

Transportation Landscape Architecture Coordination with Federal Aviation Administration

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Presentation Overview

- Applicable FDM Criteria
- Airport Locations within Florida
- Case Study
- Other Factors To Consider
- FAA Websites & Tools
- FAA Notice Process
- FAA Resources & Contacts
- Questions





FDM Criteria Overview

Section 110.5.1 Aviation and Spaceports

110.5.1 Aviation and Spaceports

Coordinate with the District Aviation Coordinator when a project is within 10 nautical miles (11.5 statute miles) of an airport or spaceport.

Federal, state, and local regulations exist to protect the national airspace system and must be considered when planning and implementing construction that may adversely impact:

- (1) Military or public-use aviation facilities (airport, seaport, or heliport),
- Navigational or communication facilities, or
- (3) Instrument approach flight procedures.

Federal law, <u>Title 14 Code of Federal Regulations (CFR)</u>, <u>Federal Aviation Regulations (FAR)</u>, <u>"Part 77, Subpart B – Notice Requirements"</u> (Part 77, Subpart B) requires that prior notification be given to the Federal Aviation Administration (FAA) regarding any proposed construction or alteration (permanent or temporary) of structures. Refer to **FDM 110.5.1.2** for FAA notification requirements.

Note: This was previously 5 nautical miles and changed with the release of the 2018 FDM.



FDM Criteria Overview

Section 110.5.1 Aviation and Spaceports

Structures may include:

- Traverseways
 - Interstate Highways
 - Public Roadways
 - o Private Roads
 - Railroads
 - Waterways
 - Other traverse ways
- Parking or rest areas
- Bridges and overpasses
- High-mast light poles
- Utility poles

- Antenna towers
- Buildings
- Signs or billboards
- Fences or gates
- Temporary-use construction materials or equipment, including dirt piles and cranes
- Natural growth, vegetation, and landscaping, depending on proximity to an aviation facility, navigational aid, or instrument procedure ground track





Airport Locations

State Roads





Airport Locations State Roads

Interstate / Highway







State Roads

Interstate / Highway

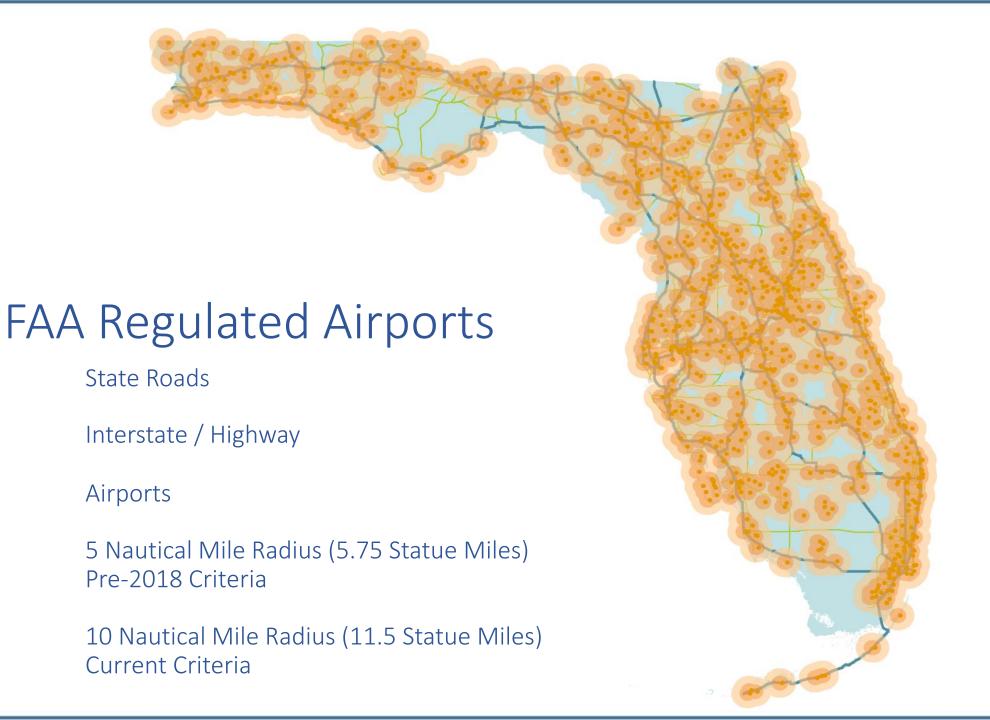
Airports













FDM Criteria Overview

Section 110.5.1 Aviation and Spaceports

110.5.1.1 Required Coordination

For guidelines on airspace obstruction permitting, refer to *Chapter 333, Florida Statutes* (*F.S.*), "Airport Zoning", and *Chapter 14-60, Florida Administrative Code*, "Airport Licensing and Airspace Protection".

While the responsibility for filing FAA notifications and local government permitting applications for Airspace Obstruction Permits, if applicable, rests with the Engineer of Record, the FDOT Aviation and Spaceports Office provides technical assistance on proposed projects to determine impact to the national airspace system in Florida. Please direct your inquiries to the following:

FDOT Aviation and Spaceports Office Airspace and Land Use Manager 605 Suwannee St., M.S. 46 Tallahassee, FL 32399-0450 Tel: (850) 414-4500

http://www.fdot.gov/aviation/

Contact:

Greg Jones
Airspace and Land Use Manager
Aviation and Spaceports Office
850-414-4502
Greg.Jones@dot.state.fl.us



FDM Criteria Overview

Section 110.5.1 Aviation and Spaceports

110.5.1.2 FAA Notification Guidelines

Part 77 – **Subpart B** requires that prior notification be given to the FAA regarding any proposed construction or alteration of structures that exceeds the criteria of **Part 77**, **Subpart B**. The FAA provides a **Notice Criteria Tool** via the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) website (https://oeaaa.faa.gov/) that should also be used to determine if notice to the FAA is required due to possible obstruction of navigation or communication facilities.

If FAA notification is required, <u>FAA Form 7460-1</u>, "Notice of <u>Proposed Construction or Alteration</u>" can be submitted either electronically through the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) website, or manually to the FAA Southern Regional Office in Atlanta. Submitting electronically is the preferred notification method. Submission of the *Form 7460-1* will result in the FAA issuing a Determination whether the proposed structure constitutes a hazard to air navigation. If the structure is determined to be a hazard the construction may not proceed, according to *Chapter 333, F.S.* The Form must be submitted at least 45 days before the earlier of the following dates:

- (1) Date proposed construction or alteration is to begin.
- (2) Date an application for a construction permit is to be filed.



FAA Process Overview

- Is any portion of the project within 10 nautical miles of an airport runway?
- If yes, utilize the FAA Notice Criteria Tool to determine if Notice to the FAA is required.
- If Notice is required, submit FAA Form 7460-1 for each structure (referred to as cases).
- The FAA will then perform an aeronautical study and provide a determination for each case if the proposed structure is a hazard to the airspace.
- If it is determined that a particular structure is a hazard, plans must be modified.
- If approved, Determination is good for 18 months.



Case Study: 1-95 & International Speedway Blvd Interchange

Bold Landscape Project in District 5 (Volusia County)







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Bold Landscape Project in District 5 (Volusia County)



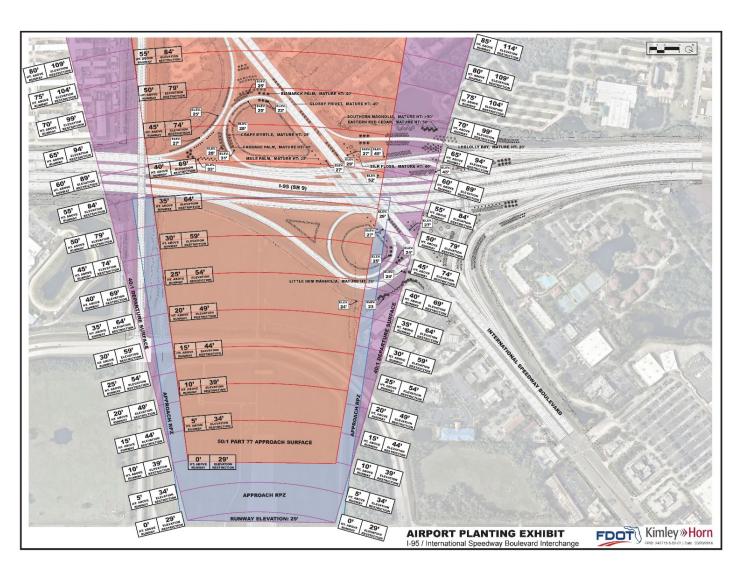
Airport Coordination

Coordination with appropriate Airport Management to ensure airport review of safety issues which may include:

- Smoke generated by the equipment being used.
- Tall structures, to include cranes, light poles, signs, landscaping, etc. during and after construction that may penetrate the Federal Aviation Regulations (FAR), Part 77 surfaces to the airport.
- Lighting used during nighttime operations, and that it is shielded from projecting upwards and outward, which could cause blindness or confusion by approaching and departing aircraft.
- Stockpiling of material or stormwater pond locations that could attract wildlife.
- Airport specific list of plant species known to attract wildlife.



Case Study: 1-95 & International Speedway Blvd Interchange



Overlay of:

- Runway Protection Zone (RPZ)
- Approach Surface (50:1)
- Departure Surface (40:1)

Evaluation of:

- Existing Elevations
- Mature Tree Heights of Proposed Landscape

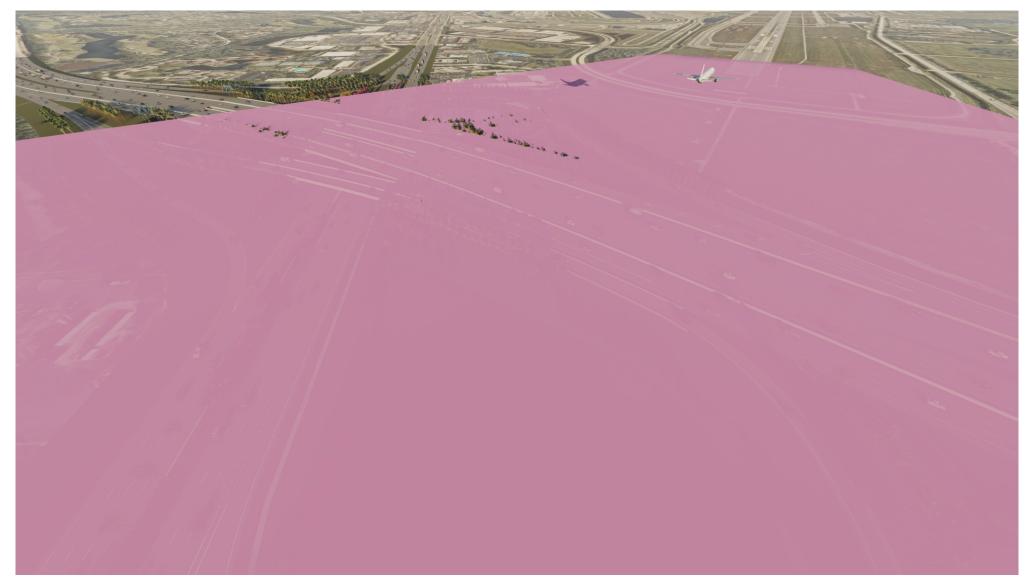


Preliminary Conceptual Rendering



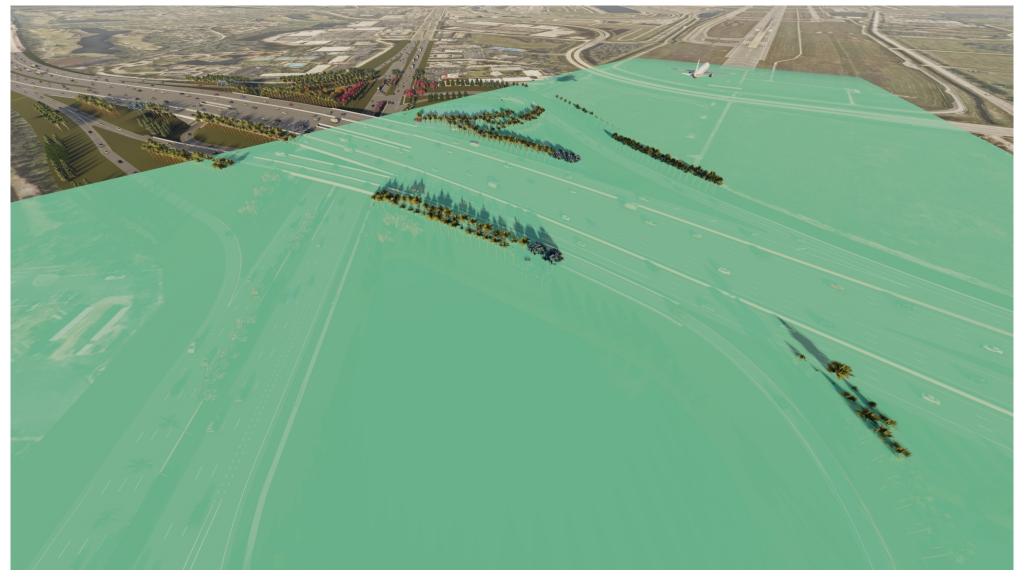


Impact of Approach Surface on Preliminary Design



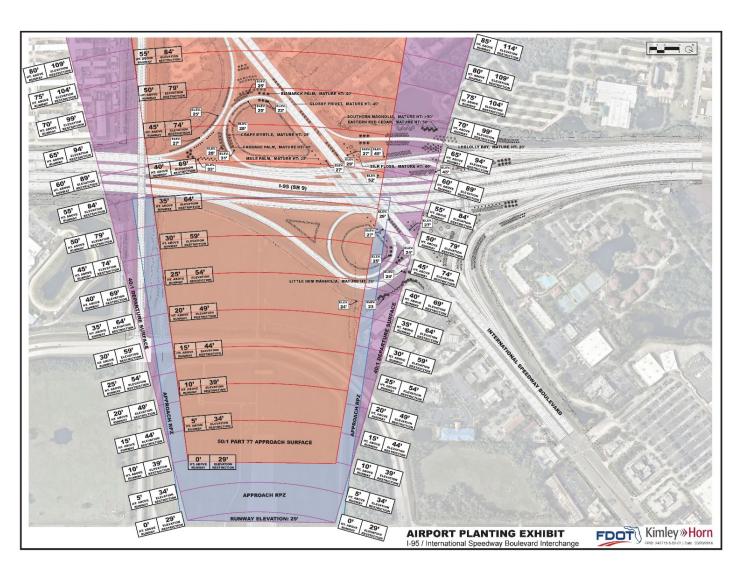


Impact of Departure Surface on Preliminary Design





Case Study: 1-95 & International Speedway Blvd Interchange



Overlay of:

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- Approach Surface (50:1)
- Departure Surface (40:1)

Evaluation of:

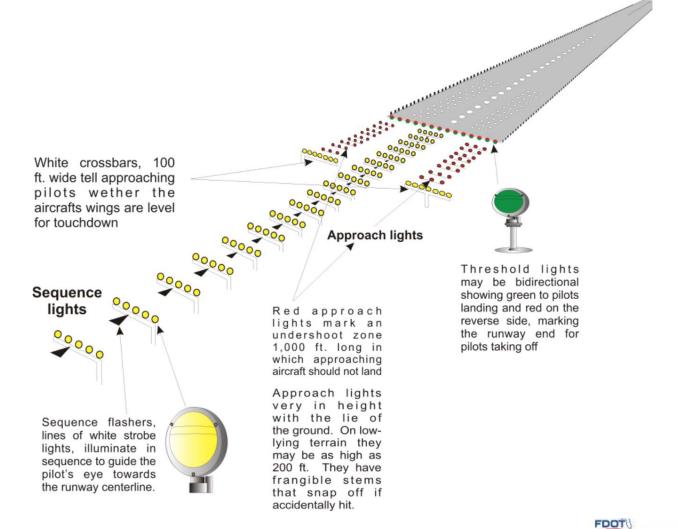
- Existing Elevations
- Mature Tree Heights of Proposed Landscape



Case Study: 1-95 & International Speedway Blvd Interchange

Proximity of proposed trees

- Avoid blocking the vision of the pilots entering runway approach area
- Avoid blocking the MALSR lights (Medium-intensity approach light system with Runway alignment indicator lights)





Other Landscape Design Factors

- Avoiding Plantings That Attract Hazardous Wildlife or Create Habitats Such as Wetlands
 - Deer
 - Deer Resistant Plant Species
 - Migratory Birds
 - Minimize Standing Water
 - Avoid Littoral Plantings
 - Avoid Plants with Berries
 - Avoid Fruiting Palm Trees
 - Avoid Heavy Seed Producing Plants

Table 1. Ranking of 25 species groups as to relative hazard to aircraft (1=most hazardous) based on three criteria (damage, major damage, and effect-on-flight), a composite ranking based on all three rankings, and a relative hazard score. Data were derived from the FAA National Wildlife Strike Database, January 1990–April 2003.

Species group	Ranking by criteria				
	Damage ⁴	Major damage ⁵	Effect on flight ⁶	Composite ranking ²	Relative hazard score ³
Deer	1	1	1	1	100
Vultures	2	2	2	2	64
Geese	3	3	6	3	55
Cormorants/pelicans	4	5	3	4	54
Cranes	7	6	4	5	47
Eagles	6	9	7	6	41
Ducks	5	8	10	7	39
Osprey	8	4	8	8	39
Turkey/pheasants	9	7	11	9	33
Herons	11	14	9	10	27
Hawks (buteos)	10	12	12	11	25
Gulls	12	11	13	12	24
Rock pigeon	13	10	14	13	23
Owls	14	13	20	14	23
H. lark/s. bunting	18	15	15	15	17
Crows/ravens	15	16	16	16	16
Coyote	16	19	5	17	14
Mourning dove	17	17	17	18	14
Shorebirds	19	21	18	19	10
Blackbirds/starling	20	22	19	20	10
American kestrel	21	18	21	21	9
Meadowlarks	22	20	22	22	7
Swallows	24	23	24	23	4
Sparrows	25	24	23	24	4
Nighthawks	23	25	25	25	1

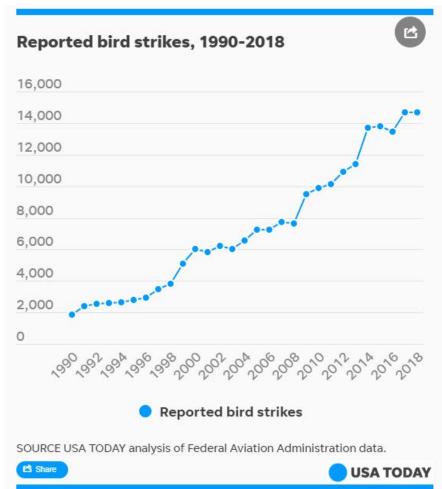
Per FAA Advisory Circular AC 150/5200-33B



Other Landscape Design Factors

 Avoiding Plantings That Attract Hazardous Wildlife or Create Habitats Such as Wetlands







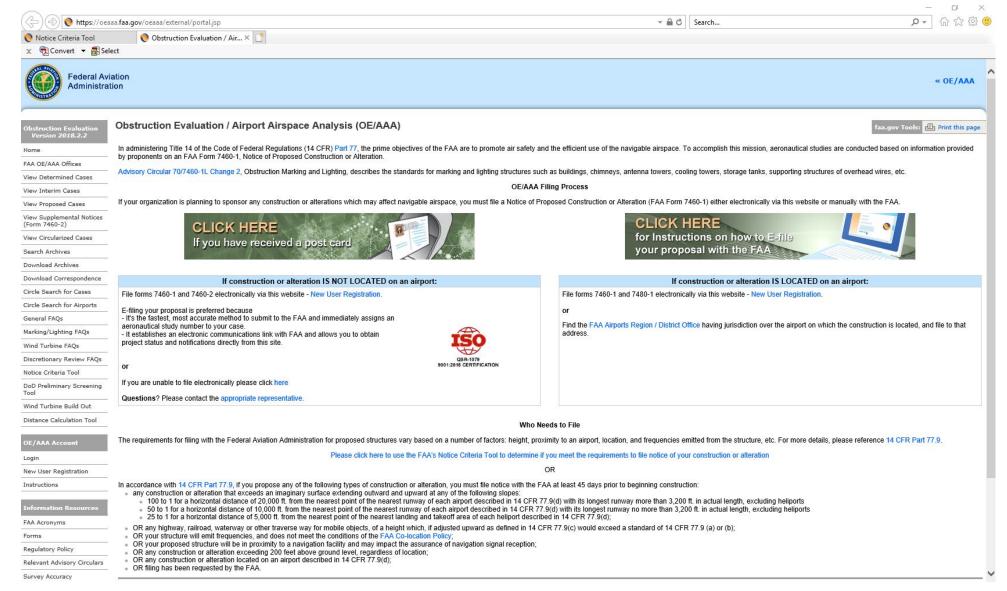
Miracle on the Hudson





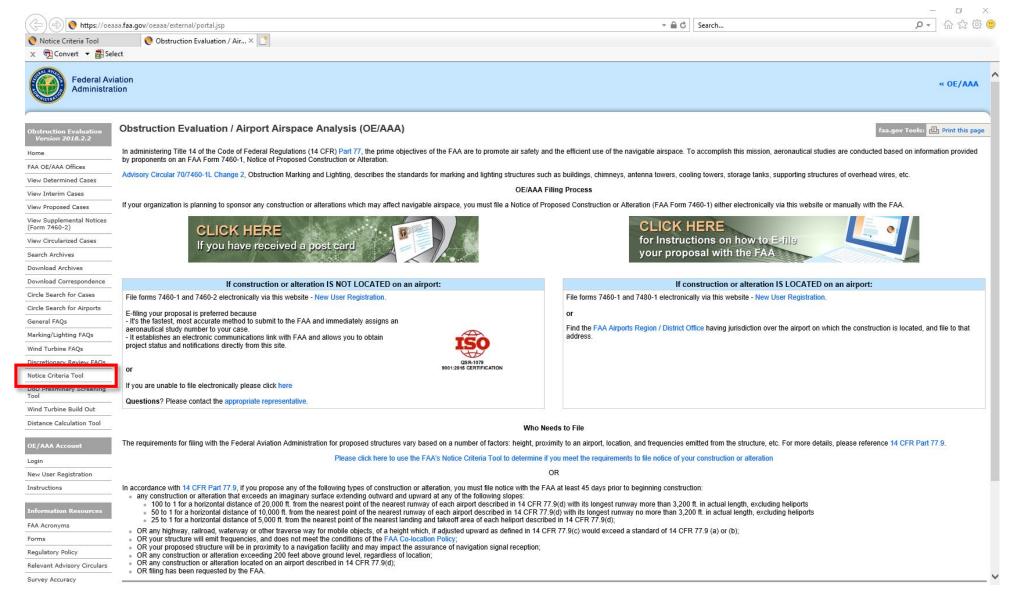
On January 15th, 2009, Flight 1549 struck a flock of geese causing engine failure.

FAA: Obstruction Evaluation/Airport Airspace Analysis Website



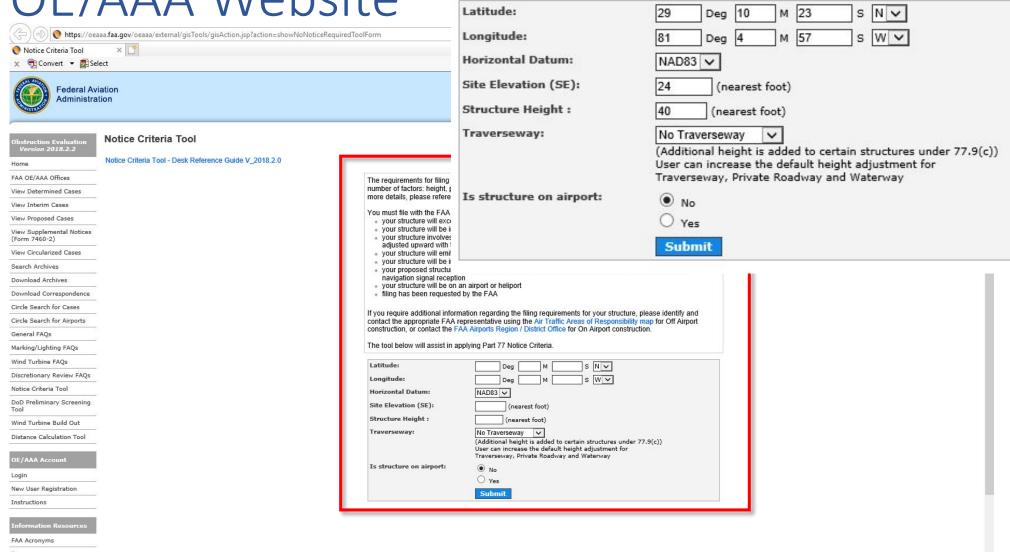


Notice Criteria Tool





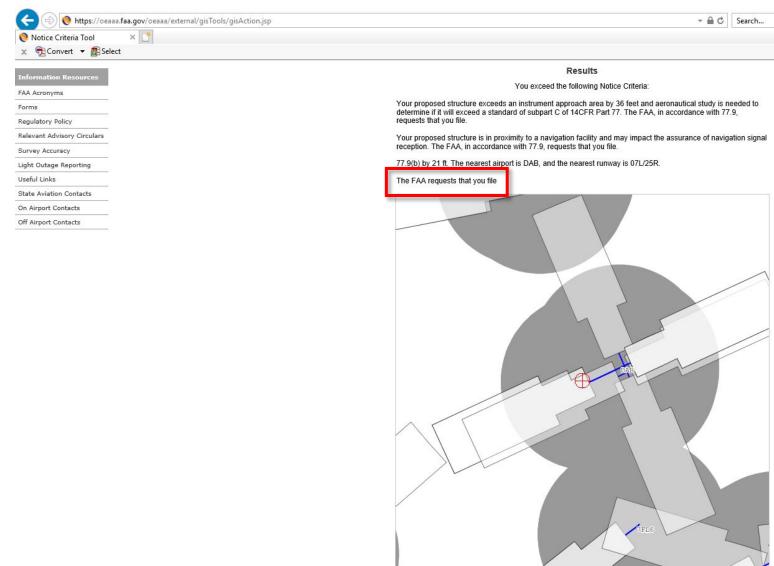
FAA: OE/AAA Website



TRANSPORTATION
SYMPOSITIVE

Regulatory Policy
Relevant Advisory Circulars
Survey Accuracy

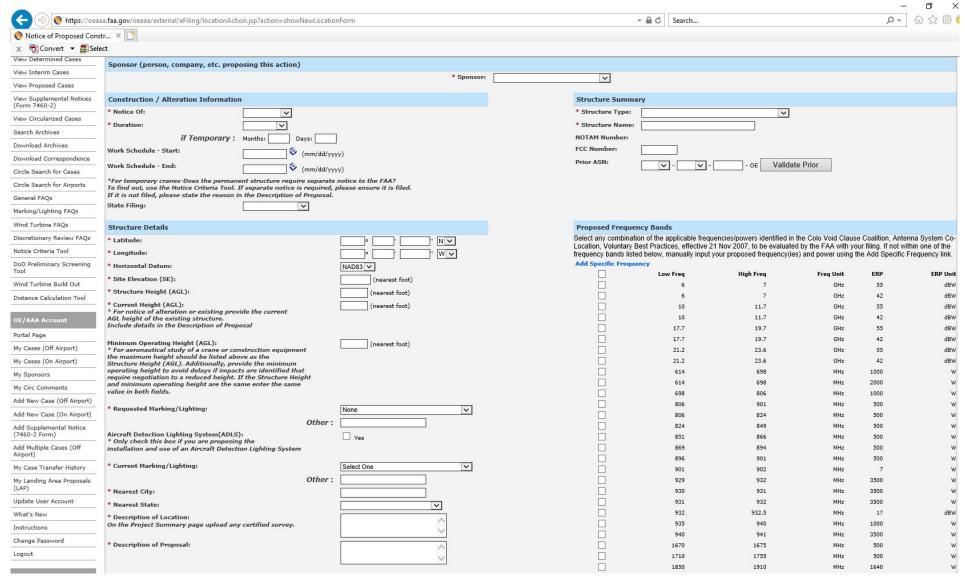
Notice Criteria Tool





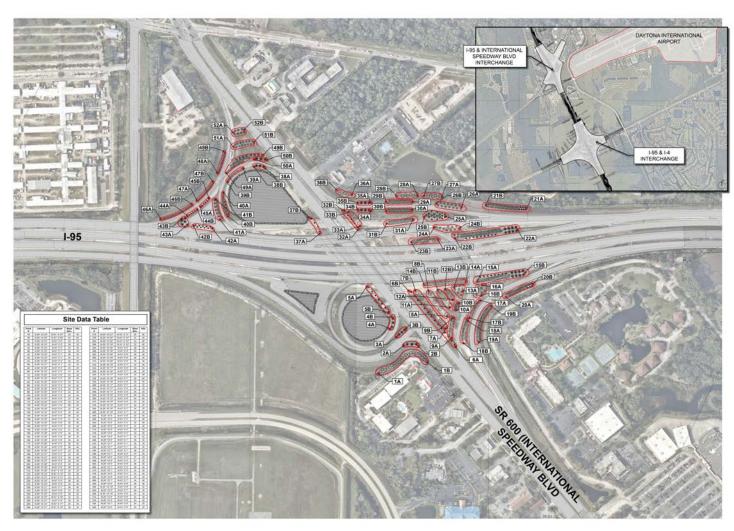
FAA: OE/AAA Website: Notice Criteria Tool

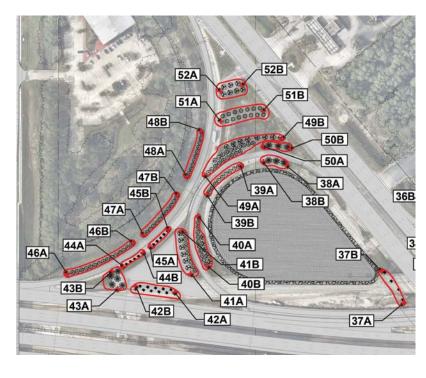
Off Airport Cases: FAA Form 7460-1





Off Airport Cases: Case Exhibit





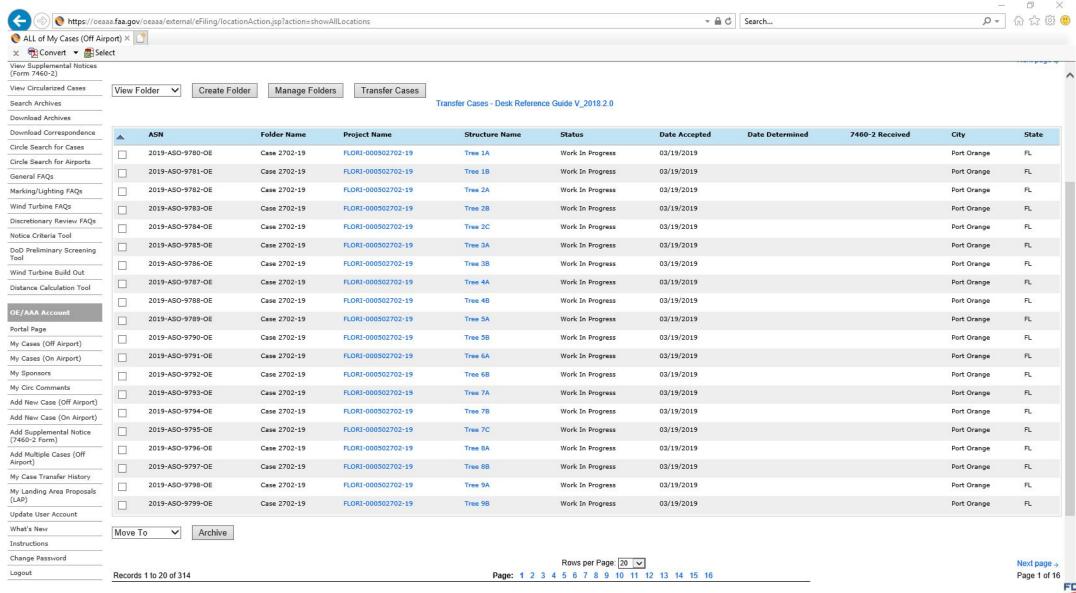






I-95 & ISB INTERCHANGE AIRPORT PLANTING EXHIBIT

Off Airport Cases: FAA Form 7460-1



FAA: OE/AAA Website: Off Airport Cases: FAA Form 7460-1

Project Considerations

- Impact of FAA constraints on the placement of Bold Landscaping.
- Appropriate selection of plant material.
- Potential scope need for FAA and/or airport coordination.
- Potential schedule impacts FAA coordination.



Referenced Information / Resources

FDM Section 110.5.1 Aviation and Spaceports:

http://fdot.gov/roadway/FDM/current/2019FDM110InitialEngDsn.pdf

Title 14 CFR Part 77 - Safe, Efficient Use, and Preservation of the Navigable Airspace:

https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=61302bd90d79271a583474ad2f9dcd7e&rgn=div5&view=text&node=14:2.0.1.2.9&idno=14

FAA Advisory Circular AC 150/5300-13A – Section 310 - Runway Protection Zone (RPZ):

https://www.faa.gov/documentLibrary/media/Advisory Circular/150-5300-13A-chg1-interactive-201804.pdf

FAA Advisory Circular AC 150/5200-33B – Hazardous Wildlife Attractants On or Near Airports:

https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.information/documentNumber/150_5200-33B

Note: This AC is soon to be replaced by a version update currently available in draft form.

FAA Notice Criteria Tool:

https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm

FAA Form 7460-1 (Hardcopy):

https://www.faa.gov/documentLibrary/media/Form/FAA Form 7460-1 AJV-1-050117.pdf

FAA Form 7460-1 (Electronic Submittal):

https://oeaaa.faa.gov/



FAA Contacts

North Florida:

Luke Wray (Technician)	(817) 222-4559	luke.ctr.wray@faa.gov
Michael Blaich (Specialist)	(404) 305-6462	mike.blaich@faa.gov

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Michael Blaich (Specialist)	(404) 305-6462	mike.blaich@faa.gov

FDOT Contact:

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