



30 September 2021

Ms. Sandy Lancaster
Dallas Fort Worth International Airport
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project Dallas County - Protected Species Habitat Assessment
Sites 7 through 10 of the 13 total locations for the CTA Terminals A and C Development Project located
within the Dallas Fort Worth International Airport, Dallas County

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a protected species habitat assessment on the CTA Terminals A and C Development Project associated with Sites 7 through 10 of the 13 total locations within the Dallas Fort Worth International Airport, Dallas County (**Attachment A, Figure 1**). This habitat assessment was performed to satisfy the requirements regarding the Endangered Species Act (ESA). The following report is a list of the federal and state-listed protected species for Dallas County and their preferred vegetation assemblages, a summary of the vegetation communities identified on the site, an evaluation of whether the communities present on the site could support a protected species, and whether or not future proposed actions would affect listed species.

INTRODUCTION

Protected Species

Federal

The ESA of 1973 (Public Law [P.L.] 93-205) and the amendments of 1988 (P.L. 100-578) were enacted to provide a program of preservation for endangered and threatened species and to provide protection for ecosystems upon which these species depend for their survival. The ESA requires all federal agencies to implement protection programs for designated species and to use their authorities to further the purposes of the Act. Responsibility for the listing of an endangered or threatened species and for the development of recovery plans lies with the Secretary of Interior and Secretary of Commerce. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the ESA within the United States.

An endangered species is a species, which is in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the near future throughout all or a significant portion of its range. Proposed species are those, which have been formally submitted to Congress for official listing as endangered or threatened.

In addition, the USFWS has identified species, which are candidates for possible addition to the list of Endangered and Threatened Wildlife and Plants (50 Code of Federal Regulations [CFR] 17.11 and 17.12) under the ESA. The USFWS maintains a candidate list to: (1) provide advance knowledge of potential listings that could affect land planning decisions, (2) solicit input to identify candidates not requiring protection or additional species that may require protection under the ESA, and (3) solicit information needed to prioritize the order in which species will be proposed for listing. Candidate species have no legal protection under the ESA.

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The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance with the Act's policies and regulations. However, in a recent decision the U.S. Court of Appeals for the Fifth Circuit found that for an unlawful "taking" to occur, a "deliberate act done directly and intentionally to migratory birds" would need to occur. (United States v. CITGO Petroleum Corp., No. 14-40128 [5th Cir. Sept. 4, 2015]).

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The Texas Parks and Wildlife Department (TPWD) Wildlife Diversity Program (WDP) maintains computerized records of state-listed threatened and endangered species by county. The State of Texas does not list threatened and endangered species using the same criteria as the federal government. When the USFWS lists a plant species, the State of Texas then lists that plant. Thus, the list of threatened and endangered plants in Texas is the same as the Federal list. The state has separate laws governing the listing of animal species as threatened or endangered. Threatened and endangered animal species in Texas are those species so designated according to Chapters 67 and 68 of the Texas Parks and Wildlife Code and Section 65.171 - 65.184 of Title 31 of the Texas Administrative Code. Species that are not currently listed by the Federal government may be listed as threatened or endangered by the TPWD.

METHODOLOGY

Prior to conducting fieldwork, the list of Endangered and Threatened Wildlife and Plants under the ESA was obtained through the USFWS Information, Planning, and Conservation System (IPaC) and from the TPWD WDP and the Texas Natural Diversity Database (TXNDD). The vegetation communities used by each species was obtained and is detailed below. During the field survey, vegetation composition within and adjacent to the project site were noted to determine whether there was any potential for protected species habitat. This survey was not designed to identify the presence of protected species; however, if any species were observed, they were recorded. Photographs were taken at representative points, illustrating common vegetation communities within the survey area (**Attachment B**).

RESULTS

Literature Review

According to the USFWS, four species, Golden-cheeked Warbler (*Dendroica chrysoparia*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*) are listed as federally protected (i.e., threatened or endangered) with the potential to occur within Dallas County. Two of these species are conditionally listed as threatened within Dallas County on the basis that the proposed project is for wind energy production, Red Knot and Piping Plover. No federally listed critical habitat for these species is located within the vicinity of the survey area. The TPWD lists 14 state protected species that could occur within Dallas County. Five are also federally listed avian species; however, the Black Rail (*Laterallus jamaicensis*) is only listed by TPWD for Dallas County. The review of the TXNDD files did not indicate any unique vegetation communities, parks or natural/managed areas within the survey area.

Attachment C identifies the state and federally protected species that could potentially occur within Dallas County from the IPAC and Rare and Threatened Endangered Species of Texas (RTEST) lists.

Site Survey

Ms. Karisa Fenton and Ms. Clair Unruh of IES evaluated the survey area on 22 September 2021. This survey was designed to provide a habitat evaluation of the overall survey area with the primary focus on the plant community.

The four sites within the survey area consisted of two distinct vegetation communities, **frequently maintained grassland** and **urban matrix**. The entirety of Site 7 and the western portion of Site 8 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **urban matrix** was found in the southeastern region of Site 8, and the entirety of Sites 9 and 10, and was comprised of gravel lots, buildings, and active construction areas. A small emergent wetland and associated pond were located on the

western boundary of Site 10. The wetland was dominated by saltmarsh aster (*Symphotrichum subulatum*) and sumpweed (*Iva annua*), both common, early successional disturbance species that occupy mesic areas.

CONCLUSIONS

Preferred Habitat for Federally Protected Species

Table 1 provides a summary of the federally and state-listed species that could potentially occur within Dallas County, as well as a brief description of their habitat, whether this habitat is present within the survey area, and whether the proposed project would potentially affect the listed species.

Regarding federally listed threatened and endangered species, Golden-cheeked Warbler, Red Knot, Piping Plover, and Whooping Crane were listed for Dallas County. As these projects will not be related to wind energy, the Red Knot and Piping Plover will not be affected.

- The Golden-cheeked Warbler requires a habitat that includes forested areas dominated by Ashe juniper (*Juniperus ashei*) in mixed stands with various oaks (*Quercus* spp.). This unique vegetation community is not present within the survey area.
- Whooping Cranes utilize estuaries, prairie marshes, moist grasslands, croplands, and will use large shallow wetland areas associated with lakes for roosting and feeding. The survey area did not contain these types of vegetation communities.

As such, the habitats present within the survey area were not suitable for any of the federally listed threatened or endangered species. Nor were the habitats suitable for nesting, feeding, or stopover migration habitat for these species.

Preferred Habitat for State Protected Species

There were 14 state-listed threatened and endangered species for Dallas County, which includes all the federally listed avian species. Any occurrence of the Least Tern (*Sternula antillarum athalassos*), Piping Plover, and White-faced Ibis (*Plegadis chihi*) would be in relation to stopover during migration; however, no suitable stopover or nesting habitat was observed within the survey area. Whooping Crane, Black Rail, and Wood Stork (*Mycteria americana*) would be unlikely to utilize the survey area, as their preferred habitat type were not present.

Black Rails utilize freshwater marshes and grassy swamps with dense emergent vegetation. While emergent vegetation was observed within the wetland, the size and location would indicate the survey area would not be suitable habitat. While this site contained a freshwater wetland, this community did not meet the parameters of the Wood Stork for roosting with no tall snags, red mangrove (*Rhizophora mangle*) dominated areas, or bald cypress (*Taxodium distichum*) dominated areas. Wood Storks utilize flooded fields and marsh habitats with shallow standing water for feeding areas, but none were observed. As such, foraging habitat potentially suitable for the Wood Stork was not present within the survey area.

Vegetation Communities

None of the vegetation observed within the survey areas would be considered unique or compose a unique vegetation type for the region. The vegetation communities described were composed of species that are not only common to grassland and forested areas, but to the Cross-Timbers and Blackland Prairie eco-regions of North Central Texas. It is IES' professional opinion that the proposed project will not have any effect on any unique vegetation, vegetation communities, or habitat types.

Table 1. Federally- and State- listed Threatened and Endangered Species Occurring or Potentially Occurring in Dallas County, Texas

Species	State Status	Federal Status	Description of Habitat	Habitat Present ¹	Species Effect ²
BIRDS					
Black Rail (<i>Laterallus jamaicensis</i>)	T	LT	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of <i>Salicornia</i> .	No	No
Golden-cheeked Warbler (<i>Setophaga chrysoparia</i>)	E	LE	Ashe juniper in mixed stands with various oaks (<i>Quercus</i> spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.	No	No
Least Tern (<i>Sterna antillarum athalassos</i>)	E	DL	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	No	No
Piping Plover (<i>Charadrius melodus</i>)	T	LT	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e., north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	No	No
Rufa Red Knot (<i>Calidris canutus rufa</i>)	T	LT	The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (<i>Donax</i> spp.) on beaches and dwarf surf clam (<i>Mulinia lateralis</i>) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	No	No
White-faced ibis (<i>Plegadis chihi</i>)	T	---	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No	No
Whooping Crane (<i>Grus americana</i>)	E	LE	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	No	No
Wood stork (<i>Mycteria americana</i>)	T	---	Prefers to nest in large tracts of baldcypress (<i>Taxodium distichum</i>) or red mangrove (<i>Rhizophora mangle</i>); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e., active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.	No	No

Species	State Status	Federal Status	Description of Habitat	Habitat Present ¹	Species Effect ²
MOLLUSK					
Louisiana pigtoe (<i>Pleurobema riddellii</i>)	T	---	Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019].	No	No
Sandbank pocketbook (<i>Lamellis satura</i>)	T	---	Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019].	No	No
Texas heelsplitter (<i>Potamilus amphichaenus</i>)	T	---	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019].	No	No
Trinity pigtoe (<i>Fusconaia chunii</i>)	T	---	Found in a variety of habitats but most common in riffles. Inhabits various substrates though most often sand, gravel, and cobble (species was recently split from Texas Pigtoe and occurs in similar habitats; Howells 2010a; Randklev et al. 2013b; Randklev et al. 2014a; Troia et al 2015). [Mussels of Texas 2019].	No	No
INSECTS					
Monarch Butterfly (<i>Danaus plexippus</i>)	---	C	Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily <i>Asclepias</i> spp.), and larvae emerge after 2 to 5 days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately 2 to 5 weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live 6 to 9 months. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites.	No	No
REPTILES					
Alligator snapping turtle (<i>Macrochelys temminckii</i>)	T	---	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	No	No
Texas horned lizard (<i>Phrynosoma cornutum</i>)	T	---	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	No	No

LE – Federally Listed Endangered, LT – Federally Listed Threatened, DL – Federally Delisted, PT – Federally Proposed Threatened, E – State Listed Endangered, T - State Listed Threatened

¹Habitat Present? – Do the vegetation communities located within the survey area match the requirements for that particular protected species?

²Species Effect? – Will the proposed project potentially affect a protected species?

Data Sources: USFWS IPaC (Published and accessed 28 September 2021), TPWD (Published 22 June 2021, accessed 28 September 2021), and field survey of the survey area

Potential to Affect Protected Species

As previously noted, habitat for any of the federally listed species and state listed species was not present within the survey area. As such, the proposed project is not expected to have any impacts on the federally or state-listed threatened or endangered species.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project and hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

Attachments

File ref: 03.006.094

ATTACHMENT A

Figures

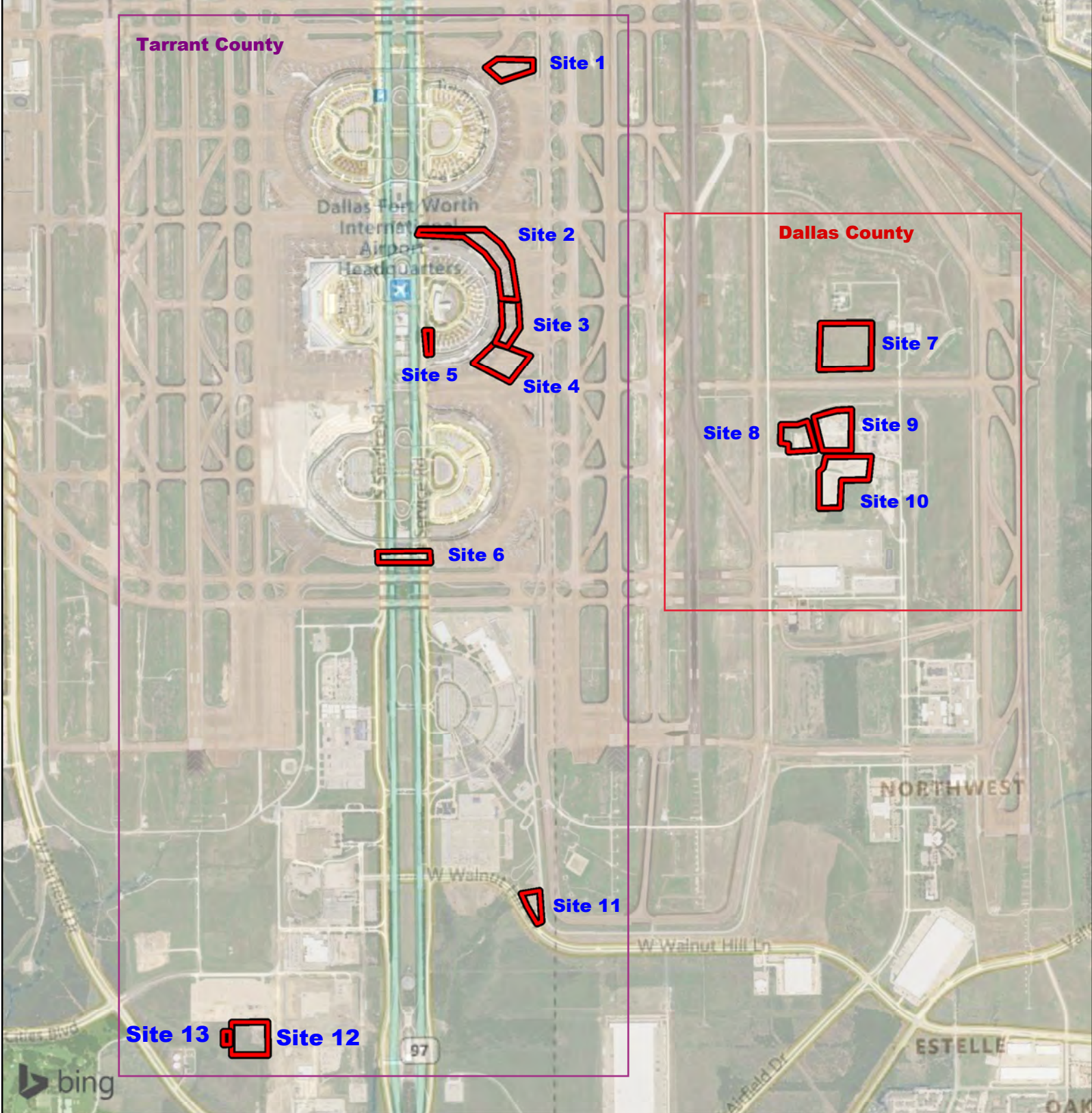



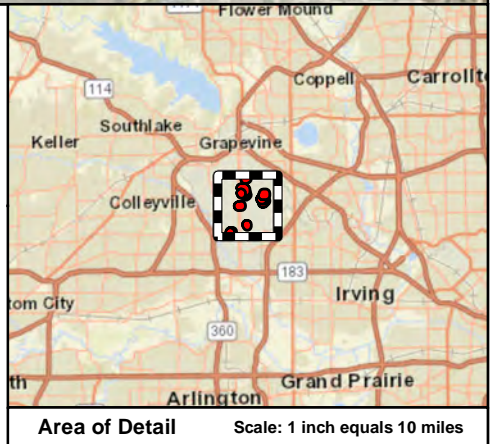
Figure 1.
General Location Map

CTA Development Project
 Dallas Fort Worth International Airport
 Dallas and Tarrant Counties, Texas

1 in = 2,000 feet

File Ref. 03.006.094
 Date: 9/28/2021

 Survey Area



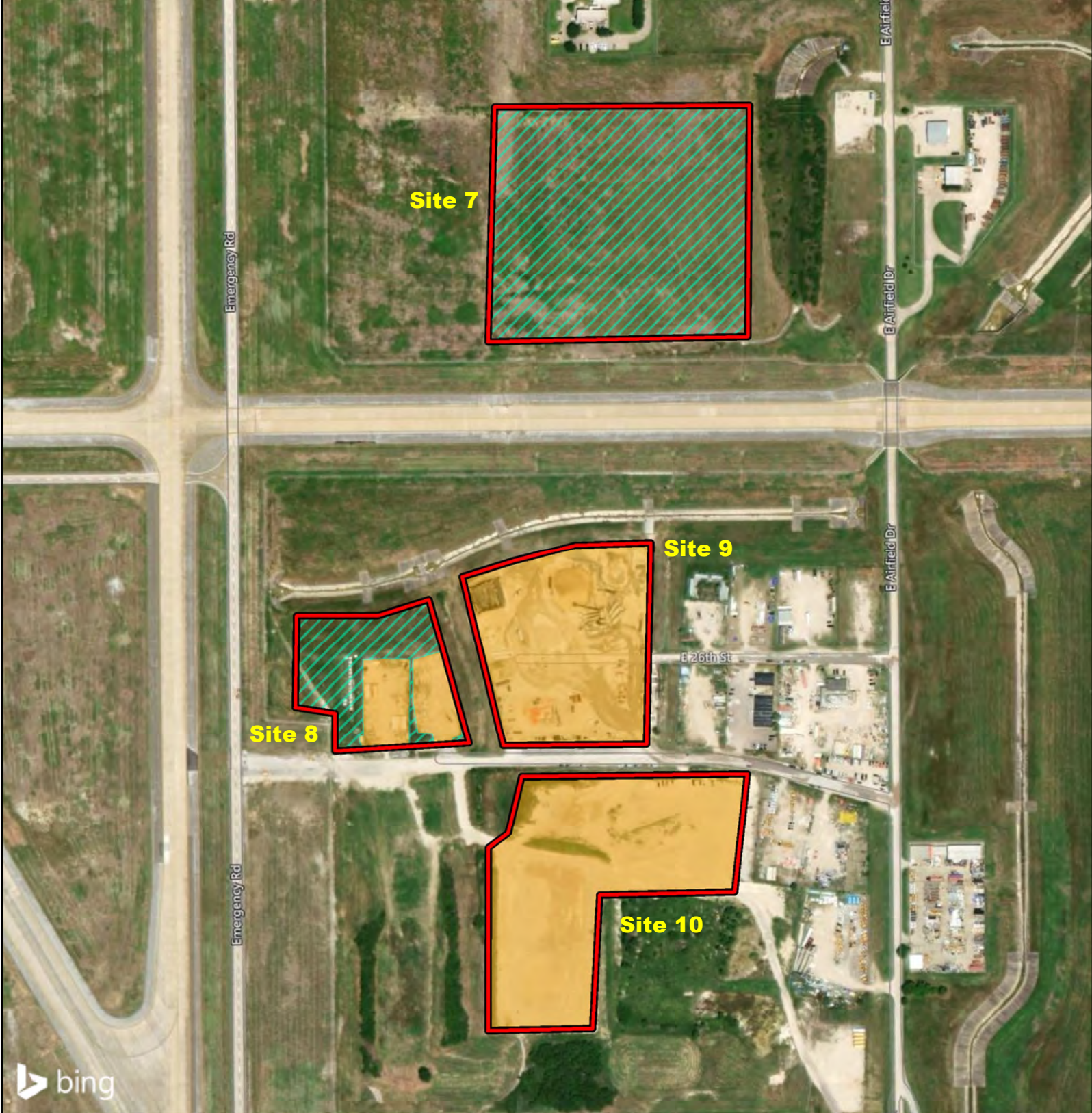


Figure 2.
Vegetation Communities Identified
within the Survey Areas

CTA Development Project
 Dallas Fort Worth International Airport
 Dallas County, Texas

- Survey Area
- Vegetation Communities**
- Frequently Maintained Grassland
- Urban Matrix

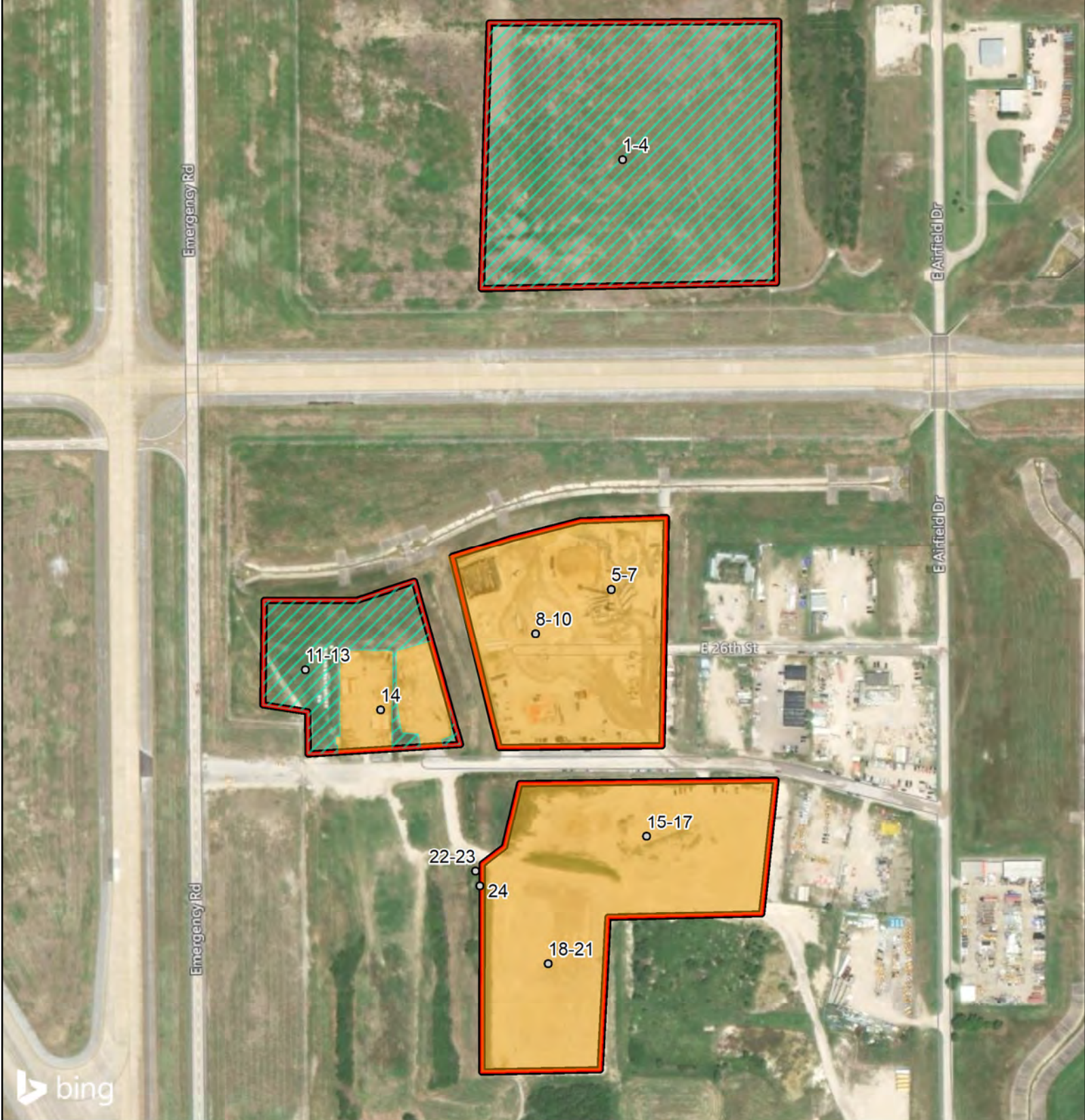
1 in = 400 feet Feet

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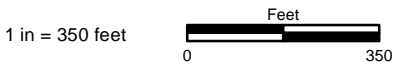
File Ref. 03.006.094
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ATTACHMENT B
Site Photographs







Photograph Location Map

CTA Development Project
 Dallas Fort Worth International Airport
 Dallas County, Texas



File Ref. 03.006.094
 Date: 9/29/2021

-  Survey Area
-  Photograph Location
- Vegetation Communities**
-  Frequently Maintained Grassland
-  Urban Matrix



Photograph 1



Photograph 2



Photograph 3



Photograph 4



Photograph 5



Photograph 6



Photograph 7



Photograph 8



Photograph 9



Photograph 10



Photograph 11



Photograph 12



Photograph 13



Photograph 14



Photograph 15



Photograph 16



Photograph 17



Photograph 18



Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24



30 September 2021

Ms. Sandy Lancaster
Dallas Fort Worth International Airport
3003 South Service Road, Annex Building A
DFW Airport, Texas 75261-9428

Re: CTA Development Project Tarrant County - Protected Species Habitat Assessment
Sites 1 through 6 and 11 through 13 of the 13 total locations for the CTA Terminals A and C Development
Project located within the Dallas Fort Worth International Airport, Tarrant County

Dear Ms. Lancaster,

Integrated Environmental Solutions, LLC (IES) performed a protected species habitat assessment on the CTA Terminals A and C Development Project associated with Sites 1 through 6 and 11 through 13 of the 13 total locations within the Dallas Fort Worth International Airport, Tarrant County (**Attachment A, Figure 1**). This habitat assessment was performed to satisfy the requirements regarding the Endangered Species Act (ESA). The following report is a list of the federal and state-listed protected species for Tarrant County and their preferred vegetation assemblages, a summary of the vegetation communities identified on the site, an evaluation of whether the communities present on the site could support a protected species, and whether or not future proposed actions would affect listed species.

INTRODUCTION

Protected Species

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RESULTS

Literature Review

According to the USFWS, three species, Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*) are listed as federally protected (i.e., threatened or endangered) with the potential to occur within Tarrant County. Two of these species are conditionally listed as threatened within Tarrant County on the basis that the proposed project is for wind energy production, Red Knot, and Piping Plover. No federally listed critical habitat for these species is located within the vicinity of the survey area. The TPWD lists 12 state protected species that could occur within Tarrant County. Four are also federally listed avian species; however, the Black Rail (*Laterallus jamaicensis*) is only listed by TPWD for Tarrant County. The review of the TXNDD files did not indicate any unique vegetation communities, parks or natural/managed areas within the survey area.

Attachment C identifies the state and federally protected species that could potentially occur within Tarrant County from the IPAC and Rare and Threatened Endangered Species of Texas (RTEST) lists.

Site Survey

Ms. Karisa Fenton and Ms. Clair Unruh of IES evaluated the survey area on 22 September 2021. This survey was designed to provide a habitat evaluation of the overall survey area with the primary focus on the plant community.

Sites 1 through 6 and 11 through 13 consisted of four distinct vegetation communities, **urban matrix**, **frequently maintained grassland**, **infrequently maintained grassland**, and **shrub-scrub upland**. The **urban matrix** was found throughout a majority of Sites 1 through 6, and on the eastern side of Site 12. The urban matrix was comprised of concrete lots, roads, buildings, and active construction areas. The entirety of Site 11, and the western portion of Site 5 contained the **frequently maintained grassland** vegetation community, dominated by mowed Bermudagrass (*Cynodon dactylon*). The **infrequently maintained grassland** was observed in the central region of Site 12 and was comprised of Maximilian sunflower (*Helianthus maximiliani*), meadow dropseed (*Sporobolus compositus*),

Johnsongrass (*Sorghum halepense*), white heath aster (*Symphyotrichum ericoides*), King Ranch bluestem (*Bothriochloa ischaemum*), sumpweed (*Iva annua*), Canada goldenrod (*Solidago canadensis*), prairie broomweed (*Amphiachyris dracunculoides*), Bermudagrass, and annual sunflower (*Helianthus annuus*). The **shrub-scrub upland** vegetation community was observed on the western side of Site 12 and throughout Site 13, dominated by honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), giant ragweed (*Ambrosia trifida*), Johnsongrass, Bermudagrass, and annual sunflower.

CONCLUSIONS

Preferred Habitat for Federally Protected Species

Table 1 provides a summary of the federally and state-listed species that could potentially occur within Tarrant County, as well as a brief description of their habitat, whether this habitat is present within the survey area, and whether the proposed project would potentially affect the listed species.

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- Whooping Cranes utilize estuaries, prairie marshes, moist grasslands, croplands, and will use large shallow wetland areas associated with lakes for roosting and feeding. The survey area did not contain this type of vegetation communities within.

As such, the habitats present within the survey area were not suitable for any of the federally listed threatened and endangered species. Nor were the habitats suitable for nesting, feeding, or stopover migration habitat for these species.

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Black Rail (<i>Laterallus jamaicensis</i>)	T	LT	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of <i>Salicornia</i> .	No	No
Least Tern (<i>Sterna antillarum athalassos</i>)	E	DL	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	No	No
Piping Plover (<i>Charadrius melodus</i>)	T	LT	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e., north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	No	No
Rufa Red Knot (<i>Calidris canutus rufa</i>)	T	LT	The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Primary prey items include coquina clam (<i>Donax</i> spp.) on beaches and dwarf surf clam (<i>Mulinia lateralis</i>) in bays, at least in the Laguna Madre. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore.	No	No
White-faced ibis (<i>Plegadis chihi</i>)	T	---	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No	No
Whooping Crane (<i>Grus americana</i>)	E	LE	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	No	No
MAMMALS					
Black Bear (<i>Ursus americanus</i>)	T	---	Historically prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat.	No	No
MOLLUSKS					
Louisiana pigtoe (<i>Pleurobema riddellii</i>)	T	---	Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019].	No	No
Sandbank pocketbook (<i>Lamsilis satura</i>)	T	---	Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019].	No	No
Texas heelsplitter (<i>Potamilus amphichaenus</i>)	T	---	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019].	No	No

Species	State Status	Federal Status	Description of Habitat	Habitat Present ¹	Species Effect ²
INSECTS					
Monarch Butterfly (<i>Danaus plexippus</i>)	---	C	Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily <i>Asclepias</i> spp.), and larvae emerge after 2 to 5 days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately 2 to 5 weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live 6 to 9 months. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites.	No	No
REPTILES					
Alligator snapping turtle (<i>Macrochelys temminckii</i>)	T	---	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	No	No
Texas horned lizard (<i>Phrynosoma cornutum</i>)	T	---	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	No	No

LE – Federally Listed Endangered, LT – Federally Listed Threatened, DL – Federally Delisted, PT – Federally Proposed Threatened, E – State Listed Endangered, T - State Listed Threatened
 C - Candidate

¹Habitat Present? – Do the vegetation communities located within the survey area match the requirements for that particular protected species?

²Species Effect? – Will the proposed project potentially affect a protected species?

Data Sources: USFWS IPaC (Published and accessed 28 September 2021), TPWD (Published 22 June 2021, accessed 28 September 2021), and field survey of the survey area

Potential to Affect Protected Species

As previously noted, habitat for any of the federally listed species and state listed species was not present within the survey area. As such, the proposed project is not expected to have any impacts on the federally or state-listed threatened or endangered species.

IES appreciates the opportunity to work with you and the Dallas Fort Worth International Airport Environmental Affairs Department on this project and hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at 972-562-7672 or by email at skipp@intenvsol.com or rreinecke@intenvsol.com.

Sincerely,

Integrated Environmental Solutions, LLC.



Mr. Shae Kipp
Ecologist

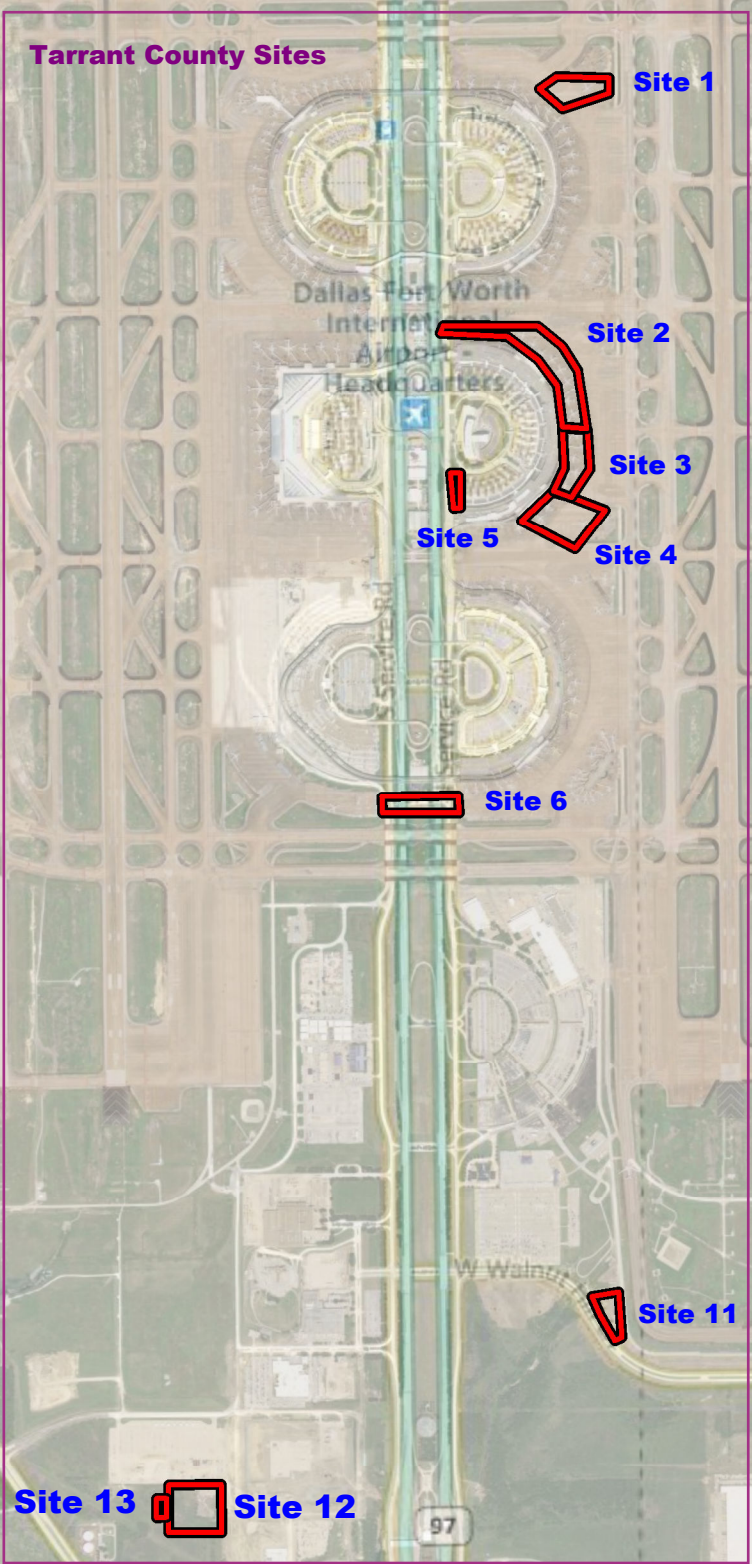
Attachments

File ref: 03.006.094

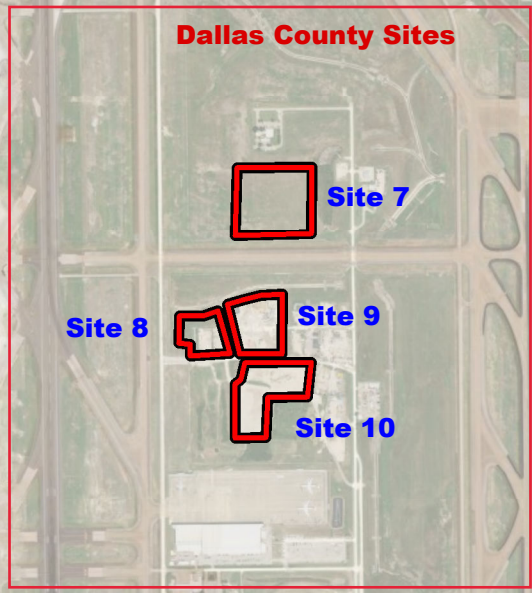
ATTACHMENT A

Figures

Tarrant County Sites




Dallas County Sites



Site 13 **Site 12**

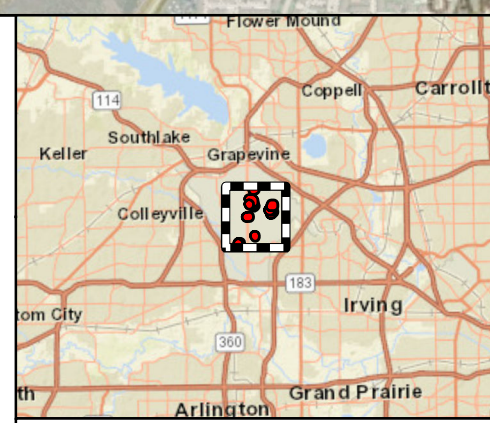
**Figure 1.
General Location Map**

 Survey Area

CTA Development Project
Dallas Fort Worth International Airport
Dallas and Tarrant Counties, Texas



File Ref. 03.006.094
Date: 9/28/2021



Area of Detail Scale: 1 inch equals 10 miles

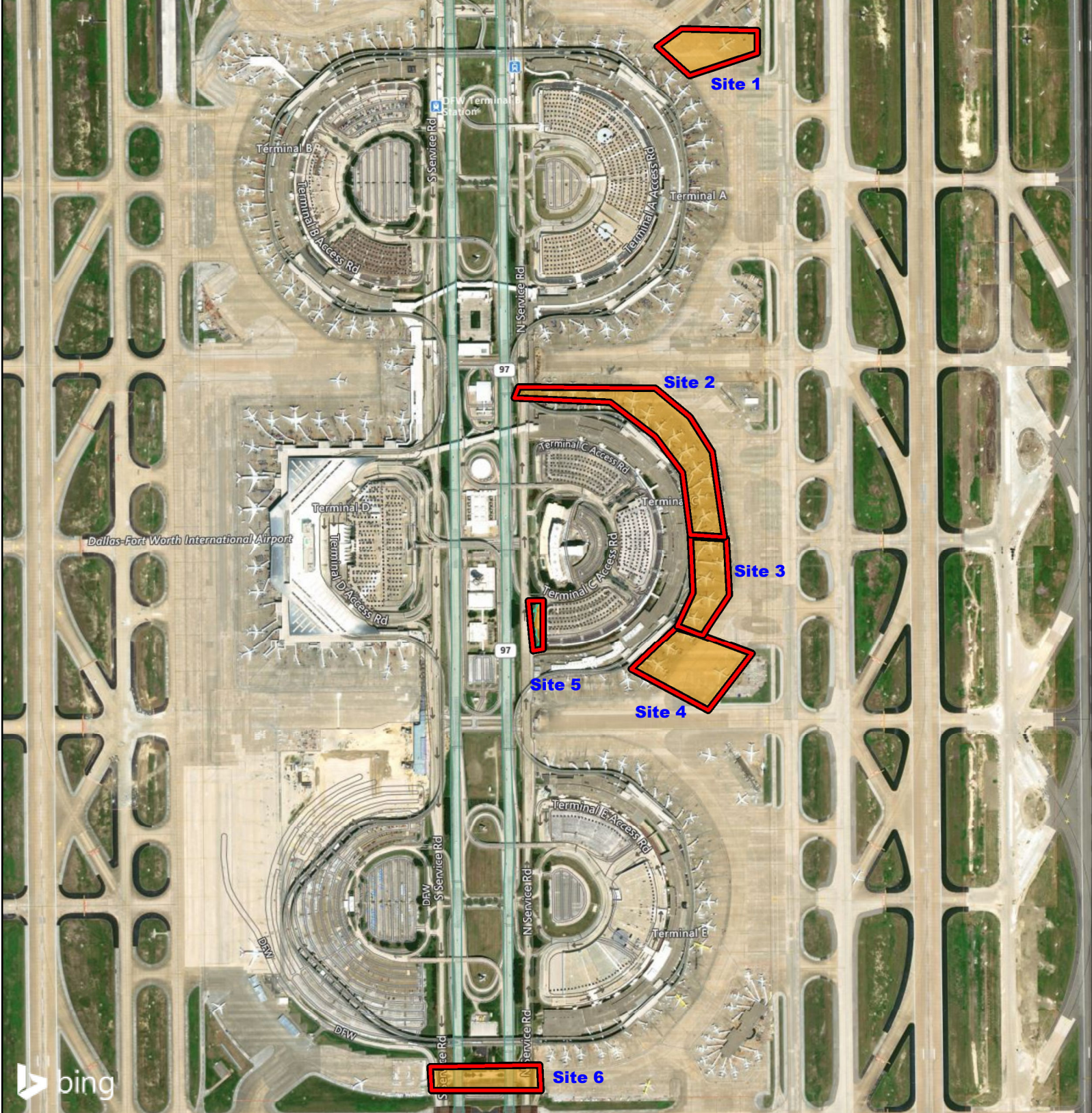



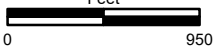


Figure 2A.
Vegetation Communities Identified
within the Survey Area

CTA Development Project
 Dallas Fort Worth International Airport
 Tarrant County, Texas

-  Survey Area
- Vegetation Communities**
-  Frequently Maintained Grassland
-  Urban Matrix

1 in = 950 feet 



File Ref. 03.006.094
 Date: 9/29/2021

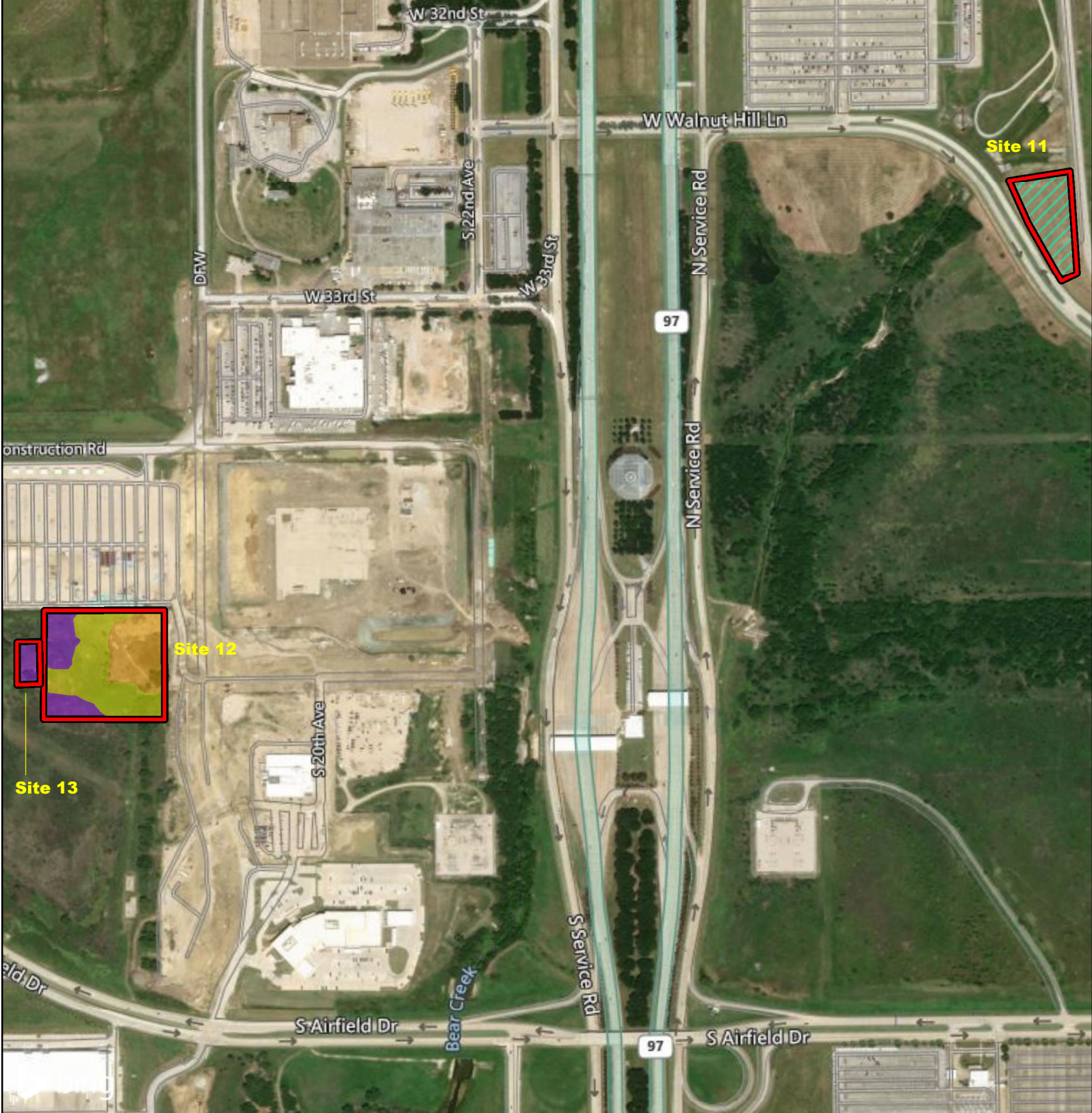







Figure 2B.
Vegetation Communities Identified
within the Survey Area

CTA Development Project
 Dallas Fort Worth International Airport
 Tarrant County, Texas

-  Survey Area
- Vegetation Communities**
-  Frequently Maintained Grassland
-  Infrequently Maintained Grassland
-  Urban Matrix
-  Scrub Shrub



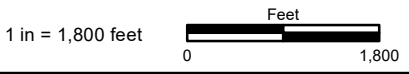
File Ref. 03.006.094
 Date: 9/29/2021

ATTACHMENT B
Site Photographs



Photograph Location Map

CTA Development Project
 Dallas Fort Worth International Airport
 Tarrant County, Texas

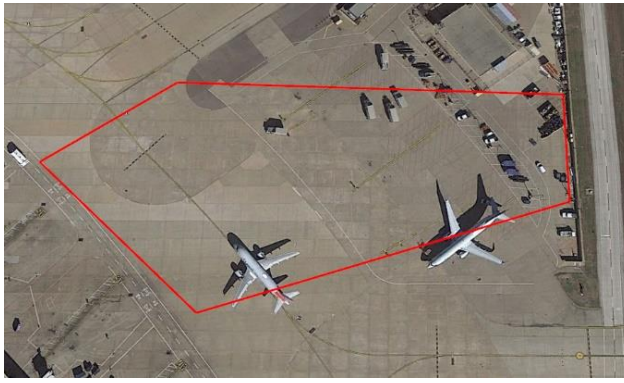


File Ref. 03.006.094
 Date: 9/29/2021

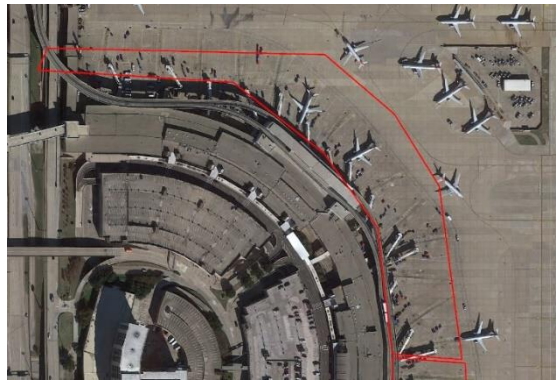
- Survey Area
- Photograph Location

Vegetation Communities

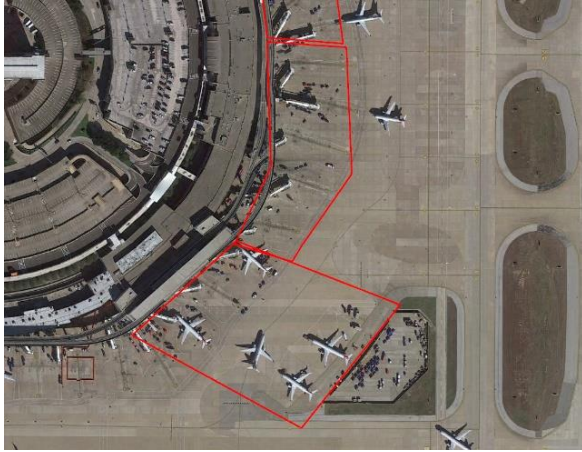
- Frequently Maintained Grassland
- Infrequently Maintained Grassland
- Urban Matrix
- Scrub Shrub



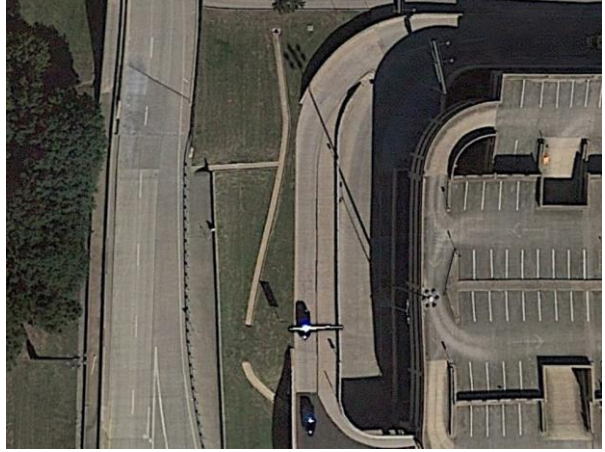
Photograph 1*



Photograph 2*



Photograph 3*



Photograph 4*



Photograph 5*



Photograph 6*



Photograph 7*



Photograph 8*



Photograph 9



Photograph 10



Photograph 11



Photograph 12



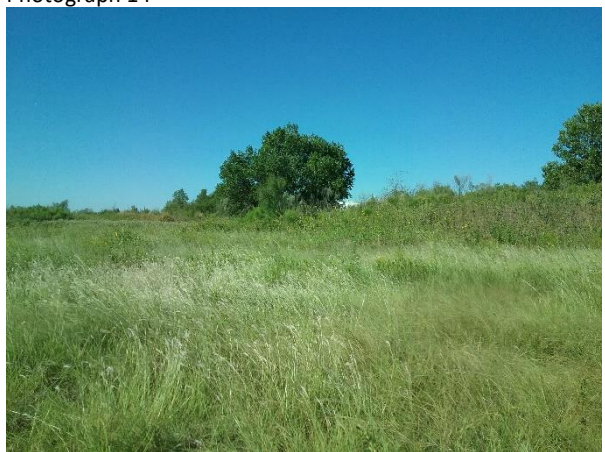
Photograph 13



Photograph 14



Photograph 15



Photograph 16



Photograph 17



Photograph 18



Photograph 19



Photograph 20



Photograph 21



Photograph 22



Photograph 23



Photograph 24



Photograph 25



Photograph 26



Photograph 27

*Aerial Images and Street View Images from Google Earth

ATTACHMENT C
Protected Species Lists



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
501 West Felix Street
Suite 1105
Fort Worth, TX 76115-3410
Phone: (817) 277-1100 Fax: (817) 277-1129
Email Address: arles@fws.gov

In Reply Refer To:
Project Code: 2023-0134510
Project Name: CTA Expansion

December 15, 2023

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, which may occur within the boundary of 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.).

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 section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

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 Federal actions 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.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at: <https://www.fws.gov/service/section-7-consultations>

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

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>). Additionally, wind energy projects should follow the wind energy guidelines (<https://www.fws.gov/media/land-based-wind-energy-guidelines>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation>. The Federal Aviation Administration (FAA) released specifications for and made mandatory flashing L-810 lights on new towers 150-350 feet AGL, and the elimination of L-810 steady-burning side lights on towers above 350 feet AGL. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

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 Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- 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:

Arlington Ecological Services Field Office

501 West Felix Street

Suite 1105

Fort Worth, TX 76115-3410

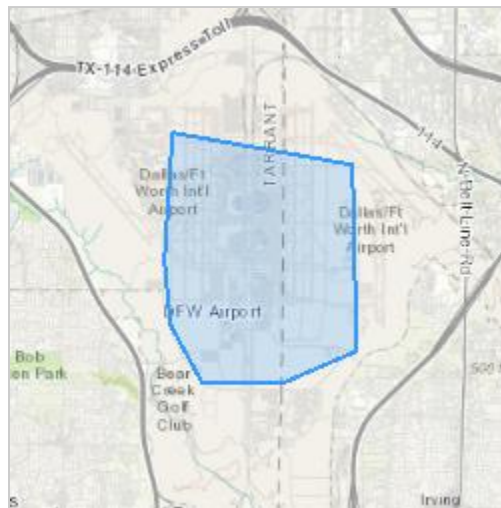
(817) 277-1100

PROJECT SUMMARY

Project Code: 2023-0134510
Project Name: CTA Expansion
Project Type: Airport - New Construction
Project Description: Central Terminal Area Expansion, including new Terminal F at DFW International Airport

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@32.8956595,-97.03781473364748,14z>



Counties: Dallas and Tarrant counties, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, 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.

MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Golden-cheeked Warbler <i>Setophaga chrysoparia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

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

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 Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, 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. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

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

Probability of Presence (■)

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 (■)

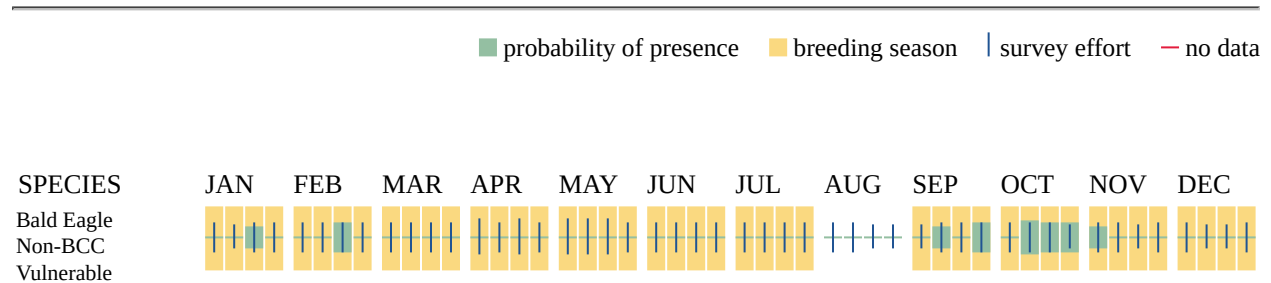
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

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 Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ 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 Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561</p>	Breeds elsewhere
<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. https://ecos.fws.gov/ecp/species/1626</p>	Breeds Sep 1 to Jul 31
<p>Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406</p>	Breeds Mar 15 to Aug 25
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Little Blue Heron <i>Egretta caerulea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9477</p>	Breeds Mar 10 to Oct 15
<p>Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561</p>	Breeds elsewhere
<p>Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439</p>	Breeds Apr 1 to Jul 31

NAME	BREEDING SEASON
Sprague's Pipit <i>Anthus spragueii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8964	Breeds elsewhere

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 (■)

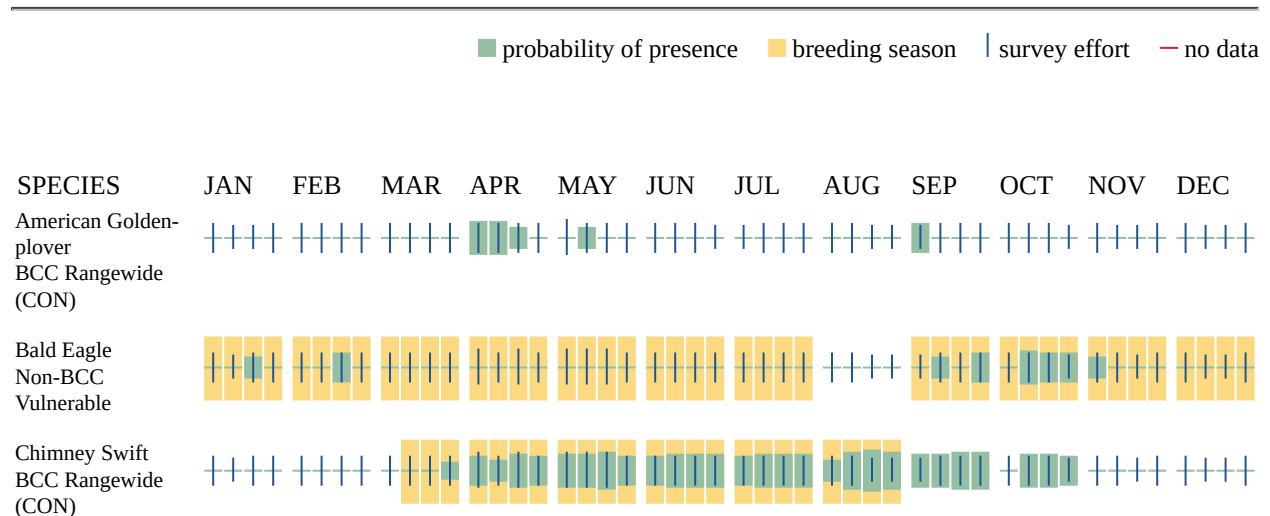
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

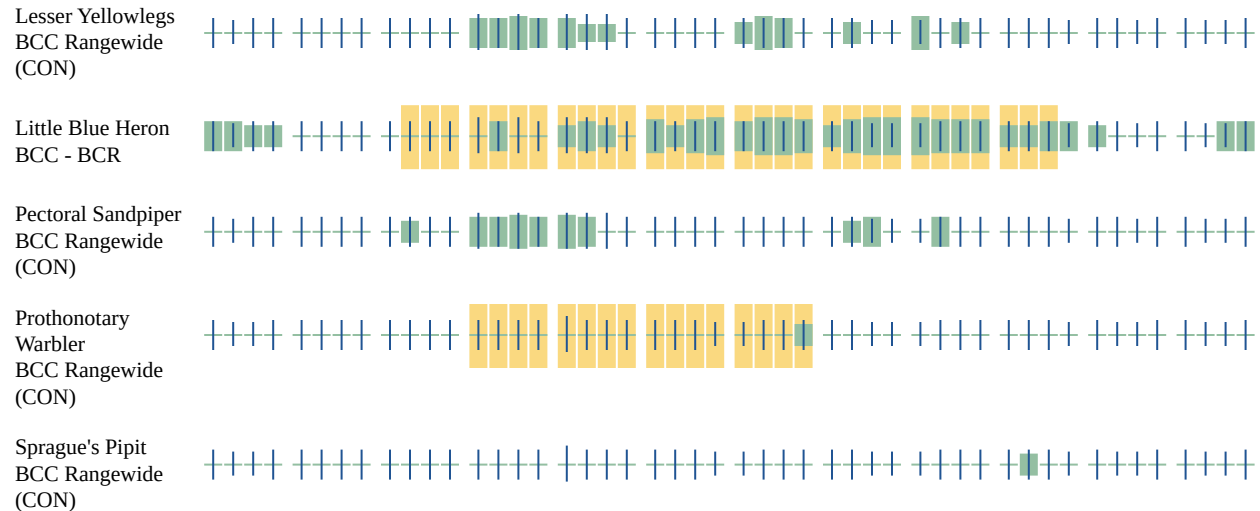
Survey Effort (|)

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>

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.

FRESHWATER POND

- PUBFh
- PUSCh

RIVERINE

- R4SBCx
- R4SBC

- R5UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1Ah
-

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LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Aviation Administration
