climate analysis does not include positive impacts from the Proposed Project (e.g., economic development, meeting projected passenger and airline (domestic and international) demand, proactively preventing near-future congestion, improving passenger experience, and technological advancements).

According to CEQ National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023), “This guidance does not establish any particular quantity of GHG emissions as “significantly” affecting the quality of the human environment.” According to 1050.1F Desk Reference, there are no significance thresholds for aviation GHG emissions, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions. There are currently no accepted methods of determining significance applicable to aviation projects given the small percentage of emissions they contribute. The Proposed Project, compared to the No Action Alternative, is not anticipated to significantly affect regional or global GHG emissions. There is a considerable amount of ongoing scientific research to improve understanding of global climate change and FAA guidance will evolve as the science matures or if new Federal requirements are established.

**Table 3-4: Social Cost - Carbon Dioxide for the Proposed Project**

Year	Proposed Project CO <sub>2</sub> e	Average Estimate at 5% Discount Rate	Average Estimate at 3% Discount Rate	Average Estimate at 2.5% Discount Rate	95 <sup>th</sup> Percentile Estimate at 3.0% Discount Rate
	Construction Emissions				
<b>2025</b>	4,612.09	\$78,405.53	\$258,277.04	\$382,803.47	\$779,443.21
<b>2026</b>	8,844.57	\$150,390.16	\$504,249.36	\$743,104.32	\$1,530,441.04
	Operational Emissions				
<b>2027</b>	889.8	\$16,016.40	\$52,498.20	\$76,522.80	\$156,604.80
<b>2032</b>	3,856.67	\$80,990.07	\$246,826.88	\$354,813.64	\$748,193.98

Note: Per the 2023 IPCC Sixth Assessment Report, CO<sub>2</sub>e equivalent for SC-GHG were calculated using the Interagency Working Group<sup>19</sup> average discount rates: 5 percent, 3 percent, 2.5 percent, and the 95<sup>th</sup> percentile estimate applying the 3 percent discount rate. CO<sub>2</sub>e Values are multiplied by the discount rate to calculate SC-CO<sub>2</sub>.

Per the 2023 IPCC<sup>20</sup> Sixth Assessment Report, the CO<sub>2</sub> equivalent for N<sub>2</sub>O is calculated by multiplying the N<sub>2</sub>O emissions by the GWP of 265. The CO<sub>2</sub> equivalent for CH<sub>4</sub> is calculated by multiplying the CH<sub>4</sub> emissions by the GWP of 28. For example, the 2025

<sup>19</sup> [Technical Support Document: Social Cost of Carbon, Methane, \(whitehouse.gov\)](#); Accessed November 2023

<sup>20</sup> [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf); Accessed November 2023

Average Estimate at 5% Discount Rate was calculated using the 2025 CO<sub>2</sub>e value of 6,737.994 multiplied by 2025's \$17 determined value for the 5% Discount Rate. Sources: Interagency Working Group, 2021, IPCC Sixth Assessment 2023, RS&H, 2023.

### **Mitigation Measures**

As described above, the Proposed Project would not result in significant air quality or climate effects. Therefore, the HCAA does not propose mitigation measures for the Proposed Project.

However, according to the HCAA 2024 Sustainable Management Plan, while airports lack direct control over airline operations emissions, the HCAA's reduction in emissions is being achieved and facilitated through activities that reduce the Airport's effect on climate change and its contribution to net-zero GHG emissions by 2050. HCAA is currently on track to meet this goal.

In addition, the HCAA participates in the Airport Carbon Accreditation (ACA) Program. This voluntary certification program allows airports of any size to demonstrate their commitment to greenhouse gas reduction. ACA has six levels of accreditation including: (1) Mapping, (2) Reduction, (3) Optimization, (3+) Neutrality, (4) Transformation, and (4+) Transition. Tampa International Airport has reached the Level 2 standard. Continued participation at Level 2 or higher would support the reduction of annual emissions at the Airport.<sup>21</sup>

### **3.4.2 Department of Transportation Act, Section 4(f)**

Department of Transportation (DOT) Act, Section 4(f) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. This section describes the existing conditions and significance threshold(s) pertaining to DOT Section 4(f) resources and Land and Water Conservation Fund (LWCF) resources. This section also describes the potential effects of the Proposed Project compared to the No Action Alternative.

#### **3.4.2.1 Affected Environment**

One DOT Section 4(f) resource exists, the Tampa International Airport Main Terminal, within the Direct Study Area. As described in **Section 3.4.4**, according to the Florida Master Site File, the Tampa International Airport (Site ID HI14544) is eligible for listing on the National Register of Historic Places (NRHP) (SHPO, 2022). Therefore, it is also a Section 4(f) resource. Four additional Section 4(f) resources are near the Airport and Direct Study Area. Rocky Point Golf Course is approximately one mile west of the Direct Study Area. Al Lopez Park is approximately two miles to the northeast. Loretta Ingraham Park is approximately two miles to the southeast. Lincoln Garden Park is approximately two miles southeast of the Direct Study Area (City of

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<sup>21</sup> <https://www.tampaairport.com/our-sustainability-program>

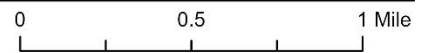


Tampa, 2022) (see **Figure 3-6**). There are no recreational or wildlife refuges or LWCF Section 6(f) resources in the Direct Study Area.

Figure 3-6: Section 4(f) Resources



Sources: ESRI 2023; RS&H 2023.



**Legend**

- Direct Study Area
- Section 4(f) Resources
- Public Schools
- Historic Resource



### 3.4.2.2 Environmental Consequences

#### *Significance Threshold*

FAA Order 1050.1F, Exhibit 4-1, provides the FAA's significance threshold for Section 4(f), which states, "The action involves more than a minimal physical use of a Section 4(f) resource or constitutes a "constructive use" based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource." For Section 4(f) purposes, a project would "use" a resource in one of two ways.

**Physical Use:** The project physically occupies and directly uses the Section 4(f) resource. A project's occupancy or direct control (via purchase) causes a change in the use of the Section 4(f) resource. For example, building a runway safety area across a fairway of a publicly-owned golf course is a physical taking because the transportation facility physically used the course by eliminating the fairway.

**Constructive Use:** The project indirectly uses a Section 4(f) resource by substantially impairing the resource's intended use, features, or attributes. For example, a constructive use of an overnight camping area would occur when project-related aircraft noise eliminates the camping area's solitude. Although not physically occupying the area, the project indirectly uses the area by substantially impairing the features and attributes (i.e., solitude) that are necessary for the area to be used as an overnight camping area.

#### *Potential Impacts*

The Proposed Project is to construct aviation-related infrastructure at the Airport and replace an airside and 450-foot-long-dual-guideway APM connection that were previously operational (1971-2005) and later demolished (2007). The APM would connect the proposed Airside D to the Main Terminal (a Section 4(f) resource and historic resource eligible for listing on the NRHP) (see [Section 3.4.4](#) for further details regarding the historic resource). The APM would re-establish a connection for passengers, tenants, and employees and would not change the use of the Section 4(f) resource. Therefore, the Proposed Project would result in a minimal physical use of a Section 4(f) resource.

The described Section 4(f) resources are not within the existing DNL 65 dBA noise contour. An Area Equivalent Method (AEM) noise analysis was conducted for this EA (see [Section 3.4.6](#) of this EA). Compared to the No Action Alternative, the Proposed Project's potential change in the DNL 65 dBA contour is 0.6% in 2032 (or approximately 19 acres of a total 2,336-acre contour). Therefore, the Proposed Project would not be an appreciable change in the aircraft noise environment and would not indirectly affect (i.e., constructive use) these Section 4(f) resources.

#### *Mitigation Measures*

Because the Proposed Project would not exceed the FAA's significance threshold for Section 4(f) or Section 6(f) resources, the HCAA does not propose mitigation measures.

### 3.4.3 Hazardous Materials, Solid Waste, and Pollution Prevention

This section describes the existing conditions and significance threshold(s) pertaining to hazardous materials, solid waste, and pollution prevention. This section also describes the potential effects of the Proposed Project compared to the No Action Alternative.

#### 3.4.3.1 Affected Environment

According to FAA 1050.1F Desk Reference, “*hazardous material is any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce*” and includes hazardous wastes and hazardous substances. According to the Resource Conservation and Recovery Act (RCRA), solid waste includes construction and demolition debris, food waste from concession activities in the terminal, and paper/cardboard. Pollution prevention includes methods to avoid, prevent, or reduce pollutant discharges or emissions as a result of a project.

**Hazardous Materials** – According to the USEPA, no designated hazardous material sites exist in the Direct Study Area (EPA, 2022). One aboveground ground service equipment (GSE) fuel tank is near the former Airside D terminal. However, the fuel tank has no pollution or hazardous conditions and would be relocated before construction. In 2007, the fueling system components servicing Airside D were taken out of service. The fuel lines were cleaned, grouted, and abandoned in-place. Valve boxes and hydrant pits were removed except for the two isolation valve boxes located along the edge of the apron, which remain. The concrete apron was restored in all areas affected by the demolition. According to the HCAA, there is the potential for legacy residual underground petroleum products in the Direct Study Area. The HCAA would require the Proposed Project’s design-builder to investigate the existing conditions during the design phase. Soil analyses may be required by a selected disposal facility, which would be completed before the initiation of construction. The selected design-builder would submit a construction proposal for what is required to construct the Proposed Project in accordance with all applicable environmental regulations and code requirements.

**Solid Waste and Pollution Prevention** – The HCAA tracks waste and recycling data for TPA. In 2021 (the most recent data readily available), TPA produced 4,442 tons of waste, of which 1,024 tons were recycled, for a diversion rate of 23%. In 2021, the Airport had 15.4 million annual passengers; therefore, on average, the pounds of undiverted waste (i.e., waste disposed after recycling or 3,398 tons) would be approximately 0.44 pound per passenger.

A significant amount of the Airport’s municipal solid waste is sent to the McKay Bay Waste-to-Energy (WTE) facility, which converts solid waste into electricity for the City of Tampa (Tampa International Airport, 2014). Waste that cannot be processed at the McKay Bay WTE facility is sent to the Hillsborough County Southeast Landfill, approximately 25 miles southeast of the Airport in Lithia, Florida (Tampa International Airport, 2014). In 2021, according to the Florida Department of Environmental Protection, the Southeast Landfill had approximately 6.5 million

cubic yards of volume remaining. This landfill's remaining capacity is through the year 2030 (SCS Engineers, 2021).

The HCAA has established various sustainability practices to reduce the environmental impact of the Airport. The Airport has developed a Sustainable Management Plan (SMP), which established environmental goals and created a continuous monitoring system to ensure the goals of the SMP are being achieved. The SMP has identified three focus areas: facility planning, design and construction, and maintenance and operations (Tampa International Airport, 2014). The sustainability initiatives involve the Airport's energy, water, waste management practices, and design. For energy use, the HCAA installed electric charging stations for public use, and the Airport's vehicle fleet consists of 42% alternative fuel vehicles (Tampa International Airport, 2023).

In 2009, the HCAA developed a collection and recycling program in the main terminal and airside. There are 132 recycling containers placed throughout public areas of the Airport for passengers to recycle and 31 containers placed in employee break rooms. The Airport participates in the City of Tampa's recycling program, which allows for recycling plastics, glass, aluminum, steel cans, newspapers, magazines, and paperboard. The Authority's recently updated Sustainability Management Plan targets a 30% recycling rate by 2030.

The HCAA has implemented waste management programs to reduce the total waste produced at the Airport. The Airport has implemented recycling programs that led to a 27% recycling rate in 2017 (Tampa International Airport, 2023).

### **3.4.3.2 Environmental Consequences**

#### ***Significance Threshold***

FAA Order 1050.1F does not define a significance threshold for hazardous materials, solid waste, and pollution prevention; however, it does provide several factors to consider in evaluating the context and intensity of potential environmental impacts. FAA Order 1050.1F, Exhibit 4-1 states that these include when the action would have the potential to:

- » “Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;
- » Involve a contaminated site (including but not limited to a site listed on the National Priorities List). Contaminated sites may encompass relatively large areas. However, not all of the grounds within the boundaries of a contaminated site are contaminated, which leaves space for siting a facility on non-contaminated land within the boundaries of a contaminated site. An EIS is not necessarily required. Paragraph 6-2.3.a of [FAA Order 1050.1F] allows for mitigating impacts below significant levels (e.g., modifying an action to site it on non-contaminated grounds within a contaminated site). Therefore, if

appropriately mitigated, actions within the boundaries of a contaminated site would not have significant impacts;

- » Produce an appreciably different quantity or type of hazardous waste;
- » Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or
- » Adversely affect human health and the environment.”

### **Potential Impacts**

**Hazardous Materials** – Construction of the Proposed Project would involve using hazardous materials (such as fuels), subject to Best Management Practices (BMPs). The Proposed Project would not involve any properties on the National Priorities List. Operation of the Proposed Project would increase the Airport’s use of operationally related hazardous materials (e.g., aviation fuel, oils, solvents, etc.). The HCAA maintains a Spill Prevention and Countermeasure Control Plan (SPCC) and a Stormwater Pollution Prevention Plan (SWPPP). In addition, major airlines that operate at the Airport maintain similar plans for the Airport’s bulk fuel and fuel hydrant system. Therefore, the Proposed Project would not significantly affect designated hazardous material properties.

**Solid Waste and Pollution Prevention** - Construction of the Proposed Project would cause a short-term, temporary increase in the quantity of solid waste generated at the Airport; however, the amount of solid waste anticipated would not affect the capacity of landfills in the area. The selected contractor would be responsible for disposing of waste in accordance with all federal, state, and local rules and regulations. The oil used for the lubrication of construction equipment could be recycled in accordance with federal, state, and local laws.

The Proposed Project would increase the number of aircraft operations by 462 in 2027 and 2,000 in 2032. Compared to the No Action Alternative, the Proposed Project would increase airline waste by approximately 15.2 tons in 2027 and 66 tons in 2032.<sup>22</sup> These calculations do not take into consideration the HCAA’s increasing recycling rate to 30% by 2030. Solid waste would continue to be handled and disposed of in accordance with federal, state, and local rules and regulations and would not significantly affect local landfills. Therefore, the Proposed Project would not significantly affect solid waste.

### **Mitigation Measures**

Because the Proposed Project would not cause direct or indirect effects on hazardous materials, solid waste, and pollution prevention, the HCAA does not propose mitigation measures.

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<sup>22</sup> Calculations were based on 150 passengers per operation (i.e., an approximate number of passengers on a narrow body aircraft).

### 3.4.4 Historic, Architectural, Archaeological, and Cultural Resources

This section describes the existing conditions and significance threshold(s) pertaining to historical, architectural, archaeological, and cultural resources. This section also describes the potential historic resources effects of the Proposed Project (referred to in this section as the proposed undertaking) compared to the No Action Alternative.

#### 3.4.4.1 Affected Environment

The National Historic Preservation Act (NHPA)<sup>23</sup> establishes the Advisory Council on Historic Preservation (ACHP). The ACHP oversees federal agency compliance with the NHPA. The NHPA also established the NRHP, which the National Park Service (NPS) oversees. Section 106 of the NHPA established a process requiring federal agencies to consider the effects of a project on historic properties and to consult with the State Historic Preservation Officer regarding the proposed undertaking's effects.

The Area of Potential Effects (APE) to historic resources for the Proposed Undertaking consists of the Main Terminal, including existing Airsides A, B, C, E and F and the former Hardstand D area (see *Figure 3-7*).

As shown in *Figure 3-7*, the APE is approximately 480 acres and also includes portions of Runway 1L/19R and Runway 1R/19L, concrete apron area, vehicular roads (e.g., George Bean Parkway), taxiways, taxilanes,, stormwater drainage system, and mowed/maintained airfield turf. The nearest NRHP-listed resource is the George Guida Sr. House, about 3.5 miles southeast of the APE (National Park Service, 2022).

According to the Florida Master Site File, the Tampa International Airport (Site ID HI14544) is within the APE and eligible for listing on the NRHP (SHPO, 2022). In 2018, Tampa International Airport (8HI14544) was determined eligible for inclusion in the NRHP due to its architectural style, integrity, and significant technological and design innovations (FMSF 2018). The significance is based on the National Register Criterion C, which represents “the distinct characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent significant and distinguishable entity whose components may lack individual distinction.”

Five historic structures are recorded within one mile of the Proposed Project (see *Table 3-5*).

These include one private residence (8HI09995) and four commercial buildings (8HI14469, 8HI14615, 8HI14627, and 8HI14628). Four of the five historical structures within one mile of the Proposed Project have been determined ineligible for inclusion in the NRHP, and one was not evaluated.

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<sup>23</sup> 54 U.S.C. §§ 300101 et seq.

Figure 3-7: Area of Potential Effects (APE)



Sources: Google Earth, 2024; RS&H, 2024

**Legend**

 Area of Potential Effects (APE)





**Table 3-5: Previously Recorded Historic Resources within One Mile of the Proposed Undertaking**

Trinomial	Name	Site Type	Year Built	Type	NRHP Status
8HI14544	Tampa International Airport	Building Complex – American 20 <sup>th</sup> Century	1971	Resource Group	Eligible (not determined)
8HI14628	Building 4, 5519 W. Hillsborough Ave.	Building – Commercial	1970	Historic Structure	Ineligible (2019)
8HI14627	Building 2, 5519 W. Hillsborough Ave.	Building – Commercial	1970	Historic Structure	Ineligible (2019)
8HI14615	Building 1, 5519 W. Hillsborough Ave.	Building – Commercial	1970	Historic Structure	Not evaluated
8HI09995	6011 Elanor Dr.	Building – Private Residence	1930	Historic Structure	Ineligible (2007)
8HI14469	6005 Jarvis Street	Building – Commercial	1961	Historic Structure	Ineligible (2019)
8HI03295	Hoover	Isolated Find – Native American-Aceramic	n/a	Archaeological Site	Not evaluated
8HI06719	Skyway Bike Trail	Campsite – Native American-Aceramic	n/a	Archaeological Site	Ineligible (2003)

Source: FMSF and SEARCH, Inc. 2023.

The one structure not evaluated was a commercial building (8HI14615) built in 1970 that is part of a complex of contemporary buildings located at 5519 W. Hillsborough Avenue.

Two archaeological sites are recorded within one mile of the Proposed Project (see **Figure 3-8** and **Table 3-5**). These include one campsite site (8HI06719) and one site that is an isolated lithic find (8HI03295). See **Appendix F** for more information.

#### **3.4.4.2 Environmental Consequences**

Section 106 of the NHPA requires federal agencies to account for the effects of their undertaking<sup>24</sup> and consult with the SHPO, Tribal Historic Preservation Officers (THPO), and other parties to develop and evaluate alternatives or modifications to the undertaking where necessary to avoid, minimize, or mitigate adverse effects on historic properties. In consultation with the SHPO/THPO, the FAA evaluates a property's eligibility for inclusion in the NRHP.

##### ***Significance Threshold***

FAA Order 1050.1F does not provide a significance threshold for historical, architectural, archeological, and cultural resources; however, it does provide a factor to consider in evaluating the context and intensity of potential environmental impacts. This would occur when the action results in a finding of Adverse Effect through the Section 106 process. However, an adverse effect finding does not automatically trigger the preparation of an EIS (i.e., a significant impact).

##### ***Potential Impacts***

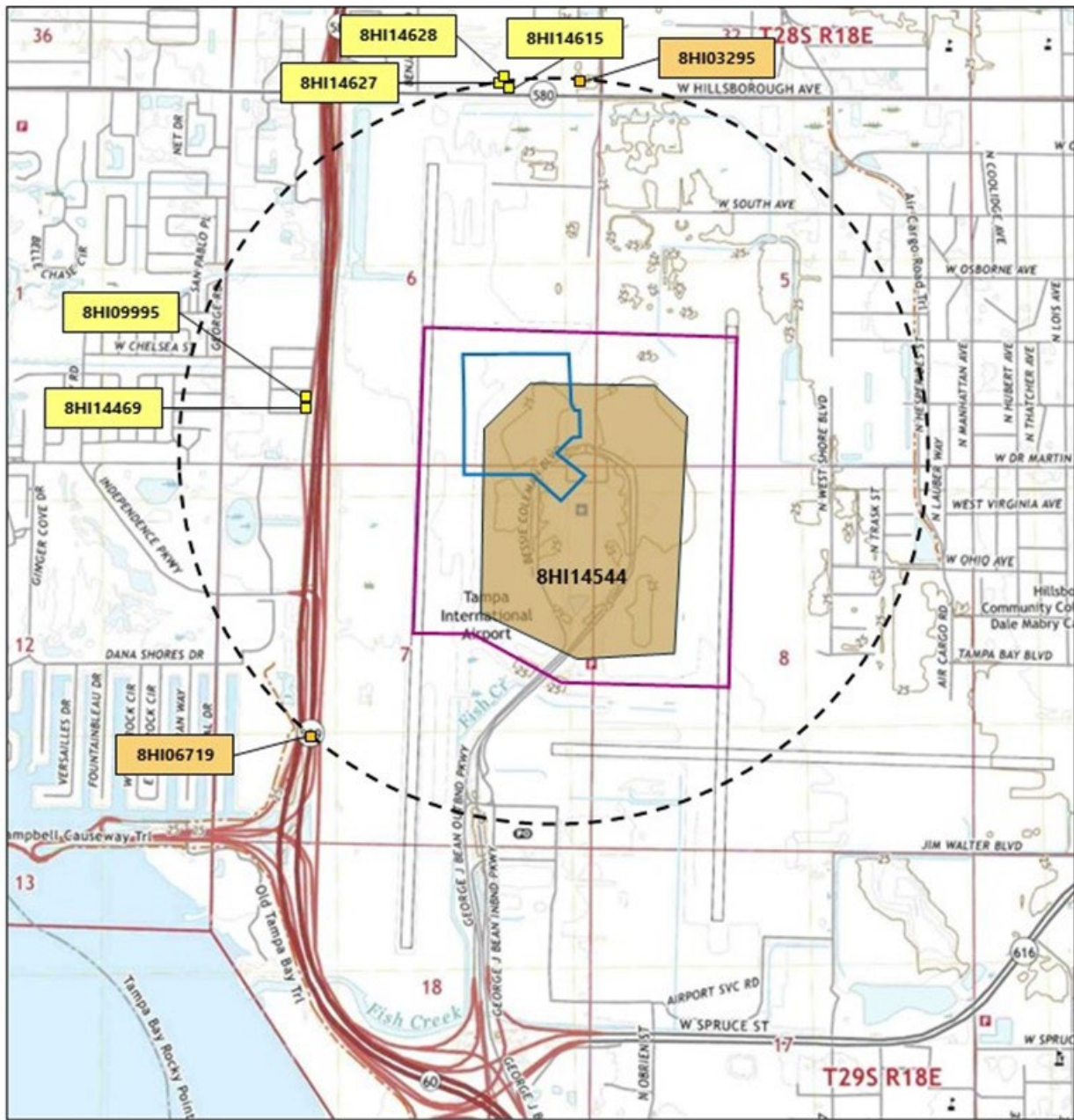
HCAA's Proposed Project is to construct aviation-related infrastructure at the Airport and replace an airside and 450-foot-long-dual-guideway APM connection that were previously operational (1971-2005) and later demolished (2007). The Proposed Project complements the architectural style and integrity of Site HI14544 and reestablishes significant technological and design innovations.

The Proposed Project would be consistent with the Airport setting. It would not affect National Register eligibility under Criterion C for "the distinct characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent significant and distinguishable entity whose components may lack individual distinction." Therefore, constructing the Proposed Project and its APM connection to the main terminal would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's Site HI14544 eligibility for listing on the NRHP as defined in 36 Code of Federal Regulations (CFR) 800.5.

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<sup>24</sup> Under Section 106, an undertaking is the proposed action, or project.

Figure 3-8: Previously Recorded Cultural Resources within One Mile of the Proposed Project



Source: USGS, 2021, FMSF, 2023, RS&H, 2023.

**Legend**

- Project Area
- 1-mile boundary
- Area of Potential Effects (APE)
- Historic Structure
- Archaeological Site
- Resource Group



The APE was extensively disturbed when Tampa International Airport was originally constructed. There are no archaeological resources located within the APE. The Proposed Project includes ground-disturbing activities occurring entirely on land previously disturbed and developed for aviation activities (original Airside D, apron, taxiways) and would not affect archaeological resources.

The Proposed Project's ground-disturbing activities occur entirely on land previously disturbed and developed for aviation activities. The Proposed Project would not affect tribal land or land of interest to tribes.

An AEM noise analysis was conducted for the Proposed Project. The Proposed Project's potential change in the DNL 65 dBA contour is 0.6% in 2032 (or approximately 19 acres of a total 2,336-acre contour). According to FAA Order 1050.1F Desk Reference, "If the AEM calculations indicate that the action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas, and no further noise analysis would be required" (Federal Aviation Administration, 2020). The Proposed Project would increase operations and aircraft taxiing noise adjacent to the Main Terminal (Site ID HI14544). However, it would not significantly increase noise levels at Site ID HI14544 or introduce significant audible elements that would be out of character. Accordingly, it would not have an adverse effect on them as defined in 36 CFR 800.5. It would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP.

The construction and operation of the Proposed Project would not significantly affect air quality or violate local, state, tribal, or federal air quality standards under the Clean Air Act Amendments of 1990. The Proposed Project would not significantly increase construction or operational air emission levels at Site ID HI14544 or introduce significant atmospheric elements that would be out of character. Accordingly, it would not diminish the integrity of the property's historic features defined in 36 CFR 800.5. Therefore, the Proposed Project would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP.

Potential aesthetic effects of an action are generally assessed by comparing the visual characteristics of the proposed development to existing development in the areas and to the environmental setting. The visual effects resulting from constructing and operating the Proposed Project would result from physical changes to the visual character of the APE, including existing development, landforms, vegetation, and water surfaces.

Construction of the Proposed Project would occur during the day. There is the potential for night-time work that would require additional lighting; however, this lighting would be directional and last only for the duration of night-time construction work. The temporary use of directional lighting for construction purposes would not result in light emission impacts on

the surrounding area, including cultural resources. The Proposed Project would occur entirely on-Airport property, would be consistent with the existing Airport environment, and would not result in viewshed changes or additional light emissions of cultural resources. The Proposed Project would not introduce visual elements that would be out of character. Accordingly, it would not diminish the integrity of the property's historic features defined in 36 CFR 800.5.

Operation of the Proposed Project would be visually different, with increased operations and aircraft taxiing adjacent to the main terminal. It would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP. Operation of the Proposed Project would include permanent outside lighting to move aircraft, vehicles, and people safely. Public views of the new Airside D would be obscured by the existing multi-lane Veterans Expressway, Hillsborough Avenue, commercial businesses, and other on-Airport structures. See **Appendix F** for more information.

### ***Determination of Effects***

The Proposed Project occurs entirely on land previously disturbed and developed for aviation activities. The Proposed Project's construction and operation would not directly or indirectly affect any cultural resources (e.g., noise, air, visual) other than the Tampa International Airport (8HI14544). However, the likely effects on Tampa International Airport would not alter any aspect of this resource from which it derives its significance under Criterion C for NRHP eligibility. Therefore, the likely effects to the Tampa International Airport will not constitute *adverse effects* as defined in 36 CFR 800.5. Because the Proposed Project does include ground disturbance activities, the Authority will implement special conditions regarding unexpected discoveries during construction.

In addition, the FAA is conducting Tribal coordination with the Muscogee (Creek) Nation Cultural Preservation and the Miccosukee Tribe of Indians of Florida offering the Tribes the opportunity to describe any concerns or interests in the project (see **Appendix F** for the FAA's Tribal correspondence). The Final EA will disclose the Tribes response. Based on an evaluation of the details of the Proposed Project in conjunction with the research and analysis summarized in this CRAS, the FAA concluded that the Proposed Project ***will have no adverse effect*** on historic properties (i.e., properties that are eligible for or listed on the NRHP). On February 20, 2024, the Florida State Historic Preservation Office (SHPO) concurred with the FAA's ***no adverse effect*** on historic properties determination. See **Appendix F** for further details.

### ***Mitigation Measures***

Because the Proposed Project would have no adverse effect on historic properties, the HCAA does not propose mitigation measures.

### 3.4.5 Natural Resources and Energy Supply

This section describes the existing conditions and significance threshold(s) pertaining to natural resources and energy supply. This section also describes the Proposed Project's potential natural resources and energy supply effects compared to the No Action Alternative.

#### 3.4.5.1 Affected Environment

Sections 1502.16l and (f) of the CEQ Regulations require federal agencies to consider the use of consumable natural resources, demands on energy supplies from projects, and the conservation potential of alternatives and mitigation measures. FAA policy also encourages developing facilities to use the highest design standards and to incorporate sustainable measures into designs.

Airport personnel and tenants regularly use consumable materials to maintain various airside and landside facilities and services. Those materials may include asphalt, concrete, aggregate for sub-base materials, various metals associated with such maintenance, and fuels associated with the operation of aircraft and vehicles.

Tampa Electric Company (TECO) supplies electricity to the Airport. According to the 2024 Sustainable Management Plan (SMP), the primary energy users are the Airport's main terminal and four airside (A, C, E, and F). During 2021, the Airport's electrical usage (including tenants) was 131,819,931 kilowatt hours (kWh). HCAA has been working to reduce TPA's electricity consumption in accordance with its sustainability goals, achieving a 13% reduction from 2019 to 2021. According to the HCAA, the Airport's central utility plant can meet the Airport's electrical needs. TECO can generate more than 5,000 megawatts for users of TECO (Emera, 2022). The City of Tampa can produce up to 120 million gallons of water daily; the current average water production per day is 81 million gallons (City of Tampa, 2022).

The HCAA has implemented various sustainability initiatives at the Airport. The HCAA 2024 SMP results from a process of continuous improvement beginning in 2012 with a Sustainable Management Policy for the Airport, followed by the HCAA's first Sustainable Management Plan in 2014. The 2024 SMP results set the direction for the next ten years of sustainable and resilient development at HCAA.

Additionally, the HCAA has installed 176,000 square feet of solar arrays and various LED fixtures in the terminal and airfield to lower electricity usage at the Airport (Tampa International Airport, 2023). Water use at the Airport has been reduced with reclaimed water for irrigation and cooling towers on an as-needed basis (Tampa International Airport, 2023). Additionally, the HCAA uses rainwater harvesting and low-impact landscape maintenance to lower water demands (Tampa International Airport, 2022).

### 3.4.5.2 Environmental Consequences

#### *Significance Threshold*

FAA Order 1050.1F does not define a significance threshold for natural resources and energy supply; however, it does provide a factor to consider in evaluating the context and intensity of potential environmental impacts. Potentially significant effects could occur if the action has the potential to cause demand to exceed available or future supplies of these resources, which include aviation and surface vehicle fuel, construction material, and electrical power.

Available industry information related to sustainable design and practices was reviewed to describe measures to reduce the potential landside development demands on natural resources and energy supplies. These useful references, recognized by the FAA, are:

- » Airports Cooperative Research Program (ACRP) Synthesis 10, Airport Sustainability Practices
- » Sustainable Aviation Guidance Alliance Database

#### *Potential Impacts*

The construction of the Proposed Project would temporarily increase the use of natural resources at the Airport. These resources could include prefabricated building components, aggregate, sub-base materials, and oils. These resources are not rare or in short supply, and the quantity required for development of this size would not place an undue strain on supplies within the Bay area. Construction would also increase the energy demand at the Airport; however, the increase would be temporary and minor and within the supply capabilities of TECO.

Construction of the Proposed Project would temporarily increase fuel usage from construction-related vehicles accessing the Direct Study Area. In addition, the Proposed Project could include diesel generators for backup electrical needs. The operation of the Proposed Project would increase aviation fuel use at the Airport. In 2032, the Proposed Project would increase aircraft operations by 2,000. Compared to the Airport's total forecast of approximately 287,400 operations in 2032, this increase in operations is 0.70% greater than the No Action Alternative. Therefore, while the Proposed Project would increase aviation fuel, it would not significantly affect fuel supplies or usage.

For this EA, water consumption per square foot was calculated for the Proposed Project. Water consumption (gallons) for Airside C was used to establish a water consumption per square foot for Airside D. Airside C is 320,062 square feet, the largest and most recently constructed airside. HCAA's water consumption records show that Airside C annually uses about 20.3 million gallons of water (about 63.31 gallons of water per square foot of space). Airside C's average daily water use is about 55,516 gallons (i.e., 20.3 million gallons divided by 365 days). The 63.31 gallons per square foot of space was calculated for the Proposed Project's 563,000-

square-foot facility. The Proposed Project is calculated to use about 35.6 million gallons of water annually (about 97,654 gallons per day). This total does not include the HCAA's ongoing sustainability goals to reduce water consumption at the Airport. The Proposed Project's total water consumption is well below the City's average water production per day of 81 million gallons (0.12 % of the City's daily water production). It does not include the HCAA's continuing goals to reduce water use at the Airport. The HCAA would coordinate with the City of Tampa regarding additional water supply.

The HCAA regularly meets with TECO to discuss their needs and upcoming projects, including the proposed Airside D. The existing central utility plant would accommodate the Proposed Project's electrical demand. For this EA, electrical consumption per square foot was calculated for the Proposed Project. Airside C's electrical consumption (kilowatt hours) was used to establish an electrical consumption per square foot for Airside D. Airside C is 320,062 square feet is the largest and most recently constructed airside. HCAA's electrical consumption records show Airside C annually uses about 15.9 million kilowatt hours (about 49.59 kilowatt hours per square foot of space annually). Airside C's average daily electricity use is about 43,561 kilowatt hours (i.e., 15.9 million kilowatt hours divided by 365 days). The 49.59 kilowatt hours per square foot of space was calculated for the Proposed Project's 563,000-square-foot facility. The Proposed Project is calculated to use about 27.9 million kilowatt hours annually (about 76,438 kilowatt hours per day). This total kilowatt hours does not include the HCAA's ongoing sustainability goals to reduce electricity use at the Airport. The energy increase is not expected to be significant or place undue strain on TECO's capacity, and the energy provider is not concerned about power supplies. TECO can meet all electrical requirements, and the City of Tampa can meet the water supply demands of the Airport. Additionally, the design of the Proposed Project could include the implementation of energy-efficient light fixtures, LED lighting, solar gray tinted exterior glass, low-flow toilets, and automatic faucets, which would be more energy and water-efficient.

The construction and operation of the Proposed Project should not significantly increase the use of natural resources and energy supplies. According to the HCAA, the design-builder would review and perform a demand analysis once the initial early design is completed. This analysis would then be reviewed, and where necessary, any additional utilities would be engineered and brought to or from (in case of wastewater) the Proposed Project.

Therefore, compared to the No Action Alternative, the Proposed Project would not significantly increase the use of fuel or water.

### ***Mitigation Measures***

Construction and implementation of the Proposed Project would not significantly affect natural resources and energy supply. Therefore, no mitigation is required or proposed.



### 3.4.6 Noise and Noise-Compatible Land Use

This section describes the existing conditions and significance threshold(s) pertaining to noise and noise-compatible land use. This section also describes the potential noise effects of the Proposed Project compared to the No Action Alternative in 2027 and 2032.

Day-Night Average Sound Level (DNL) is a 24-hour time-weighted sound level expressed in A-weighted decibels. DNL includes the cumulative effects of several sound events rather than a single event. It also accounts for increased sensitivity to noise during relaxation and sleeping hours. In the calculation of DNL, for each hour during the nighttime period (10:00 p.m. to 6:59 a.m.), the sound levels are increased by a 10-decibel weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The FAA requires DNL as the noise descriptor in aircraft noise exposure analysis and noise compatibility planning. DNL levels are commonly shown as lines of equal noise exposure, similar to terrain contour maps, referred to as noise contours.

#### 3.4.6.1 Affected Environment

In December 2021, the Authority finalized a 14 CFR Part 150 (Part 150) Noise Exposure Map Update (NEM) for the Airport. The NEM included noise contours for 2021, which represent the existing noise conditions at the Airport. *Figure 3-9* depicts 2021 65, 70, and 75 DNL contours on an existing land use map. The total area encompassed by 2021 65 DNL and greater contours is 1,861 acres, 304 acres of which are located off-Airport property.

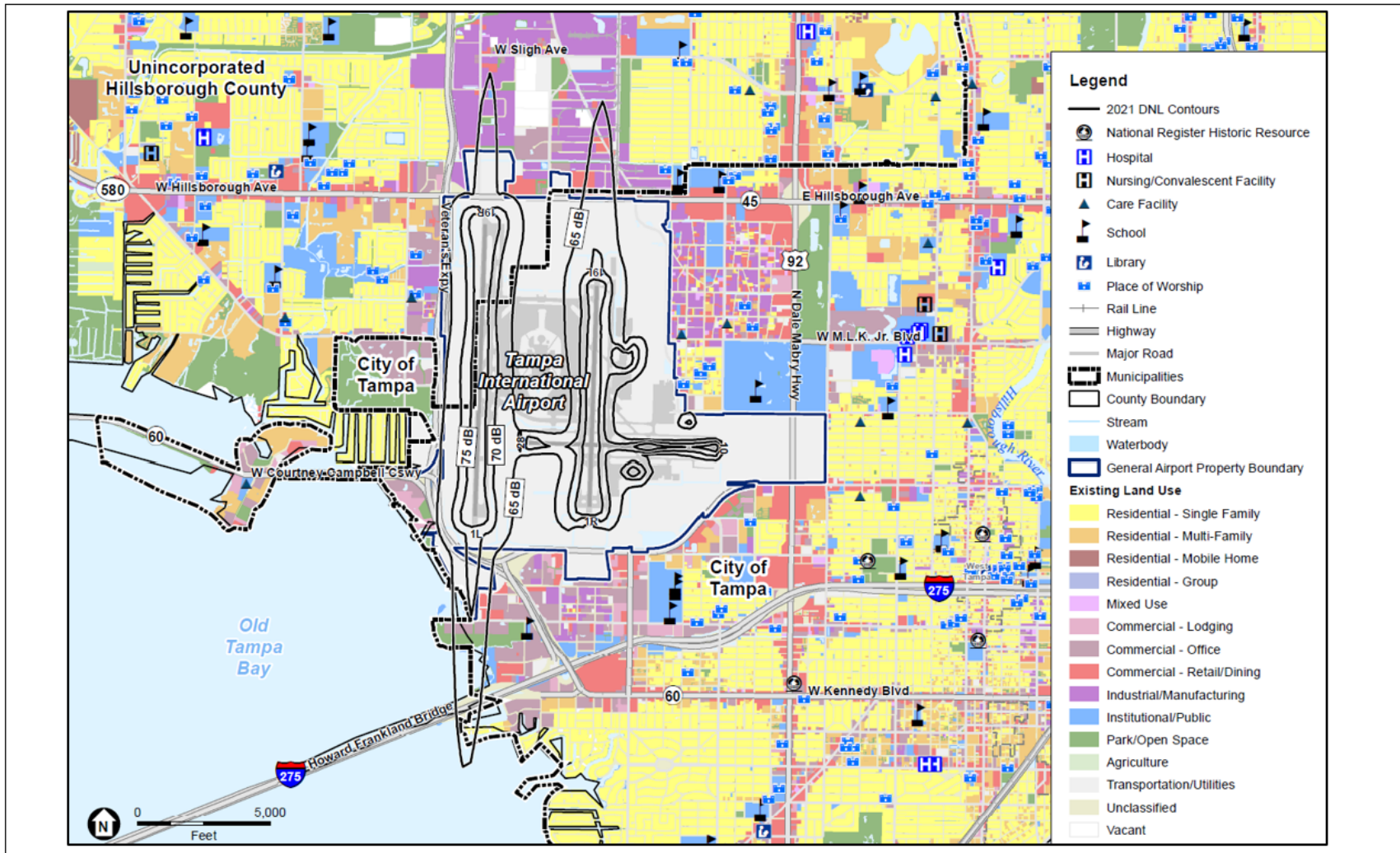
The total off-Airport acres for each land use category within the 65 DNL and higher contours are shown in *Table 3-6*. *Table 3-6* also presents the estimated number of housing units and population exposed to 65 DNL and higher in 2021. The 65 DNL contour includes 36 residents and 14 housing units located approximately one and a half miles south of the approach end of Runway 1L. All 14 housing units have participated in TPA's Voluntary Noise Abatement Program by receiving soundproofing and are considered compatible land uses for this EA.

**Table 3-6: Land Use and Population within 2021 65 DNL and Higher Noise Contours**

Land Use	65-70 DNL (acres)	70-75 DNL (acres)	75+ DNL (acres)	Total (acres)	Housing Units	Population
Residential - Single Family	3.3	0.0	0.0	3.3	14	36
Commercial - Office	13.4	0.0	0.0	13.4	0	0
Commercial - Retail/Dining	20.6	0.0	0.0	20.6	0	0
Industrial/Manufacturing	58.4	0.0	0.0	58.4	0	0
Institutional/Public	3.1	0.0	0.0	3.1	0	0
Park/Open Space	40.7	0.0	0.0	40.7	0	0
Transportation/Utilities	6.9	0.0	0.0	6.9	0	0
Unclassified	86.9	6.8	0.1	93.8	0	0
Vacant	0.5	0.0	0.0	0.5	0	0
Water	62.8	0.0	0.0	62.8	0	0
<b>Total</b>	<b>296.7</b>	<b>6.8</b>	<b>0.1</b>	<b>303.6</b>	<b>14</b>	<b>36</b>

Source: TPA 14 CFR Part 150 Noise Exposure Map Update, December 2021.

Figure 3-9: 2021 Airport Noise Contours



Source: ESA, 2021.



### 3.4.6.2 Environmental Consequences

#### *Significance Threshold*

The Area Equivalent Method (AEM) is an FAA-approved aircraft screening tool. The AEM is for “evaluating proposed actions and alternative(s) at an airport which result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft, as long as there are no changes in ground tracks, flight profiles or runway use.” According to FAA Order 1050.1F, Desk Reference, “If the AEM calculations indicate that the action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas, and no further noise analysis would be required. If the AEM calculations indicate an increase of 17 percent or more, or if the action is such that the use of the AEM is not appropriate, then the noise analysis must be performed using the Aviation Environmental Design Tool (AEDT) to determine if significant noise impacts would result.”

#### *Potential Impacts*

A noise screening analysis was prepared to evaluate the change in noise levels associated with the Proposed Project. The Proposed Project would increase annual aircraft operations by 462 in 2027 and 2,000 in 2032. As the 2032 study year has the larger increase in aircraft operations (i.e., 2,000), the change in noise exposure due to the Proposed Project was assessed by comparing the 2032 Proposed Project to the 2032 No Action Alternative. For projects in which the planned changes involve only operations and fleet mix (and not flight tracks, flight profiles, or runway modifications), the procedure for assessing noise exposure is as follows:

1. Conduct a noise screening analysis using the FAA’s Area Equivalent Method (AEM) model. If the potential for significant noise impact results, proceed to step 2.
2. Conduct detailed noise contour modeling and develop Day-Night Average Sound Level (DNL) contours using the FAA’s Aviation Environmental Tool (AEDT).

For step 1, FAA regulations stipulate that an increase in the 65 DNL contour area of 17% requires the development of noise contours using AEDT is required, which is step 2. If AEM computes an increase of less than 17%, then there are no significant noise impacts, and no further noise analysis is required. The AEM does not produce noise contours, only an estimate (in square miles) of the area potentially affected. The most recent version of AEM, Version 2c SP2, was used for this analysis.

The AEM results indicate that the Proposed Project would increase the 65 DNL contour area by 0.6% (19 acres) in 2032. While the AEM does not provide a visualization of the change in the 65 DNL contour, this calculated increase is well below the FAA’s 17% threshold for additional analysis, and there would not be an appreciable change in the aircraft noise environment.

Therefore, the Proposed Project does not result in a significant noise impact, and no further noise analysis is necessary (see **Appendix B** for further details).

### ***Mitigation Measures***

Implementing the Proposed Project would not result in a significant noise impact. Therefore, mitigation measures are not proposed or required.

## **3.4.7 Socioeconomics**

This section describes the existing socioeconomic conditions. This section also describes the significance thresholds and potential socioeconomic effects of the Proposed Project compared to the No Action Alternative.

### **3.4.7.1 Affected Environment**

Socioeconomics is an umbrella term for a project's social or economic aspects or a combination of the two. A socioeconomic analysis evaluates how elements of the human environment, such as population, employment, housing, and public services, might be affected by a Proposed Project and alternative(s).

This section describes the existing demographics of the area in and around the Direct Study Area as they relate to socioeconomics. U.S. Census Bureau information for the City of Tampa and Hillsborough County is the basis of the socioeconomic analysis. Population, income, and housing for the City of Tampa and Hillsborough County are included as the basis for evaluating potential socioeconomic impacts.

The Airport is a driver of economic activity for the City of Tampa, Hillsborough County, and the State of Florida. In 2019, the Florida Department of Transportation (FDOT) determined that the Airport generated \$4.5 billion in personal income and approximately \$14.5 billion in total economic output (Florida Department of Transportation, 2019). As of 2022, the Airport and its tenants employed approximately 10,500 employees (Tampa International Airport, 2022).

According to the U.S. Census data, the City of Tampa has a population of 384,959, an average household income of \$63,404, and 170,964 housing units (U.S. Census Bureau, 2022). Hillsborough County has a population of 1,459,792, an average household income of \$65,905, and 602,886 housing units (U.S. Census Bureau, 2022). The Direct Study Area is within the Airport property. As a result, no population would be affected within the Direct Study Area.

Public services at the Airport include firefighting and law enforcement. The Airport has an Aircraft Rescue and Fire Fighting (ARFF) facility to fight fires. Law enforcement at the Airport is provided by the Tampa International Airport Police Department, which provides traditional law enforcement services and, in addition, transportation security (Tampa International Airport, 2022).

The HCAA has recently completed several projects that have improved the on-Airport roadways and their levels of service (LOS). Surface transportation improvements recently completed at the Airport include improvements to George Bean Parkway and additional lanes on the Red and Blue curbsides. The HCAA also constructed a multi-story Consolidated Rental Car Facility (CONRAC), new Employee/Tenant Parking, and HCAA's new administrative offices. An Automated People Mover (APM) connects these facilities to the Main Terminal. These projects moved the transportation of surface vehicles away from the on-Airport roads circulating the Main Terminal. The HCAA also recently improved its curbsides for arriving and departing passengers. In 2021, the HCAA completed Blue Express Curbsides for arriving and departing passengers. In 2022, the HCAA began construction on the Red Express Curbsides. These projects were designed to reduce congestion for arriving and departing passengers picked up or dropped off at the Airport. These improvements assist passengers without checked baggage with the ability to be picked up or dropped off, bypassing the ticketing and baggage claim levels.

### **3.4.7.2 Environmental Consequences**

#### ***Significance Threshold***

FAA Order 1050.1F does not provide a significance threshold for socioeconomic. It does provide several factors to consider in evaluating the context and intensity of potential environmental effects. Factors considered include the potential of the action to:

- » Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area)
- » Disrupt or divide the physical arrangement of an established community
- » Cause extensive relocation when sufficient replacement housing is unavailable
- » Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities
- » Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities.
- » Produce a substantial change in the community tax base.

#### ***Potential Impacts***

The Proposed Project would increase the Airport's and the community's economic activity compared to the No Action Alternative. The Proposed Project would result in short-term construction-related employment of local contractors, which could have a positive effect. Construction-related impacts would be temporary and are not expected to cause a significant secondary (induced) impact on the surrounding area.

The Proposed Project's employment opportunities can also be considered a positive, long-term secondary impact. Compared to the No Action Alternative, the Proposed Project would

increase the number of airline and Airport employees, including baggage handlers, janitors, and concessionaire employees at TPA. Most employees are expected to be from the Bay area.

As described above, recent on-Airport roadway improvements (e.g., widening the entrance/exit parkway, expansion of Blue and Red Curbsides with additional lanes) as well as new facilities in the south terminal support area (e.g., CONRAC, Employee/Tenant parking, and HCAA offices), were planned and constructed to meet the surface transportation needs of the Airport's 20-year demand.

The TPA MPU conducted a curbside and roadway LOS analysis to model modes of travel and roadway characteristics accessing the Airport. The FAA-approved 2022 TPA MPU forecast for passengers and operations was used to calculate future curbside and access roadways LOS. According to the Transportation Research Board, Levels of Services are described as follows:

- » LOS A – Excellent,
- » LOS B – Very Good,
- » LOS C – Good,
- » LOS D – Fair,
- » LOS E – Poor, or
- » LOS F – Failure.

A LOS D is acceptable during peak hours, while a LOS E or F would require improvement.

**Table 3-7** shows that the traffic analysis concluded that the Airport's curbside LOS through 2032 was LOS D or better. Therefore, additional curb length and through lanes are not required. For accessing the Airport, the TPA MPU studied approximately 25 access roadway segments (i.e., on-Airport property and roadway ramps to and from the Airport), including but not limited to George J Bean Parkway, Memorial Highway, Veterans Expressway, Spruce Street, West Cypress Street, and Interstate 275. In 2032, roadways studied had an LOS greater than or equal to "D," and 88% of those studied had a LOS B or greater.

Therefore, the Proposed Project's increased traffic demand would not significantly affect the Airport's future curbside or roadways accessing the Airport. The Proposed Project would not disrupt local traffic patterns nor substantially reduce the LOS of roads serving the Airport.

The Proposed Project would not cause shifts in the projected population growth, cause changes to population movement, or result in the need for extensive relocations. The Proposed Project does not anticipate increasing the demand for fire and life safety services. There is the potential for additional Airport Police Department personnel to secure the new Airside D. Compared to the No Action Alternative, the Proposed Project would not disrupt any nearby surrounding communities of any planned development, relocate community businesses, and it would be consistent with the plans and goals of the community.

**Table 3-7: 2032 Peak Hours Roadway Level of Service**

Roadway Segment	Peak Hour Volume	Volume/ Capacity Ratio	Level of Service
Access Road to Airport Service/Bessie Coleman Blvd	190	0.19	A
George Bean (GB) Parkway (Pkwy) Northbound (NB)- North of Blue Entrance	1,840	0.71	C
GB Pkwy Southbound (SB)	1,760	0.68	B
Ramp back to Red Airside	200	0.2	A
Airport Recirculation Ramp	790	0.39	A
GB Pkwy SB Ramp to Airport Service Road Eastbound (EB)	310	0.31	A
Airport Service Road Westbound (WB) Ramp to GB Pkwy SB	725	0.36	A
Bessie Coleman Blvd (one-way) NB	635	0.63	B
Terminal Short-term Ramp NB	1,233	0.81	D
GB Pkwy NB – near Cell Phone Lot	1,370	0.45	A
GB Pkwy SB from Economy Parking WB	925	0.72	C
GB Pkwy SB to Economy Parking EB	730	0.57	A
Spruce St. to GB Pkwy NB	550	0.36	A
GB Pkwy NB Ramp from SR 60	1,165	0.38	A
GB Pkwy NB Ramp	1,550	0.51	A
GB Pkwy SB Ramp to I-275 SB	1,240	0.69	B
GB Pkwy SB Exit Ramp	620	0.41	A
GB Pkwy SB Exit Ramp	910	0.59	A
Bessie Coleman to GB Pkwy NB	570	0.44	A
Short Exit from Pay Parking	30	0.03	A
Long Exit form Pay Parking to Recirculation Ramp	60	0.06	A
Exit Pay Parking to GB Pkwy SB	630	0.49	A
GB Pkwy SB Exit to Cypress St (O'Brien St)	120	0.09	A
GB Pkwy SB Exit Rampa to I-275 NB	810	0.63	B
GB Pkwy SB Exit Ramp to Spruce St.	730	0.57	A

Notes: GB Pkwy: George Bean Parkway; NB: Northbound; SB: Southbound; EB: Eastbound; and WB: Westbound  
Source: AECOM, 2022. Ricondo & Associates, Inc 2022, RS&H, 2023.

### **Mitigation Measures**

The Proposed Project would have no significant impact on socioeconomics. No mitigation is required or proposed.



### 3.4.8 Visual Effects

This section describes the existing conditions and significance threshold(s) pertaining to visual effects and the potential visual effects of the Proposed Project compared to the No Action Alternative.

#### 3.4.8.1 Affected Environment

According to FAA 1050.1F Desk Reference, “visual effects deal broadly with the extent to which the proposed action or alternative(s) would either: 1) produce light emissions that create [an] annoyance or interfere with activities, or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment.”

The Direct Study Area is located northwest of the Main Terminal at the former site of Hardstand D. The viewshed of the Direct Study Area includes Airport facilities such as the terminal, concourses, Airport Traffic Control Tower, and hangar facilities. The closest residential population is located about 0.8 mile west of the Direct Study Area. No residents have a line of sight to the Direct Study Area from their home due to the distance from the Direct Study Area, as well as the presence of the Veterans Expressway, Hillsborough Avenue, existing landscaping, a sound wall, and commercial businesses located between the residences and the Airport. Existing permanent outside lighting provides for the safe movement of aircraft, vehicles, and people.

#### 3.4.8.2 Environmental Consequences

##### *Significance Threshold*

FAA Order 1050.1F does not define a significance threshold for visual effects; however, Exhibit 4-1 of the Order provides several factors to consider in evaluating the context and intensity of potential environmental impacts.

For light emissions, these factors include 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 the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.”

For visual resources/visual character, these include 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;
- » Contrast 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.”

Potential aesthetic effects of an action are generally assessed by comparing the visual characteristics of the proposed development to existing development in the areas and to the environmental setting and by determining if a jurisdictional agency considers this contrast objectionable. The visual effects resulting from constructing and operating the Proposed Project would result from physical changes to the visual character of the Direct Study Area, including existing development, landforms, vegetation, and water surfaces.

### **Potential Impacts**

Construction of the Proposed Project would occur during the day. There is the potential for night-time work that would require additional lighting; however, this lighting would be directional and last only for the duration of night-time construction work. The temporary use of directional lighting for construction purposes would not result in light emission impacts on the surrounding area.

The Proposed Project's conceptual illustrations are shown in *Figure 3-10* and *Figure 3-11*. Operation of the Proposed Project would include permanent outside lighting to safely move aircraft, vehicles, and people. The closest residential area is about 0.8 mile west of the Proposed Project. The Veterans Expressway overpass, Hillsborough Avenue, existing landscaping, a sound wall, and commercial businesses obscure views from the residential area. The Proposed Project would occur entirely on-Airport property, would be consistent with the existing Airport environment, and would not result in viewshed changes or additional light emissions for off-Airport residents.

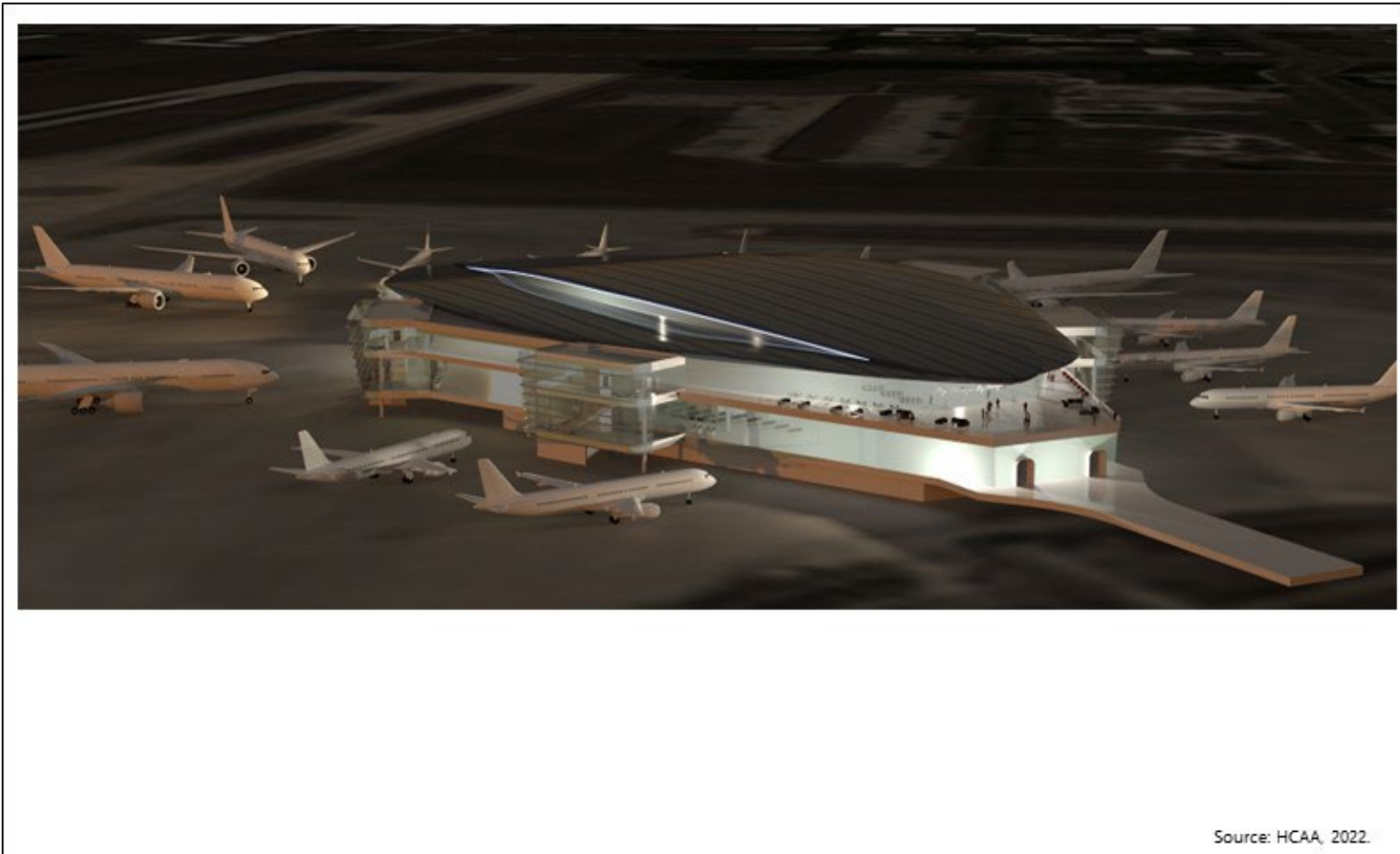
### **3.4.9 Water Resources (Floodplains)**

This section describes the existing conditions and significance threshold(s) pertaining to floodplains and the potential floodplain effects of the Proposed Project compared to the No Action Alternative.

#### **3.4.9.1 Affected Environment**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Direct Study Area is located in FIRM Map 12057C0331J (Federal Emergency Management Agency, 2022) and includes approximately 8.2 acres of isolated Zone A 100-year floodplain areas (see *Figure 3-12*). The Indirect Study Area is in FIRM Map: 12057C0331J, 12057C0332J, 12057C0333J, and 12057C0334J (Federal Emergency Management Agency, 2022).

**Figure 3-10: Proposed Project – Nighttime Conceptual Illustration**



Source: HCAA, 2022.



**Figure 3-11: Proposed Project – Daytime Conceptual Illustration**



Figure 3-12: Floodplains



Sources: HCAA 2023; FEMA 2023; ESRI 2023; RS&H 2023

0 0.07 0.15 Mile

Legend

- Direct Study Area
- Existing Stormwater Treatment Area
- Airside D
- Segment of Existing Stormwater Drainage System
- Zone A
- Zone X
- Zone AE



### 3.4.9.2 Environmental Consequences

#### *Significance Threshold*

According to FAA Order 1050.1F, Desk Reference, “A significant floodplain encroachment under DOT Order 5650.2 is defined as an encroachment resulting in one or more of the following construction or flood related impacts: (1) a considerable probability of loss of human life; (2) likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility; and (3) a notable adverse impact on “natural and beneficial floodplain values.” A significant floodplain encroachment is not necessarily a significant environmental impact under NEPA.” The following questions were considered:

1. Would flooding affect airport or facility access roads, thereby preventing people from entering or exiting the area?
2. Would flooding affect aviation safety and the airport or facility’s use?
3. Would flooding cause flood-induced spills of hazardous material stored at the airport or facility and their impacts on human populations?

#### *Potential Impacts*

The Proposed Project would encroach approximately 4.9 acres of Zone A 100-year floodplains. Approximately 3.2 acres of Zone A 100-year floodplain encroachment are impervious surfaces (i.e., apron and taxiways) in the existing condition. There are also approximately 1.7 acres of Zone A 100-year floodplain encroachment that are pervious in the existing condition and part of the Airport’s existing stormwater management system. According to FEMA FIRM Map 12057C0331J, all impervious encroachment areas are considered isolated segments of the overall 100-year floodplain. Floodplain compensation for these encroachments is not required because they are small, isolated, and wholly within the Airport property. As such, offsite impacts would not occur. The pervious encroachment area is located within an existing stormwater pond, which is tidally connected to Old Tampa Bay. The Proposed Project would not require modification of the onsite stormwater management to compensate for rainfall-runoff with regard to the 4.25 acres of new impervious surface. Compensation is not required for any potential impact on a coastal (tidal) floodplain, as the ultimate outfall of this entire area is Old Tampa Bay. The Direct Study Area was also reviewed to determine where it was located in relation to the Limit of Moderate Wave Action (LiMWA) line. The Proposed Project is outside the LiMWA. As a result of the existing impervious surfaces and existing stormwater system, and the Authority’s continued compliance with federal, state, and local regulations, the Proposed Project would not result in the following:

- » affect airport or facility access roads, thereby preventing people from entering or exiting the area,
- » affect aviation safety and the airport or facility’s use, or

- » cause flood-induced spills of hazardous material stored at the airport or facility and their impacts on human populations.

Therefore, the Proposed Project would not adversely affect the floodplain, complies with EO 11988 and DOT Order 5650.2, and mitigation is not required.

### **Mitigation Measures**

The Proposed Project would not adversely affect the floodplain, complies with EO 11988 and DOT Order 5650.2, and mitigation is not required.

## **3.5 CUMULATIVE IMPACTS**

This section describes the cumulative projects and the significance threshold of cumulative effects. This section also describes the potential for the Proposed Project to contribute to potentially significant cumulative impacts when considered with those of other past, present, and reasonably foreseeable future actions.

The CEQ<sup>25</sup> defines 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.”

### **3.5.1.1 Cumulative Projects**

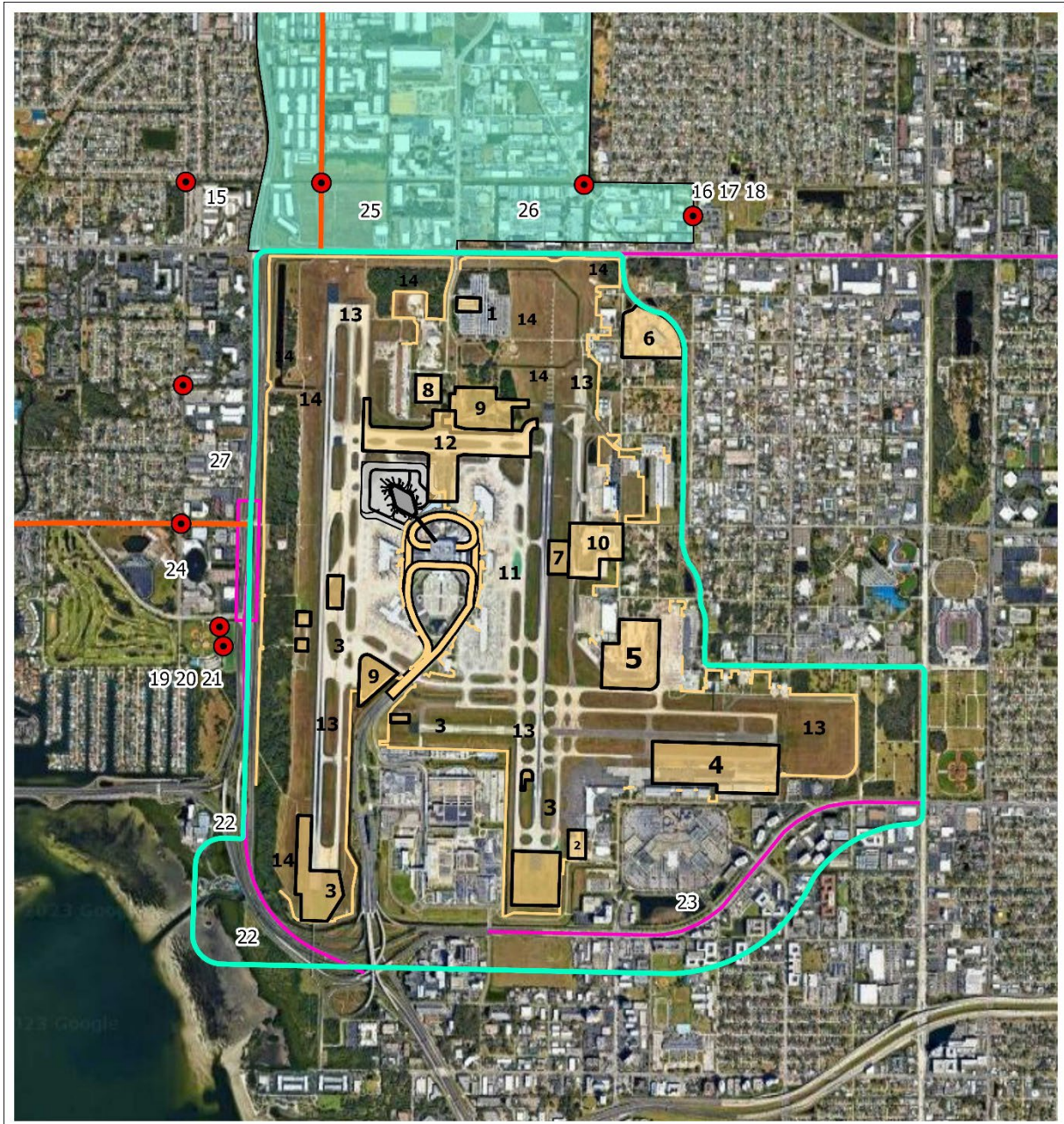
Cumulative projects have been identified as on-Airport and off-Airport projects. On- and off-Airport projects that have occurred in the past (2016-2022), present (2023), and future (2024-2027) are included in this analysis.

**Table 3-8** and **Table 3-9** describe each project’s name, location, sponsor, expected completion/approval date, and project description. **Figure 3-13** illustrates each cumulative project to the Proposed Project. Cumulative projects were identified by the Authority and through the Florida Department of Transportation (FDOT) Tampa Bay Area Project Finder (FDOT, 2023), Hillsborough County’s Capital Improvement Program (Hillsborough County, 2023), and Hillsborough County’s Targeted Redevelopment Program (Hillsborough County, 2023).

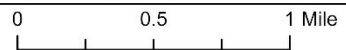
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<sup>25</sup> 40 CFR Part 1508.7 (1978).

Figure 3-13: Cumulative Projects



Sources: FDOT 2022; Hillsborough County 2022; ESRI 2022; RS&H 2022.



**Legend**

- Indirect Study Area
- On Airport Projects
- Hillsborough County North Airport Redevelopment
- Proposed Project
- FDOT Projects
- Hillsborough County Capital Improvement Program
- Parking
- Hillsborough County Capital Improvement Program





**Table 3-8: Cumulative Projects: On-Airport Projects**

Map Number	Year (Approval)	Project Name	Project Description
1	2022	Electric Bus Charging Station and Electric Buses	Reconfigure a small portion of an existing employee parking lot on the Airport's north side into an electric bus charging area and purchase electric buses.
2	2021	Jet ICU Hangar	Relocation of Jet ICU from its existing hangar north of Runway 10-28 along Air Cargo Road to the southeast side of Airport property along Airport Service Road.
3	2021	Runway Safety Area Grading & Drainage Improvements	Grading portions of the runway safety area to eliminate ponding and associated new and upsized drainage structures and pipe installations necessary to drain regraded areas away from the RSA to the existing outfalls.
4	2021	SheltAir Hangars 6 and 7	Construction of Hangars 6 and 7 at the Airport, located south of Runway 10-28 along Jim Walter Boulevard.
5	2019	United Parcel Service (UPS) Cargo Facility	Relocation and expansion of the current UPS operation at the Airport to a new location on Airport property.
6	2019	CAE USA Headquarters Campus Development	Construction and operation of the new CAE USA Headquarters Campus on Airport property.
7	2019	Connector Taxiway U	Reconstruction of existing Connector Taxiway U.
8	2019	LGSTX Air Cargo Truck Parking Lot	Construction of an air cargo truck parking lot.
9	2019	Remain Overnight Aircraft Parking Areas	Construction of two remain overnight (RON) aircraft parking areas at the Airport.
10	2018	United Airlines Maintenance, Repair, and Overhaul Facility	Construction of a United Airlines Maintenance, Repair, and Overhaul (MRO) facility includes a connector taxiway and shoulders, apron, hangar, vehicle parking area, surface road, fire suppression system, and FAA-compliant stormwater ponds.

Map Number	Year (Approval)	Project Name	Project Description
11	2017	On-Airport Roadway Improvements	Expansion and improvements of on-Airport roadways (Red Side – estimated completion in 2025).
12	2017	New Taxiway A and Bridge	Construction of a new Taxiway A and associated bridge.
13	2024	Airport Perimeter Fencing	Replacement and addition of new Airport perimeter fencing.
14	2024	Wildlife Hazard Remediation and Employee Parking Improvements	Implementing the Wildlife Hazard Management Plan and improving the North Employee Parking lot.

Source: HCAA, 2022.

**Table 3-9: Cumulative Projects: Off-Airport Projects**

Map Number	Year (Completion)	Project Name	Project Description
15	2018	KR Jetview (Hillsborough County Targeted Redevelopment Grant program)	Redevelopment of a corporate warehouse/flex space.
16	2024	Pierce Middle School Pedestrian Safety and Circulation Improvements (Hillsborough County Capital Improvement Program - HCCIP)	Safety improvement for students and pedestrians walking/biking to school and traffic circulation at drop off and pick up times.
17	2023	School Route Safety Improvements (HCCIP)	Addition of raised walks, speed management road treatments, and intersection pedestrian improvements.
18	2023	School Route Safety Improvements (HCCIP)	Addition of raised walks, speed management road treatments, and intersection pedestrian improvements.

Map Number	Year (Completion)	Project Name	Project Description
19	2023	Skyway Park Playground Shade (HCCIP)	Installation of a fabric sunshade structure at the existing Skyway Sports Complex playground.
20	2020	Skyway Park Synthetic Turf (HCCIP)	Construction of a multi-purpose synthetic sports field, including site work and miscellaneous amenities.
21	2022	Skyway Park ADA Improvements (HCCIP)	Addition of various improvements required to bring the site into compliance with the 2010 ADA Standards for Accessible Design.
22	2025	SR 60 WB Widening from Spruce St/TIA to Memorial Highway (FDOT)	Add one westbound lane on SR 60 from George Bean Parkway to the Courtney Campbell Causeway. Add a new ramp from westbound SR 60 to Independence Parkway.
23	2024	SR 616 (Boy Scout Blvd) Arterial Traffic Management System Upgrades from Airport Service Rd to Dale Mabry Hwy (FDOT)	Install fiber optic communications tools and hardware along Boy Scout Blvd between Airport Service Rd and Dale Mabry Highway to assist with traffic management.
24	2016	Memorial Hwy Pavement Treatment Program (HCCIP)	Resurface Memorial Highway from Veterans Expressway to Hillsborough Ave. Additionally, there will be ADA improvements, sidewalk repairs, and the construction of recommended rehabilitation.
25	2020	Benjamin Rd Resurfacing Project (HCCIP)	Resurfacing along Benjamin Rd from W Hillsborough Ave to W Waters Ave.
26	2024	US 92 (Hillsborough Ave) Arterial Traffic Management	Install fiber optic communications tools and

Map Number	Year (Completion)	Project Name	Project Description
		System Upgrades from Veterans Expressway to I-4 (FDOT)	hardware along Hillsborough Avenue between Veterans Expressway (SR 589) and I-4 to manage traffic.
27	2022	SR 589 (Veterans Expressway) Repaving Exit Ramps to Independence Parkway (FDOT)	Replacement of the top layer of asphalt with a high friction treatment to improve the exit ramp surface from SR 589 onto Independence Parkway.

Sources: FDOT 2022; Hillsborough County 2022.

### 3.5.1.2 Environmental Consequences

#### *Significance Threshold*

The analysis of potential cumulative effects uses the thresholds of significance in FAA Order 1050.1F, Exhibit 4-1, for each resource category.

#### *Potential Impacts*

The CEQ regulations require the analysis and disclosure of the Proposed Project's potential cumulative effects (40 CFR §§ 1508.25(a)(2) and (3)). This informs the public if the Proposed Project, when considered with other projects occurring within the project area during specific periods (i.e., "past, present, and reasonably foreseeable actions"), would cause a significant environmental effect. This EA uses the information presented in this chapter to determine potential cumulative impacts.

Each past, present, and reasonably foreseeable future action was qualitatively assessed for its potential to cumulatively affect the same environmental resources affected by the Proposed Project. Cumulative impacts are only considered for those resources the Proposed Project would affect (Air Quality; Climate; DOT Section 4(f) Resources, Hazardous Materials; Historic Architectural, Archaeological, and Cultural Resources; Natural Resources and Energy; Noise and Noise Compatible Land Use; Socioeconomics; Visual; and Water Resources – Surface Water). The Proposed Project would not result in cumulative impacts to resources that the Proposed Project would not affect (Biological Resources; Coastal Resources; Children's Health and Safety Risks; Environmental Justice; Farmlands, Land Use; Visual Effects; and Water Resources – Wetlands, Floodplains, Groundwater, and Wild and Scenic Rivers).

Implementation of the Proposed Project would cause less than significant environmental effects related to Air Quality and Climate (temporary construction-related air emissions, a minor increase in surface transportation vehicle emissions and aircraft operations); Hazardous

Materials (minor additional fuel use), Solid Waste (minor construction waste and MSW), and Pollution Prevention; Natural Resources and Energy Supply (minor increase in fuel, potable water, and electricity); Noise and Compatible Land Use (minor increase in aviation noise); Socioeconomics (positive increase in construction and permanent jobs); and Water Resources (small additional rainfall-runoff).

See **Table 3-10** for a summary of potential cumulative impacts. Each project's cumulative impact is assigned a rating of no impact, low impact, or moderate impact. There would not be any high impacts associated with the cumulative projects in conjunction with the Proposed Project's potential impacts. As shown in **Table 3-10**, although there is the potential for cumulative impacts to specific environmental resources, no reasonably foreseeable cumulative effects would be considered unique or of extraordinary magnitude. The likelihood that the Proposed Project would have a notable cumulative impact is generally low for most environmental resource categories. Additionally, no identified past, present, or future projects are considered enabling to, dependent upon, or otherwise connected to the Proposed Project.

Cumulative projects would result in construction activities affecting air quality, climate, hazardous waste, solid waste, pollution prevention, socioeconomics, and natural resources and energy supply. Cumulative projects that increase impervious surfaces have the potential to affect biological resources. Increases in impervious surface also increases the potential to increase rainfall runoff into local waterways. However, each project would include stormwater system development or improvements; therefore, cumulative impacts would be low.

As previous sections describe, the construction and operation of the Proposed Project would have less than significant impacts. When considered with projects that have occurred, are occurring, and are planned to occur in the reasonably foreseeable future, the Proposed Project would not cause significant environmental effects. It would not cause or contribute to significant cumulative environmental effects.

### **Conclusion**

The Airport Sponsor's compliance with all federal, state, and local regulations and permit requirements (e.g., Generic Permit for Discharge of Ground Water from Dewatering Operations; HCEPC Collection/transmission system construction permit; HCDOH Drinking Water permit; FDEP ERP permit) would ensure that the Proposed Project would not exceed any significance thresholds identified in FAA Order 1050.1F. All future projects involving federal funding or approval would be subject to review under NEPA to determine the potential for significant environmental impacts to result from their construction or implementation. Therefore, the Proposed Project's construction and operation, combined with the past, present, and reasonably foreseeable future projects, would result in no significant cumulative environmental impacts.

Table 3-10: Summary of Cumulative Impacts

Year	Map ID	Project Title	Air Quality	Biological Resources	Climate	Coastal Resources	DOT Section 4(f) Resources	Farmlands	Hazardous Materials, Solid Waste, Pollution Prevention	Historical, Architectural, and Archaeological Resources	Land Use	Natural Resources and Energy Supply	Noise and Noise-Compatible Land Use	Socioeconomics, Environmental Justice, and Childrens Environmental Health and Safety Risks	Visual Effects	Water Resources
<b>Proposed Project (no significant impacts)</b>			<b>L</b>	<b>N</b>	<b>L</b>	<b>N</b>	<b>L</b>	<b>N</b>	<b>L</b>	<b>L</b>	<b>N</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>
<b>On-Airport Projects</b>																
2017	11	On-Airport Roadway Improvements	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2017	12	New Taxiway A and Bridge	L	N	L	N	N	N	L	N	N	L	L	L	N	N
2018	10	United Airlines Maintenance, Repair, and Overhaul Facility	L	L	L	N	N	N	L	N	N	L	L	L	L	L
2019	5	United Parcel Service (UPS) Cargo Facility	L	L	L	N	N	N	L	N	N	L	L	L	L	L
2019	6	CAE USA Headquarters Campus Development	L	L	L	N	N	N	L	N	N	L	N	L	L	L
2019	7	Connector Taxiway U	L	N	L	N	N	N	L	N	N	L	N	L	N	L
2019	8	LGSTX Air Cargo Truck Parking Lot	L	N	L	N	N	N	L	N	N	L	N	L	N	L
2019	9	Remain Overnight Aircraft Parking Areas	L	L	L	N	N	N	L	N	N	L	N	L	N	L
2021	2	Jet ICU Hangar	L	L	L	N	N	N	L	N	N	L	L	L	L	L
2021	3	Runway Safety Area Grading & Drainage Improvements	L	L	L	N	N	N	L	N	N	L	N	L	N	L
2021	4	SheltAir Hangars 6 and 7	L	L	L	N	N	N	L	N	N	L	L	L	L	L
2022	1	Electric Bus Charging Station and Electric Buses	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2024	13	Airport Perimeter Fencing	L	L	L	N	N	N	L	N	N	L	N	L	N	N
2024	14	Wildlife Hazard Remediation and Employee Parking Improvements	L	M	L	N	N	N	L	L	N	L	N	L	M	L
<b>Off-Airport Projects</b>																
2016	24	Memorial Hwy Pavement Treatment Program (HCCIP)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2018	15	KR Jetview (Hillsborough County Targeted Redevelopment Grant program)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2020	25	Benjamin Rd Resurfacing Project (HCCIP)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2020	20	Skyway Park Synthetic Turf (HCCIP)	L	N	L	N	L	N	L	N	N	L	N	L	N	N
2022	21	Skyway Park ADA Improvements (HCCIP)	L	N	L	N	L	N	L	N	N	L	N	L	N	N
2022	27	SR 589 (Veterans Expressway) Repaving Exit Ramps to Independence Parkway (FDOT)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2023	17	School Route Safety Improvements (HCCIP)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2023	18	School Route Safety Improvements (HCCIP)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2023	19	Skyway Park Playground Shade (HCCIP)	L	N	L	N	L	N	L	N	N	L	N	L	L	N

Year	Map ID	Project Title	Air Quality	Biological Resources	Climate	Coastal Resources	DOT Section 4(f) Resources	Farmlands	Hazardous Materials, Solid Waste, Pollution Prevention	Historical, Architectural, and Archaeological Resources	Land Use	Natural Resources and Energy Supply	Noise and Noise-Compatible Land Use	Socioeconomics, Environmental Justice, and Childrens Environmental Health and Safety Risks	Visual Effects	Water Resources
2024	16	Pierce Middle School Pedestrian Safety and Circulation Improvements (Hillsborough County Capital Improvement Program - HCCIP)	L	N	L	N	N	N	L	N	N	L	N	L	N	L
2024	23	SR 616 (Boy Scout Blvd) Arterial Traffic Management System Upgrades from Airport Service Rd to Dale Mabry Hwy (FDOT)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2024	26	US 92 (Hillsborough Ave) Arterial Traffic Management System Upgrades from Veterans Expressway to I-4(FDOT)	L	N	L	N	N	N	L	N	N	L	N	L	N	N
2025	22	SR 60 WB Widening from Spruce St/TIA to Memorial Highway (FDOT)	L	N	L	N	N	N	L	N	N	L	N	L	N	N

Notes: N – No Impact; L – Low Impact; M – Moderate Impact.

Source: RS&H, 2024.



4

*AGENCY COORDINATION /  
PUBLIC OUTREACH*



**RS&H**



The EA coordination process described in this chapter provides interested agencies and the public the opportunity to comment on the potential effects of the construction and operation of the Proposed Project.

As NEPA and FAA Order 1050.1F require, a public involvement process will be conducted. This process provides the opportunity for public and agency input regarding the Proposed Project analyzed in this EA. The public and agency involvement process will:

- » Provide information about the Proposed Project's purpose and need and the alternatives the EA discusses.
- » Obtain feedback about the above information from the public and agencies interested in and affected by the Proposed Project.
- » Inform those interested that the EA provides a full and fair discussion of project-related environmental effects.
- » Provide timely public notices to the interested parties so they may submit comments and participate in open public meetings concerning the Proposed Action.
- » Record comments received from interested parties.

## 4.1 PUBLIC INVOLVEMENT AND AGENCY COORDINATION APPROACH AND PROCESS

Pertinent federal statutes, regulations, executive orders, and guidance are considered when conducting the public involvement process. The HCAA has hosted multiple stakeholder and public involvement meetings to allow public feedback for the 2022 Master Plan Update (MPU) (which includes the Proposed Project). As part of the 2022 Airport MPU public involvement, the public has been allowed to comment on the proposed Airside D and other MPU projects. The HCAA has held public involvement meetings with various entities in the local Tampa Bay area and has, and will continue to have, meetings with local transportation planning organizations (TPO), local governments, local economic development councils (EDC), tourism boards, community organizations, and state government entities. The 2022 Master Plan Update, which includes the Proposed Project, can be found at this link:

<https://www.tampaairport.com/2022-master-plan-update>.

The Florida Department of Environmental Protection State Clearinghouse was sent an initial coordination letter providing details on the Proposed Project's components and an early opportunity to comment (see **Appendix C**). The FDEP comments received in response to the initial coordination are reflected in the applicable sections of **Chapter 3** (Affected Environment and Environmental Consequences). The FDEP response letter is included in **Appendix C**.

## 4.2 DISTRIBUTION OF DRAFT EA

A notice of availability for the Draft EA was published in the Tampa Bay Times. The Draft EA is being made available for a 30-day review (30 days after the notice of availability advertisement) at the Airport’s administrative office during normal business hours, on the Airport’s website [www.tampaairport.com], and at a local library (see **Table 4-1**).

**Table 4-1: Draft EA Available Locations**

Location Name	Address
Hillsborough County Aviation Authority	5411 Skycenter Dr., Suite 220, Tampa, FL 33607
Town N’ Country Regional Library	7606 Paula Dr. #120, Tampa, FL 33615

Source: RS&H, 2023.



5

*LIST OF PREPARERS*

## 5.1 PRINCIPAL PREPARERS

This section lists the EA's principal preparers, including HCAA and RS&H, Inc. representatives.

### 5.1.1 Hillsborough County Aviation Authority

Jeff Siddle, P.E.

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Richard Coudurier, P.E.

Position: Director of Planning and Design

Matthew W. DeLoatche, RA

Position: Senior Manager of Planning and Design

Daniel Porter

Position: Director of Capital Planning

### 5.1.2 RS&H, Inc.

David Alberts

Position: Project Manager, Senior Environmental Planner

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Experience: Mr. Alberts has 25 years of NEPA-related experience. He is the RS&H Project Manager and is responsible for the technical NEPA documentation and quality assurance of the NEPA analyses in the EA.

Dave Full, AICP

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Mike Alberts

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Experience: Mr. Alberts has 29 years of aviation noise modeling/mitigation experience. He is responsible for the technical noise analysis in the EA.

Jon Erion

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Michael Fesanco

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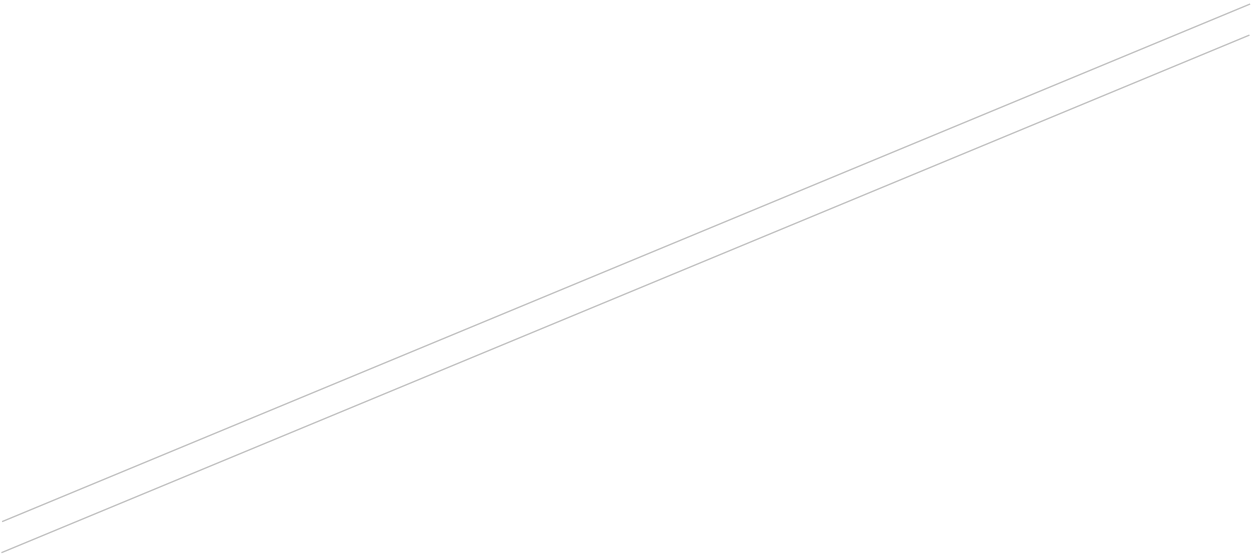
Experience: Mr. Fesanco has 1 year of experience in the environmental field. He assisted with data collection, technical writing, and exhibit production.

Audrey Hsu

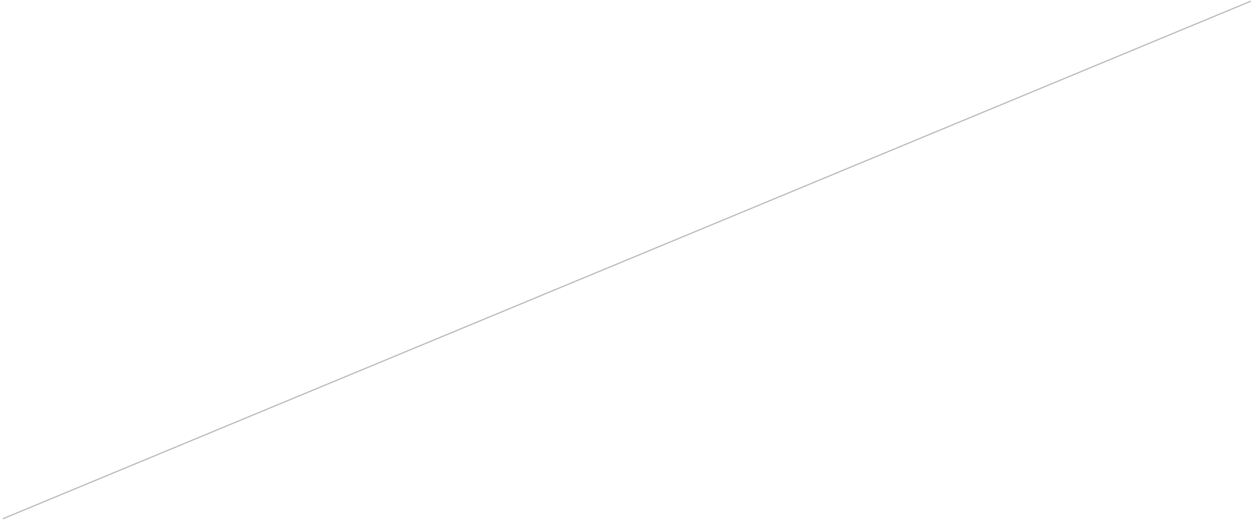
Position: Aviation Environmental Specialist

Education: B.S. Environmental Management and Protection

Experience: Ms. Hsu has 2 years of experience in the environmental field. She assisted with data collection and exhibit production.



6  
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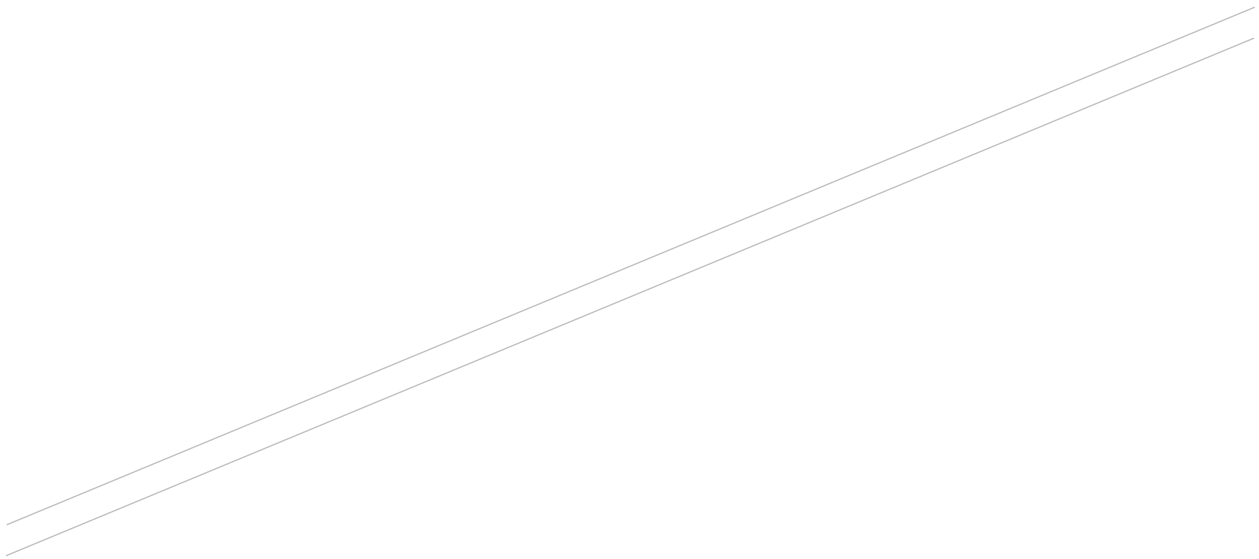


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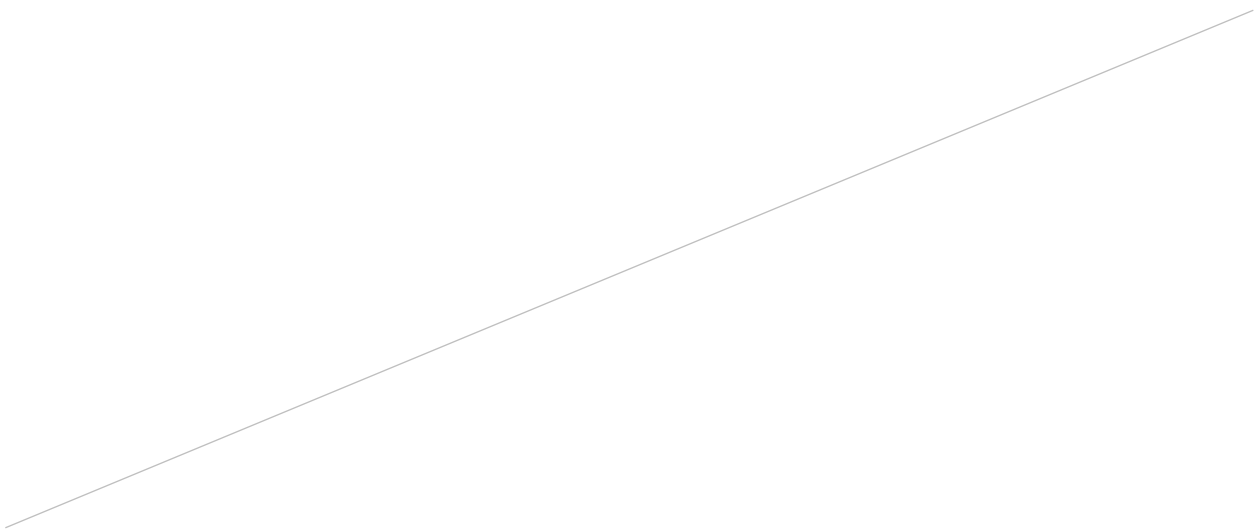
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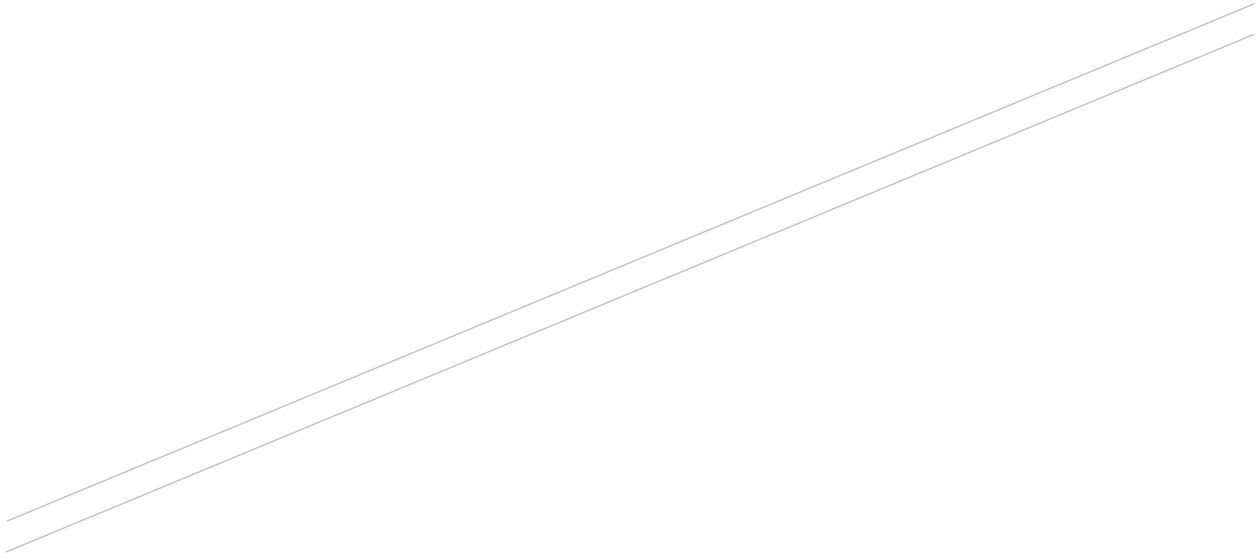
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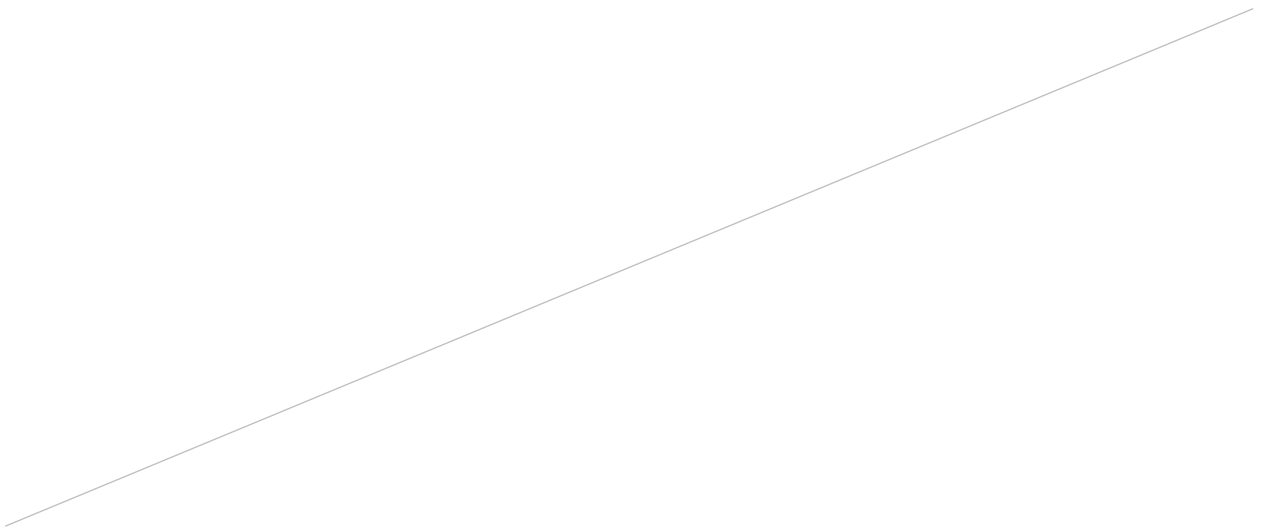


## *APPENDICES*





*APPENDIX A*  
*AIR QUALITY AND CLIMATE ANALYSIS*



## Construction Emission Inventory

This construction emission inventory (CEI) assessment was prepared for informational purposes to disclose the potential construction-related emissions generated by the Proposed Project.

The U.S. Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The USEPA has identified the following seven criteria air pollutants for which NAAQS are applicable: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). The USEPA describes these pollutants as "criteria" air pollutants because the agency regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels (EPA, 2023).

According to the USEPA, lead (2008 standard), for a portion of Hillsborough County, is classified as "maintenance" (i.e., about 10 miles east of the Airport) (EPA, 2022). Also, sulfur dioxide 1-hour (2010 standard) for a portion of Hillsborough County is classified as "maintenance" (i.e., Gibsonton and Riverview areas, over 10 miles southeast of the Airport) (EPA, 2022).

The EA's Direct and Indirect Study areas are located entirely within Hillsborough County. All construction activity would occur in the Direct Study Area. The Direct Study Area is an "attainment" area for all National Ambient Air Quality Standards (NAAQS) (EPA Greenbook, 2022).<sup>1</sup>

### Construction Emissions Inventory Approach

Construction requirements for the Proposed Project include a variety of construction emissions sources: off-road, on-road, and fugitive dust. The emissions from these sources are most commonly associated with the following types of activities: earthwork, grading and leveling, and construction equipment storage and movement. Construction of the Proposed Project is anticipated to begin in 2025 and end in 2026. Construction emissions are estimated based on these factors: construction schedule; the number of construction vehicles and/or equipment; the types of construction vehicles and/or equipment; types of fuel used to power the equipment and vehicles; vehicle and equipment hourly activity/vehicle miles traveled; construction materials used and their quantities; and the duration of construction.

#### Non-road Emission Sources

Non-road sources associated with the Proposed Project's construction include exhaust from heavy construction equipment (e.g., graders, excavators, rollers, dump trucks) and fugitive dust emissions). The CEI assessment was based on the factors described in the above paragraph.

#### On-road Emission Sources

On-road emission sources associated with the Proposed Project's construction include material delivery vehicles (e.g., dump trucks, 18-wheelers carrying asphalt) and passenger vehicles transporting construction personnel to and from the job site.

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<sup>1</sup> NAAQS are six criteria pollutants: carbon monoxide, lead, ozone, sulfur dioxide, nitrogen dioxide, and ozone.

### Fugitive Emissions

Paving or dust emission sources associated with the Proposed Project's construction include asphalt storage, material movement on both paved and unpaved roads, soil handling, and un-stabilized land and wind erosion. Paving or dust emissions were based on the number of months for construction.

### MOVES3

The CEI used the EPA's MOTO Vehicle Emissions Simulator 3 (MOVES3.1) to analyze the Proposed Project's potential construction emissions.

### Inputs

The Proposed Project's cost estimates and typical construction practices were used to develop the CEI inputs displayed in **Table 1**, **Table 2**, **Table 3**, and **Table 4**. Construction equipment type and hours for the Proposed Project are based on engineering judgment and past experience with airport construction projects. These equipment types and hours were used in MOVES3.1 to develop Non-Road and On-Road engine emission and load factors to determine if the Proposed Project would exceed the *de minimis* levels established in the FAA's Aviation Emissions and Air Quality Handbook (FAA, 2023).

**Table 1 2025 Non-Road Construction Emissions Inventory Inputs**

<b>Equipment Type</b>	<b>Fuel Type</b>	<b>Operating Hours</b>
90 Ton Crane	Diesel	2,104.5
Backhoe	Diesel	2,104.5
Concrete Pump	Diesel	78.9
Concrete Ready Mix Trucks	Diesel	394.5
Concrete Truck	Diesel	157.8
Fork Truck	Diesel	22,354.3
Generator	Diesel	1,972.3
High Lift	Diesel	6,049.1
Man Lift	Diesel	19,723.2
Man Lift (Fascia Construction)	Diesel	157.8
Material Deliveries	Diesel	394.5
Survey Crew Trucks	Diesel	65.1
Tool Truck	Diesel	4,879.5
Tractor Trailer- Material Delivery	Diesel	5,429.8
Tractor Trailer- Steel Deliveries	Diesel	262.3
Tractor Trailers Temp Fac.	Diesel	25.6
Trowel Machine	Diesel	78.9

Source: RS&H 2023

**Table 2 2026 Non-Road Construction Emissions Inventory Inputs**

	<b>Equipment Type</b>	<b>Fuel Type</b>	<b>Operating Hours</b>
	90 Ton Crane	Diesel	3,908.3
	Backhoe	Diesel	3,908.3
	Concrete Pump	Diesel	146.5
	Concrete Ready Mix Trucks	Diesel	732.6
	Concrete Truck	Diesel	293.0
	Fork Truck	Diesel	41,515.1
	Generator	Diesel	3,662.9
	High Lift	Diesel	11,234.1
	Man Lift	Diesel	36,628.8
	Man Lift (Fascia Construction)	Diesel	293.0
	Material Deliveries	Diesel	732.6
	Survey Crew Trucks	Diesel	120.9
	Tool Truck	Diesel	9,062.0
	Tractor Trailer- Material Delivery	Diesel	10,083.9
	Tractor Trailer- Steel Deliveries	Diesel	487.2
	Tractor Trailers Temp Fac.	Diesel	47.6
	Trowel Machine	Diesel	146.5

Source: RS&H 2023

Vehicle Miles Traveled (VMT) are based on the distance traveled by employees and material deliveries for the Proposed Project. MOVES3.1 uses a 30-mile round trip per passenger car and a 40-mile trip per material delivery.

**Table 3 2025 On-Road Construction Emissions Inventory Inputs**

<b>Equipment</b>	<b>Fuel Type</b>	<b>VMT*</b>
Single Unit Short-haul Truck	Diesel	3,469
Single Unit Short-haul Truck	Diesel	1,850
Combination Short-haul Truck	Diesel	79.5
Passenger Car	Gasoline	851,400

Note – VMT = vehicle miles traveled

Source: MOVES3.1, RS&H 2023

**Table 4: 2026 On-Road Construction Emissions Inventory Inputs**

<b>Equipment</b>	<b>Fuel Type</b>	<b>VMT*</b>
Single Unit Short-haul Truck	Diesel	10,407
Single Unit Short-haul Truck	Diesel	5,550
Combination Short-haul Truck	Diesel	238.5
Passenger Car	Gasoline	2,554,200

Note – VMT = vehicle miles traveled

Source: MOVES3.1, RS&H 2023

## Construction Emissions Inventory Results

For informational purposes, **Table 5** shows the criteria pollutants in tons per year during the Proposed Project's construction.

**Table 5: Proposed Project Totals MOVES3 Results (Tons Per Year or TPY)**

2025-2026	NAAQS						GHGs		
	CO	VOC	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>	SOx	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
<b>NONROAD</b>	4.24	0.60	16.69	0.67	0.65	0.03	12,431.19	0.00	0.00
<b>ONROAD</b>	13.71	0.10	0.36	0.01	0.01	0.01	1,025.47	0.03	0.00
<b>FUGITIVE</b>	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00
<b>TOTAL (TPY)</b>	17.95	0.70	17.05	0.68	0.67	0.04	13,456.66	0.03	0.00
<b>HILLSBOROUGH COUNTY TOTAL</b>	149,296	46,505	24,761	26,365	6,911	8,244	N/A	N/A	N/A
<b>% OF COUNTY</b>	0.012%	0.001%	0.068%	0.025%	0.009%	0.0005%	N/A	N/A	N/A

Note – N/A = not applicable

Source: MOVES3.1, RS&H 2023.

## Operational Aviation Emissions

When compared to the No Action Alternative, the Proposed Project would result in an increase in aircraft operations in 2027 and 2032. As the 2032 study year has the larger increase in aircraft operations (i.e., 2,000), the aircraft emissions due to the 2032 Proposed Project were compared to the Hillsborough County total emissions. The Direct Study Area is “attainment” for all NAAQS. Therefore, air quality *de minimis* thresholds do not apply.

For informational purposes, operational aviation emissions were calculated for the opening year 2027 and five years after the opening year in 2032 for the Proposed Project. Operational aviation emissions were calculated using the FAA’s Aviation Environmental Design Tool (AEDT) up to the 10,000-foot mixing height. See **Table 6** for emissions that would be generated from the Proposed Project.

**Table 6 Operational Aviation Emissions in Tons Per Year (Up to 10,000-foot Mixing Height)**

Year	CO	VOC	NOx	SOx	PM 2.5	PM 10
<b>2027</b>	2.05	0.25	3.35	0.25	0.04	0.04
<b>2032</b>	8.87	1.08	14.52	1.11	0.16	0.16

Note: Calculated up to the 10,000-foot mixing height for social cost calculations.

Source: AEDT, 2023, RS&H, 2023.

## Climate

In January 2023, the Council on Environmental Quality (CEQ) issued interim guidance, *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*,<sup>2</sup> to assist agencies in analyzing greenhouse gas emissions (GHG) and climate change effects of a proposed project under NEPA. The CEQ identified Social Cost-Greenhouse Gases (SC-GHG) as the metric for assessing potential climate impacts and represents the monetary estimate of the effect associated with each additional metric ton of carbon dioxide released into the air (Interagency Working Group, 2021). The three GHGs<sup>3</sup> that are analyzed are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), which represent more than 97% of U.S. GHG emissions.

To calculate SC-GHG, the carbon dioxide equivalent CO<sub>2</sub>e<sup>4</sup> must be calculated first. CO<sub>2</sub>e is calculated using the Global Warming Potential (GWP) metric to compare the impact a gas has on the global climate concerning CO<sub>2</sub>. GWP values are based on the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) (IPCC, 2023). For example, CH<sub>4</sub> has 28 times the GWP of CO<sub>2</sub> and absorbs 28 times more energy in the atmosphere when compared to CO<sub>2</sub> (IPCC, 2023). **Table 7** shows the CO<sub>2</sub>e values for the construction years of 2025 and 2026 using the CEI results from **Table 5**. Operational aviation emissions from the Proposed Project are represented in 2027<sup>5</sup> and 2032<sup>6</sup> (see **Table 6**). The associated CO<sub>2</sub>e emissions from the operation of the Proposed Project are included in **Table 7**.

The Interagency Working Group (IWG) developed average discount rates to assess climate impacts over time. The higher the discount rate, the lower the social climate cost (SCC) for future generations. The IWG average discount rates are 5 percent, 3 percent, 2.5 percent, and the 95<sup>th</sup> percentile estimate at the 3 percent discount rate, which represents the potential for low-probability catastrophic climate impacts. The IWG determined the social cost of CO<sub>2</sub> (SC-CO<sub>2</sub>) through 2050 and assigned a monetary value<sup>7</sup> for each additional metric ton of CO<sub>2</sub> produced. SC-CO<sub>2</sub> is equivalent to SC-GHGs and represents the social costs of the total greenhouse gases converted to the CO<sub>2</sub>e equivalent. The SC-CO<sub>2</sub> helps weigh the benefits of climate mitigation against its costs.

**Table 8** shows the monetary value of each additional metric ton of CO<sub>2</sub> for 2025, 2026, 2027, and 2032. The SC-CO<sub>2</sub> models projects the future cost of each additional ton of CO<sub>2</sub> in the future (Institute for Policy Integrity, 2017).

**Table 9** shows the Social Cost of Carbon Dioxide (SC-CO<sub>2</sub>) for the Proposed Project. The construction emissions inventory's CO<sub>2</sub>e (see **Table 7**) was multiplied by the average discount rates (see **Table 8**) to determine the monetary impact for 2025 and 2026. The Proposed Project's CO<sub>2</sub>e operational aviation emissions data was multiplied by the average discount rate (see **Table 8**) to determine the monetary impact for 2027 and 2032.

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<sup>2</sup> 88 FR 1196, National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, <https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate>; Accessed November, 2023

<sup>3</sup> These three GHGs are identified in the CEQ's National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change.

<sup>4</sup> CO<sub>2</sub>e: Number of metric tons of CO<sub>2</sub> emissions with the same global warming potential as one metric ton of another greenhouse gas.

<sup>5</sup> 2027 represents the opening year of the Proposed Project.

<sup>6</sup> 2032 represents five years after the opening year of the Proposed Project.

<sup>7</sup> These monetary values are based on the results from three economic models used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University).

**Table 7 Proposed Project CO<sub>2</sub>e**

Year	Pollutant	Emissions Quantity (Tons)	AR6 GWP	CO <sub>2</sub> e
<b>Construction Emissions</b>				
<b>2025</b>	CO <sub>2</sub>	4611.58	1	4,611.58
	CH <sub>4</sub>	0.01	28	0.2381
	N <sub>2</sub> O	0.00104	265	0.2767
			<b>Total</b>	<b>4,612.0985</b>
<b>Operational Emissions</b>				
<b>2026</b>	CO <sub>2</sub>	8845.08	1	8,845.077
	CH <sub>4</sub>	0.02255	28	0.631449
	N <sub>2</sub> O	0.00	265	0.776564
			<b>Total</b>	<b>8,846.484627</b>
<b>2027</b>	CO <sub>2</sub>	2.05	1	2.05
	CH <sub>4</sub>	0	28	0.00
	N <sub>2</sub> O	3.35	265	887.75
			<b>Total</b>	<b>889.80</b>
<b>2032</b>	CO <sub>2</sub>	8.87	1	8.87
	CH <sub>4</sub>	0	28	0.00
	N <sub>2</sub> O	14.52	265	3,847.80
			<b>Total</b>	<b>3,856.67</b>

Sources: MOVES 3.1; Interagency Working Group, 2021<sup>8</sup>, IPCC Sixth Assessment 2023<sup>9</sup>

The calculated social costs are estimates only and subject to change depending on various factors (i.e. flooding, energy supply)<sup>10</sup>. These calculations are for information purposes only. This range in costs represents the potential social costs associated with adding GHGs to the atmosphere in a given year. It includes the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. It is important to note that this climate analysis does not include positive impacts from the Proposed Project (e.g., economic development, meeting projected passenger and airline (domestic and international) demand, proactively preventing near-future congestion, improving passenger experience, and technological advancements).

<sup>8</sup> [https://www.whitehouse.gov/wpcontent/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wpcontent/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf); Accessed November 2023

<sup>9</sup> [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf); Accessed November 2023

<sup>10</sup> [https://costofcarbon.org/files/Omitted\\_Damages\\_Whats\\_Missing\\_From\\_the\\_Social\\_Cost\\_of\\_Carbon.pdf](https://costofcarbon.org/files/Omitted_Damages_Whats_Missing_From_the_Social_Cost_of_Carbon.pdf); Accessed November 2023



**Table 8 Annual SC-CO<sub>2</sub> Per Metric Ton of CO<sub>2</sub> (in 2020 dollars)**

Emissions year	Average Estimate at 5% Discount Rate	Average Estimate at 3% Discount Rate	Average Estimate at 2.5% Discount Rate	95 <sup>th</sup> Percentile Estimate at 3.0% Discount Rate
<b>Construction Emissions</b>				
<b>2025</b>	\$17	\$56	\$83	\$169
<b>2026</b>	\$17	\$57	\$84	\$173
<b>Operational Emissions</b>				
<b>2027</b>	\$18	\$59	\$86	\$176
<b>2032</b>	\$21	\$64	\$92	\$194

Note: Discount Rates from IWG 2021 represent the monetary value of each additional metric ton of CO<sub>2</sub> produced for 2025, 2026, 2027, and 2032. 2027 represents the opening year of the Proposed Project, and 2032 represents five years after the opening year of the Proposed Project. These monetary values are based on the results from three economic models used by the IWG: William Nordhaus' DICE model (Yale University), Richard Tol's FUND model (Sussex University), and Chris Hope's PAGE model (Cambridge University). The models projects the future cost of each additional metric ton of CO<sub>2</sub> in the future.

Sources: Interagency Working Group, 2021, IPCC Sixth Assessment 2023, RS&H, 2023.

**Table 9 Social Cost - Carbon Dioxide for the Proposed Project**

Year	Proposed Project CO <sub>2</sub> e	Average Estimate at 5% Discount Rate	Average Estimate at 3% Discount Rate	Average Estimate at 2.5% Discount Rate	95 <sup>th</sup> Percentile Estimate at 3.0% Discount Rate
<b>Construction Emissions</b>					
<b>2025</b>	4,612.09	\$78,405.53	\$258,277.04	\$382,803.47	\$779,443.21
<b>2026</b>	8,844.57	\$150,390.16	\$504,249.36	\$743,104.32	\$1,530,441.04
<b>Operational Emissions</b>					
<b>2027</b>	889.8	\$16,016.40	\$52,498.20	\$76,522.80	\$156,604.80
<b>2032</b>	3,856.67	\$80,990.07	\$246,826.88	\$354,813.64	\$748,193.98

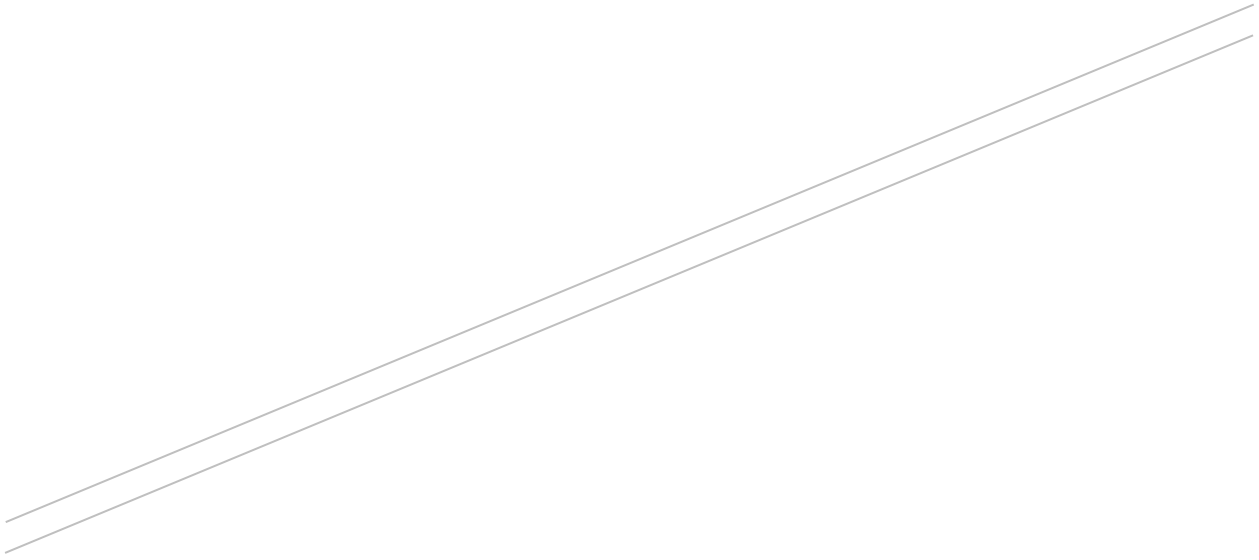
Note: Per the 2023 IPCC Sixth Assessment Report, CO<sub>2</sub>e equivalent for SC-GHG were calculated using the Interagency Working Group<sup>11</sup> average discount rates: 5 percent, 3 percent, 2.5 percent, and the 95<sup>th</sup> percentile estimate applying the 3 percent discount rate. CO<sub>2</sub>e Values are multiplied by the discount rate to calculate SC-CO<sub>2</sub>.

Per the 2023 IPCC<sup>12</sup> Sixth Assessment Report, the CO<sub>2</sub> equivalent for N<sub>2</sub>O is calculated by multiplying the N<sub>2</sub>O emissions by the GWP of 265. The CO<sub>2</sub> equivalent for CH<sub>4</sub> is calculated by multiplying the CH<sub>4</sub> emissions by the GWP of 28. For example, the 2025 Average Estimate at 5% Discount Rate was calculated using the 2025 CO<sub>2</sub>e value of 6,737.994 multiplied by 2025's \$17 determined value for the 5% Discount Rate.

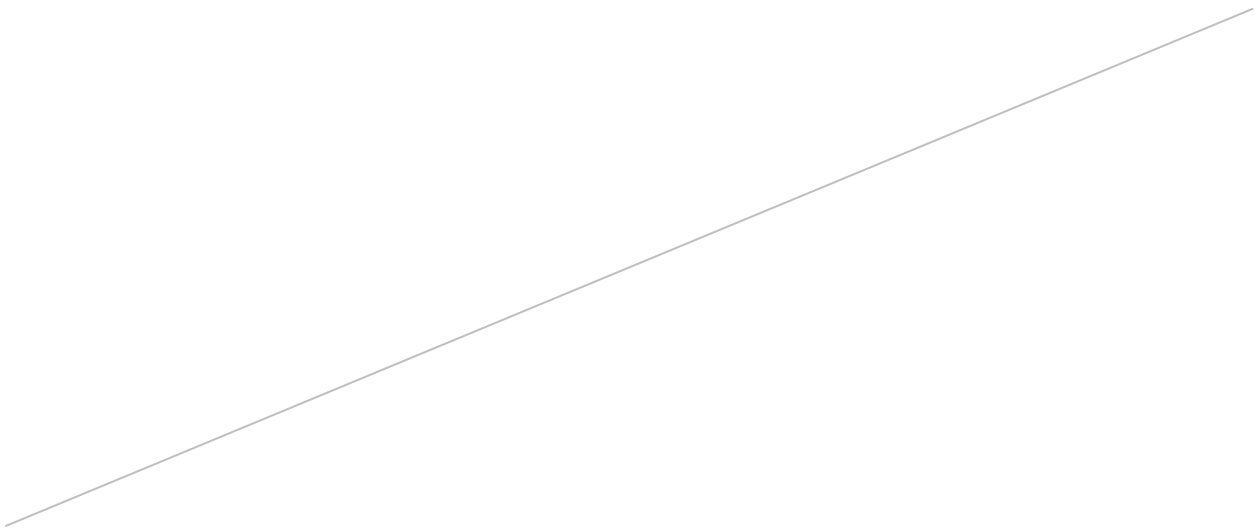
Sources: Interagency Working Group, 2021, IPCC Sixth Assessment 2023, RS&H, 2023.

<sup>11</sup>[https://www.whitehouse.gov/wpcontent/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wpcontent/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf); Accessed November, 2023

<sup>12</sup>[https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf); Accessed November, 2023



*APPENDIX B*  
*AIRCRAFT NOISE ANALYSIS*



## AIRCRAFT NOISE

A noise screening analysis has been prepared to evaluate the potential changes in noise associated with the Proposed Project. The noise analysis was prepared to comply with the National Environmental Policy Act (NEPA) of 1969; Federal Aviation Administration (FAA) Order 1050.1F, Environmental Impacts: Policies and Procedures; and FAA Order 5050.4B, NEPA Implementing Instructions for Airport Actions.

### Methodology

The potential for changes in noise exposure due to the Proposed Project was assessed by comparing the 2032 Proposed Project to the 2032 No Action Alternative.<sup>1</sup> For projects in which the planned changes involve only aircraft operations and fleet mix (and not flight tracks, flight profiles, or runway modifications), the procedure for assessing noise exposure for an airport NEPA assessment is two-tiered:

Step 1: Conduct a noise screening analysis using the FAA's Area Equivalent Method (AEM) model. If the potential for significant noise impact results, proceed to Step 2.

Step 2: Conduct detailed noise contour modeling and develop Day-Night Average Sound Level (DNL) contours using the FAA's Aviation Environmental Design Tool (AEDT).

For step 1, the regulations stipulate that a 17% or greater increase in the 65 DNL contour area could result in a 1.5 DNL increase. If AEM computes an increase of less than 17%, then there are no significant noise impacts, and no further noise analysis is required. The AEM does not produce noise contours, only an estimate (in square miles) of the area potentially affected. The most recent available version of AEM, Version 2c SP2, was used for this analysis.

### Aircraft Operations and Fleet Mix

The aircraft operations<sup>2</sup> for 2032 were obtained from the FAA's Terminal Area Forecast (TAF), issued February 2023. These data, by aircraft category, are provided in **Table 1**. As shown, the 2032 forecast annual operations total 271,488, which is an average of 744 operations per day.

**Table 1: 2032 Annual Aircraft Operations**

Air Carrier	Air Taxi & Commuter	General Aviation	Military	Sum
216,615	24,935	29,241	697	271,488

Source: FAA TAF, February 2023

<sup>1</sup> The 2032 study year has the greatest difference in aircraft operations, therefore, the 2027 aircraft operations are not included in the AEM study.

<sup>2</sup> An aircraft operation is defined as one arrival or one departure.

The 2032 aircraft fleet mix was based on a recent noise study prepared by the Hillsborough County Aviation Authority (HCAA). In December 2021, the HCAA finalized a 14 CFR Part 150 (Part 150) Noise Exposure Map Update (NEM) for Tampa International Airport (TPA). Included in this study were forecast projections of operations by specific aircraft types for the future year 2026. This data was compared to the aircraft operations and fleet that occurred at TPA in 2022 to identify if any notable changes to the aircraft types have occurred since the development of the Part 150 NEM.

The HCAA maintains an aircraft operations monitoring system that records aircraft flights at TPA. The system records the aircraft type, the origin/destination, and the time of the departure/arrival. Calendar year 2022 information for TPA was obtained and reviewed.

The aircraft types that comprised the top ten in air carrier operations in 2022 are the same as the top ten aircraft types in 2026 included in the FAR Part 150 NEM. The day/night split for these ten in 2022 were 89% occurred during the day (7:00 a.m. – 9:59 p.m.) and 11% occurred at night (10:00 p.m. - 6:59 a.m.) and the 2026 Part 150 NEM forecast has these ten at 90% day and 10% at night. The review of the 2022 data showed that while there were some changes in the aircraft fleet mix and time of day compared to the Part 150 NEM data, these changes are minor and would not result in notably different noise exposure results. Therefore, the year 2026 fleet mix of aircraft (and the time of day) included in the Part 150 NEM have been applied to the operations for the year 2032.

## Proposed Project Aircraft Operations

This section provides the total passenger airline operations considered under the No Action Alternative and Proposed Project. The Airport's passenger airline operations were developed using the methodology summarized below.

- » Annual passenger operations and design day flight schedules for 2028 (Gate Test), Planning Activity Level (PAL) 1 (2032), PAL 2 (2037), and PAL 3 (2042) were established as part of the TPA Master Plan Update based on the projections of aviation activity that FAA approved on April 29, 2022.
- » Annual passenger airline operations by day for 2027 and 2032 were determined by extrapolating growth trends from forecast and design day flight schedule development to determine daily operations for the particular years. This resulted in the "extrapolated daily operations."
- » Previous analyses were reviewed to identify the number of operations associated with each design flight schedule and the maximum operational capability associated with the existing gates. This resulted in the "maximum daily operations."
- » The difference between extrapolated daily operations and the maximum daily operations was summed and identified as the operations associated with the additional gates (i.e., Airside D's 16 gates). This resulted in "additional operations."
- » The total additional operations were subtracted from the forecasted passenger airline operations established in the FAA-approved forecast to determine the annual passenger airline operations without Airside D development.

**Table 2** includes the 2027 and 2032 Proposed Project and No Action Alternative passenger airline operations.

**Table 2: Proposed Project and No Action Alternative Passenger Airline Operations**

	2027	2032
Proposed Project Operations	198,625	220,500
No Action Alternative Operations	198,163	218,500
Difference	462	2,000

Source: Ricondo & Associates, Inc. 2023

The 2032 No Action Alternative and Proposed Project total annual aircraft operations and fleet mix are shown in **Table 3**.

**Table 3: 2032 Annual Aircraft Operations and Fleet**

Category	Aircraft	2032 No Action Alternative	2032 Proposed Project	Difference
Air Carrier / Cargo	Boeing 737-800 Series	43,389	43,786	397
	Boeing 737-8 (MAX8)	36,752	37,088	336
	Airbus A320-200 Series	34,378	34,693	315
	Boeing 737-700 Series	31,859	32,151	292
	Airbus A321-200 Series	28,216	28,474	258
	Airbus A320-NEO	21,575	21,772	197
	Airbus A319-100 Series	12,564	12,679	115
	Boeing 767-300 ER	5,927	5,981	54
	Boeing 757-200 Series	3,083	3,083	-
	Airbus A300F4-600 Series	2,336	2,336	-
	Boeing 757-200 Series	2,283	2,311	28
	Boeing MD-11	1,475	1,475	-
	Boeing 757-300 Series	475	479	4
	Airbus A350-900 series	274	277	3
	Embraer ERJ190	9	10	1
Air Taxi / Commuter	DeHavilland DHC-8-300	4,881	4,881	-
	DeHavilland DHC-6-300	4,580	4,580	-
	Embraer ERJ175	4,237	4,237	-
	Bombardier Challenger 600	2,163	2,163	-
	Bombardier CRJ-900-ER	437	437	-
	Bombardier Challenger 601	411	411	-
	Embraer ERJ170	245	245	-
General Aviation	Bombardier Learjet 35	4,718	4,718	-
	Cessna 550 Citation II	3,112	3,112	-
	Cessna 500 Citation I	2,713	2,713	-
	Raytheon Beech Baron 58	1,839	1,839	-
	Cessna 750 Citation X	1,694	1,694	-
	Cessna 560 Citation Excel	1,594	1,594	-
	1985 1-ENG COMP	1,554	1,554	-

Category	Aircraft	2032 No Action Alternative	2032 Proposed Project	Difference
	Cessna 680 Citation	1,476	1,476	-
	Cessna 208 Caravan	1,427	1,427	-
	Cessna 180	1,222	1,222	-
	Gulfstream V	1,152	1,152	-
	Gulfstream IV	898	898	-
	Cessna Citation 510	847	847	-
	Dassault Falcon 900-EX	738	738	-
	Bell 427	717	717	-
	Cessna 560 Citation Encore	590	590	-
	Cessna 560 Citation V	478	478	-
	Bell 407	311	311	-
	Cessna 172 Skyhawk	305	305	-
	Cessna 150 Series	254	254	-
	Bombardier Global Express	212	212	-
	Cessna 650 Citation III	197	197	-
	Bell 206 Jet Ranger	154	154	-
	Cessna 441 Conquest II	127	127	-
	Cessna 182	124	124	-
	Bombardier Global 5000	121	121	-
	Cessna 525 Citation Jet	121	121	-
	Gulfstream G650	109	109	-
	Robinson R44 Raven	106	106	-
	Israel IAI-1121	82	82	-
	Eclipse 500	73	73	-
	Sikorsky S-76	48	48	-
	Cessna 206	33	33	-
	Aerospatiale SA-350D	21	21	-
	Piper PA-42 Cheyenne	18	18	-
	Bell Iroquois	18	18	-
	Robinson R22 Mariner	12	12	-
	Hawker HS748-2A	9	9	-
	Piper PA-30	9	9	-
	Dassault Falcon 20-C	3	3	-
	Raytheon Beech 1900-C	3	3	-
	Bell 429	3	3	-
Military	Lockheed C-130 Hercules	697	697	-
		<b>271,488</b>	<b>273,488</b>	<b>2,000</b>

Source: 2021 TPA FAR Part 150 NEM Update, December 2021; FAA TAF, February 2023; RS&H 2023

Each aircraft type has been assigned the corresponding AEM aircraft type. As required for use in the AEM, aircraft operations have been converted to daily landing-takeoff cycles (LTOs). One LTO equals two operations. Aircraft operations modeled in the AEM are assigned as occurring during daytime (7:00 a.m. to 9:59 p.m.) or nighttime (10:00 p.m. to 6:59 a.m.). The calculation includes an additional weight of 10 decibels for those operations occurring at night. The 2032 No Action Alternative and Proposed Project modeled daily LTOs by time of day are shown in **Table 4**.

**Table 4: 2032 Daily LTOs**

Category	Aircraft	AEM ID	2032 No Action Alternative		2032 Proposed Project	
			Day	Night	Day	Night
Air Carrier / Cargo	Boeing 737-800 Series	737800	52.48	6.95	52.97	7.02
	Boeing 737-8 (MAX8)	737800	43.33	7.02	43.73	7.08
	Airbus A320-200 Series	A320-232	43.20	3.89	43.60	3.92
	Boeing 737-700 Series	737700	39.65	3.99	40.01	4.03
	Airbus A321-200 Series	A321-232	34.01	4.65	34.32	4.69
	Airbus A320-NEO	A320-211	25.13	4.43	25.36	4.47
	Airbus A319-100 Series	A319-131	15.64	1.58	15.78	1.59
	Boeing 767-300 ER	767300	6.23	1.89	6.29	1.91
	Boeing 757-200 Series	757PW	2.15	2.07	2.15	2.07
	Airbus A300F4-600 Series	A300-	2.07	1.13	2.07	1.13
	Boeing 757-200 Series	757RR	2.53	0.60	2.56	0.61
	Boeing MD-11	MD11PW	1.34	0.68	1.34	0.68
	Boeing 757-300 Series	757300	0.54	0.11	0.54	0.11
	Airbus A350-900 series	A340-211	0.37	0.00	0.37	0.00
	Embraer ERJ190	EMB190	0.01	0.00	0.01	0.00
Air Taxi / Commuter	DeHavilland DHC-8-300	DHC830	6.69	0.00	6.69	0.00
	DeHavilland DHC-6-300	DHC6	5.95	0.32	5.95	0.32
	Embraer ERJ175	EMB175	5.55	0.25	5.55	0.25
	Bombardier Challenger 600	CL600	2.81	0.16	2.81	0.16
	Bombardier CRJ-900-ER	CRJ9-ER	0.60	0.00	0.60	0.00
	Bombardier Challenger 601	CL601	0.54	0.03	0.54	0.03
	Embraer ERJ170	EMB170	0.34	0.00	0.34	0.00
	Bombardier Learjet 35	LEAR35	5.79	0.68	5.79	0.68
General Aviation	Cessna 550 Citation II	CNA55B	4.04	0.22	4.04	0.22
	Cessna 500 Citation I	CNA500	3.44	0.27	3.44	0.27
	Raytheon Beech Baron 58	BEC58P	1.91	0.61	1.91	0.61
	Cessna 750 Citation X	CNA750	2.22	0.10	2.22	0.10
	Cessna 560 Citation Excel	CNA560X	2.12	0.07	2.12	0.07
	1985 1-ENG COMP	COMSEP	2.08	0.05	2.08	0.05
	Cessna 680 Citation	CNA680	1.94	0.08	1.94	0.08
	Cessna 208 Caravan	CNA208	1.85	0.11	1.85	0.11

Category	Aircraft	AEM ID	2032 No Action Alternative		2032 Proposed Project		
			Day	Night	Day	Night	
	Cessna 180	GASEPV	1.62	0.06	1.62	0.06	
	Gulfstream V	GV	1.42	0.16	1.42	0.16	
	Gulfstream IV	GIV	1.16	0.07	1.16	0.07	
	Cessna Citation 510	CNA510	0.96	0.20	0.96	0.20	
	Dassault Falcon 900-EX	CNA750	0.98	0.03	0.98	0.03	
	Bell 427	DHC6	0.73	0.25	0.73	0.25	
Military	Cessna 560 Citation Encore	CNA560E	0.76	0.05	0.76	0.05	
	Cessna 560 Citation V	CNA560E	0.51	0.14	0.51	0.14	
	Bell 407	DHC6	0.28	0.15	0.28	0.15	
	Cessna 172 Skyhawk	CNA172	0.29	0.13	0.29	0.13	
	Cessna 150 Series	GASEPF	0.33	0.02	0.33	0.02	
	Bombardier Global Express	GV	0.27	0.02	0.27	0.02	
	Cessna 650 Citation III	CIT3	0.25	0.02	0.25	0.02	
	Bell 206 Jet Ranger	DHC6	0.19	0.02	0.19	0.02	
	Cessna 441 Conquest II	CNA441	0.17	0.01	0.17	0.01	
	Cessna 182	CNA182	0.15	0.02	0.15	0.02	
	Bombardier Global 5000	GV	0.15	0.01	0.15	0.01	
	Cessna 525 Citation Jet	CNA525C	0.16	0.00	0.16	0.00	
	Gulfstream G650	GV	0.14	0.01	0.14	0.01	
	Robinson R44 Raven	DHC6	0.13	0.01	0.13	0.01	
	Israel IAI-1121	IA1125	0.10	0.01	0.10	0.01	
	Eclipse 500	ECLIPSE50	0.10	0.00	0.10	0.00	
	Sikorsky S-76	DHC6	0.07	0.00	0.07	0.00	
	Cessna 206	CNA206	0.05	0.00	0.05	0.00	
	Aerospatiale SA-350D	DHC6	0.015	0.036	0.015	0.036	
	Piper PA-42 Cheyenne	PA42	0.02	0.00	0.02	0.00	
	Bell Iroquois	DHC6	0.02	0.00	0.02	0.00	
	Robinson R22 Mariner	DHC6	0.02	0.00	0.02	0.00	
	Hawker HS748-2A	HS748A	0.01	0.00	0.01	0.00	
	Piper PA-30	PA30	0.01	0.00	0.01	0.00	
	Dassault Falcon 20-C	CNA750	0.01	0.00	0.01	0.00	
	Raytheon Beech 1900-C	1900D	0.01	0.00	0.01	0.00	
	Bell 429	DHC6	0.01	0.00	0.01	0.00	
	Lockheed C-130 Hercules	C130E	0.89	0.00	0.89	0.00	
				<b>328.535</b>	<b>43.366</b>	<b>330.955</b>	<b>43.686</b>

Source: 2021 TPA FAR Part 150 NEM Update, December 2021; FAA TAF, February 2023; RS&H 2023



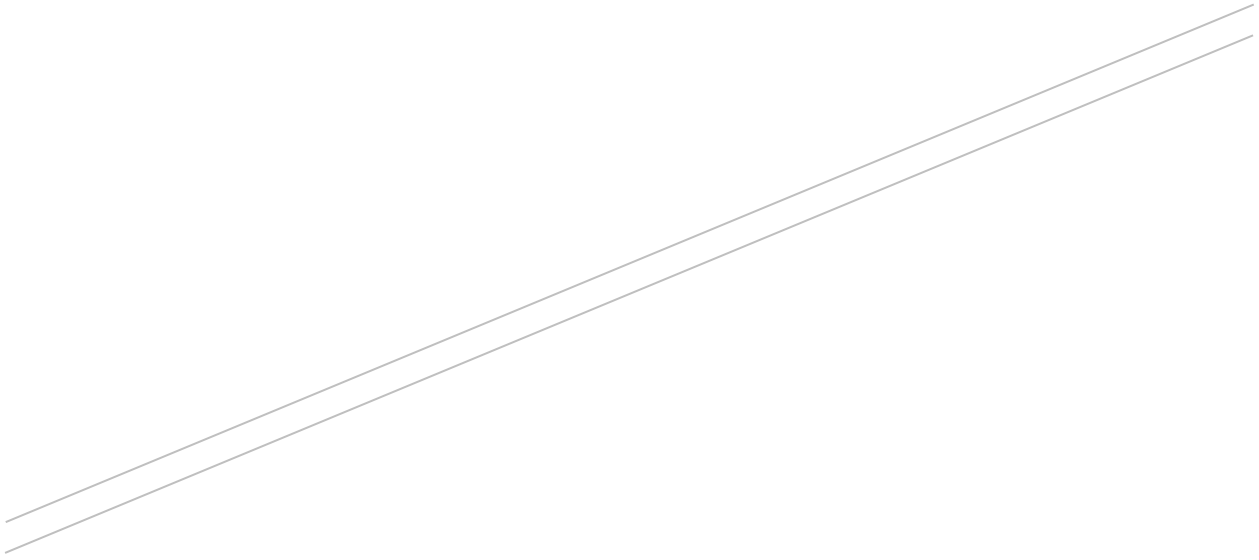
## AEM Results

The AEM results indicate that the Proposed Project, when compared to the No Action Alternative, would increase the 65 DNL contour area by 0.6% in 2032. The 0.6% increase is well below the FAA's noise criterion of 17% for additional noise analysis. Therefore, the Proposed Project does not result in a significant noise impact and no further analysis is necessary. The AEM input and results are shown in **Figure 1**.

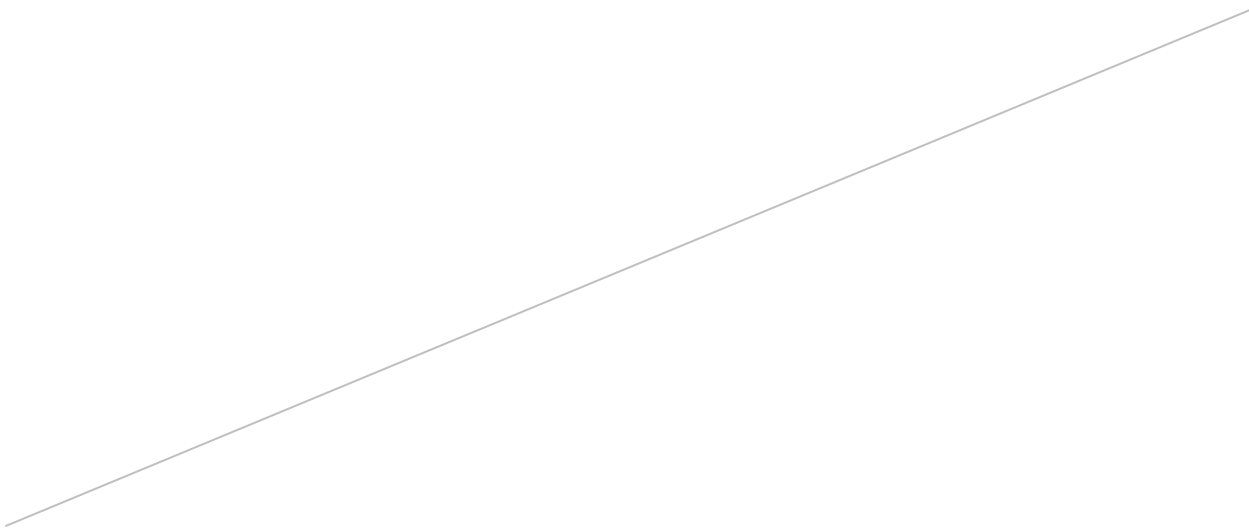
**Figure 1: AEM Results**

Federal Aviation Administration Office of Environment and Energy <a href="http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/">http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/</a>				
Area Equivalent Method (AEM) Version 2c SP2				
Airport Name/Code:		TPA 2032		
DNL (dBA)	Baseline Area (Sq. Mi.)	Alternative Area (Sq. Mi.)	Percent Change in Area	
65	3.62	3.65	0.6%	
Aircraft Type	BASE Case		ALTERNATIVE Case	
	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
<a href="#">737700</a>	39.654	3.989	40.017	4.026
<a href="#">737800</a>	95.810	13.972	96.687	14.100
<a href="#">757300</a>	0.539	0.111	0.544	0.112
<a href="#">767300</a>	6.227	1.892	6.284	1.909
<a href="#">1900D</a>	0.004	0.000	0.004	0.000
<a href="#">757PW</a>	2.154	2.070	2.154	2.070
<a href="#">757RR</a>	2.529	0.598	2.560	0.606
<a href="#">A300-622R</a>	2.066	1.134	2.066	1.134
<a href="#">A319-131</a>	15.635	1.576	15.778	1.590
<a href="#">A320-211</a>	25.126	4.429	25.355	4.469
<a href="#">A320-232</a>	43.204	3.890	43.599	3.925
<a href="#">A321-232</a>	34.006	4.645	34.318	4.688
<a href="#">A340-211</a>	0.375	0.000	0.378	0.000
<a href="#">BEC58P</a>	1.906	0.613	1.906	0.613
<a href="#">C130E</a>	0.955	0.000	0.955	0.000
<a href="#">CIT3</a>	0.249	0.021	0.249	0.021
<a href="#">CL600</a>	2.806	0.156	2.806	0.156
<a href="#">CL601</a>	0.536	0.027	0.536	0.027
<a href="#">CNA172</a>	0.286	0.133	0.286	0.133
<a href="#">CNA182</a>	0.153	0.017	0.153	0.017
<a href="#">CNA206</a>	0.046	0.000	0.046	0.000
<a href="#">CNA208</a>	1.848	0.108	1.848	0.108
<a href="#">CNA441</a>	0.166	0.008	0.166	0.008
<a href="#">CNA500</a>	3.443	0.273	3.443	0.273
<a href="#">CNA510</a>	0.957	0.203	0.957	0.203
<a href="#">CNA525C</a>	0.162	0.004	0.162	0.004
<a href="#">CNA555B</a>	4.043	0.220	4.043	0.220
<a href="#">CNA560E</a>	1.272	0.191	1.272	0.191
<a href="#">CNA560XL</a>	2.117	0.066	2.117	0.066
<a href="#">CNA680</a>	1.943	0.079	1.943	0.079
<a href="#">CNA750</a>	3.198	0.137	3.198	0.137
<a href="#">COMSEP</a>	2.076	0.054	2.076	0.054
<a href="#">CRJ9-ER</a>	0.599	0.000	0.599	0.000
<a href="#">DHC6</a>	7.415	0.765	7.415	0.765
<a href="#">DHC830</a>	6.689	0.000	6.689	0.000
<a href="#">ECLIPSE500</a>	0.095	0.004	0.095	0.004
<a href="#">EMB170</a>	0.335	0.000	0.335	0.000
<a href="#">EMB175</a>	5.550	0.255	5.550	0.255
<a href="#">EMB190</a>	0.012	0.000	0.012	0.000
<a href="#">GASEPF</a>	0.327	0.021	0.327	0.021
<a href="#">GASEPV</a>	1.616	0.058	1.616	0.058
<a href="#">GIV</a>	1.160	0.070	1.160	0.070
<a href="#">GV</a>	1.980	0.203	1.980	0.203
<a href="#">HS748A</a>	0.008	0.004	0.008	0.004
<a href="#">JA1125</a>	0.104	0.008	0.104	0.008
<a href="#">LEAR35</a>	5.787	0.675	5.787	0.675
<a href="#">MD11PW</a>	1.338	0.683	1.338	0.683
<a href="#">PA30</a>	0.012	0.000	0.012	0.000
<a href="#">PA42</a>	0.021	0.004	0.021	0.004
<b>Total LTOs</b>	<b>328.535</b>	<b>43.366</b>	<b>330.955</b>	<b>43.686</b>

Source: RS&H, 2023



*APPENDIX C*  
*AGENCY AND PUBLIC ENGAGEMENT*



## Alberts, David

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**Sent:**  
**To:**  
**Subject:**

Good morning David,

SWD water facilities permitting recommendations. This project may need the following list of permits by programs.

**Industrial Wastewater:** The project may require a Generic Permit for Discharge of Ground Water from Dewatering Operations. "Dewatering operations" means temporarily lowering the water table by draining or pumping of ground water from activities such as excavations, building foundations, vaults, trenches and aquifer performance tests for exploratory purposes. If required, the project will be reviewed under 62-621.300(2), F.A.C. Please note that dewatering operations covered under the Generic Permit for Stormwater Discharges from Construction Activities (CGP), will not be required to obtain separate coverage under the dewatering generic permit.

**Domestic Wastewater:** Rule 62-604, F.A.C. requires that any project that needs to extend wastewater collection and transmission system to obtain a collection/transmission system construction permit unless it is a construction of a single gravity or non-gravity individual service connection from a single building to a gravity collection system. This project probably will require a construction permit for the collection system from HCEPC. Also, check with EPC for other local construction permits.

Drinking water permit for water distribution systems from DOH Hillsborough county.

ERP permit from FDEP.

Thank you

Jorge

*Jorge Perez*, CESCO  
Environmental Consultant  
Permitting & Waste Cleanup Program  
Florida Dept. of Environmental Protection, Southwest District  
13051 North Telecom Parkway  
Temple Terrace, FL 33637-0926  
(813) 470-5734  
FAX (813) 470-5995  
[jorge.perez@floridadep.gov](mailto:jorge.perez@floridadep.gov)

**Permitting Consistency Initiative:** The Florida Department of Environmental Protection is committed to providing efficient, consistent and quality service to the citizens of Florida. In keeping with these objectives, we continue to identify ongoing improvements to our permitting process by standardizing and simplifying our documents.

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**From:** Alberts, David <David.Alberts@rsandh.com>

**Sent:** Monday, November 27, 2023 8:21 AM

**To:** Perez, Jorge <Jorge.Perez@FloridaDEP.gov>  
**Subject:** FW: HCAA TPA 8500 23 - AS-D EA - FDEP coordination  
**Importance:** High

**EXTERNAL MESSAGE**

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good Morning Mr. Perez,

Does the DEP southwest district have any initial comments on the Tampa Airport Airside D Environmental Assessment packet sent to your office?

Thank you,

Dave A

**David E. Alberts**

Aviation Senior Environmental Manager  
10748 Deerwood Park Blvd South, Jacksonville, FL 32256  
O 904-256-2469 | M 904-307-7049  
[David.Alberts@rsandh.com](mailto:David.Alberts@rsandh.com)  
[rsandh.com](http://rsandh.com) | [Facebook](#) | [Twitter](#) | [LinkedIn](#) | [Blog](#)

[Stay up-to-date with our latest news and insights.](#)



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**From:** Stahl, Chris <[Chris.Stahl@FloridaDEP.gov](mailto:Chris.Stahl@FloridaDEP.gov)>  
**Sent:** Tuesday, November 7, 2023 8:35 AM  
**To:** Alberts, David <[David.Alberts@rsandh.com](mailto:David.Alberts@rsandh.com)>  
**Subject:** RE: HCAA TPA 8500 23 - AS-D EA - FDEP coordination

Since this was a request for early coordination it was forwarded on the DEP Southwest district office since they could speak much more effectively to possible issues from our program areas in that region. The staffer I sent it to was Jorge Perez 813-470-5734 [Jorge.Perez@FloridaDEP.gov](mailto:Jorge.Perez@FloridaDEP.gov)

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**From:** Alberts, David <[David.Alberts@rsandh.com](mailto:David.Alberts@rsandh.com)>  
**Sent:** Monday, November 6, 2023 10:09 AM  
**To:** Service Desk <[ServiceDesk@dep.state.fl.us](mailto:ServiceDesk@dep.state.fl.us)>  
**Cc:** Stahl, Chris <[Chris.Stahl@FloridaDEP.gov](mailto:Chris.Stahl@FloridaDEP.gov)>  
**Subject:** RE: HCAA TPA 8500 23 - AS-D EA - FDEP coordination

**EXTERNAL MESSAGE**

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

FDEP,

I reviewed the FDEP Clearinghouse system and cannot find the FDEP's comments on the early agency coordination for the Tampa Airport Airside D EA (attached). Can you please help?

Thanks

Dave A

**David E. Alberts**

Aviation Senior Environmental Manager  
10748 Deerwood Park Blvd South, Jacksonville, FL 32256  
O 904-256-2469 | M 904-307-7049  
[David.Alberts@rsandh.com](mailto:David.Alberts@rsandh.com)  
[rsandh.com](http://rsandh.com) | [Facebook](#) | [Twitter](#) | [LinkedIn](#) | [Blog](#)

[Stay up-to-date with our latest news and insights.](#)



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**From:** Alberts, David  
**Sent:** Friday, August 11, 2023 8:58 AM  
**To:** Stahl, Chris <[Chris.Stahl@FloridaDEP.gov](mailto:Chris.Stahl@FloridaDEP.gov)>  
**Subject:** FW: HCAA TPA 8500 23 - AS-D EA - FDEP coordination

Mr. Stahl,

About a year ago, I submitted an email seeking FDEP comments. I looked in my files and do not see a reply. I did not see a letter on the Clearinghouse website either.

At this time we are assembling the Draft EA for this project and would like to include FDEP's letter.

Could you please re-send the FDEP's comments letter to me?

Thanks,

Dave A

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**From:** Alberts, David  
**Sent:** Monday, September 26, 2022 12:14 PM  
**To:** Stahl, Chris <[Chris.Stahl@FloridaDEP.gov](mailto:Chris.Stahl@FloridaDEP.gov)>  
**Cc:** Hamblin, Monica <[Monica.Hamblin@rsandh.com](mailto:Monica.Hamblin@rsandh.com)>; Fesanco, Michael <[Michael.Fesanco@rsandh.com](mailto:Michael.Fesanco@rsandh.com)>; Robert L. Furr <[rfurr@TampaAirport.com](mailto:rfurr@TampaAirport.com)>; Daniel Porter <[dporter@TampaAirport.com](mailto:dporter@TampaAirport.com)>  
**Subject:** HCAA TPA 8500 23 - AS-D EA - FDEP coordination

Mr. Stahl,

On behalf of the Hillsborough County Aviation Authority, I am pleased to provide the Early Agency Coordination Letter for the new Airside D Environmental Assessment at Tampa International Airport. FDEP's input on the attached is greatly appreciated.

If you have any questions, please let me know.

Dave A



September 26, 2022

Mr. Chris Stahl  
Florida Department of Environmental Protection  
Environmental Review Clearinghouse  
3900 Commonwealth Blvd., MS 47  
Tallahassee, FL 32399  
Sent via email: [State.Clearinghouse@FloridaDEP.gov](mailto:State.Clearinghouse@FloridaDEP.gov)

**RE: Tampa International Airport – New Airside-D Environmental Assessment – Early Agency Coordination**

Dear Mr. Stahl,

The Hillsborough County Aviation Authority (Authority) proposes the construction of the new Airside D (AS-D) development at Tampa International Airport (Airport or TPA) in Hillsborough County, Tampa, Florida (see **Figure 1**, attached). The Proposed Project includes airside and landside improvements at the Airport (see **Figure 2**, attached). The Proposed Project is the construction and operation of a sixteen-gate airside (AS-D), automated people mover, improvements to Taxiway Z, and associated apron area. The new AS-D would consist of three levels including holdrooms, aircraft gates, concessions, restrooms, and a connecting automated people mover station to the main terminal.

The Authority will request the Federal Aviation Administration's (FAA) unconditional approval of the improvements on its Airport Layout Plan. This request is a Federal action, and through the requirement for the Authority to meet FAA grant assurances. RS&H, Inc. will prepare an Environmental Assessment (EA) for the Proposed Project.

In accordance with the National Environmental Policy Act (NEPA) and FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures* and 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions of Airport Actions*, the EA will analyze the potential environmental effects of the Proposed Project. A project study area has been developed for the EA (see **Figure 3**, attached). Preliminary environmental analysis indicates that the Proposed Project would not result in significant impacts.

On behalf of the Authority, we are sending you this early notification letter to:

1. Advise your agency of the preparation of the EA;
2. Request any relevant information that your agency may have regarding the project site or environs;  
and
3. Solicit early comments regarding potential environmental, social, and economic issues for consideration during the preparation of the EA.

You may send any information and comments to me via email at [David.Alberts@rsandh.com](mailto:David.Alberts@rsandh.com) or to the address provided at the top of this letter. We would appreciate your prompt response within 30 days.

On behalf of the Authority, we would like to thank you for your interest in this project and look forward to working with you as we prepare the EA. If you have any questions or need additional information regarding the Proposed Project or EA, please do not hesitate to contact me at (904) 256-2469 or the email above.

Sincerely,

A handwritten signature in blue ink that reads "D. Alberts".

David Alberts  
Project Manager  
RS&H, Inc.

Attachments

cc: Rob Furr, Sr. Manager - Sr. Airport Architect, Hillsborough County Aviation Authority  
Layne E Bolen, FAA  
Project File



Figure 1: Airport Location



Sources: ESRI 2022; RS&H 2022.

Not to scale. Graphics use only.

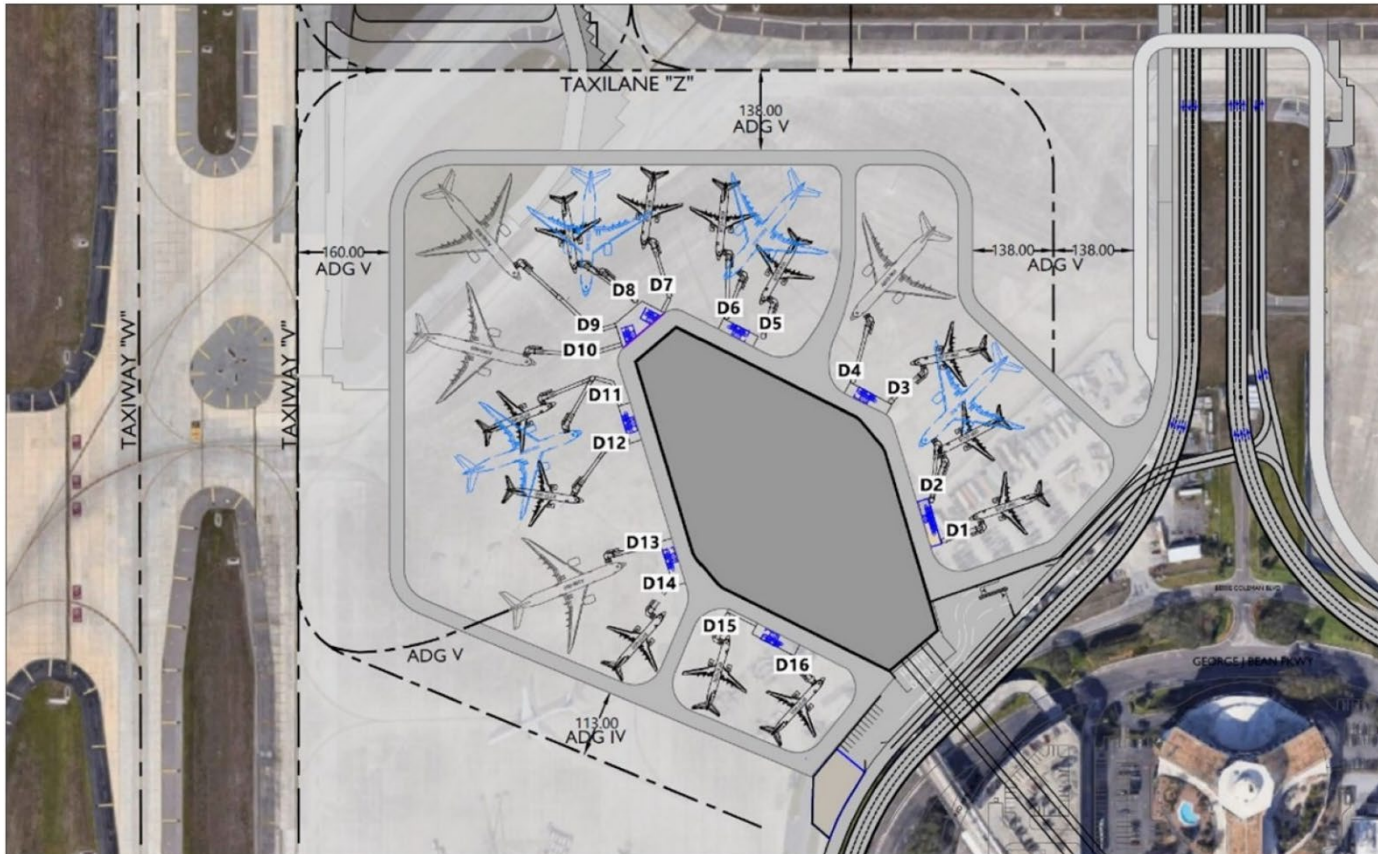
**Legend**

 Airport Location



Airport Location

Figure 2: Proposed Project



Sources: ESRI 2022; RS&H 2022.

Not to scale. Graphics use only.



Proposed Project

Figure 3: Project Study Area



Sources: ESRI 2022; RS&H 2022.

Not to scale. Graphics use only.

**Legend**

 Project Study Area



Project Study Area



*APPENDIX D*  
*BIOLOGICAL RESOURCES*





## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Florida Ecological Services Field Office  
1339 20th Street  
Vero Beach, FL 32960-3559  
Phone: (772) 562-3909 Fax: (772) 562-4288  
Email Address: [fw4flesregs@fws.gov](mailto:fw4flesregs@fws.gov)

In Reply Refer To:  
Project Code: 2024-0031659  
Project Name: TPA Airside D

January 02, 2024

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

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

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

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

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this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

## **OFFICIAL SPECIES LIST**

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

This species list is provided by:

**Florida Ecological Services Field Office**

1339 20th Street

Vero Beach, FL 32960-3559

(772) 562-3909

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## PROJECT SUMMARY

Project Code: 2024-0031659

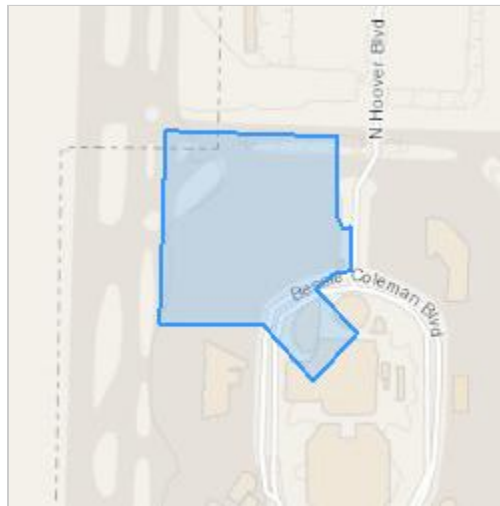
Project Name: TPA Airside D

Project Type: Airport - New Construction

Project Description: The HCAA proposes to construct and operate a new 563,000-square-foot Airside D (AS-D) to meet its projected demand of operations and passengers (Proposed Project). This includes a three-level airside and 16 contact gates with passenger boarding bridges.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@27.9830665,-82.53713104034594,14z>



Counties: Hillsborough County, Florida

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 14 threatened, endangered, or candidate species on this species list.

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

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

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

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

**BIRDS**

NAME	STATUS
<p>Crested Caracara (audubon""s) [fl Dps] <i>Caracara plancus audubonii</i></p> <p>Population: FL DPS</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/8250">https://ecos.fws.gov/ecp/species/8250</a></p>	Threatened
<p>Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/10477">https://ecos.fws.gov/ecp/species/10477</a></p>	Threatened
<p>Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i></p> <p>There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/7713">https://ecos.fws.gov/ecp/species/7713</a></p>	Endangered
<p>Rufa Red Knot <i>Calidris canutus rufa</i></p> <p>There is <b>proposed</b> critical habitat for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a></p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY)</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a></p>	Experimental Population, Non- Essential
<p>Wood Stork <i>Mycteria americana</i></p> <p>Population: AL, FL, GA, MS, NC, SC</p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a></p> <p>General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/6JHCLSE46VAVVENEP4SWEGQFR4/documents/generated/6954.pdf">https://ipac.ecosphere.fws.gov/project/6JHCLSE46VAVVENEP4SWEGQFR4/documents/generated/6954.pdf</a></p>	Threatened

## REPTILES

NAME	STATUS
American Crocodile <i>Crocodylus acutus</i> Population: U.S.A. (FL) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/6604">https://ecos.fws.gov/ecp/species/6604</a>	Threatened
Eastern Indigo Snake <i>Drymarchon couperi</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/646">https://ecos.fws.gov/ecp/species/646</a>	Threatened
Hawksbill Sea Turtle <i>Eretmochelys imbricata</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/3656">https://ecos.fws.gov/ecp/species/3656</a>	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1493">https://ecos.fws.gov/ecp/species/1493</a>	Endangered
Loggerhead Sea Turtle <i>Caretta caretta</i> Population: Northwest Atlantic Ocean DPS There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1110">https://ecos.fws.gov/ecp/species/1110</a>	Threatened

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## FLOWERING PLANTS

NAME	STATUS
Florida Golden Aster <i>Chrysopsis floridana</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5352">https://ecos.fws.gov/ecp/species/5352</a>	Endangered
Pygmy Fringe-tree <i>Chionanthus pygmaeus</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1084">https://ecos.fws.gov/ecp/species/1084</a>	Endangered

## CRITICAL HABITATS

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

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

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act<sup>1</sup> and the Migratory Bird Treaty Act<sup>2</sup>.

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

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

### There are bald and/or golden eagles in your project area.

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

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

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

**Breeding Season (■)**

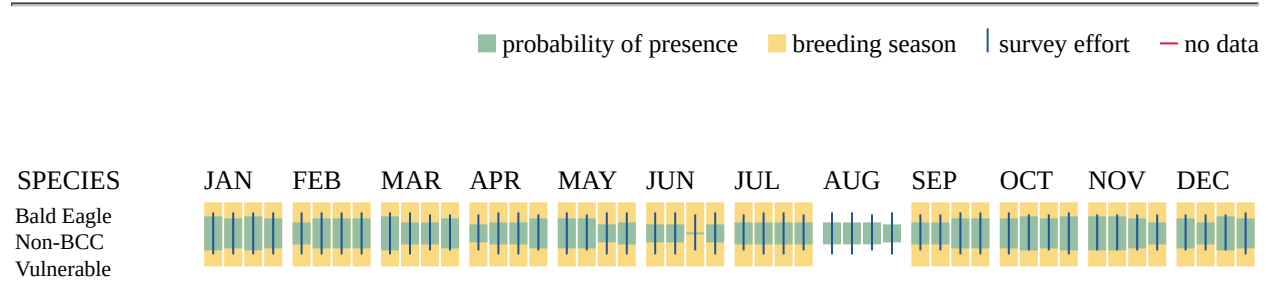
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort (|)**

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data (-)**

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

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

**MIGRATORY BIRDS**

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

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

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

NAME	BREEDING SEASON
<p>American Kestrel <i>Falco sparverius paulus</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/9587">https://ecos.fws.gov/ecp/species/9587</a></p>	Breeds Apr 1 to Aug 31
<p>American Oystercatcher <i>Haematopus palliatus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8935">https://ecos.fws.gov/ecp/species/8935</a></p>	Breeds Apr 15 to Aug 31
<p>Bald Eagle <i>Haliaeetus leucocephalus</i>            This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a></p>	Breeds Sep 1 to Jul 31
<p>Black Skimmer <i>Rynchops niger</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/5234">https://ecos.fws.gov/ecp/species/5234</a></p>	Breeds May 20 to Sep 15
<p>Chimney Swift <i>Chaetura pelagica</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9406">https://ecos.fws.gov/ecp/species/9406</a></p>	Breeds Mar 15 to Aug 25
<p>Great Blue Heron <i>Ardea herodias occidentalis</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/10590">https://ecos.fws.gov/ecp/species/10590</a></p>	Breeds Jan 1 to Dec 31
<p>Gull-billed Tern <i>Gelochelidon nilotica</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9501">https://ecos.fws.gov/ecp/species/9501</a></p>	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
<b>King Rail <i>Rallus elegans</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8936">https://ecos.fws.gov/ecp/species/8936</a>	Breeds May 1 to Sep 5
<b>Lesser Yellowlegs <i>Tringa flavipes</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a>	Breeds elsewhere
<b>Magnificent Frigatebird <i>Fregata magnificens</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9588">https://ecos.fws.gov/ecp/species/9588</a>	Breeds Oct 1 to Apr 30
<b>Painted Bunting <i>Passerina ciris</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9511">https://ecos.fws.gov/ecp/species/9511</a>	Breeds Apr 25 to Aug 15
<b>Prairie Warbler <i>Dendroica discolor</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9513">https://ecos.fws.gov/ecp/species/9513</a>	Breeds May 1 to Jul 31
<b>Reddish Egret <i>Egretta rufescens</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/7617">https://ecos.fws.gov/ecp/species/7617</a>	Breeds Mar 1 to Sep 15
<b>Ruddy Turnstone <i>Arenaria interpres morinella</i></b> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/10633">https://ecos.fws.gov/ecp/species/10633</a>	Breeds elsewhere
<b>Short-billed Dowitcher <i>Limnodromus griseus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
<b>Swallow-tailed Kite <i>Elanoides forficatus</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8938">https://ecos.fws.gov/ecp/species/8938</a>	Breeds Mar 10 to Jun 30
<b>Willet <i>Tringa semipalmata</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/10669">https://ecos.fws.gov/ecp/species/10669</a>	Breeds Apr 20 to Aug 5







Additional information can be found using the following links:

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

## WETLANDS

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

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

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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## **IPAC USER CONTACT INFORMATION**

Agency: Private Entity  
Name: Michael Fesanco  
Address: 10748 Deerwood Park Blvd South  
City: Jacksonville  
State: FL  
Zip: 32256  
Email: michael.fesanco@rsandh.com  
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# Endangered Species Act Review

- Request an official species list
- Evaluate Determination Keys Complete
- ③ Analyze project (optional)
- ④ Download documentation

## DETERMINATION KEY

### Wood Stork Determination Key

Release date: May 1, 2023

You completed the latest version of this key, published May 1, 2023, and reached a determination of not applicable for species or critical habitats covered by the key.

This key is for determining effects to the threatened wood stork resulting from U.S. Army Corps of Engineers' (Corps) permit applications. The purpose of this Key is to assist IPaC users in making appropriate effects determinations for threatened wood stork resulting from U.S. Army Corps of Engineers' (Corps) permit applications pursuant to section 7 of the [Endangered Species Act of 1973](#), as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.) The Key is intended to streamline consultation with the U.S. Fish and Wildlife Service (Service) when the proposed action can be walked through the Key and the appropriate conclusion is the proposed action will have no effect or may affect but not likely to adversely affect the wood stork. For projects where the Service believes that further evaluation of the proposed project is necessary, the Key recommends contacting the local field office and requesting consultation. The Service intends to develop decision keys in the future to provide technical assistance for section 7 consultation for other listed species. Therefore, the Service highly recommends continuing to check this site for improvements and additional streamlining opportunities for other listed species.

The U.S. Fish and Wildlife Service is the lead Federal agency charged with the protection and conservation of Federal Trust Resources, such as threatened and endangered species and migratory birds, in accordance with section 7 of the [Endangered Species Act of 1973](#), as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the [Marine Mammal Protection Act](#), the [Bald and Golden Eagle Protection Act](#), (16 U.S.C. 668-668d) (Eagle Act), and the [Migratory Bird Treaty Act](#) (40 Stat. 755; 16 U.S.C. 701 et seq.).

This key is based on the following documents:  
[The Corp's Determination Guidance for Endangered & Threatened Species \(EDGES\)](#)  
[Central and North Peninsular Florida 2008 wood stork consultation key](#)  
[South Florida 2010 wood stork consultation key](#)

### Species covered by this key

This key covers the following species, and critical habitat for these species, expected to occur in this project area:

Wood Stork *Mycteria americana*

### Critical habitats covered by this key

This key covers the critical habitats for the following species expected to occur in this project area:

None

For more information about this determination key, including a list of all potential questions, refer to the [detailed overview](#).

### Qualification interview

1. Does the proposed action require a permit (nationwide, general, or individual permits) from the U.S. Army Corps of Engineers?

No

Your project is outside the scope of this determination key. Please contact the local Ecological Service Field Office if you need additional information regarding the wood stork.

# Florida Natural Areas Inventory - Hillsborough County

## Plants & Lichens

Group	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Tracked?
Plants and Lichens	<i>Acrostichum aureum</i> 🌿	golden leather fern	G5	S3		T	Y
Plants and Lichens	<i>Adiantum tenerum</i> 🌿	brittle maidenhair fern	G5	S3		E	Y
Plants and Lichens	<i>Agrimonia incisa</i> 🌿	incised groove-bur	G3	S2		T	Y
Plants and Lichens	<i>Andropogon arctatus</i> 🌿	pinewoods bluestem	G3	S3		T	Y
Plants and Lichens	<i>Asplenium auritum</i> 🌿	auricled spleenwort	G5	S2		E	Y
Plants and Lichens	<i>Astragalus obcordatus</i> 🌿	Florida milkvetch	G3G4	S2S3		N	Y
Plants and Lichens	<i>Bonamia grandiflora</i> 🌿	Florida bonamia	G3	S3	T	E	Y
Plants and Lichens	<i>Calopogon multiflorus</i> 🌿	many-flowered grass-pink	G2G3	S2S3		T	Y
Plants and Lichens	<i>Carex chapmanii</i> 🌿	Chapman's sedge	G3	S3		T	Y
Plants and Lichens	<i>Centrosema arenicola</i> 🌿	sand butterfly pea	G2Q	S2		E	Y
Plants and Lichens	<i>Cheiroglossa palmata</i> 🌿	hand fern	G4	S3		E	Y
Plants and Lichens	<i>Chionanthus pygmaeus</i> 🌿	pygmy fringe tree	G2G3	S2S3	E	E	Y
Plants and Lichens	<i>Chrysopsis floridana</i> 🌿	Florida goldenaster	G3	S3	E, PDL	E	Y

Plants and Lichens	<i>Glandularia tampensis</i> 🌿	Tampa vervain	G2	S2		E	Y
Plants and Lichens	<i>Gymnopogon chapmanianus</i> 🌿	Chapman's skeletongrass	G3	S3		N	Y
Plants and Lichens	<i>Helianthus debilis</i> ssp. <i>vestitus</i> 🌿	hairy beach sunflower	G5T2	S2		N	Y
Plants and Lichens	<i>Hypoxis sessilis</i> 🌿	glossyseed yellow stargrass	G3	S2S3		N	Y
Plants and Lichens	<i>Lechea cernua</i> 🌿	nodding pinweed	G3	S3		T	Y
Plants and Lichens	<i>Lechea divaricata</i> 🌿	pine pinweed	G2	S2		E	Y
Plants and Lichens	<i>Lythrum flagellare</i> 🌿	lowland loosestrife	G3	S3	UR	E	Y
Plants and Lichens	<i>Matelea floridana</i> 🌿	Florida spiny-pod	G2	S2		E	Y
Plants and Lichens	<i>Meniscium serratum</i> 🌿	toothed maiden fern	G5	S1		E	Y
Plants and Lichens	<i>Nolina brittoniana</i> 🌿	Britton's beargrass	G3	S3	E	E	Y
Plants and Lichens	<i>Pecluma dispersa</i> 🌿	widespread polypody	G5	S2		E	Y
Plants and Lichens	<i>Pecluma plumula</i> 🌿	plume polypody	G5	S2		E	Y
Plants and Lichens	<i>Pecluma ptilodon</i> var. <i>bourgeauana</i> 🌿	comb polypody	G5? TNR	S2		E	Y
Plants and Lichens	<i>Protocodon robiniae</i> 🌿	Brooksville bellflower	G1	S1	E	E	Y

Plants and Lichens	<i>Rhynchospora megaplumosa</i> 	large-plumed beaksedge	G2	S2		E	Y
Plants and Lichens	<i>Schizachyrium niveum</i> 	scrub bluestem	G1G2	S1S2		E	Y
Plants and Lichens	<i>Schwalbea americana</i> 	chaffseed	G2	S1	E	E	Y
Plants and Lichens	<i>Stachys agraria</i> 	shade betony	G5	S1		N	Y
Plants and Lichens	<i>Tephrosia corallicola</i> 	rockland hoary-pea	G1	S1		E	Y
Plants and Lichens	<i>Tephrosia curtissii</i> 	Curtiss's hoary-pea	G1	S1		E	Y
Plants and Lichens	<i>Triphora amazonica</i> 	broad-leaved nodding-caps	GU	S1		E	Y
Plants and Lichens	<i>Vachellia tortuosa</i> 	poponax	G4G5	S1		E	Y
Plants and Lichens	<i>Zephyranthes simpsonii</i> 	redmargin zephyrlily	G2G3	S2S3		T	Y

## Invertebrates

Group	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Tracked?
Clams and Mussels	<i>Utterbackia peninsularis</i> ☞	Peninsular Floater	G2G3	S2S3		N	Y
Clams and Mussels	<i>Villosa amygdala</i> ☞	Florida Rainbow	G3	S3		N	Y
Mayflies	<i>Attenella attenuata</i> ☞	Hirsute Mayfly	G5	S1S2		N	Y
Mayflies	<i>Stenacron floridense</i> ☞	A Mayfly	G3G4	S3S4		N	Y
Dragonflies and Damselflies	<i>Dromogomphus armatus</i> ☞	Southeastern Spinyleg	G4	S3		N	Y
Dragonflies and Damselflies	<i>Gomphurus modestus</i> ☞	Gulf Coast Clubtail	G3G4	S1		N	Y
Dragonflies and Damselflies	<i>Leptobasis lucifer</i> ☞	Lucifer Swampdamselfly	G4G5	S2		N	Y
Dragonflies and Damselflies	<i>Lestes tenuatus</i> ☞	Blue-striped Spreadwing	G5	S3		N	Y
Grasshoppers and Allies	<i>Typhloceuthophilus floridanus</i> ☞	Blind Pocket Gopher Cave Cricket	G2	S2		N	Y
Beetles	<i>Aphodius aegrotus</i> ☞	Small Pocket Gopher Aphodius Beetle	G3G4	S3?		N	Y
Beetles	<i>Aphodius laevigatus</i> ☞	Large Pocket Gopher Aphodius Beetle	G3G4	S3?		N	Y
Beetles	<i>Bolbocerosoma hamatum</i> ☞	Bicolored Burrowing Scarab Beetle	G3G4	S3		N	Y
Beetles	<i>Chelyoxenus xerobatis</i> ☞	Gopher Tortoise Hister Beetle	G2G3	S2		N	Y



Beetles	<i>Haroldiataenius saramari</i> <sup>®</sup>	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4		N	Y
Beetles	<i>Hypotrichia spissipes</i> <sup>®</sup>	Florida Hypotrichia Scarab Beetle	G3G4	S3S4		N	Y
Beetles	<i>Ischyrys dunedinensis</i> <sup>®</sup>	Three Spotted Pleasing Fungus Beetle	G2G3	S2S3		N	Y
Beetles	<i>Micronaspis floridana</i> <sup>®</sup>	Florida Intertidal Firefly	G3?	S3		N	Y
Beetles	<i>Onthophagus polyphemi polyphemi</i> <sup>®</sup>	Punctate Gopher Tortoise Onthophagus Beetle	G2G3T2T3	S2		N	Y
Beetles	<i>Peltotrupes profundus</i> <sup>®</sup>	Florida Deepdigger Scarab Beetle	G3	S3		N	Y
Beetles	<i>Phyllophaga elongata</i> <sup>®</sup>	Elongate June Beetle	G3	S3		N	Y
Beetles	<i>Selonodon mandibularis</i> <sup>®</sup>	Large-Jawed Cebrioid Beetle	G2G4	S2S4		N	Y
Caddisflies	<i>Hydroptila bernerii</i> <sup>®</sup>	Berner's Microcaddisfly	G4G5	S3		N	Y
Caddisflies	<i>Hydroptila wakulla</i> <sup>®</sup>	Wakulla Springs Vari-colored Microcaddisfly	G2	S2		N	Y
Caddisflies	<i>Ochrotrichia provosti</i> <sup>®</sup>	Provost's Somber Caddisfly	GH	SH		N	Y
Caddisflies	<i>Orthotrichia curta</i> <sup>®</sup>	Short Orthotrichian Microcaddisfly	G4	S2S3		N	Y
Caddisflies	<i>Orthotrichia dentata</i> <sup>®</sup>	Dentate Orthotrichian Microcaddisfly	G2G3	S2		N	Y


Caddisflies	<i>Oxyethira florida</i> <sup>®</sup>	Florida Cream and Brown Microcaddisfly	G2	S2		N	Y
Caddisflies	<i>Triaenodes furcellus</i> <sup>®</sup>	Little-fork Triaenode Caddisfly	G3	S3		N	Y
Butterflies and Moths	<i>Aphrissa statira</i> <sup>®</sup>	Statira	G5	S2S3		N	Y
Butterflies and Moths	<i>Euphyes dukesi calhouni</i> <sup>®</sup>	Calhoun's Skipper	G3G4T2T3	S2S3	UR	N	Y
Butterflies and Moths	<i>Idia gopheri</i> <sup>®</sup>	Gopher Tortoise Noctuid Moth	G2G3	S2S3		N	Y
Ants, Bees, and Wasps	<i>Bombus fraternus</i> <sup>®</sup>	Southern Plains Bumble Bee	G3G4	S3		N	Y
Ants, Bees, and Wasps	<i>Colletes titusensis</i> <sup>®</sup>	A Cellophane Bee	G2G3	S2S3		N	Y
Ants, Bees, and Wasps	<i>Stelis ater</i> <sup>®</sup>	Southwest Florida Stelis Bee	G2	S2		N	Y

## Vertebrates

Group	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Tracked?
Fishes	<i>Microphis brachyurus</i> <sup>Ⓢ</sup>	Opossum Pipefish	G4G5	S2	SC	N	Y
Amphibians	<i>Lithobates capito</i> <sup>Ⓢ</sup>	Gopher Frog	G2G3	S3	UR	N	Y
Reptiles	<i>Alligator mississippiensis</i> <sup>Ⓢ</sup>	American Alligator	G5	S4	SAT	FT(S/A)	Y
Reptiles	<i>Caretta caretta</i> <sup>Ⓢ</sup>	Loggerhead Sea Turtle	G3	S3	T	FT	Y
Reptiles	<i>Chelonia mydas</i> <sup>Ⓢ</sup>	Green Sea Turtle	G3	S2S3	T	FT	Y
Reptiles	<i>Crotalus adamanteus</i> <sup>Ⓢ</sup>	Eastern Diamondback Rattlesnake	G3	S3	UR	N	Y
Reptiles	<i>Dermochelys coriacea</i> <sup>Ⓢ</sup>	Leatherback Sea Turtle	G2	S2	E	FE	Y
Reptiles	<i>Drymarchon couperi</i> <sup>Ⓢ</sup>	Eastern Indigo Snake	G3	S2?	T	FT	Y
Reptiles	<i>Gopherus polyphemus</i> <sup>Ⓢ</sup>	Gopher Tortoise	G3	S3		ST	Y
Reptiles	<i>Heterodon simus</i> <sup>Ⓢ</sup>	Southern Hognose Snake	G2	S2S3		N	Y
Reptiles	<i>Lampropeltis extenuata</i> <sup>Ⓢ</sup>	Short-tailed Snake	G3	S3	PT	ST	Y
Reptiles	<i>Lampropeltis floridana</i> <sup>Ⓢ</sup>	Florida Kingsnake	G2	S2		N	Y
Reptiles	<i>Pituophis melanoleucus</i> <sup>Ⓢ</sup>	Pine Snake	G4	S3	UR	ST	Y
Reptiles	<i>Plestiodon egregius pop. 1</i> <sup>Ⓢ</sup>	Mole Skink, Egmont Key population	G5T1Q	S1		N	Y

Reptiles	<i>Pseudemys concinna suwanniensis</i> ☼	Suwannee Cooter	G5T3	S3		N	Y
Birds	<i>Antigone canadensis pratensis</i> ☼	Florida Sandhill Crane	G5T2	S2		ST	Y
Birds	<i>Aphelocoma coerulescens</i> ☼	Florida Scrub-Jay	G1G2	S1S2	T	FT	Y
Birds	<i>Aramus guarauna</i> ☼	Limpkin	G5	S3		N	Y
Birds	<i>Athene cunicularia floridana</i> ☼	Florida Burrowing Owl	G4T3	S3		ST	Y
Birds	<i>Buteo brachyurus</i> ☼	Short-tailed Hawk	G4G5	S1		N	Y
Birds	<i>Charadrius nivosus</i> ☼	Snowy Plover	G3	S1		ST	Y
Birds	<i>Egretta caerulea</i> ☼	Little Blue Heron	G5	S4		ST	Y
Birds	<i>Egretta rufescens</i> ☼	Reddish Egret	G4	S2		ST	Y
Birds	<i>Egretta thula</i> ☼	Snowy Egret	G5	S3		N	Y
Birds	<i>Egretta tricolor</i> ☼	Tricolored Heron	G5	S4		ST	Y
Birds	<i>Eudocimus albus</i> ☼	White Ibis	G5	S4		N	Y
Birds	<i>Haematopus palliatus</i> ☼	American Oystercatcher	G5	S2		ST	Y
Birds	<i>Haliaeetus leucocephalus</i> ☼	Bald Eagle	G5	S3		N	Y
Birds	<i>Hydroprogne caspia</i> ☼	Caspian Tern	G5	S2		N	Y
Birds	<i>Mycteria americana</i> ☼	Wood Stork	G4	S2	DL	FT	Y

Birds	<i>Nyctanassa violacea</i> ☾	Yellow-crowned Night-heron	G5	S3		N	Y
Birds	<i>Nycticorax nycticorax</i> ☾	Black-crowned Night-heron	G5	S3		N	Y
Birds	<i>Pandion haliaetus</i> ☾	Osprey	G5	S3S4		N	Y
Birds	<i>Platalea ajaja</i> ☾	Roseate Spoonbill	G5	S2		ST	Y
Birds	<i>Plegadis falcinellus</i> ☾	Glossy Ibis	G5	S3		N	Y
Birds	<i>Rallus longirostris scottii</i> ☾	Florida Clapper Rail	G5T3?	S3?		N	Y
Birds	<i>Rynchops niger</i> ☾	Black Skimmer	G5	S3		ST	Y
Birds	<i>Sternula antillarum</i> ☾	Least Tern	G4	S3		ST	Y
Birds	<i>Thalasseus maximus</i> ☾	Royal Tern	G5	S3		N	Y
Birds	<i>Thalasseus sandvicensis</i> ☾	Sandwich Tern	G5	S2		N	Y
Mammals	<i>Eptesicus fuscus</i> ☾	Big Brown Bat	G5	S3		N	Y
Mammals	<i>Mustela frenata peninsulæ</i> ☾	Florida Long-tailed Weasel	G5T3?	S3?		N	Y
Mammals	<i>Podomys floridanus</i> ☾	Florida Mouse	G3	S3		N	Y
Mammals	<i>Sciurus niger niger</i> ☾	Southeastern Fox Squirrel	G5T5	S3		N	Y
Mammals	<i>Trichechus manatus latirostris</i> ☾	Florida Manatee	G2G3T2	S2S3	T	N	Y

Mammals	<i>Ursus americanus floridanus</i> 	Florida Black Bear	G5T4	S4		N	Y
---------	--	-----------------------	------	----	--	---	---

## Natural Communities

Group	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Tracked?
Natural Communities	<i>Beach dune</i>		G3	S2		N	Y
Natural Communities	<i>Coastal grassland</i>		G3	S2		N	Y
Natural Communities	<i>Estuarine composite substrate</i>		G3	S3		N	Y
Natural Communities	<i>Estuarine consolidated substrate</i>		G3	S3		N	Y
Natural Communities	<i>Estuarine unconsolidated substrate</i>		G5	S5		N	Y
Natural Communities	<i>Hydric hammock</i>		G4	S4		N	Y
Natural Communities	<i>Mangrove swamp</i>		G5	S4		N	Y
Natural Communities	<i>Marine mollusk reef</i>		G3	S3		N	Y
Natural Communities	<i>Marine seagrass bed</i>		G3	S2		N	Y
Natural Communities	<i>Maritime hammock</i>		G3	S2		N	Y
Natural Communities	<i>Mesic flatwoods</i>		G4	S4		N	Y
Natural Communities	<i>Salt marsh</i>		G5	S4		N	Y
Natural Communities	<i>Sandhill</i>		G3	S2		N	Y
Natural Communities	<i>Scrub</i>		G2	S2		N	Y

# ESI Marine Mammal Habitat Areas

FWC GIS Librarian  
Florida Fish and Wildlife Conservation Commission

## Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

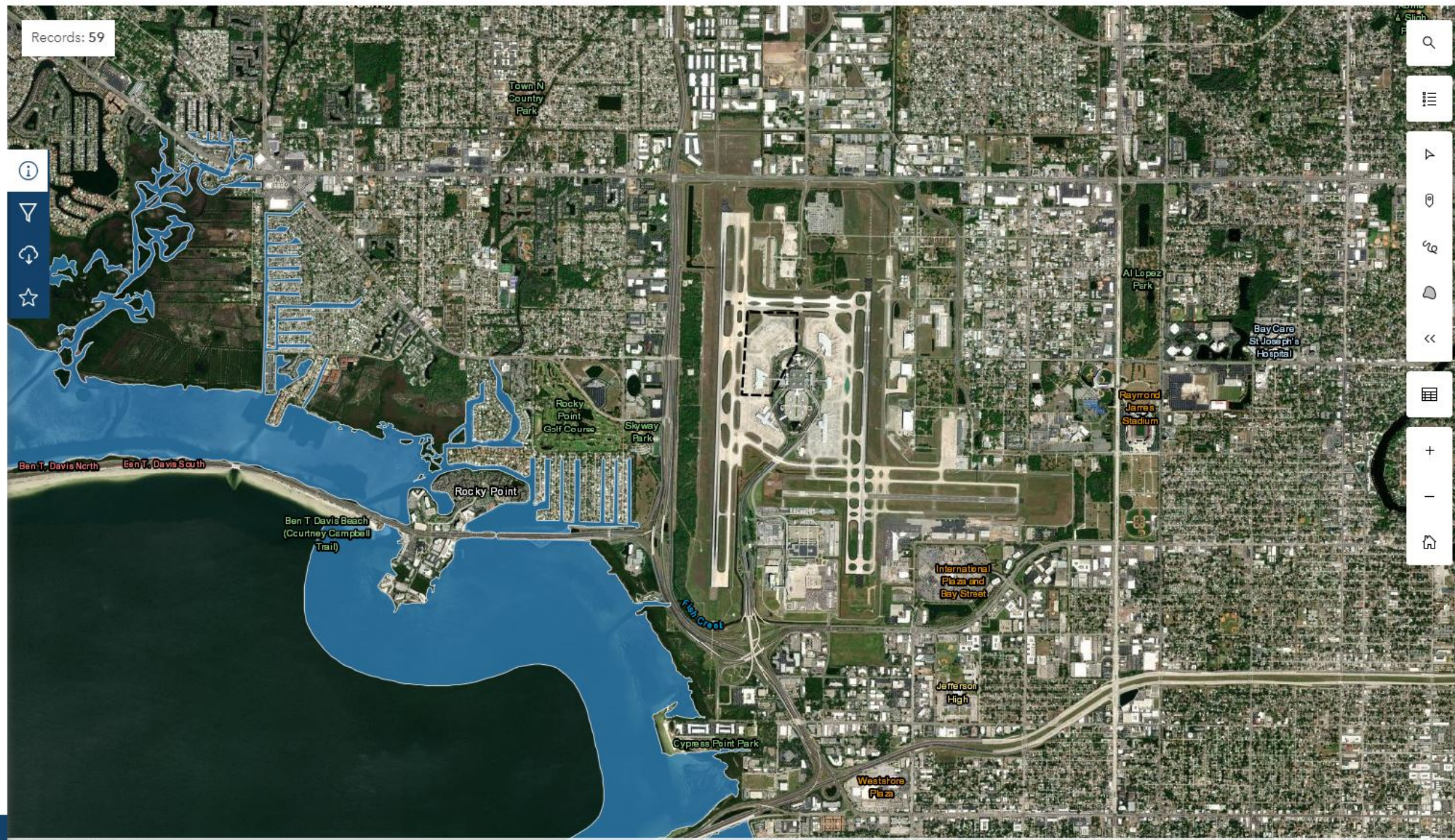
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## ESI Marine Mammal Habitat Areas



FWC GIS Librarian  
Florida Fish and Wildlife Conservation Commission

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### Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

This data set contains sensitive biological resource data for manatees, whales, and dolphins in South Florida (2013), Panhandle Florida (2012), and the rest of Florida (2003). The data were originally delivered as coverages with a region polygon format which allowed overlaps, representing describe marine mammal distributions. These overlapping polygons are retained in the final geodatabase feature classes. Species specific abundance, seasonality, status, life history, and source ID information have been joined to the attribute table. Source details are stored in a separate related SOURCES data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Florida. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. Environmental Sensitivity Index (ESI) is more properly known as "Sensitivity of Coastal Habitats and Wildlife to Spilled Oil" Atlases. The term "ESI" is often used in reference to the whole dataset, but the term "ESI" is really a reference to the classification system of shoreline types known as Environmental Sensitivity Index, that classifies a shoreline on a scale from 1 to 10 based upon overall sensitivity to spilled oil. FWRI contracted out updates to Florida's ESI data for the Panhandle and South Florida in the years 2010 through early 2013. These datasets were delivered as coverages in region-polygon format that allow for overlapping polygons in the same manner as FWRI's older ESI GIS data (in Gulf-Wide Information System (GWIS) format/specification). Hundreds of new species were added and the regional products were completed and delivered as promised. However, FWRI wanted and needed a statewide product for use within the Marine Resources Geographic Information System (MRGIS) and the Florida Marine Spill Analysis System (FMSAS). This data set is a compilation of the most recent ESI mapping for each area of Florida.

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**FWC GIS Librarian**  
Florida Fish and Wildlife Conservation Commission

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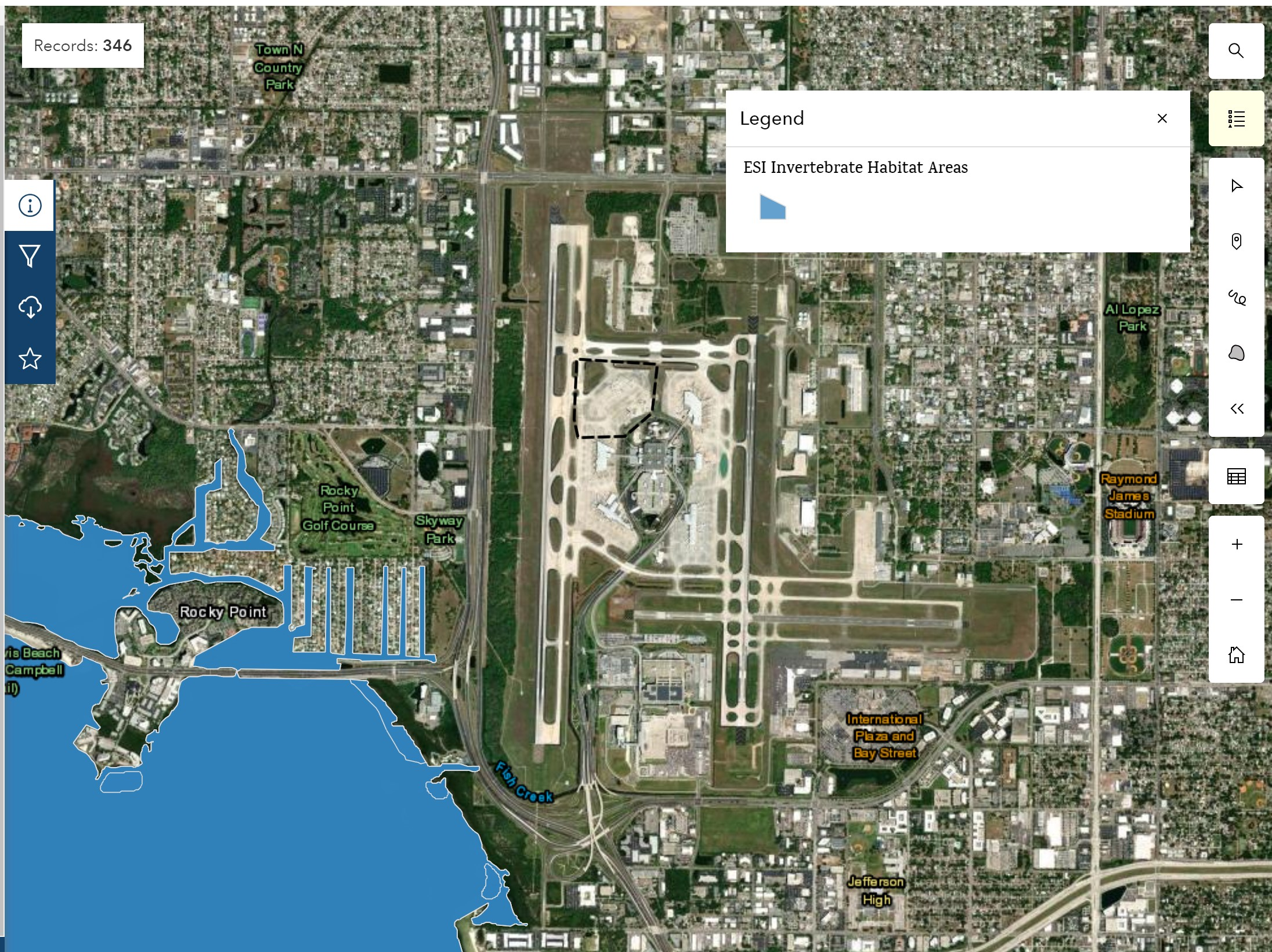
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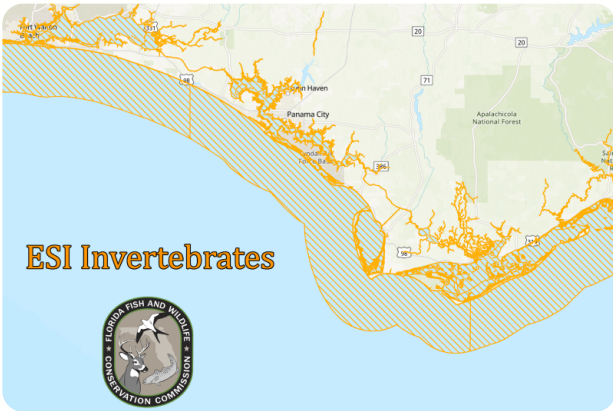
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### Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

This data set contains sensitive biological resource data for marine and estuarine invertebrate species in South Florida (2013), Panhandle Florida (2012), and the rest of Florida (2003). The data were originally delivered as coverages with a region polygon format which allowed overlaps, representing invertebrate distribution and concentration areas. These overlapping polygons are retained in the final geodatabase feature classes. Species specific abundance, seasonality, status, life history, and source ID information have been joined to the attribute table. Source details are stored in a separate related SOURCES data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Florida. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. Environmental Sensitivity Index (ESI) is more properly known as "Sensitivity of Coastal Habitats and Wildlife to Spilled Oil" Atlases. The term "ESI" is often used in reference to the whole dataset, but the term "ESI" is really a reference to the classification system of shoreline types known as Environmental Sensitivity Index, that classifies a shoreline on a scale from 1 to 10 based upon overall sensitivity to spilled oil. FWRI contracted out updates to Florida's ESI data for the Panhandle and South Florida in the years 2010 through early 2013. These datasets were delivered as coverages in region-polygon format that allow for overlapping polygons in the same manner as FWRI's older ESI GIS data (in Gulf-Wide Information System (GWIS) format/specification). Hundreds of new species were added and the regional products were completed and delivered as promised. However, FWRI wanted and needed a statewide product for use within the Marine Resources Geographic Information System (MRGIS) and the Florida Marine Spill Analysis System (FMSAS). This data set is a compilation of the most recent ESI mapping for each area of Florida.

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## Summary

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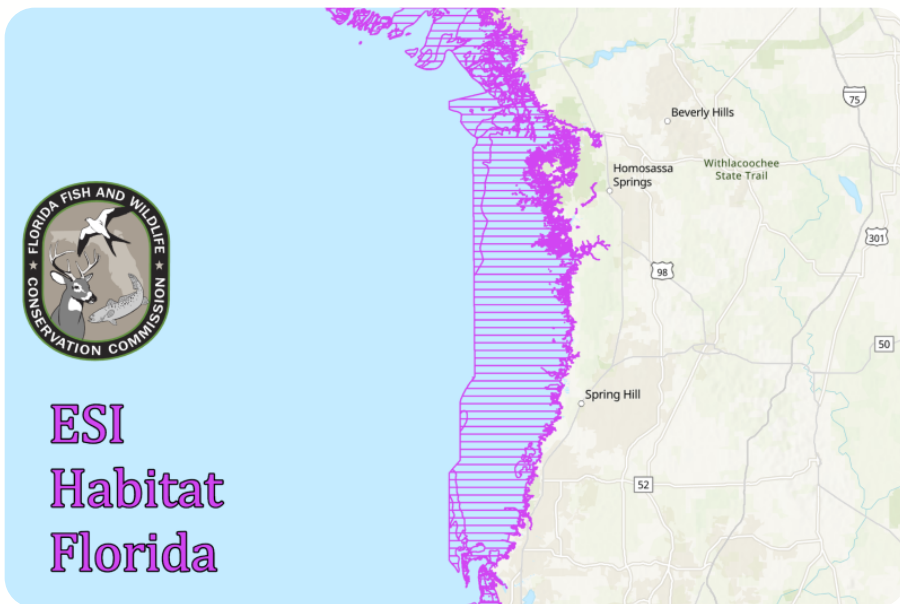
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## ESI Habitat Regions in Florida



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### Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

This data set contains sensitive biological resource data for threatened/endangered/rare terrestrial plants and communities in South Florida (2013), Panhandle Florida (2012), and the Saint Johns River (2003). The data were originally delivered as coverages with a region polygon format which allowed overlaps, representing plants and communities geodata. These overlapping polygons are retained in the final geodatabase feature classes. Benthic habitats information are included in the HABITATS layer for the areas outside of the Panhandle and South Florida areas that were updated in 2010-2013. Please see the BENTHIC feature class within the larger Statewide Composite ESI geodata for benthic habitats in South Florida and the Panhandle. Species specific abundance, seasonality, status, life history, and source ID information have been joined to the attribute table. Source details are stored in a separate related SOURCES data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Florida. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. Environmental Sensitivity Index (ESI) is more properly known as "Sensitivity of

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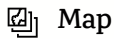
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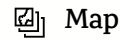
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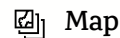


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# ESI Reptile Habitat Areas

FWC GIS Librarian  
Florida Fish and Wildlife Conservation Commission

## Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

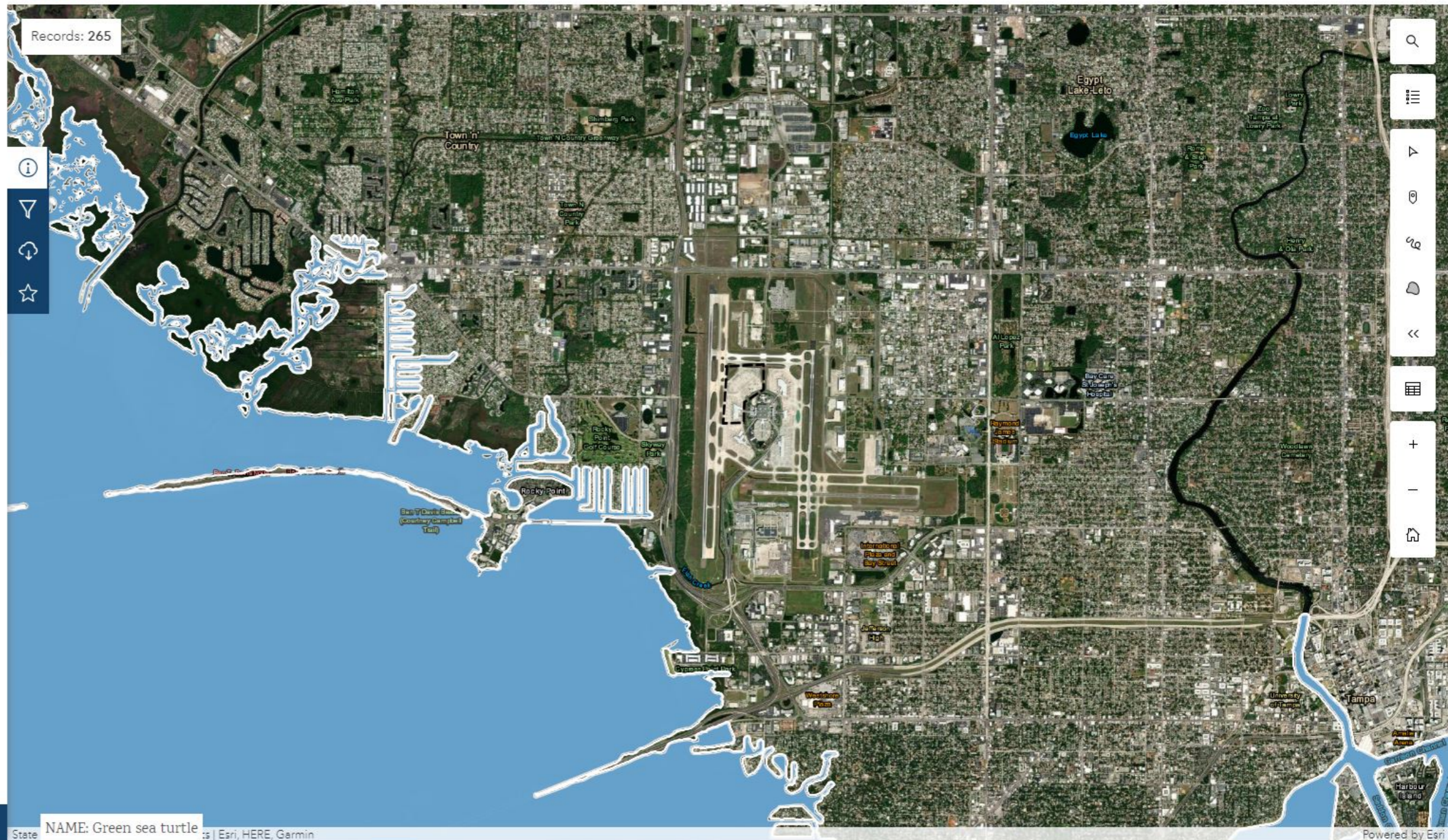
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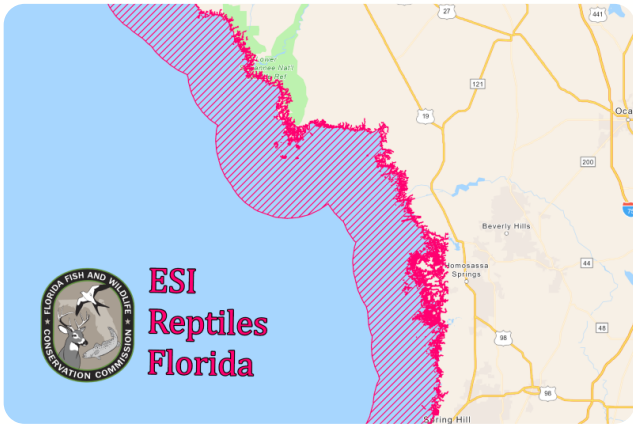
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State NAME: Green sea turtle Esri, HERE, Garmin





## ESI Reptile Habitat Areas



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Florida Fish and Wildlife Conservation Commission

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### Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

This data set contains sensitive biological resource data for sea turtles, crocodiles, mangrove terrapins, and other rare species in South Florida (2013), Panhandle Florida (2012), and the rest of Florida (2003). The data were originally delivered as coverages with a region polygon format which allowed overlaps, representing reptile distribution and nesting areas. These overlapping polygons are retained in the final geodatabase feature classes. Species specific abundance, seasonality, status, life history, and source ID information have been joined to the attribute table. Source details are stored in a separate related SOURCES data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Florida. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also REPTILES\_PT for additional information on reptiles. Environmental Sensitivity Index (ESI) is more properly known as "Sensitivity of Coastal Habitats and Wildlife to Spilled Oil" Atlases. The term "ESI" is often used in reference to the whole dataset, but the term "ESI" is really a reference to the classification system of shoreline types known as Environmental Sensitivity Index, that classifies a shoreline on a scale from 1 to 10 based upon overall sensitivity to spilled oil. FWRI contracted out updates to Florida's ESI data for the Panhandle and South Florida in the years 2010 through early 2013. These datasets were delivered as coverages in region-polygon format that allow for overlapping polygons in the same manner as FWRI's older ESI GIS data (in Gulf-Wide Information System (GWIS) format/specification). Hundreds of new species were added and the regional products were completed and delivered as promised. However, FWRI wanted and needed a statewide product for use within the Marine Resources Geographic Information System (MRGIS) and the Florida Marine Spill Analysis System (FMSAS). This data set is a compilation of the most recent ESI mapping for each area of Florida.

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# ESI Land Mammal Habitat Areas

FWC GIS Librarian  
Florida Fish and Wildlife Conservation Commission

## Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

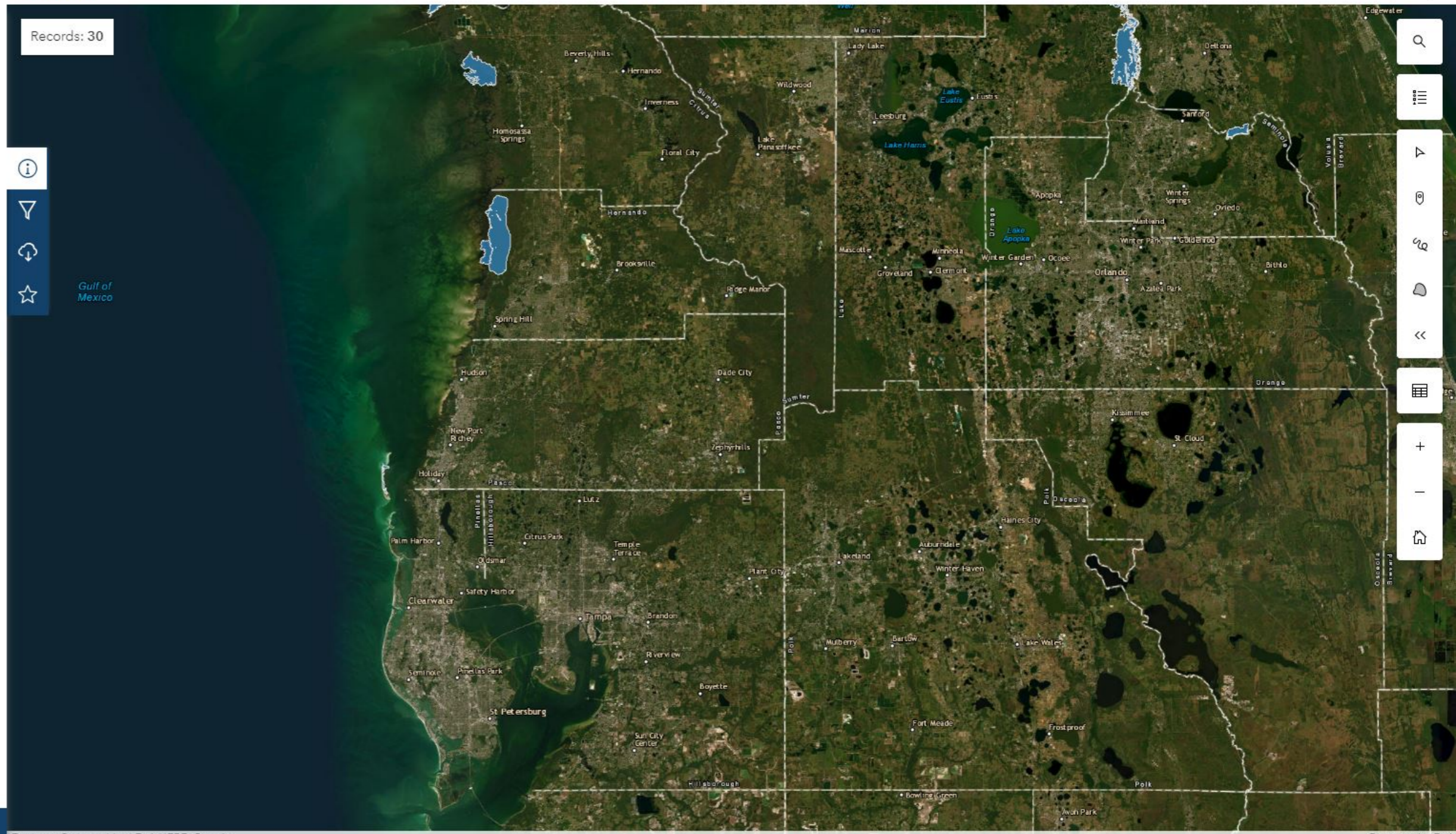
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## ESI Land Mammal Habitat Areas



FWC GIS Librarian  
Florida Fish and Wildlife Conservation Commission

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### Summary

To visually represent the most recent Environmental Sensitivity Index data available for each area within the state of Florida.

This data set contains sensitive biological resource data for State and Federally threatened and endangered terrestrial mammals in South Florida (2013), Panhandle Florida (2012), and the rest of Florida (2003). The data were originally delivered as coverages with a region polygon format which allowed overlaps, representing State and Federally threatened and endangered terrestrial mammal distribution. These overlapping polygons are retained in the final geodatabase feature classes. Species specific abundance, seasonality, status, life history, and source ID information have been joined to the attribute table. Source details are stored in a separate related SOURCES data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Florida. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. Environmental Sensitivity Index (ESI) is more properly known as "Sensitivity of Coastal Habitats and Wildlife to Spilled Oil" Atlases. The term "ESI" is often used in reference to the whole dataset, but the term "ESI" is really a reference to the classification system of shoreline types known as Environmental Sensitivity Index, that classifies a shoreline on a scale from 1 to 10 based upon overall sensitivity to spilled oil. FWRI contracted out updates to Florida's ESI data for the Panhandle and South Florida in the years 2010 through early 2013. These datasets were delivered as coverages in region-polygon format that allow for overlapping polygons in the same manner as FWRI's older ESI GIS data (in Gulf-Wide Information System (GWIS) format/specification). Hundreds of new species were added and the regional products were completed and delivered as promised. However, FWRI wanted and needed a statewide product for use within the Marine Resources Geographic Information System (MRGIS) and the Florida Marine Spill Analysis System (FMSAS). This data set is a compilation of the most recent ESI mapping for each area of Florida.

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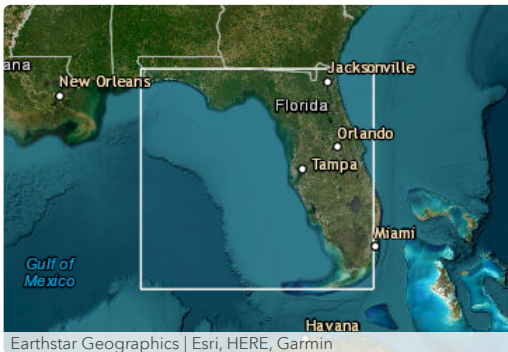


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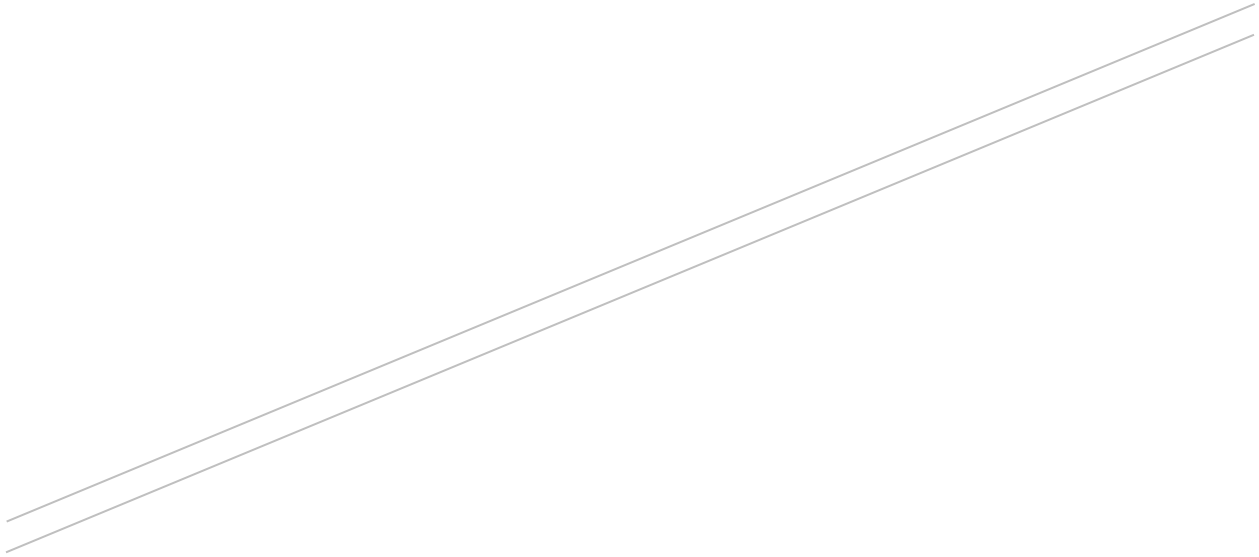
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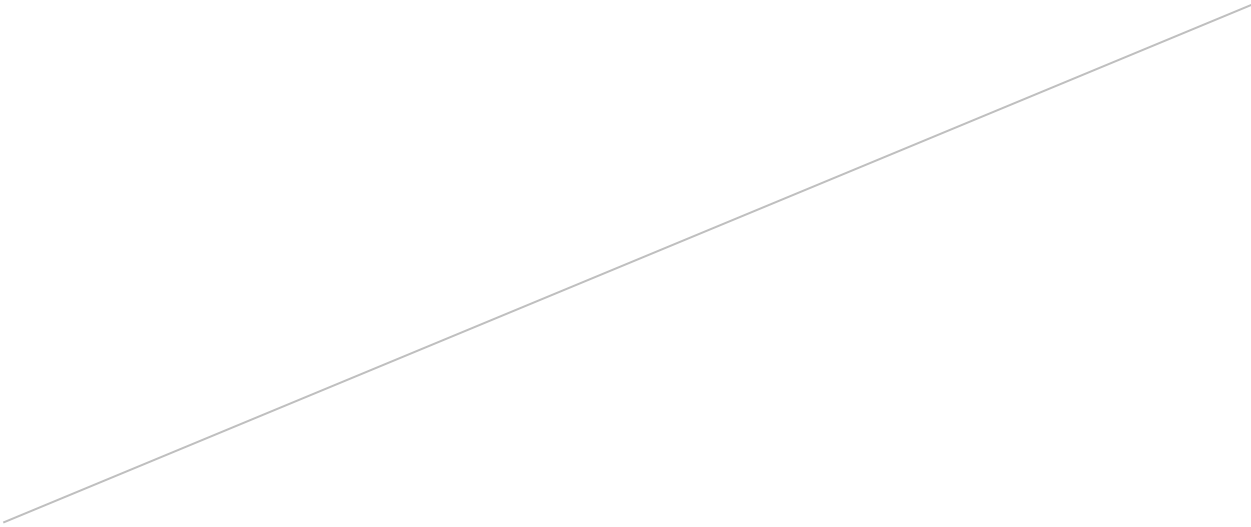
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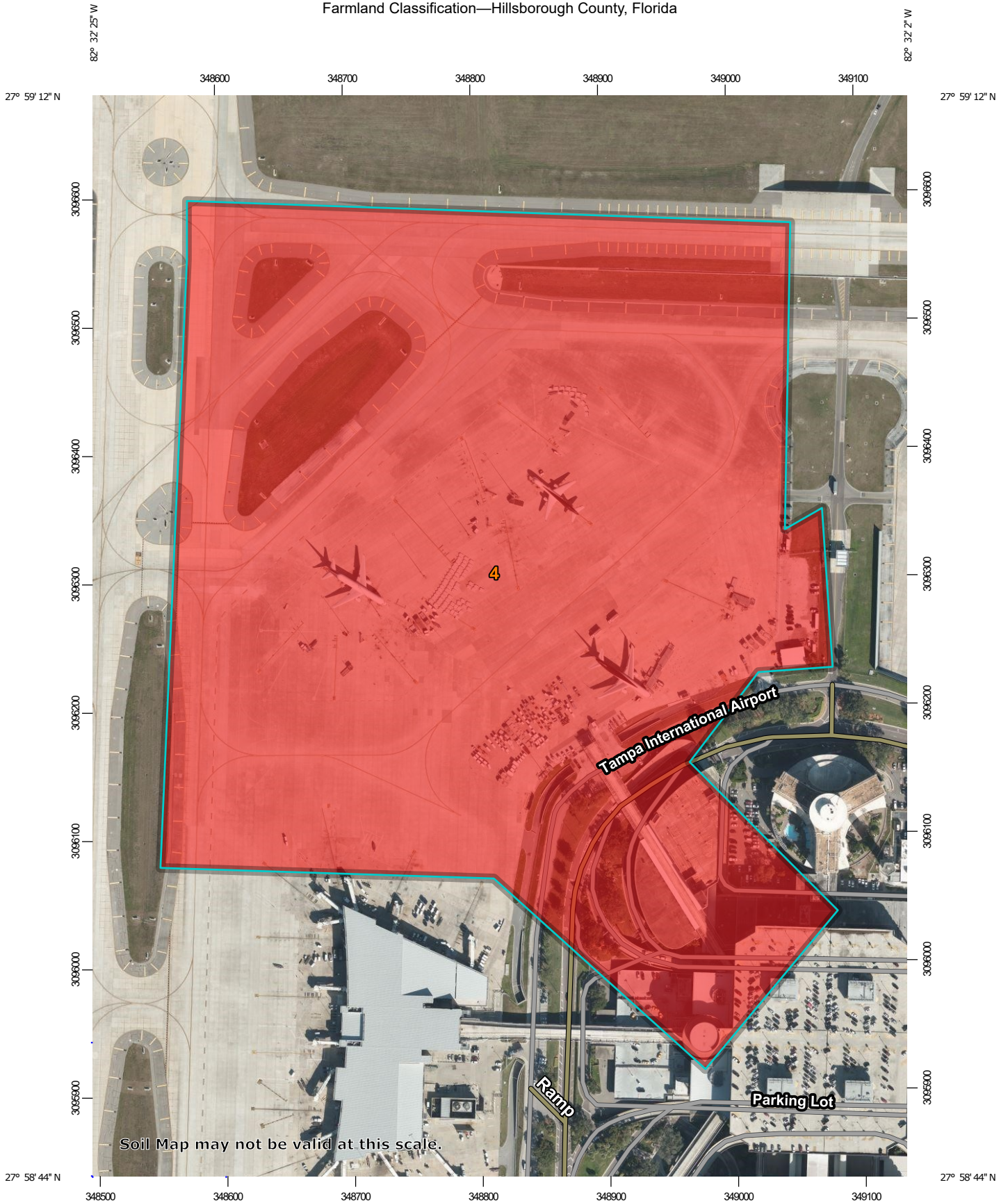




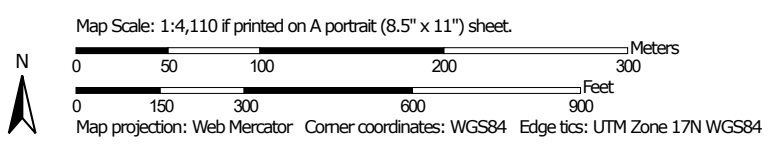
*APPENDIX E*  
*FARMLANDS*



Farmland Classification—Hillsborough County, Florida




Soil Map may not be valid at this scale.











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**Area of Interest (AOI)**






 Area of Interest (AOI)








**Soils**



**Soil Rating Polygons**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60






































-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available






















**Soil Rating Lines**

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Farmland Classification—Hillsborough County, Florida

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	<b>Soil Rating Points</b>			Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough		All areas are prime farmland		Farmland of statewide importance
	Farmland of statewide importance, if drained		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if thawed		Prime farmland if drained		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season				Farmland of local importance		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated				Farmland of local importance, if irrigated		Prime farmland if irrigated		Farmland of statewide importance, if irrigated
							Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		
							Prime farmland if irrigated and drained		
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

Farmland Classification—Hillsborough County, Florida

<ul style="list-style-type: none"> <li> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</li> <li> Farmland of statewide importance, if irrigated and drained</li> <li> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</li> <li> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</li> <li> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</li> <li> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</li> <li> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</li> <li> Farmland of statewide importance, if warm enough</li> <li> Farmland of statewide importance, if thawed</li> <li> Farmland of local importance</li> <li> Farmland of local importance, if irrigated</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of unique importance</li> <li> Not rated or not available</li> </ul> <p><b>Water Features</b></p> <ul style="list-style-type: none"> <li> Streams and Canals</li> </ul> <p><b>Transportation</b></p> <ul style="list-style-type: none"> <li> Rails</li> <li> Interstate Highways</li> <li> US Routes</li> <li> Major Roads</li> <li> Local Roads</li> </ul> <p><b>Background</b></p> <ul style="list-style-type: none"> <li> Aerial Photography</li> </ul>	<p>The soil surveys that comprise your AOI were mapped at 1:20,000.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service          Web Soil Survey URL:          Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Hillsborough County, Florida          Survey Area Data: Version 23, Aug 28, 2023</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Dec 6, 2018—Jan 30, 2022</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>
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## Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Arents, nearly level	Not prime farmland	66.2	100.0%
<b>Totals for Area of Interest</b>			<b>66.2</b>	<b>100.0%</b>

### Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

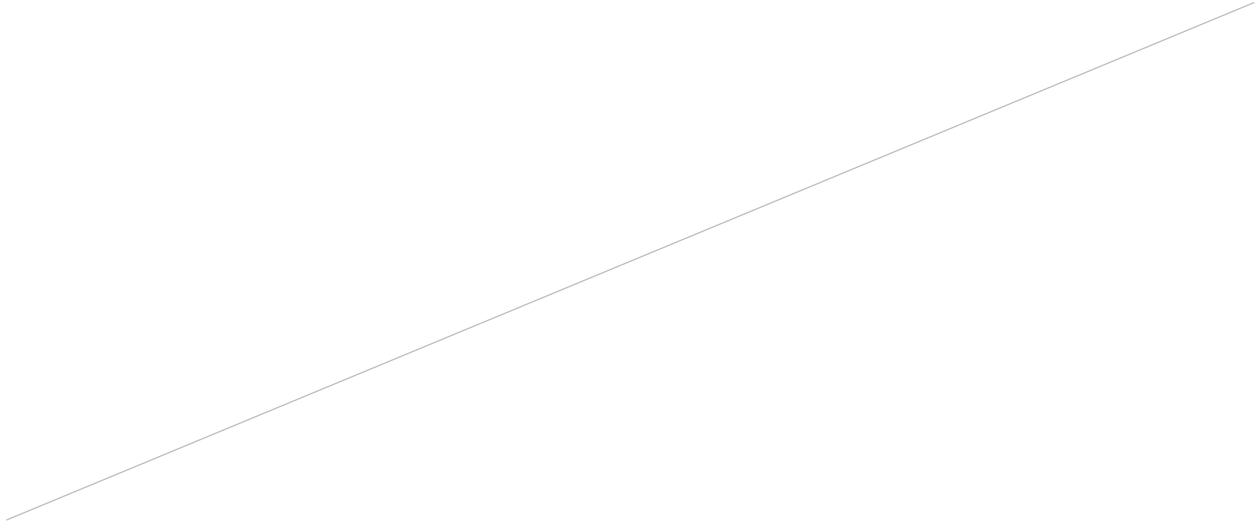
### Rating Options

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower



*APPENDIX F*  
*CULTURAL RESOURCE*  
*ASSESSMENT STUDY*







## FLORIDA DEPARTMENT *of* STATE

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Governor

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Secretary of State

Ms. Heather Chasez  
Federal Aviation Administration  
Orlando Airports District Office  
8427 South Park Circle, Suite 524  
Orlando, Florida 32819

February 20, 2024

Re: DHR Project No.: 2024-806  
*Federal Aviation Administration  
Construction and Operation of New Airside D at Tampa International Airport  
Tampa, Hillsborough County*

Dear Ms. Chasez:

This office reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*.

We note that the Tampa International Airport Resource Group (Florida Master Site File Number: HI14544) has previously been determined to meet the criteria for listing in the *National Register*.

Based on the information provided, this office concurs with your finding that the proposed undertaking will have no adverse effect on historic properties.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail [scott.edwards@dos.myflorida.com](mailto:scott.edwards@dos.myflorida.com), or at 850.245.6333 or 800.847.7278.

Sincerely,

Alissa Slade Lotane  
Director, Division of Historical Resources  
and State Historic Preservation Officer

**Division of Historical Resources**  
**R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399**  
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January 11, 2024

## Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport Hillsborough County, Florida

Tampa/Hillsborough County, Florida  
HCAA Project No.: 8500 23  
HCAA Work Order No.: 22-30A  
RS&H No.: 2041880062





**Cultural Resource  
Assessment Study for the  
Proposed New Airside D at  
Tampa International Airport**

January 11, 2024

City of Tampa/Hillsborough County, Florida

HCAA Project No.: 8500 23

HCAA Work Order No.: 22-30A

Prepared by RS&H, Inc. at the  
direction of Hillsborough County Aviation  
Authority

Assessment of Effects under 36 CFR 800.5:  
Mollie Olinyk, MS, Architectural Historian,  
The Mannik & Smith Group, Inc.

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## Executive Summary

This Cultural Resource Assessment Study (CRAS) presents the results of a cultural resources analysis completed for the Hillsborough County Aviation Authority (HCAA or Authority). This analysis was performed to supplement an Environmental Assessment (EA) being prepared by RS&H, Inc. for the proposed construction and operation of a new Airside D at Tampa International Airport (TPA or Airport) Airside D. The Federal Aviation Administration (FAA) Orlando Airports District Office (ADO) requested a CRAS to facilitate Section 106 coordination with the Florida Division of Historic Resources (FL DHR) pertaining to the Proposed Undertaking.

The HCAA proposes replacing the original Airside D with a new 563,000-square-foot Airside D (Proposed Undertaking). The HCAA is proposing improvements at the Airport that would meet projected passenger and airline (domestic and international) demand and proactively prevent near-future congestion.

The Area of Potential Effects (APE) is approximately 480 acres and consists of four existing airsides, portions of Runway 1L/19R and Runway 1R/19L, concrete apron area, vehicular roads (e.g., George Bean Parkway), taxiways, taxilanes,, stormwater drainage system, and mowed/maintained airfield turf.

The Airport was designed by Leigh Fisher Associates in consultation with the Authority. The design also included trams that transported passengers to the terminals, which had never been used in an airport, and an automated baggage system (Calise 2021; French and Hylton 2018). Construction was overseen by architect Ivan Smith of the Jacksonville-based architectural firm Reynolds, Smith & Hills (RS&H). The Airport was built in the Brutalist architectural style, with exposed concrete the primary structural material of its four distinct facades, and glass curtain walls that allowed for views of the runways. The Tampa International Airport was finished in April 1971 and cost over \$80 million (Calise 2021; French and Hylton 2018; FMSF 2018).

Florida Master Site File (FMSF) data was reviewed to identify previously recorded cultural resources within the APE and one mile of the Proposed Undertaking. Only one resource group is recorded within the APE (Tampa International Airport (Site ID HI14544). The Tampa International Airport (Site ID HI14544) is eligible for listing on the NRHP (SHPO, 2022).

The Proposed Undertaking occurs entirely on land previously disturbed and developed for aviation activities. The Proposed Undertaking's construction and operation would not directly or indirectly affect cultural resources (e.g., noise, air, visual). Based on an evaluation of the details of the Proposed Undertaking in conjunction with the research and analysis summarized in this CRAS, the FAA concluded that the Proposed Undertaking **will have no adverse effect** on historic properties (i.e., properties that are eligible for or listed on the NRHP).

This Cultural Resource Assessment Study (CRAS) presents the results of a cultural resources analysis completed by RS&H, Inc. for the Hillsborough County Aviation Authority (HCAA or Authority). This analysis was performed to supplement an Environmental Assessment (EA) being prepared by RS&H, Inc. for the proposed construction and operation of a new Airside D at Tampa International Airport (TPA or Airport) Airside D. The Federal Aviation Administration (FAA) Orlando Airports District Office (ADO) requested a CRAS to facilitate Section 106 coordination with the Florida Division of Historic Resources (FL DHR) pertaining to the proposed undertaking. This CRAS includes:

- » a description of the Proposed Undertaking
- » a description of the Proposed Undertaking's Purpose and Need
- » a description of the Area of Potential Effects (APE)
- » background research on the APE, including environmental characteristics,
- » a review of the Florida Master Site File (FMSF) database to identify previous cultural resource surveys and previously documented archaeological and historical resources,
- » descriptions of potential direct and indirect impacts,
- » a cultural context study (see **Attachment A**),
- » a review of historic aerial imagery and topographic maps (see **Attachments B and C**),
- » a architectural photo log (see **Attachment D**), and
- » the determination of effects.

The CRAS was prepared by David Alberts of RS&H. It has been reviewed by Mollie Olinyk, M.S., of The Mannik & Smith Group, Inc., who meets the Secretary of the Interior's professional qualifications (36 CFR 61) as an architectural historian. Ms. Olinyk is responsible for the assessment of effects under 36 CFR 800.5 (see **Attachment E**).

## 1 Background

The Authority has undertaken an Environmental Assessment (EA) for the construction and operation of a new passenger handling area, Airside D (i.e., Proposed Undertaking) at the Airport. The EA is being prepared pursuant to the National Environmental Policy Act of 1969 (NEPA) and in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

The original Airside D had a Y-shaped footprint, and its two concourses could accommodate 10 Boeing 727-200 aircraft. Airside D ceased operation in 2005 because it exceeded its useful life, and airlines relocated to the then-new Airside C. The previous Airside D was the last of the original airside and was demolished in 2007 (see **Figure 1**).

**Figure 1: Airside D – 2005 and 2022 Aerial Photographs\***



Sources: ESRI, 2022; RS&H, 2022



\*See **Attachment B** for additional historic aerials of this area.



Since then, improvements have been made to convert the former Airside D site into hardstands for airline and cargo aircraft parking. In 2022, UPS and Amazon cargo operations used the Hardstand D.<sup>1</sup>

## 1.1 Proposed Undertaking

The HCAA proposes replacing the original Airside D with a new Airside D. The HCAA proposes constructing and operating a 563,000-square-foot Airside D to meet its projected demand for operations and passengers (Proposed Undertaking). This includes a three-level airside and 16 contact gates with passenger boarding bridges. Additional project components that support the Proposed Undertaking include reconstruction of the apron, new hydrant fuel system, construction and operation of a 450-foot-long-dual-guideway automated people mover system (APM) to transport passengers to/from the new airside and main terminal, and an Airport-personnel vehicle parking area with an access gate connected to the existing Airport Access Road. The airside APM station would be outside the sterile airside zone. The APM stations have the capability to support up to a pair of two-car trains. Each car can carry 76 passengers. The APM maintenance facility would be located beneath the airside APM station. **Figure 2** shows the Proposed Undertaking and connected actions. **Figure 3** illustrates the Proposed Undertaking.

## 1.2 Project's Purpose and Need

The increasing demand for domestic and international flights necessitates the development of additional gates and associated airside passenger facilities to accommodate future growth effectively. The HCAA is proposing improvements at the Airport that would meet projected passenger and airline (domestic and international) demand and proactively prevent near-future congestion (i.e., Proposed Undertaking).

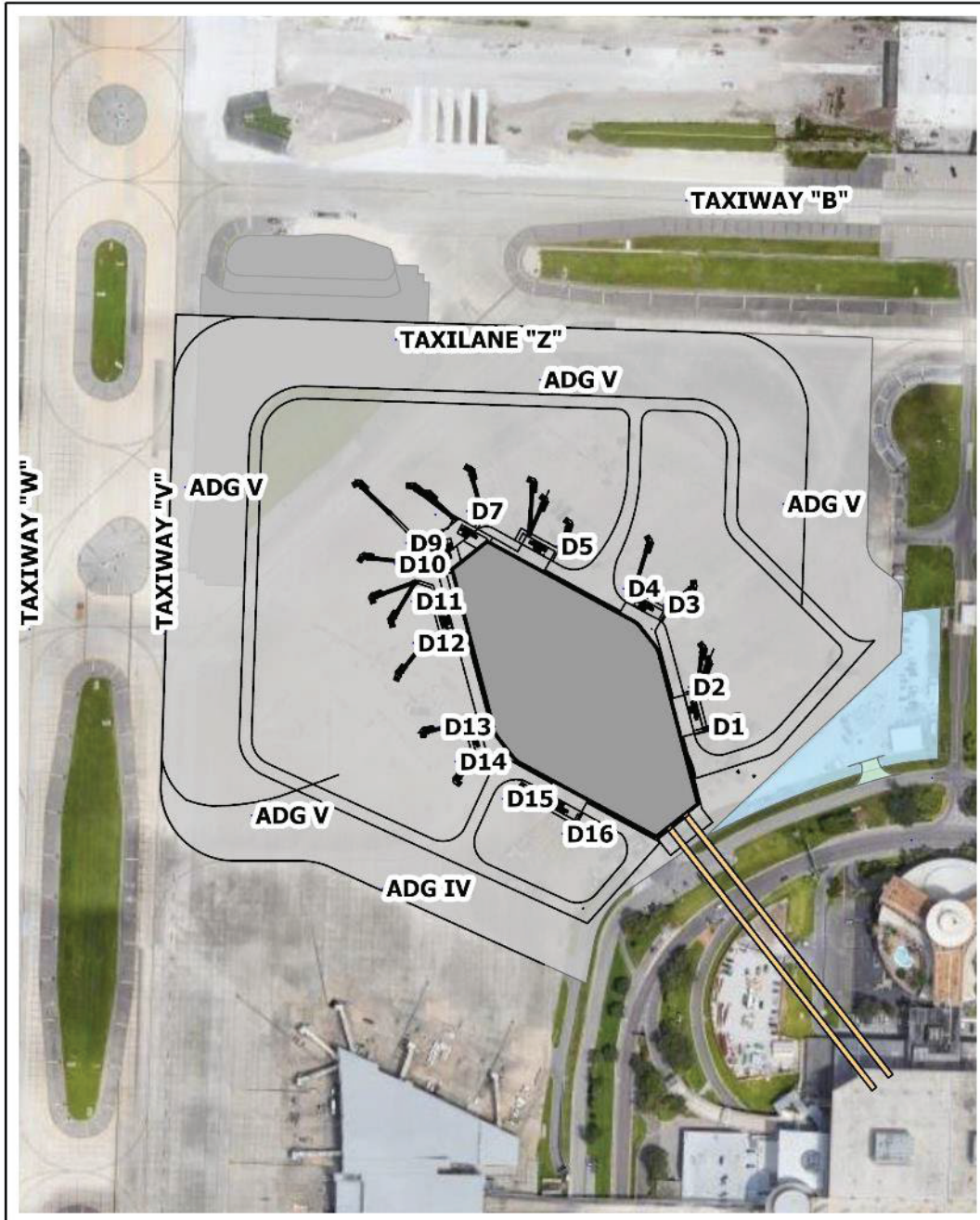
## 1.3 Area of Potential Effects and Existing Conditions

The Area of Potential Effects (APE) to historic resources for the Proposed Undertaking consists of the Main Terminal, including existing Airsides A, B, C, E and F and the former Hardstand D area (see **Figure 4**). The APE is approximately 480 acres and also includes portions of Runway 1L/19R and Runway 1R/19L, concrete apron area, vehicular roads (e.g., George Bean Parkway), taxiways, taxilanes,, stormwater drainage system, and mowed/maintained airfield turf.

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<sup>1</sup> A hardstand is an aircraft parking position that does not have equipment that connects it to a building.

**Figure 2: Proposed Undertaking**



Sources: HCAA 2022; ESRI 2022; RS&H 2022.

**Legend**

- Airside D
- Parking
- Apron
- Access Gate
- Automated People Mover



**Figure 3: Illustration of the Proposed Undertaking (Airside D)**




Source: HCAA, 2023.

**Figure 4: Area of Potential Effects**



Sources: Google Earth, 2024; RS&H, 2024

**Legend**

 Area of Potential Effects (APE)



The APE is within the Gulf Coastal Lowlands physiographic region (White 1970). This region comprises level to gently sloping and poorly drained terrain along the coastal margin. The topography of the area is characterized by broad marine terraces formed during episodes of interglacial sea level change during the Pleistocene and have been subsequently altered by wind erosion, surface hydrological processes, and subsidence of the underlying limestone bedrock (White 1970; Estabrook et al. 1990). The APE is within the Old Tampa Bay watershed and Lower Sweetwater Creek watershed.

One soil type is within the APE (U.S. Department of Agriculture Natural Resources Conservation Service [USDA NRCS] 2023). The USDA-mapped soil type is classified as Arents, nearly level. The Arents series is a fine sand series formed in altered marine deposits and typically found on rises on marine terraces. The soils of this series have been disturbed by human activities (USDA NCSS 2023a).

## 2 History of Tampa International Airport

In the 1920s, John H. Drew and Hugh C. MacFarlane built an airfield in Tampa. Named Drew Field, approximately 100,000 people attended the opening day celebration on February 22, 1928. Drew leased the 160-acre airfield to Tampa, eventually purchasing the property for \$11,654 (McMorrow-Hernandez 2021). Following its purchase by the city in 1934, several considerable improvements were completed at the field, including new runways, hangars, and lighting. These changes were financed primarily with federal funding through the Civil Works Administration and the Works Progress Administration (Drew Park Community Redevelopment Area and Hillsborough County Historical Advisory Council 2016).

The government leased the field as a sub-post to MacDill Army Airfield. Heavy bombers arrived at Drew Army Airfield in May 1940. The army converted Drew Field into a military base with over 3,000 new structures, which included barracks, an administration building, and hospital facilities. With the completion of MacDill, Drew became a separate base and headquarters for the Third Fighter Command. Throughout World War II, more than 100,000 combat aircrews trained at Drew Field (Drew Park Community Redevelopment Area and Hillsborough County Historical Advisory Council 2016; Florida Department of State 2023; McMorrow-Hernandez 2021). The base at the height of the war included 15 square miles (sq mi) and could accommodate 25,000 personnel. Training at Drew Field included large signal air warning and engineering aviation training for heavy bombers. Following the U.S. entry into the war, the airfield became the location of a German prisoner-of-war camp in August 1944. Housed initially at Camp Blanding, the German prisoners arrived at Drew Field to be laborers in quartermaster workshops, kitchens, canteens, and warehouses. This camp held 395 Germans from August 1944 to March 1946 (Florida Department of State, 2023).

At the war's end, the U.S. Army returned the airfield to the City of Tampa. The former base operations facilities building became the main passenger terminal as the field returned to use as

a municipal airport. By 1950, international flights utilized Drew Field, which prompted a name change to Tampa International Airport. The Authority formed shortly after that and began preparations to construct a new passenger terminal, which opened on August 17, 1952. Despite several expansions completed in the 1950s, the Airport quickly proved to be too small. In the 1960s, the Authority conducted a study to design a new terminal that would accommodate larger planes and an increase in passengers. Construction began in 1968, and business continued at the smaller terminal until completion (French and Hylton 2018; McMorrow-Hernandez 2021).

The new Airport was designed by Leigh Fisher Associates in consultation with the Authority. It was divided into landside and airside sections. Construction was overseen by architect Ivan Smith of the Jacksonville-based architectural firm Reynolds, Smith & Hills (RS&H). The new Tampa International Airport was finished in April 1971 and cost over \$80 million (Calise 2021; French and Hylton 2018; FMSF 2018).

Following the opening of the new terminal, portions of the older terminal were leased to Hillsborough Community College for teaching classrooms until 1974 (Sumberg 1972; Tampa Times 20 October 1975:11A). By 1975, plans for the demolition of the old building were announced following the departure of the last tenant, the National Weather Service (Seale 1975). Demolition began in October 1975 (Tampa Times 20 October 1975:11A). Most of the old Drew Field is now a part of the neighborhood called Drew Park (City of Tampa Department of Urban Development 2004).

See **Attachment B** for historic aerial photographs of the Airport. **Attachment C** includes historic USGS topographic maps.

### 3 Florida Master Site File Review

Florida Master Site File (FMSF) data was reviewed to identify previously recorded cultural resources within the APE and one mile of the Proposed Undertaking.

As shown in Figure 5, one resource group is recorded within the APE (Tampa International Airport (Site ID HI14544)). The Tampa International Airport (Site ID HI14544) is eligible for listing on the NRHP (SHPO, 2022). Tampa International Airport (HI14544) was recorded in 2018 by members of the University of Florida (UF) Historic Preservation Program during an architectural study that resulted in the publication of Florida's Mid-Century Modern Architecture (1945-1975), which highlighted the Airport's Brutalist architectural design<sup>2</sup> as one of 50 "Flagship Structures"

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<sup>2</sup> Brutalist architecture is a style of building design developed in the 1950s in the United Kingdom following World War II. With an emphasis on construction and raw materials, the aesthetic evolved as reconstruction efforts were underway in the post-war era. The style is characterized by raw, exposed concrete and bold geometric forms.

representing the character and scope of mid-century modern architecture in the state (French and Hylton 2018:11, 78).

Tampa International Airport introduced several technological innovations that are in use today. In the 1960s, the Authority studied designs for the best modern solution to overcrowding. The Authority decided to build a concept that split the Airport into landside (parking, ticketing, concessions) and airside (passenger holding areas, apron, taxiways, runways) that represented a hub and spoke system.

The landside's Brutalist-style main terminal (i.e., exposed concrete with bold geometric design) had four distinct facades, each three stories tall with glass curtain walls framed in concrete to provide airfield views. The main terminal interior used "graphic colors and wide swaths of carpeting in contrast to the honey-brown concrete and extensive bands of tinted glass." The Authority also contracted Florida sculptor Roy Butler to create dozens of metal sea birds appearing to fly in the open spaces.

Passengers would be transported from the main terminal to each airside via an automated people mover system (APM). The APM was the first significant airport application of this type of transit technology. Each air-conditioned shuttle was initially designed to transport up to 100 people. The Airport was also the first to use an automated baggage system. According to the UF Historic Preservation Program review of the main terminal, many extensive renovations have occurred. Still, the overall structure retains its architectural integrity (French and Hylton 2018:11, 78).

In 2018, Tampa International Airport (8HI14544) was determined eligible for inclusion in the NRHP due to its architectural style, integrity, and significant technological and design innovations (FMSF 2018). The significance is based on the National Register Criterion C, which represents "the distinct characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent significant and distinguishable entity whose components may lack individual distinction."

Five historic structures are recorded within one mile of the Proposed Undertaking (see **Table 1**). These include one private residence (8HI09995) and four commercial buildings (8HI14469, 8HI14615, 8HI14627, and 8HI14628). Four of the five historical structures within one mile of the Proposed Undertaking have been determined ineligible for inclusion in the NRHP, and one was not evaluated. The one structure not evaluated was a commercial building (8HI14615) built in 1970 that is part of a complex of contemporary buildings located at 5519 W. Hillsborough Avenue. None of these five historical structures are located within the APE.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

Table 1: Previously Recorded Historic Resources within One Mile of the Proposed Undertaking

8HI14628	Building 4, 5519 W. Hillsborough Ave.	Building - Commercial	1970	Historic Structure	Ineligible (2019)
8HI14615	Building 1, 5519 W. Hillsborough Ave.	Building - Commercial	1970	Historic Structure	Not evaluated
8HI14469	6005 Jarvis Street	Building – Commercial	1961	Historic Structure	Ineligible (2019)
8HI06719	Skyway Bike Trail	Campsite - Native American-Aceramic	n/a	Archaeological Site	Ineligible (2003)

Source: FMSF and SEARCH, Inc. 2023.



Two archaeological sites are recorded within one mile of the Project Undertaking (see **Figure 5** and **Table 1**). These include one pre-contact campsite site (8HI06719) and one site that is a pre-contact isolated lithic find (8HI03295). Neither of these archaeological sites are located within the APE.

## 4 Potential Direct and Indirect Effects

Since 1971, Tampa International Airport has continually been modified to provide aviation services to residents, visitors, and the economy of the Tampa Bay region. The original Airside D was operational from 1971 to 2005 and was demolished in 2007. As described in the following sections, no other listed or eligible for listing cultural resources would be directly or indirectly affected by the Proposed Undertaking other than the Tampa International Airport (Site ID HI14544).

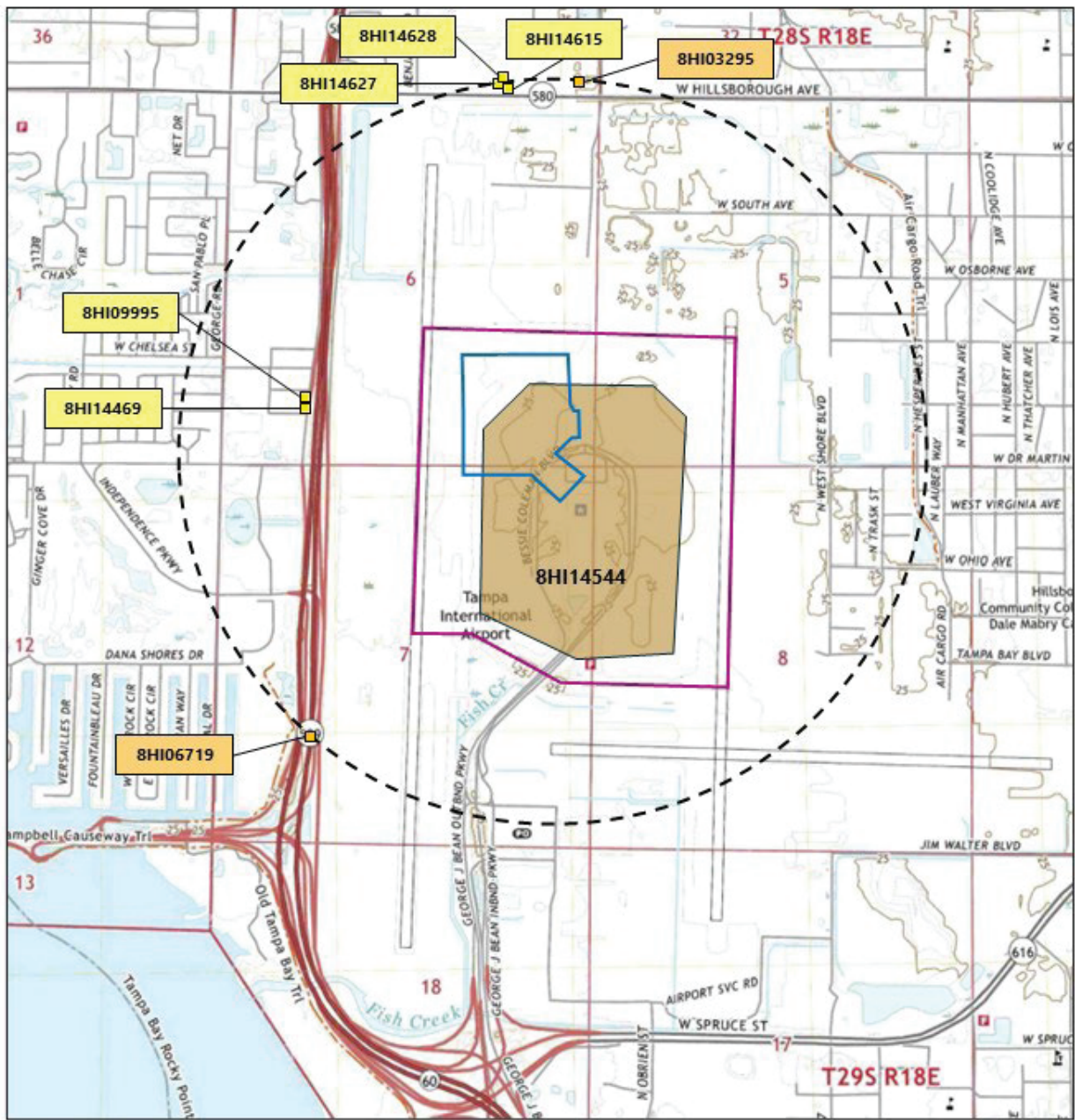
### 4.1 Cultural Resources

HCAA's Proposed Undertaking is to construct aviation-related infrastructure at the Airport and replace an airside and 450-foot-long-dual-guideway APM connection that were previously operational (1971-2005) and later demolished (2007). The Proposed Undertaking complements the architectural style and integrity of Site HI14544 and reestablishes significant technological and design innovations. The Proposed Undertaking would be consistent with the Airport setting. It would not affect National Register eligibility under Criterion C for "the distinct characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent significant and distinguishable entity whose components may lack individual distinction." Therefore, constructing the Proposed Undertaking and its APM connection to the main terminal would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's Site HI14544 eligibility for listing on the NRHP as defined in 36 Code of Federal Regulations (CFR) 800.5.

The APE was extensively disturbed when Tampa International Airport was originally constructed. There are no archaeological resources located within the APE. The Proposed Undertaking includes ground-disturbing activities occurring entirely on land previously disturbed and developed for aviation activities (original Airside D, apron, taxiways) and would not affect archaeological resources.

The Proposed Undertaking's ground-disturbing activities occur entirely on land previously disturbed and developed for aviation activities. The Proposed Undertaking would not affect tribal land or land of interest to tribes.

**Figure 5: Previously Recorded Cultural Resources within One Mile of the Proposed Undertaking**



Source: USGS, 2021, FMSF, 2023, RS&H, 2023.

**Legend**

- Project Area
- 1-mile boundary
- Area of Potential Effects (APE)
- Historic Structure
- Archaeological Site
- Resource Group



## 4.2 Noise and Noise-Compatible Land Use

An AEM noise analysis was conducted for the proposed undertaking. The Proposed Undertaking's potential change in the DNL 65 dBA contour is 0.6% in 2032 (or approximately 19 acres of a total 2,336-acre contour). According to FAA Order 1050.1F Desk Reference, "If the AEM calculations indicate that the action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, there would be no significant impact over noise sensitive areas, and no further noise analysis would be required" (Federal Aviation Administration, 2020). The Proposed Undertaking would increase operations and aircraft taxiing noise adjacent to the main terminal (Site ID HI14544). However, it would not significantly increase noise levels at Site ID HI14544 or introduce significant audible elements that would be out of character. Accordingly, it would not have an adverse effect on them as defined in 36 CFR 800.5. It would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP.

## 4.3 Air Quality

The United States Environmental Protection Agency (USEPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and environmental welfare. The USEPA has identified the following six criteria air pollutants for which NAAQS are applicable: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). The USEPA has three classifications for areas regarding their ability or inability to meet the NAAQS. "Nonattainment" areas are geographic areas that violate one or more NAAQS. "Attainment" areas are geographic areas where concentrations of the criteria pollutants are below (i.e., within) the NAAQS. Lastly, "maintenance" areas are geographic areas with prior nonattainment status that have since transitioned to attainment. The APE is an "attainment" area for all National Ambient Air Quality Standards (NAAQS) (EPA Greenbook, 2022). The construction and operation of the Proposed Undertaking would not significantly affect air quality or violate local, state, tribal, or federal air quality standards under the Clean Air Act Amendments of 1990 nor indirectly affect minority and/or low-income populations. The Proposed Undertaking would not significantly increase construction or operational air emission levels at Site ID HI14544 or introduce significant atmospheric elements that would be out of character. Accordingly, it would not diminish the integrity of the property's historic features defined in 36 CFR 800.5. Therefore, the Proposed Undertaking would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP.

## 4.4 Visual

Potential aesthetic effects of an action are generally assessed by comparing the visual characteristics of the proposed development to existing development in the areas and to the

environmental setting. The visual effects resulting from constructing and operating the Proposed Undertaking would result from physical changes to the visual character of the APE, including existing development, landforms, vegetation, and water surfaces.

Construction of the Proposed Undertaking would occur during the day. There is the potential for night-time work that would require additional lighting; however, this lighting would be directional and last only for the duration of night-time construction work. The temporary use of directional lighting for construction purposes would not result in light emission impacts on the surrounding area, including cultural resources. The Proposed Undertaking's conceptual illustration is shown in **Figure 3**. The Proposed Undertaking would occur entirely on-Airport property, would be consistent with the existing Airport environment, and would not result in viewshed changes or additional light emissions of cultural resources. The Proposed Undertaking would not introduce visual elements that would be out of character. Accordingly, it would not diminish the integrity of the property's historic features defined in 36 CFR 800.5.

Operation of the Proposed Undertaking would be visually different, with increased operations and aircraft taxiing adjacent to the main terminal. It would not affect the architectural style, integrity, and significant technological and design innovations of the Airport's (Site ID HI14544) eligibility for listing on the NRHP. Operation of the Proposed Undertaking would include permanent outside lighting to move aircraft, vehicles, and people safely. Public views of the new Airside D would be obscured by the existing multi-lane Veterans Expressway, Hillsborough Avenue, commercial businesses, and other on-Airport structures.

## 5 Section 106 Determination of Effects

The Proposed Undertaking occurs entirely on land previously disturbed and developed for aviation activities. The Proposed Undertaking's construction and operation would not directly or indirectly affect any cultural resources (e.g., noise, air, visual) other than the Tampa International Airport (8HI14544). However, the likely effects on Tampa International Airport would not alter any aspect of this resource from which it derives its significance under Criterion C for NRHP eligibility. Therefore, the likely effects to the Tampa International Airport will not constitute *adverse effects* as defined in 36 CFR 800.5. Because the Proposed Undertaking does include ground disturbance activities, the Authority will implement special conditions regarding unexpected discoveries during construction.

Based on an evaluation of the details of the Proposed Undertaking in conjunction with the research and analysis summarized in this CRAS, the FAA concluded that the Proposed Undertaking **will have no adverse effect** on historic properties (i.e., properties that are eligible for or listed on the NRHP).

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## Attachment A: Cultural Context and Historic Background

This attachment characterizes the pre-contact culture and post-contact history of the APE and the region. The source of this information is from the *Technical Memorandum Cultural Resources Desktop Analysis of the Tampa International Airport (TPA) Wildlife Remediation/ Employee Parking Expansion, Hillsborough County, Florida* completed by SEARCH, Inc. in December 2023.

### Pre-Contact Culture History

#### *Paleoindian*

The first well-documented inhabitants of Florida entered the area approximately 12,000 years ago during the Paleoindian period (12,000–9000 BP), during which the sea level was much lower than it is today. The Florida peninsula was wider and drier, particularly in the central interior. There is, however, growing evidence that there may be occupations that pre-date 12,000 BP in Florida, such as at the Sloth Hole and Page-Ladson sites in Jefferson County, where radiocarbon dates predating 12,000 BP have been obtained from levels containing lithic waste flakes, but no diagnostic tool forms (Dunbar 2002, 2006; Hemmings 1999, 2004). Both sites are inundated river sites, and although the contexts are considered intact, the downward movement of artifacts from the overlying artifact-bearing levels is possible.

Many animal species that are now extinct roamed the state (mammoths, camels, sloths, giant land tortoises, etc.), and these were hunted by Florida's earliest inhabitants. Most known Paleoindian sites are in north and west-central Florida, where karst springs and chert were readily available. In Hillsborough County, Paleoindian sites are located along the coast and various drainages.

Paleoindian sites are also underneath Tampa Bay (Goodyear and Warren 1972). These site locations were once on dry land when sea levels were lower but have become submerged as sea levels have risen during the past 10,000 years. One of the most well-known Paleoindian sites in the Tampa Bay area is in Hillsborough County. Harney Flats is a large habitation site excavated in the early 1980s (Daniel and Wisenbaker 1987).

#### *Archaic*

During the subsequent Archaic period (9000–2500 BP), human populations grew and expanded their territories as the climate became wetter and water sources became more prevalent. After the demise of Pleistocene fauna, human subsistence strategies became more diverse. They came to include new plant, animal, and aquatic species. People began to live in larger groups, use different stone tools, and inhabit more of what is now Florida.



The Early Archaic (9000–8000 BP) represented a continuity of the Paleoindian occupation of Florida. It occurred during rising sea levels, a gradual warming trend, and the spread of oak hardwood forests and hammocks. Numerous small Early Archaic special activity and campsites have been located throughout west-central Florida (Milanich 1994). The Middle Archaic (8000–4000 BP) was a wetter period with mixed pine and oak intrusion into the hardwood forest.

As conditions became wetter, extensive river systems and wetlands developed, and people began to exploit the resources associated with these aquatic habitats (Austin et al. 2004). This trend continued into the Late Archaic period (4000–2500 BP) (Austin et al. 2004). However, evidence also suggests that the environment became slightly drier during these periods and that aquatic habitats were fewer and not as deep (Russo 1986). This is probably the result of climatic fluctuations over time. Precontact populations in the Hillsborough County area may have been smaller and aggregated around springs and sinkholes once again.

The earliest pottery was tempered with plant fibers and first appeared at about 4000 BP (Sassaman 1993). The people who made fiber-tempered pottery practiced an essentially Archaic lifestyle of hunting, gathering, and incipient horticulture. Fiber-tempered pottery was made with naturally occurring clays, and plant fibers were then added to the clay as a tempering agent to strengthen it. After being made, pots were left to dry and then fired. Most Late Archaic sites containing fiber-tempered pottery are on the coast, with smaller campsites in the interior.

### *Post-Archaic*

The following Manasota period is divided into two subperiods. Early Manasota (2500–1300 BP) is recognized archaeologically by the dominance of sand-tempered pottery in assemblages, while the Weeden Island-related phase of Manasota (1300–1100 BP) is identified by the presence of St. Johns Check Stamped pottery in village contexts and the inclusion of ornately decorated pottery in mortuary contexts (burial mounds) (Milanich 1994). During the Manasota period, wetter conditions prevailed, and estuarine habitats became more numerous. This enabled larger populations to live in villages along the coast and the interior along significant rivers and streams. This trend continued into the following Safety Harbor period (1100–250 BP).

The Safety Harbor culture developed from the preceding Weeden Island-related Manasota culture in the central Gulf coast region of Florida around AD 900 (Mitchem 1989). Safety Harbor sites in this region include nucleated villages, usually containing a large platform mound with an associated plaza, one or more burial mounds, and surrounding village middens. In addition, numerous smaller midden sites are present in outlying areas. These probably represent small “hamlets” or household clusters within a specific polity. Each polity was ruled by a cacique (chief or leader) who lived in the town center. Caciques and their family members were buried in lineage mounds after their remains had been ritually cleaned and stored in a charnel house. There is no evidence that Safety Harbor groups practiced agriculture. Instead, the subsistence base was fishing, gathering, and hunting. Each town center probably represented a simple

chiefdom. Although alliances were forged between local polities, they otherwise appear to have acted independently of one another (Milanich 1998:103–104).

## Post-Contact History

### *European Exploration and Settlement, 1513–1821*

Spanish explorers were the first Europeans in the Tampa Bay area. Juan Ponce de León led two sea voyages to the peninsula of Florida, one in 1513 and one in 1521, but he never reached as far north as present-day Tampa Bay (Gannon 1996). The later expedition of Pánfilo de Narváez landed in Pinellas County in 1528 and trekked inland, then northward. While this was a significant European foray into the region, the Narváez expedition failed because of geographical confusion and conflict with Native Americans (Milanich and Hudson 1993).

A decade later, another explorer, Hernando de Soto, attempted an expedition to Florida on behalf of Spain. The expedition landed in Tampa Bay near the mouth of the Little Manatee River. It established a temporary camp before setting out into the interior. The expedition fought its way through what is now central and northern Florida before exploring other areas of the southeastern United States (Gannon 1996). Archaeological sites associated with the DeSoto expedition have been located in Hillsborough County; however, DeSoto left no permanent settlement in the region (Milanich and Hudson 1993). Little settlement occurred in the Tampa Bay area during the two centuries that followed the initial Spanish explorations. Spanish fishermen from Cuba occasionally established seasonal camps along the islands affronting the mainland. Here, fishermen collected their catch and smoked the fish before returning to Cuba (Worth 2012).

Native American groups from present-day Alabama and Georgia made their way into Florida. By the end of the seventeenth century, they had established settlements in the state. The Spanish referred to them collectively as *cimarrón*, meaning “wild” or “runaway,” which later became “Seminole” (Covington 1993:13). In 1763, after the Seven Years War, the British traded Havana to Spain in exchange for Florida. Spain regained the Florida territory in 1783 when it was returned following the American Revolution. The Seminoles developed trade with British and Spanish frontiersmen and attempted to forge alliances against the emerging U.S. (Covington 1993). During Florida’s British period, George Gauld completed a coastal survey of Florida, making the most accurate maps of Florida and Tampa Bay. When Spain regained Florida, its exploratory efforts remained comparatively minimal. Throughout the remainder of their rule over Florida, they did little to strengthen their knowledge of or presence in Tampa Bay (Weddle 1995).

### *United States Territory and State through Civil War, 1821–1865*

The Seminole accepted among their ranks formerly enslaved Africans and African Americans, who possessed valuable agricultural knowledge and could speak Native American languages and English. This acceptance fueled tensions between Americans in the southern U.S. (who opposed the relationship between formerly enslaved Africans and African Americans and Seminoles) and the Spanish in East Florida (who accepted it) (Gannon 1996). In 1817, the U.S. War Department tasked General Andrew Jackson with bringing the Seminole under control, resulting in the First Seminole War. Jackson led a punitive mission against the Seminole in Spanish Florida in 1818, highlighting Spain's weak control over the region and leading to the transfer of the territory to the U.S. several years later. The Adams-Onís Treaty, signed in 1819 and ratified in 1821, transferred Florida to the U.S. (Carter 1956:8–11; Tebeau 1981).

Once Florida became a U.S. territory in 1821, white homesteaders began moving into the northern and coastal areas of the territory. Hillsborough County's historical roots extend back to January 18, 1824, when U.S. Colonel George M. Brooke established Cantonment Brooke on the east bank of the mouth of the Hillsborough River, largely as a means of monitoring relations with the Seminole (Carter 1956; McCall 1974[1868]). In 1825, a military road connected the numerous forts being built, including Fort Brooke and Fort King (Marion County) (Knetsch 2003; Tomalin 2012). Typical of U.S. Army forts in frontier areas, Fort Brooke attracted civilian settlement. The territorial legislature created Hillsborough County on January 25, 1834. The county originally consisted of many of the present-day counties in the Tampa Bay area. Next to Fort Brooke, the village of Tampa began to grow, and it became the county seat in 1845 (Brown 1999; Covington 1957; Grismer 1950). At its creation, Hillsborough County encompassed present-day Pinellas, Polk, Manatee, Sarasota, Charlotte, De Soto, Hardee, Highlands Counties, most of Glades County, and part of Lee County. However, Hillsborough remained sparsely settled (Hillsborough County, Florida 2021).

Hillsborough County's fortunes were tied to the military personnel of Fort Brooke during the Second and Third Seminole Wars (Brown 1999). The 1840 census illustrates the extent of the military presence in this area: of the 452 people in the county in that year, fewer than 100 were civilians, the remainder being military personnel (Dietrich 1978). Enslaved African Americans also lived near Fort Brooke. Other non-military civilians included ranchers, farmers, storekeepers, and fishermen. Most of the population lived in Tampa, and men outnumbered women. Within the next 10 years, the gender imbalance began to even out as the military importance declined at the end of the Second Seminole War; additionally, the Armed Occupation Act facilitated the movement of families into the region (Covington 1957; Grismer 1950).

In the 1850s, the emerging port shipped cattle to Cuba for sizable profits, and civic leaders began discussing building a railroad to Tampa. At the onset of the Civil War, Florida seceded

from the Union. Though isolated from the epicenter of the conflict, Tampa was the backdrop for clashes between the Union Navy, which prowled the Gulf coast, and Confederate sympathizers, who attempted to sneak goods into Tampa Bay (Brown 2000). The west coast of Florida produced salt during the conflict. Salt was necessary to preserve foods for shipment to troops in the field. When the war ended in 1865, the region entered a period of economic stagnation (Brown 2000).

### *Post-Civil War and Late Nineteenth Century, 1866–1899*

Following the Civil War, new settlers began moving into the region. In 1870, William B. Hooker moved to the area; his settlement came to be known as Hooker's Point (Martin 1948:2). Apart from Tampa, Hillsborough County remained rural and sparsely settled until the 1880s, with the arrival of the railroad. Henry Plant brought his South Florida Railroad through the region in 1883. In 1886, the Orange Belt Railway connected Tampa and Sanford (Seminole County) with St. Petersburg (Pinellas County) and crossed through Hillsborough County (Turner 2008).

Agriculture and cattle emerged as the primary industries in Hillsborough County, but this changed during the last two decades of the nineteenth century. Following the railroad's arrival, Don Vicente Martinez Ybor moved his Key West cigar factory operations to the outskirts of Tampa in 1886 (Grismer 1950). At the dawn of the twentieth century, Tampa produced more than 111 million cigars annually, with a market value of about ten million dollars. The entire Bay area benefitted from the prosperity, as a service industry flourished; with this economic surge came rapid growth (Covington 1957). Shipping increased after Plant's and Ybor's investments, requiring Tampa Bay's dredging and Port Tampa's development. Hillsborough, a frontier area in 1880, blossomed into a diverse economic region by 1900 when the population surpassed 35,000 (Dietrich 1978). In 1892, the county built a red brick courthouse with a silver dome. Although it was demolished in 1952, the image of the building is preserved on the county seal (Hillsborough County, Florida, 2021).

### *Twentieth Century to Present, 1900–Present*

Hillsborough County's large industries changed significantly at the start of the twentieth century. Tropical fish farming, technology, and the service sector came to displace or limit the importance of the county's nineteenth-century industries. In 1909, Earl and Rosella Adams settled south of Gibsonton and named their community Adamsville. Originally from Pennsylvania, the Adams family bought a 40-acre plot and brought 10 children. The family expected a tropical paradise but encountered instead wild terrain. Over the next several decades, Earl and Rosella Adams cleared the land, and Rosella Adams worked as a midwife in the surrounding area (Catala 2011). As more people arrived in Adamsville, the cove nearby became known as The Kitchen. Residents depended on the fish, crabs, clams, and oysters for

much of their daily nutrition. The area was a reliable source of food and income, as many sold their catches at nearby markets (Green 1997).

During World War I, Tampa became a major shipbuilding city; at its peak, 3,400 people were employed at the Oscar Daniels Company to build eight 3,500-ton cargo ships (Mormino and Pizzo 1983:150). A total of 3,619 Hillsborough County residents served in World War I. Several men were honored for their war actions (Florida Department of Military Affairs 1992). Samuel M. Block of Tampa received the French Croix de Guerre with the Gilt Star for his bravery. As a private, Block succeeded in carrying messages during intense machine gun fire and artillery bombardment. His file indicated that he exhibited “extraordinary bravery” on several other occasions (Florida State Archives and Library 1920).

Following the First World War, Florida experienced economic growth and population expansion, known as the Florida Land Boom. This drew the attention of developers and businessmen who saw an opportunity to make large fortunes through land speculation. When the automobile increased mobility for families, many people moved to areas that had not been over-industrialized, such as Tampa. The development of state roads and public highways throughout Florida in the 1920s facilitated this movement. The Florida Road Department created many of the new hard-surfaced roads. Tampa became more accessible with the completion of the Michigan Avenue Bridge and the 22nd Street Causeway, both privately funded (NRHP 1996). Between 1920 and 1930, Tampa’s population increased from 51,608 to 101,161, making it the third-most populous city in the state.

In 1926, an economic depression began in Hillsborough County and Tampa ahead of the Great Depression that affected the rest of the nation starting in 1929. Many banks and other industries closed their doors, some never to reopen. Responding to the crises, the local government procured federal funding to employ the jobless through the CCC and WPA. The newly employed worked on numerous projects, including the opening of Adamo Drive, the widening of Nebraska Avenue, the filling in of Spanishtown Creek, the restructuring of Bayshore Boulevard, and the construction of the Fort Homer Hesterly Armory. One of the many public projects in Tampa was the improvement of Drew Field, the city’s first airfield built during the 1920s. Workers constructed runways and hangars, creating one of the best airports in the state by 1938 (Mormino and Pizzo 1983:168–169).

World War II was a boon to the economy. With the creation of new bases and the subsequent influx of military personnel and their paychecks into local economies, cities such as Tampa were able to recover from the Great Depression. MacDill Field was activated on April 16, 1941 (Mormino and Pizzo 1983:172; MacDill Air Force Base 2020). The federal government spent millions of dollars and employed thousands to construct the base. The government also established Drew Field (present-day Tampa International Airport) as a radar training base and Henderson Field (located at the present-day University of South Florida) as a physical fitness

base. Tampa's shipbuilding industry employed nearly 16,000 people in round-the-clock shifts (Mormino and Pizzo 1983:174). MacDill continued operating after the war, but many shipbuilding industries ceased (Massey 2019).

During the 1950s, a new industry was rapidly expanding in Hillsborough County. In 1958, between 20 and 30 fish hatcheries operated in the county. These operations varied greatly, with some covering many acres and others consisting of only a few ponds. In the Adamsville area, H. Woolf produced 8 million fish annually (Richardson 1958). By 1961, Adamsville and Ruskin quickly became renowned as the world's largest tropical fish producers. The Woolf Fish Farm and K & P Tropical Fish Farm, owned by Warren Kushmer and E. J. Proctor, were located in Adamsville on U.S. 41 and among the largest producers. Woolf's operation owned its own aircraft, which delivered its shipments. Millions of tropical fish lived in the numerous hatcheries in the Ruskin-Adamsville-Gibson area. They shipped to all 50 states and Canada (Beauchamp 1961).

The east Hillsborough Bay area remained minimally developed throughout the mid-twentieth century (U.S. Board of Engineers for Rivers and Harbors 1958). By the 1980s, phosphate shipping led to the development of the East Hillsborough Bay area. Companies associated with the phosphate industry or shipping owned large tracts of land in the area. However, most land remained undeveloped (U.S. Army Corps of Engineers 1987). In 1983, 107 people lived in Adamsville, which remained quite rural. That year, the Hillsborough County Commission included the community in its long-range plan. It projected that industrial development in the area would increase in the coming years. Adamsville was part of the Big Bend Industrial Park between U.S. 41 and Tampa Bay. At the time, the Tampa Electric Company, Agrico Chemical Company, and Mitsui and Company all operated in Adamsville. Though several homeowners protested the area being designated as an industrial park, the Planning Commission refused to change the classification (Steele 1983).

Hillsborough County grew steadily throughout the twentieth century, and by 1990, the county had a population of 834,054 (Forestall 1996). Recently, Tampa has become a significant city for established businesses and new entrepreneurs. Forbes Magazine named Tampa the second-best city for entrepreneurs. Tampa Bay ranked third for the most cost-friendly U.S. business location. The proximity to global transit links, high population density for the workforce, and access to many resources make Tampa a destination for business (Visit Tampa Bay 2021). East Tampa has become one of the prime locations for industries seeking space in Tampa. Tampa had 336,150 residents in 2010 and 399,700 residents in 2019 (U.S. Bureau of the Census 2021).

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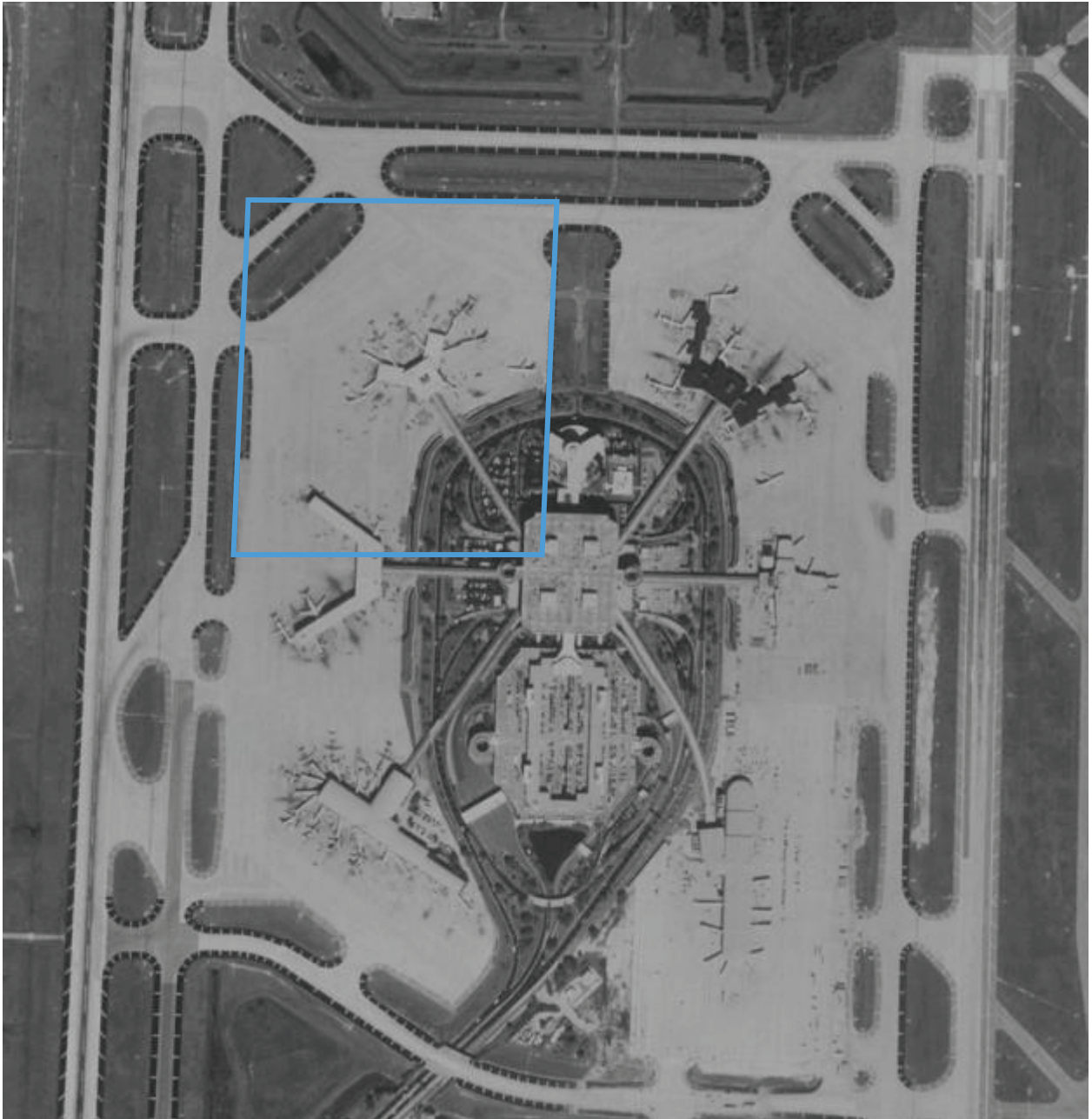
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## Attachment B: Historic Aerials

Circa 1995 (blue polygon is approximate project area)



Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

Circa 2002 (blue polygon is approximate project area)



Source: Google Earth, 2023.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

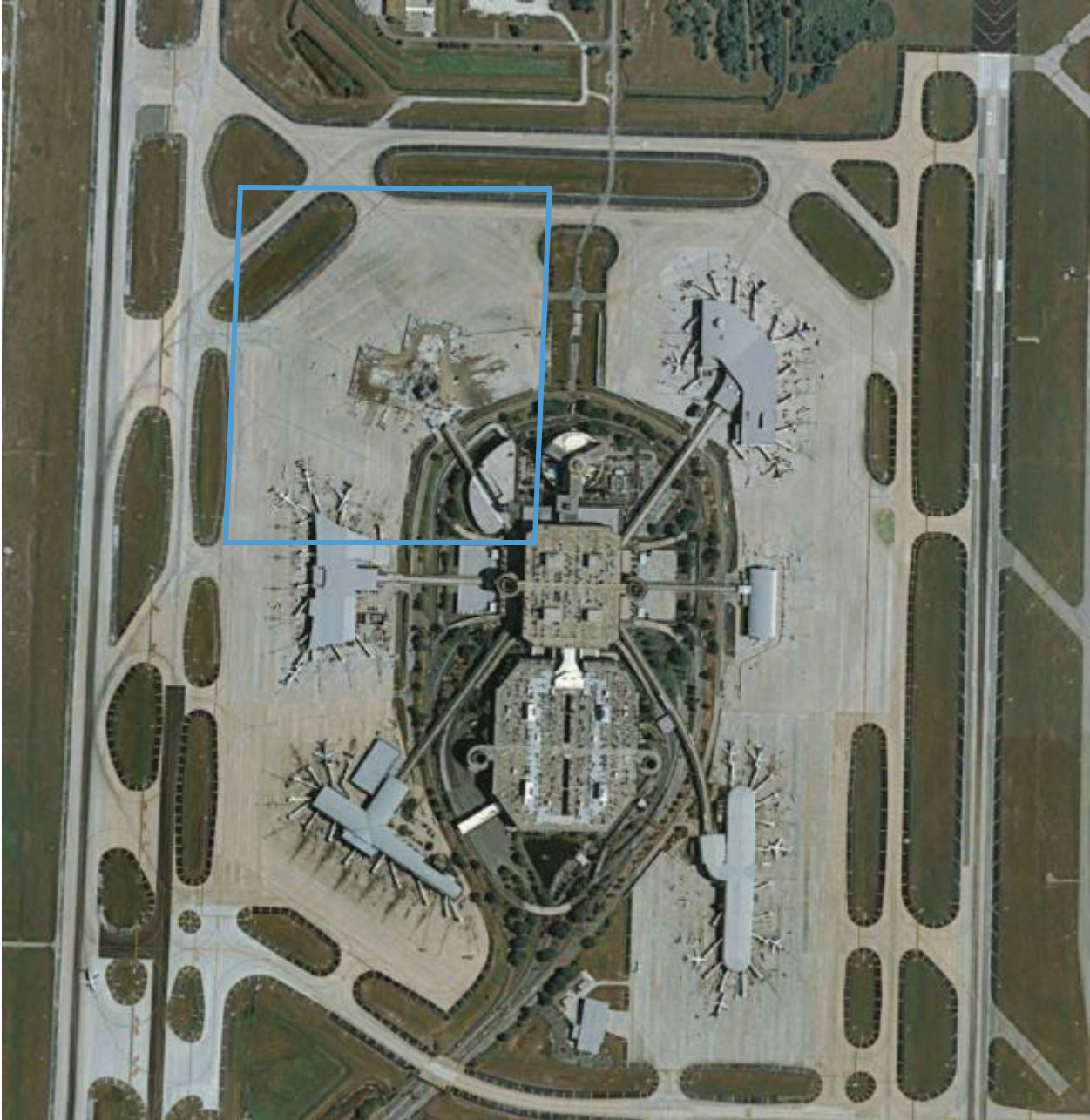
Circa 2005 (blue polygon is approximate project area)



Source: Google Earth, 2023.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

Circa 2007 (blue polygon is approximate project area)



Source: Google Earth, 2023.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

Circa 2015 (blue polygon is approximate project area)



Source: Google Earth, 2023.



Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

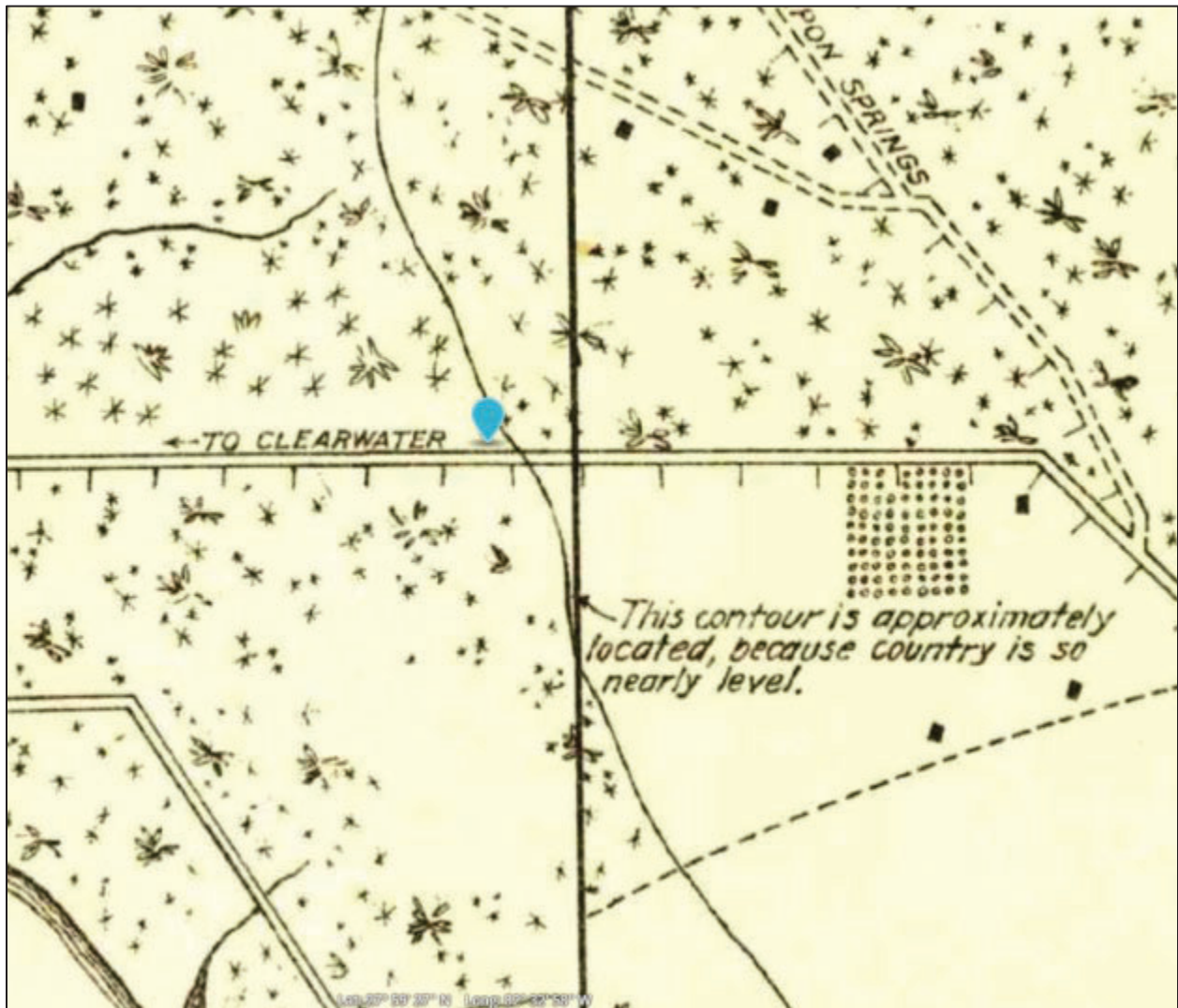
Circa 2023 (blue polygon is approximate project area)



Source: Google Earth, 2023.

## Attachment C: USGS Topographic Maps

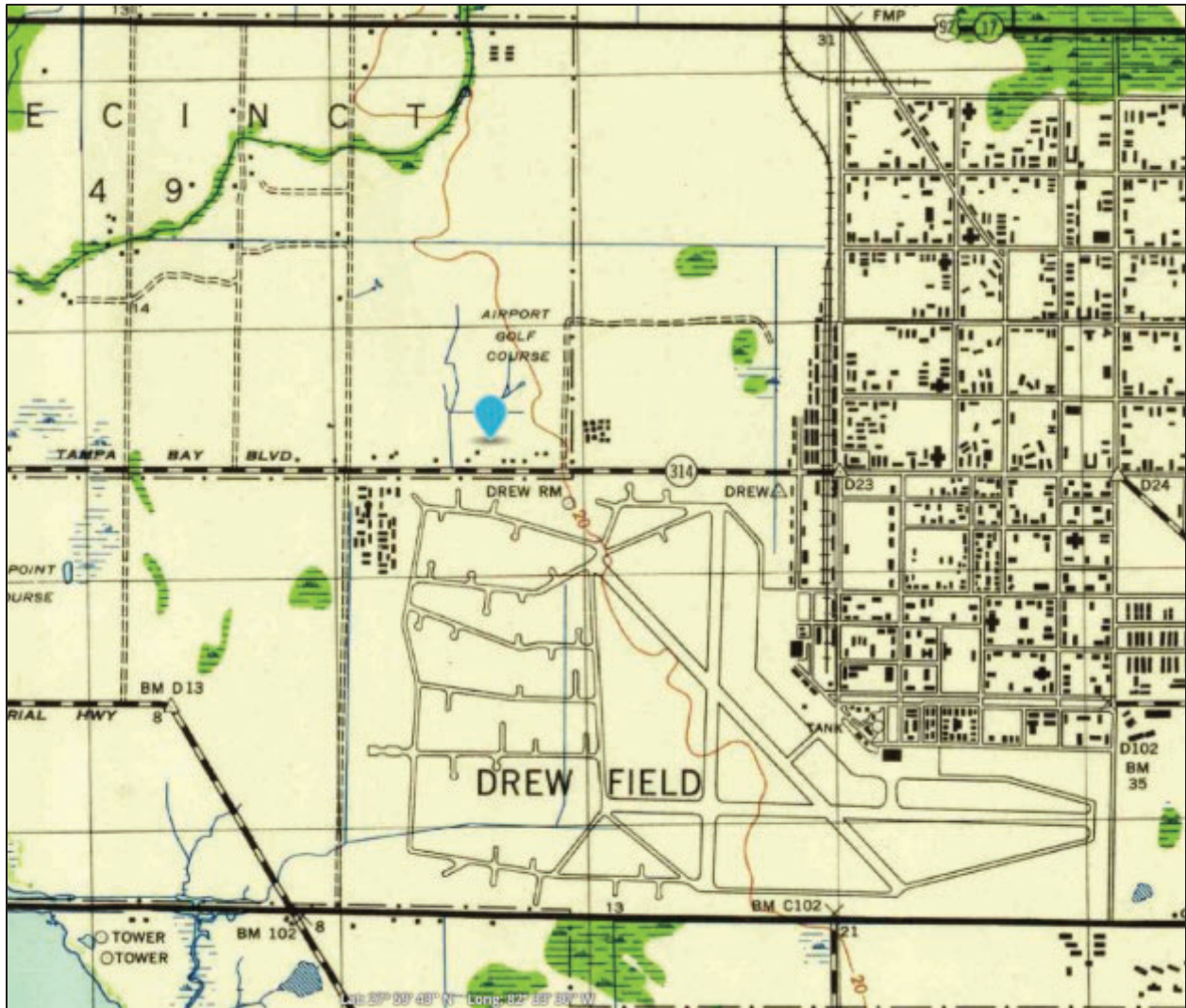
USGS 7.5' St. Petersburg Quad 1921 (blue indicator is approximate project area)



Source: USGS, 2023.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

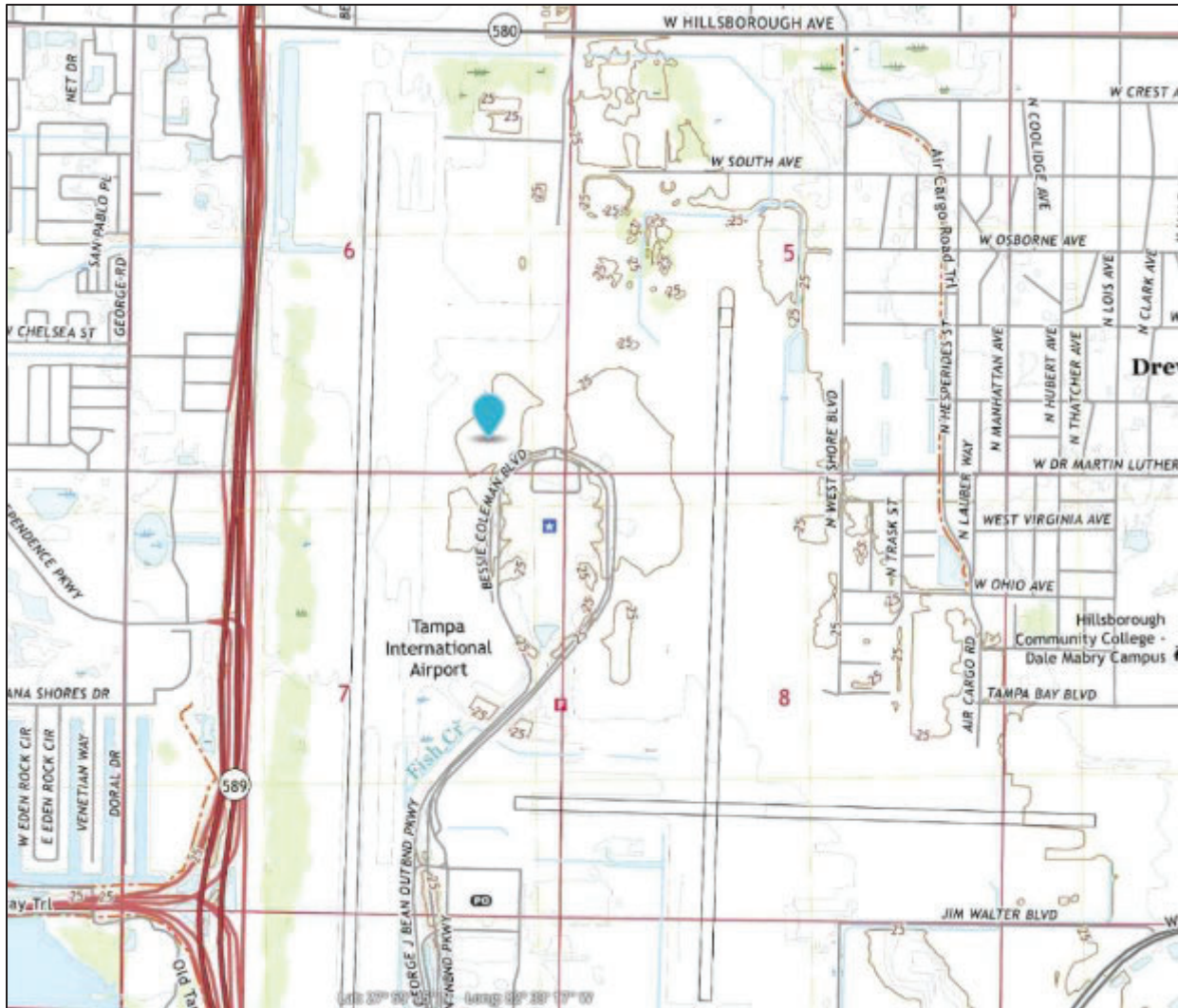
USGS 7.5' Gandy Bridge Quad 1943 (blue indicator is approximate project area)



Source: USGS, 2023.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

USGS 7.5' Gandy Bridge Quad 2021 (blue indicator is approximate project area)



Source: USGS, 2023.

## Attachment D: Photo Log

This attachment illustrates the existing conditions within the APE from ground level viewing the Site ID HI14544 (Main Terminal) in the vicinity of the project area along George Bean Parkway. The photos were downloaded from Google Street View. Photo numbers and direction are included on the photo log map.

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport

Photo Log Map



Sources: Google Earth, 2024; RS&H, 2024

**Legend**



Area of Potential Effects (APE)



Google Street View Photo and Direction



Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport



Photo 1: George Bean Parkway, looking south



Photo 2: George Bean Parkway, looking south



Photo 3: George Bean Parkway, looking east

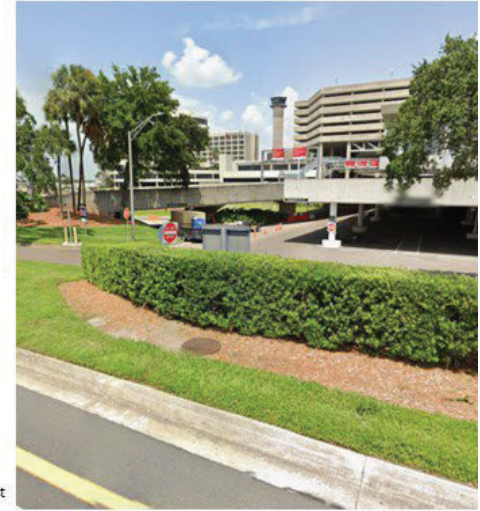


Photo 4: George Bean Parkway, looking northeast

Cultural Resource Assessment Study for the Proposed New Airside D at Tampa International Airport



Photo 5: George Bean Parkway, looking west



Photo 6: George Bean Parkway, looking northwest



Photo 7: George Bean Parkway, looking north-northwest



## Attachment E: Architectural Historian Resume



## Mollie Olinyk, MS

Architectural Historian

### Professional Background

Mollie is federally certified (36 CFR 61) as an architectural historian with over 15 years of experience. She serves as an Architectural Historian for Section 106 review/consultation and all phases of history/architecture investigations. Mollie spent 8 years as a historian coordinating and reviewing Section 106 HUD-funded demolition and rehabilitation projects in the City of Detroit for the Michigan State Historic Preservation Office (MISHPO). She has conducted state and federal tax credit reviews and facilitated grant management. Mollie has expertise in National Register of Historic Places (NRHP) evaluations and nominations, as well as experience in architectural survey, property research, historic context development, and property documentation. Her experience also extends to the negotiation and preparation of Memoranda of Agreement and Programmatic Agreement documents.

### Role

Ms. Olinyk meets the Secretary of the Interior's professional qualifications (36 CFR 61) as an architectural historian. Mollie is responsible for the assessment of effects under 36 CFR 800.5.

### Specializations

#### History/Architecture Investigations

Survey, identification and documentation of resources, research and analysis, and assessment of effects on historic and cultural resources

#### Section 106 Review/Consultation

Assist federal agencies in considering the effects of federally-funded project activities on historic properties, including identifying historic properties, determining how project activities will impact historic properties, exploring measures to reduce or avoid harm, and develop agreements with the SHPO/THPO to resolve any adverse effects

#### Agreement Documents

Assist in the development of Memoranda of Understanding (MOU), Memoranda of Agreement (MOA) and Programmatic Agreements (PAs) to support plans resulting from Section 106 Consultation, set expectations, and to help minimize future disputes

#### Grant Applications and Management

Assist in the process of grant application or grant management if and when the opportunity arises, including research and writing of grant proposals or applications

### Experience

#### Coolidge Bus Terminal, Detroit, Michigan (Client: Detroit Department of Transportation)

Project Architectural Historian for HABS Level II-style documentation of the Coolidge Bus Terminal, a mid-20<sup>th</sup>-century site that played a pivotal role in public transportation in Detroit during the transition from public rail-based transit to the dominance of personal automobiles.



### Specializations

History/Architecture Investigations

Section 106 Review/Consultation

Agreement Documents

Grant Applications and Management

### Education

M.S. Historic Preservation Planning, Eastern Michigan University, 2007

BA, Art & Art History, Kalamazoo College, 2003

### Certifications / Affiliations

Federally Certified (36 CFR 61) Architectural Historian, Historian

LEED Accredited Professional, 2009

### Years of Experience

With MSG 2023 - Present  
MI SHPO 2010 - 2018  
Mead & Hunt, Inc. 2007-2009



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Orlando Airports District Office  
8427 South Park Circle, Suite 524  
Orlando, FL 32819  
Phone: (407) 487-7220  
Fax: (407) 487-7135

January 17, 2024

Alissa S. Lotane  
Director and State Historic Preservation Officer  
Florida Division of Historical Resources  
Florida Department of State  
R.A. Gray Building  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

RE: Section 106 Consultation  
Construction and Operation of New Airside D  
Tampa International Airport  
Hillsborough County, Florida

*[Sent vial e-mail to: [scott.edwards@dos.myflorida.com](mailto:scott.edwards@dos.myflorida.com)]*

Dear Ms. Lotane,

The Hillsborough County Aviation Authority (Authority) proposes the construction of the new Airside D (AS-D) development at Tampa International Airport (Airport or TPA) in Hillsborough County, Tampa, Florida. The Airport is located in Hillsborough County, about 5 miles northwest of downtown Tampa. The Airport has three runways, with the longest runway, Runway 01L/19R, measuring 11,002 feet. TPA supports the local community by providing commercial airline service to the Tampa region. TPA supports the general aviation community with fixed-based operators (FBO), operation of maintenance repair and overhaul (MRO) facilities and the operation of several cargo operators.

The Proposed Project is the construction and operation of a sixteen-gate airside (AS-D) and connected actions. The Authority will request the Federal Aviation Administration's (FAA) unconditional approval of the improvements on its Airport Layout Plan. The Federal action associated with the Proposed Project is an "undertaking" subject to the National Historic Preservation Act (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is intended to initiate Section 106 consultation.

#### Proposed Undertaking

The Proposed Undertaking includes airside and landside improvements at the Airport. The Proposed Undertaking is the construction and operation of a sixteen-gate airside (AS-D), automated people mover, improvements to Taxilane Z, and associated apron area. The new AS-D

would consist of three levels including holdrooms, aircraft gates, concessions, restrooms, and a connecting automated people mover station to the main terminal.

Area of Potential Effects (APE)

The Area of Potential Effects (APE) to historic resources for the Proposed Undertaking consists of the Main Terminal, including existing Airsides A, B, C, E and F and the former Hardstand D area. The APE is approximately 480 acres and also includes portions of Runway 1L/19R and Runway 1R/19L, concrete apron area, vehicular roads (e.g., George Bean Parkway), taxiways, taxilanes, stormwater drainage system, and mowed/maintained airfield turf.

Historic and Archaeological Resources in the APE

There are no known resources listed on the National Register of Historic Places (NRHP) within APE. The nearest National Register-listed resource is the George Guida Sr. House located about 3.5 miles southeast of the APE (National Park Service, 2022). According to the Florida Master Site File, the Tampa International Airport is listed as eligible for NRHP listing (Site ID HI14544) (SHPO, 2022) and is within the APE.

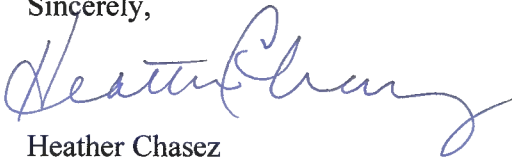
There are no known archaeological resources within the APE, and the area of the Proposed Undertaking consists of a concrete pad and a previously modified and maintained grass area that serves as part of the airports permitted stormwater system. As such, no archaeological investigation was performed.

Determination of Effect

Based on a review of the Proposed Undertaking and the research and analysis in the CRAS, the FAA has determined the undertaking would have no adverse effect historic resources. Because the Proposed Undertaking includes ground disturbance activities, the FAA will require the Authority to implement special conditions regarding unexpected discoveries during construction. The FAA requests the FL SHPO's concurrence regarding the determination of effect.

FAA requests your review of the enclosed Cultural Resources Assessment Survey and response within 30 days of receipt of this letter indicating if you concur with our determination. Please direct correspondence and questions to me at 407-487-7236 or via email at Heather.Chasez@faa.gov.

Sincerely,



Heather Chasez  
Environmental Protection Specialist  
Federal Aviation Administration

Cc: Rob Furr, Sr. Manager - Sr. Airport Architect, Hillsborough County Aviation Authority  
David Alberts, RS&H, Inc.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Orlando Airports District Office  
8427 South Park Circle, Suite 524  
Orlando, FL 32819  
Phone: (407) 487-7220  
Fax: (407) 487-7135

January 30, 2024

[Sent via e-mail: [section106@mcn-nsn.gov](mailto:section106@mcn-nsn.gov)]

Ms. Corrain Loe-Zepeda  
Tribal Historic Preservation Officer  
Historic and Cultural Preservation Department  
Muscogee (Creek) Nation Cultural Preservation  
PO Box 580  
Okmulgee, Oklahoma 74447

RE: Project Notice and Invitation for Consultation  
Construction of Airside D  
Tampa International Airport, Tampa Florida  
Hillsborough County, Florida

Dear Ms. Loe-Zepeda,

The Hillsborough County Aviation Authority (HCAA) has requested federal funds and approval from the Federal Aviation Administration (FAA) to construct and operate new Airside D at Tampa International Airport, in Tampa Florida (**Attachment 1**). The federal actions associated with the proposed project are an undertaking subject to the *National Historic Preservation Act* (Section 106) and its implementing regulations at 36 CFR Part 800. This letter is to inform the Muscogee (Creek) Nation of the proposed project and invite your Tribe to consult on the project.

### **Proposed Undertaking**

The HCAA proposes to construct a new Airside D at the same location as the previous Airside D, which was demolished in 2007. The HCAA proposes constructing and operating the 563,000-square-foot Airside D to meet its projected demand for operations and passengers (Proposed Undertaking, **Attachment 2**). This includes a three-level airside and 16 contact gates with passenger boarding bridges. Additional project components that support the Proposed Undertaking include reconstruction of the apron, new hydrant fuel system, construction and operation of a 450-foot-long-dual-guideway automated people mover system (APM) to transport passengers to/from the new airside and main terminal, and an Airport personnel vehicle parking area with an access gate connected to the existing Airport Access Road. An APM maintenance facility would be located beneath the airside APM station.

### **Area of Potential Effect (APE)**

The Area of Potential Effects (APE) to historic resources for the Proposed Undertaking consists of the Main Terminal, including existing Airsides A, B, C, E and F and the former Hardstand D area. The APE is approximately 480 acres and also includes portions of Runway 1L/19R and Runway

1R/19L, concrete apron area, vehicular roads (e.g., George Bean Parkway), taxiways, taxi lanes, stormwater drainage system, and mowed/maintained airfield turf (Attachment 3).

The project was evaluated for noise impacts on and off airport. The Proposed Undertaking would increase aircraft operations, but the noise analysis showed that the minor increase in noise would not result in an appreciable change in the noise environment, meaning that the amount of time that the area surrounding the airpath would experience additional noise would be negligible. Additionally, there are no known noise sensitive cultural resources within the area. Therefore, noise impacts to cultural resources are not anticipated.

### **Historic and Archaeological Resources**

National Register of Historic Places (NRHP) Search – There were no NRHP listed historical, archeological, or architectural resources found to be within the APE or within one mile of the Proposed Undertaking.

Florida Master Site File Search – There were no archaeological sites recorded as being located within the APE, however, two (2) are located approximately 1 mile from the Proposed Undertaking. One site was identified as a Campsite – Native American-Aceramic and was evaluated as ineligible by the State Historic Preservation Officer (SHPO). The other site is described as an Isolated Find – Native American-Aceramic and has not been evaluated for eligibility. Neither of these sites will be impacted by the Proposed Undertaking.

Five historic structures were identified within one mile of the Proposed Undertaking. Four of the structures were evaluated by the SHPO as ineligible. One structure was recorded but not evaluated for eligibility. The Proposed Undertaking will not impact any of these structures.

One previously recorded eligible architectural resource group, Tampa International Airport (Site 8HI14544) is located within the proposed APE. The Proposed Undertaking will connect directly into this resource group.

No other historical resources were identified within the APE or one mile of the Proposed Undertaking.

Cultural Resource Assessment Analysis – A Cultural Resources Assessment Study was prepared for the proposed development project. The study included the identification and description of known resources located within or proximate to the APE. A copy of the report is enclosed with this letter (Attachment 4).

The Proposed Undertaking was assessed for its effects on Site 8HI14544, Tampa International Airport. The assessment indicated that the Proposed Undertaking will be consistent with an airport setting, complements the architectural style and integrity of Site HI14544 and reestablishes significant technological and design innovations; Therefore, it would not affect its National Register eligibility under Criteria C “the distinct characteristics of a type, period, or method of construction or that represent the work of a master, or that posses high artistic vales, or that represent significant and distinguishable entity whose components may lack individual distinction”.

The background research and assessment resulted in no archaeological or historic resources being identified within the APE, but one architectural resource group was identified. It has been determined

that the proposed undertaking will have no adverse effect on cultural resources. The CRAS was submitted to the SHPO on January 17, 2024.

### Consultation

Based on site conditions, a review of the proposed development project, and the research conducted, the FAA's preliminary determination is the Proposed Undertaking would not adversely affect historic properties or cultural resources. However, we are interested in knowing if the Muscogee (Creek) Nation has any concerns or interests related to the proposed project and would like to enter into Section 106 consultation. We welcome your knowledge and opinion on the APE and the effects of the proposed project. FAA appreciates your review of the enclosed project information and response within 30 days of receipt of this letter. Please direct correspondence and questions to me at (407) 487-7236 or [heather.chasez@faa.gov](mailto:heather.chasez@faa.gov).

Sincerely,

HEATHER Digitally signed by  
HEATHER CHASEZ  
Date: 2024.07.30  
12:55:16 -0500  
CHASEZ

Heather Chasez  
Environmental Protection Specialist

Attachments Proposed Project Location Map  
Proposed Undertaking  
Area of Potential Effect  
Cultural Resource Assessment Survey

Figure 1-1: Airport Location



Sources: ESRI, 2022; RS&H, 2022

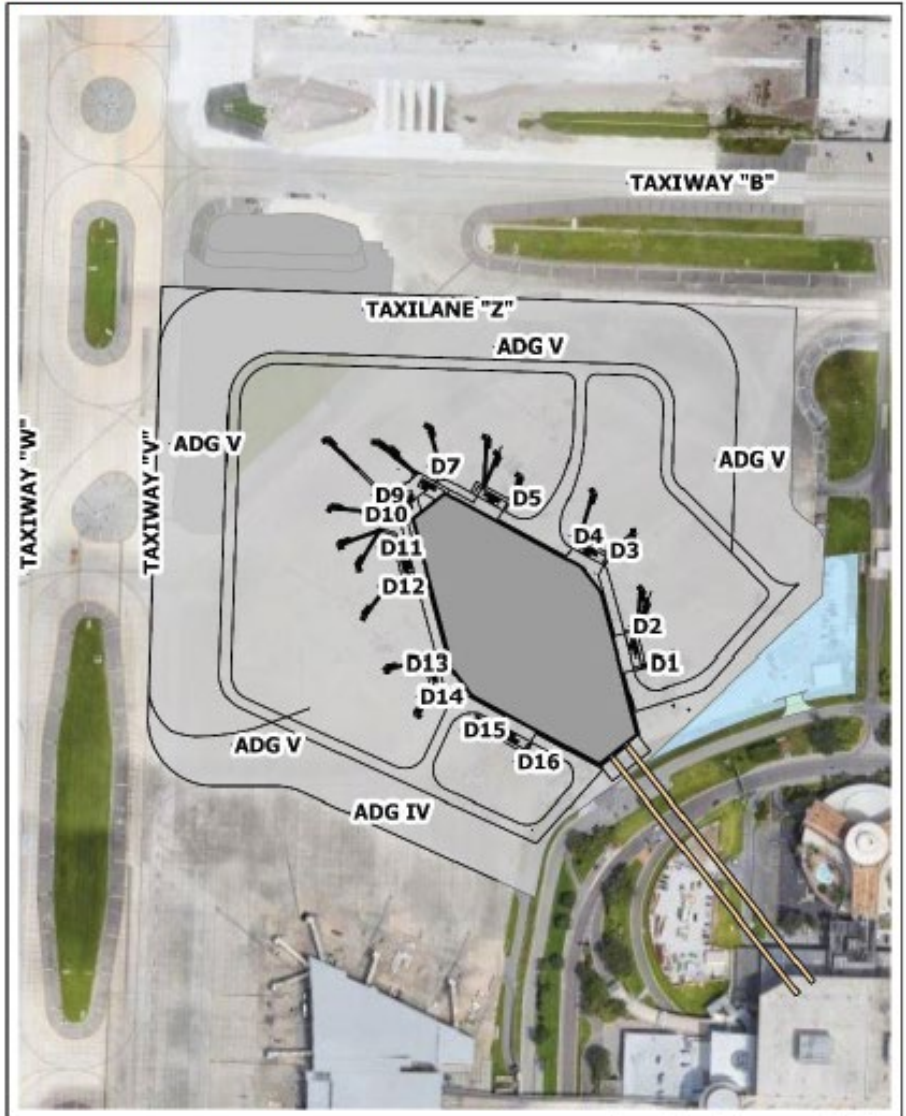
**Legend**

 Airport Location





Figure 2: Proposed Undertaking



Sources: HCAA 2022; ESRI 2022; RS&H 2022.

**Legend**

- Airside D
- Parking
- Apron
- Access Gate
- Automated People Mover




Figure 4: Area of Potential Effects



Sources: Google Earth, 2024; RS&H, 2024

**Legend**

 Area of Potential Effects (APE)





U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Orlando Airports District Office  
8427 South Park Circle, Suite 524  
Orlando, FL 32819  
Phone: (407) 487-7220  
Fax: (407) 487-7135

January 30, 2024

[Sent via e-mail: [kevind@miccosukeetribe.com](mailto:kevind@miccosukeetribe.com)]

Mr. Kevin Donaldson  
Environmental Specialist  
Miccosukee Tribe of Indians of Florida  
Tamiami Station  
P.O. Box 440021  
Miami, Florida 33144

RE: Project Notice and Invitation for Consultation  
Construction of Airside D  
Tampa International Airport, Tampa Florida  
Hillsborough County, Florida

Dear Mr. Donaldson,

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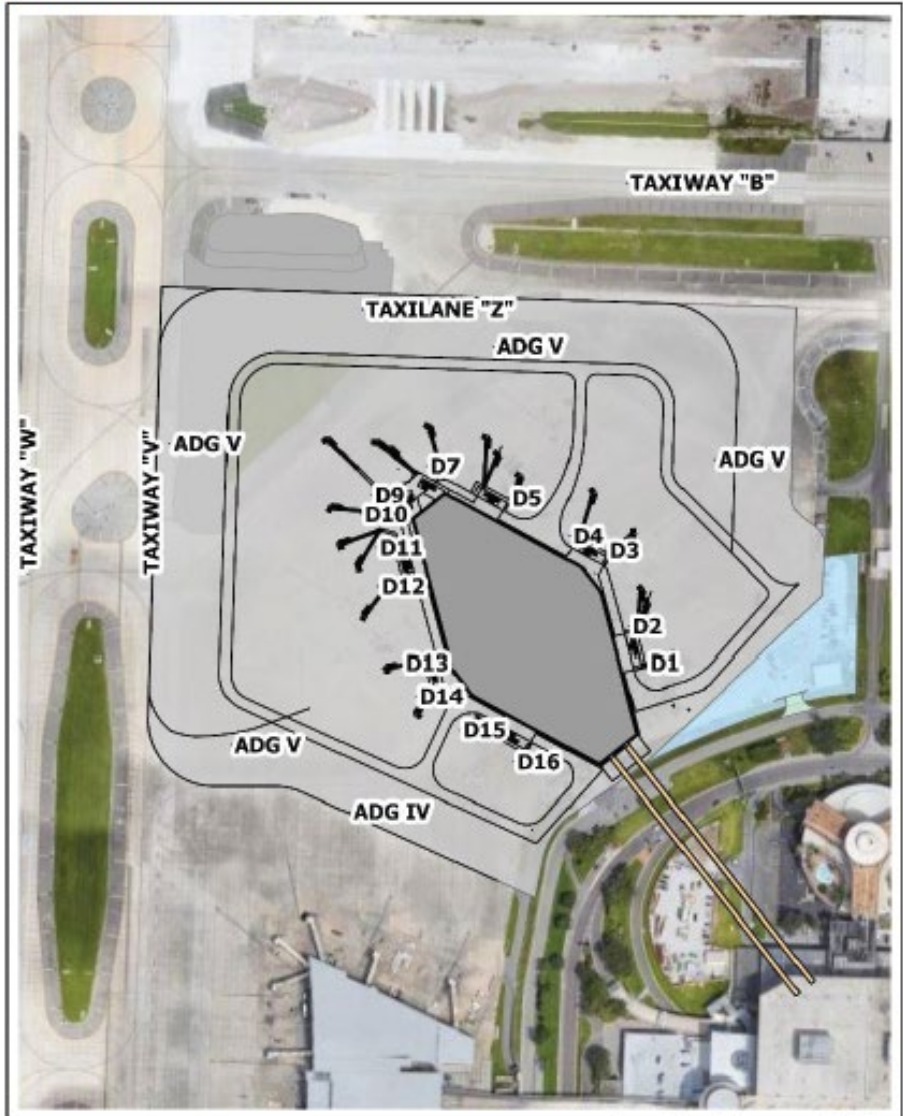
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Figure 2: Proposed Undertaking



Sources: HCAA 2022; ESRI 2022; RS&H 2022.

**Legend**

- Airside D
- Apron
- Automated People Hover
- Parking
- Access Gate




Figure 4: Area of Potential Effects



Sources: Google Earth, 2024; RS&H, 2024

**Legend**

 Area of Potential Effects (APE)

