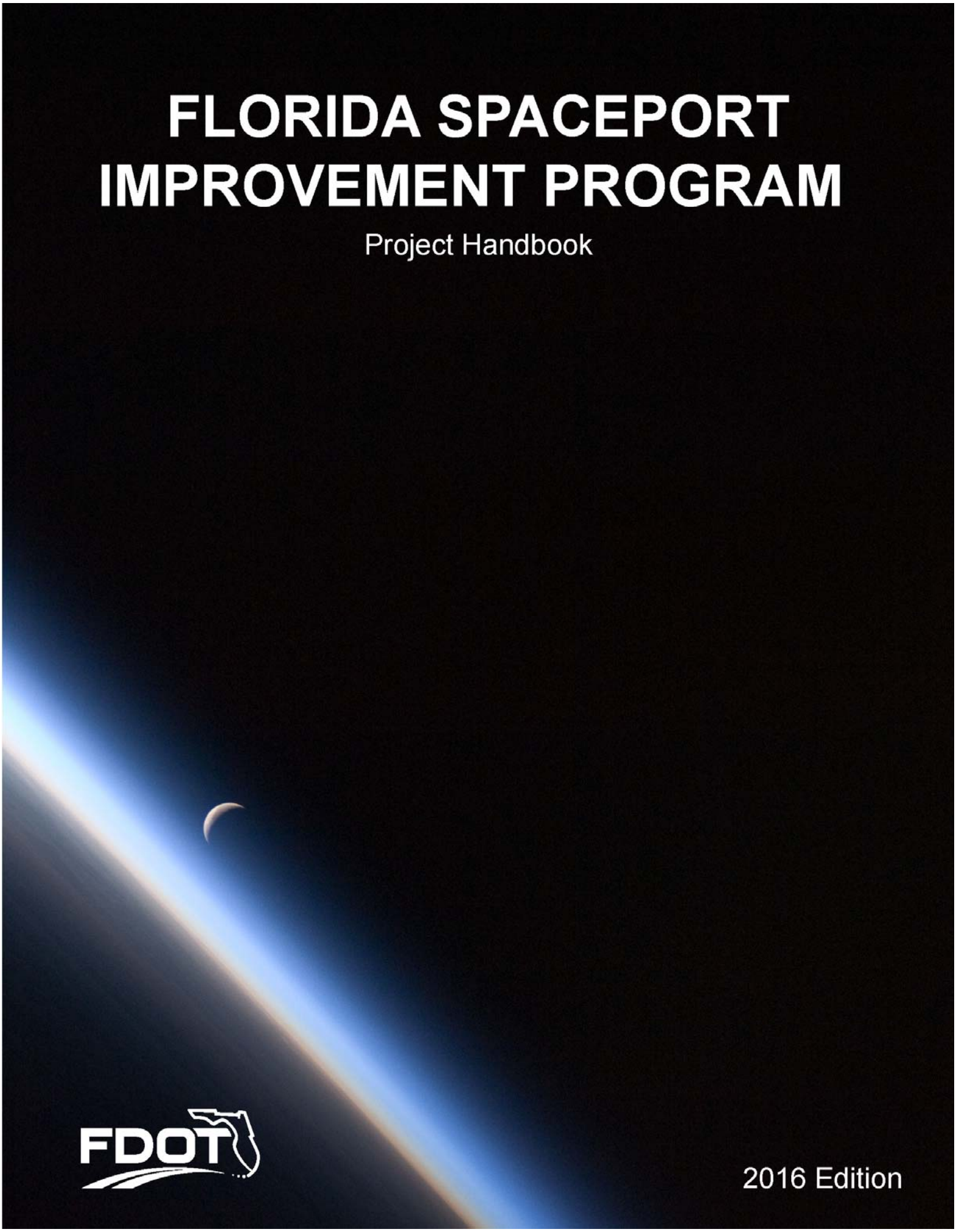
FLORIDA SPACEPORT IMPROVEMENT PROGRAM

Project Handbook



FDOT

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Introduction

Florida has one of the most dynamic transportation systems in the world. Besides roads, bridges, seaports, rail, and airports, Florida also plays a leadership role in America's space program. Substantial public benefits gained from the space program, such as global positioning systems (GPS), weather forecasting, disaster response, smartphones, and air traffic control systems, rely on satellites to enhance our transportation system and improve our quality of life.

The **Florida Department of Transportation** (FDOT) uniquely includes support for spaceports as part of its transportation network. FDOT and Space Florida work together to provide space transportation services and infrastructure in the state.

FDOT, through its Spaceport Improvement Program, provides funding for projects that:

- Improve aerospace transportation facilities
- Encourage cooperation and integration between airports and spaceports
- Facilitate and promote interagency efforts to improve space transportation capacity and efficiency

Space Florida, an independent special district of the State of Florida, serves as the state's single point of contact for state aerospace-related activities with federal, military, and state agencies as well as the private sector. Space Florida promotes and assists Florida's aerospace business sector by providing access to space transportation facilities, aerospace, financing, support services, and innovative education programs. Created pursuant to Chapter 331, Part II, Florida Statutes, Space Florida is charged with fostering the growth and development of a sustainable and world-leading space industry in Florida.

This handbook provides information and guidance on Spaceport Improvement Program processes for funding and managing spaceport projects that include FDOT funds. FDOT provides technical assistance and funding to Space Florida for transportation related capital improvements. The Spaceport Improvement Program is designed to stimulate private sector investment and commercial spaceport development. Most notably, the historic Shuttle Landing Facility at Kennedy Space Center was transferred from National Aeronautics and Space Administration to Space Florida in June 2015. At 15,000 feet long and 300 feet wide, it is one of the longest and most capable runways in the world. It will serve a new generation of space launch vehicles and be used as a testing ground for new technologies.

In Florida, space touches everyone

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Florida Spaceport Improvement Program – Project Handbook

Purpose of the Handbook

The purpose of this handbook is to provide a general overview of the Florida Department of Transportation's (FDOT) Spaceport Improvement Program and the processes associated with funding spaceport capital projects within the state. This handbook describes available eligibility requirements for partnerships, application qualification and evaluation process, project selection, invoicing, and other relevant spaceport topics.

This guidance also serves as a useful resource for stakeholders, including aerospace partners who are considering or managing such partnerships with FDOT and Space Florida. In cases where the facts or circumstances require additional guidance, interpretation, or deviation from this guidance, stakeholders are encouraged to coordinate with the FDOT Aviation and Spaceport Office, or Space Florida as appropriate, to ensure compliance with applicable laws, rules, procedures, and plans.

Commercial Crew and Processing Facility

Background: Spaceport Improvement Program

Since the beginning of the United States' space program, Florida has been at the forefront of all aspects of the space industry. As the center of National Aeronautics and Space Administration (NASA) and the United States Air Force's (USAF) space launch infrastructure since the 1950's, space transportation has had a major effect on Florida's economy and its multimodal transportation system. Though accommodating this mission has always been a significant role of FDOT, "space" itself was not previously considered a separate mode of transportation to be planned and developed by the state. This view began to change as space transportation technology continued to mature and the prospect of commercial spaceflight became a greater reality.

"To coordinate the planning and development of a safe, viable, and balanced state transportation system serving all regions of the state, and to assure the compatibility of all components, including multimodal facilities." (Section 334.044 (1)), Florida Statutes

In 1999, Florida designated "space" as an official mode of transportation and "spaceports" as the associated transportation facilities. This official designation gave "space" a standing within FDOT, similar to other long

established modes such as roads, bridges, rail, airports, and seaports. With this designation, spaceports and space transportation were aligned to help FDOT achieve its primary responsibility.

FDOT and Space Florida work closely together in order to provide space transportation services on spaceport properties throughout the state. With the Federal Aviation Administration's (FAA) licensure of commercial spaceports at Cape Canaveral in 1999 and Cecil Spaceport in 2010, coupled with the potential for more in the future, Florida is in a unique position of having an expanding system of spaceports.

Space Florida was created in 2006 as an independent special district for the purpose of fostering the growth and development of Florida's space industry.[1] Since its inception, Space Florida has acted as the state's single point of contact for all aerospace-related activities. It has broad statutory authority to develop spaceport infrastructure, arrange financial incentives for industry, pursue research and development opportunities that enhance targeted industry growth, provide workforce resources, and host educational programs.

Due to the programmatic changes associated with the retirement of the NASA Shuttle Program, access to an increasing number of unused federal space launch facilities led Space Florida, in partnership with FDOT, to take a more active role in the planning and funding of spaceport infrastructure. This expanding role has led to the Spaceport Improvement Program and other significant milestones that are securing Florida's place as a global space transportation leader.

Partnerships, Coordination, and Collaboration

Pursuant to Florida law, state aerospace activities are to be highly visible and well-coordinated within this state. The law specifically designates Space Florida as the single point of contact for state aerospace-related activities with federal agencies, the military, state agencies, businesses, and aerospace partners (section 331.301, Florida Statutes) (**Figure 1**).

As Florida's aerospace industry development authority, Space Florida fosters bold economic development activities to expand and diversify domestic and international opportunities. These efforts support talent development, enhance infrastructure, and support governments and organizations in improving the state's competitive business climate. Space Florida does this by supporting, facilitating, and consulting on space industry-related needs for attracting, retaining, and expanding aerospace or related supply chain businesses (aerospace partners) that create economic opportunities in Florida by:

[1] Although Space Florida was created in 2006, the state has had similar predecessor organizations since 1989. See Chapter 89-300, Laws of Florida.

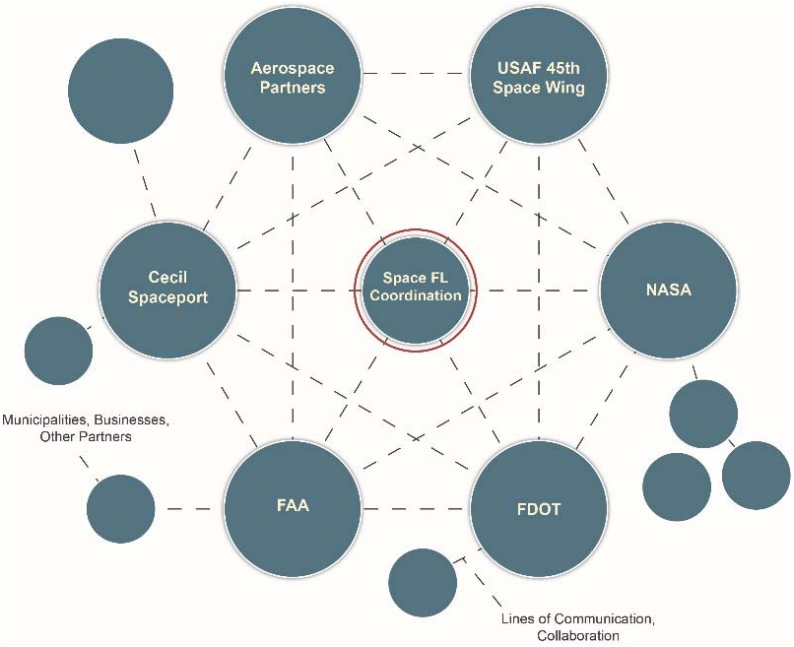
- Coordinating financial incentives, facilitating access to capital, and providing start up and relocation support
- Consulting on business formation, relocation, and venture development
- Developing and operating targeted infrastructure and facilities
- Supporting research and development opportunities that enable target industry growth

"To enter into agreement with Space Florida to coordinate and cooperate in the development of spaceport infrastructure and related transportation facilities contained in the Strategic Intermodal System Plan." (Section 334.044 (32)), Florida Statutes.

Space Florida's efforts are supported by other state agencies such as the Florida Department of Economic Opportunity and FDOT. With the incorporation of spaceports into the Florida Transportation Plan (FTP) and Space Florida's development of the 2013 Spaceports System Plan and the Cape Canaveral Spaceport 2013 Master Plan, FDOT provides support and funding to Space Florida for high-priority spaceport projects through the Spaceport Improvement Program. This funding stimulates public and private investment into emerging and growing aerospace enterprises while advancing a safer and secure spaceport transportation system.

Aerospace partners are eligible public or private entities who consider or request Spaceport Improvement Program funding for a proposed project. These partners may include businesses such as SpaceX, Boeing, and United Launch Alliance, and licensed spaceports such as Cecil Spaceport in Jacksonville. In other cases the federal government (i.e., NASA/Kennedy Space Center, USAF and Navy), may also be considered an aerospace partner. Aerospace partners are an integral partner in the implementation of the processes described in this handbook.

Figure 1: Spaceport Coordination



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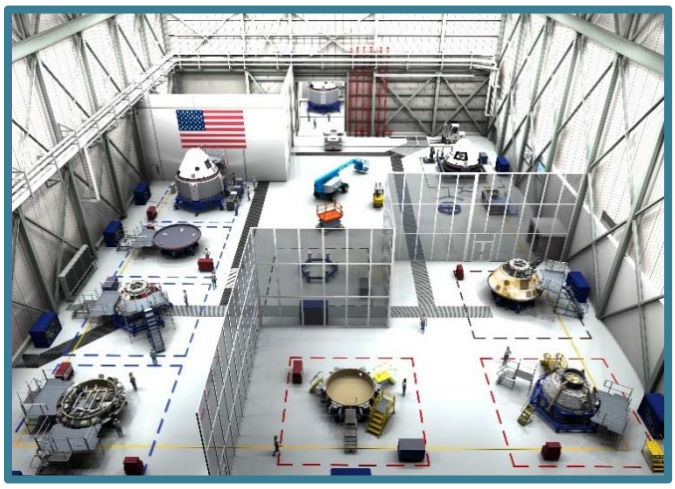
Spaceport Improvement Program

Overview

FDOT has significant responsibilities relative to aerospace and spaceports in Florida[2]. Most notably, Florida law establishes a process for incorporating spaceport and aerospace industry related needs into the FTP and the Strategic Intermodal System (SIS). Florida's SIS consists of the state's largest and most significant commercial service airports, spaceports, seaports, and freight rail terminals. Incorporating space and aerospace related needs into the FTP and the SIS is a significant commitment by the state to support a major sector of Florida's economy.

The Spaceport Improvement Program was created to implement the aerospace and spaceport goals and objectives set out in the FTP and SIS. Florida law places several aerospace and spaceport responsibilities on FDOT and are incorporated into the Spaceport Improvement Program. Most notably, the Program provides technical assistance and funding for projects that:

- Improve aerospace transportation facilities
- Encourage coordination between airports and spaceports
- Foster interagency efforts to improve space transportation capacity and efficiency



High Bay Layout, Commercial Crew and Processing Facility

In order to implement state law and FTP/SIS goals and objectives, FDOT collaborates with Space Florida. Recent examples of the program's partnership with Space Florida include:

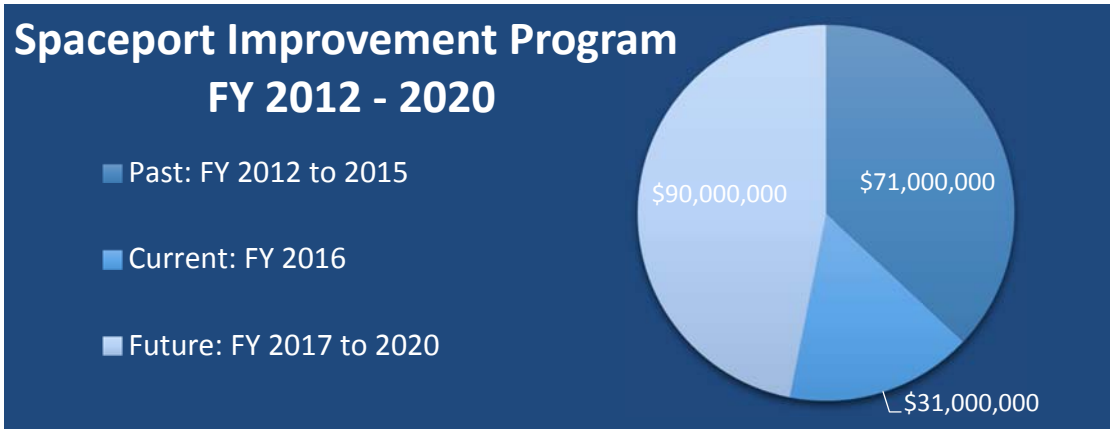
- Provided funding to Space Florida for improvements to Launch Complex-36 at Cape Canaveral Spaceport. The improvements provide for rocket engine testing and development at the complex.
- Continued to support Space Florida's efforts to obtain an FAA commercial launch site operator license for the Shuttle Landing Facility and the proposed Shiloh launch complex, both at the Cape Canaveral Spaceport
- Provided Space Florida with engineering and technical expertise for facility assessments of the Shuttle Landing Facility, Launch Complex-46, solid propellant processing areas, and future launch pad sites

[2] See sections 331.3051, 331.360, 334.044, and 339.362, Florida Statutes.

One challenge for FDOT is to identify, balance, and incorporate the various regulatory and economic aspects of evolving commercial space market and activities with its mission to provide a safe and secure air transportation system.

Through 2020, approximately $121 million is in the July 1, 2015 Five Year Adopted Work Program for spaceport improvement projects; however, this is not a guarantee of future funding (**Figure 2**). The work program is updated annually to account for changes in FDOT revenue, state-wide transportation funding priorities, legislative approval, and many other factors; therefore the actual funding level is subject to change. Most importantly, the five year funding allocation shows Florida has an ongoing policy to invest in the state's growing spaceport transportation system.

Figure 2: Spaceport Improvement Program Funding



Key Points to Know

Before any discussion on the project funding process, it's important for stakeholders to be aware of challenges and limitations when funding spaceport capital projects. For example, Florida has a broad public records law and aerospace partners may not be aware of specific requirements pertaining to the release of information. FDOT capital funding is limited to designated areas called spaceport territories, and infrastructure ownership and responsibilities at Cape Canaveral Spaceport require coordination with our federal partners (i.e., NASA/Kennedy Space Center, the USAF and Navy, the National Park Service, and the United States Fish and Wildlife Service).

Public Records and Proprietary Information

Florida has broad public records laws, governed by Chapter 119, Florida Statutes. Frequently, spaceport projects involve sensitive or proprietary information from aerospace partners that could fall under the public record law if part of a contract or project funding agreement. Care must be taken from the beginning of the process to ensure that all public information is made available and that sensitive or proprietary information is not improperly disclosed. All recipients of spaceport funding must sign the FDOT Public Records Form and abide by all related terms in the funding agreement.
www.dot.state.fl.us/proceduraldocuments

Single Audit Act Requirements

In accordance with section 215.97 (2) (a), Florida Statutes, each non-state entity that expends a total amount of state financial assistance equal to or in excess of $500,000 in any fiscal year shall be required to have a state single audit, or a project-specific audit, for such fiscal year in accordance with the requirements of this section. Essentially, this means project related financial records are public records and audited as part of the project.

Launch Complex 40

Spaceport Territories

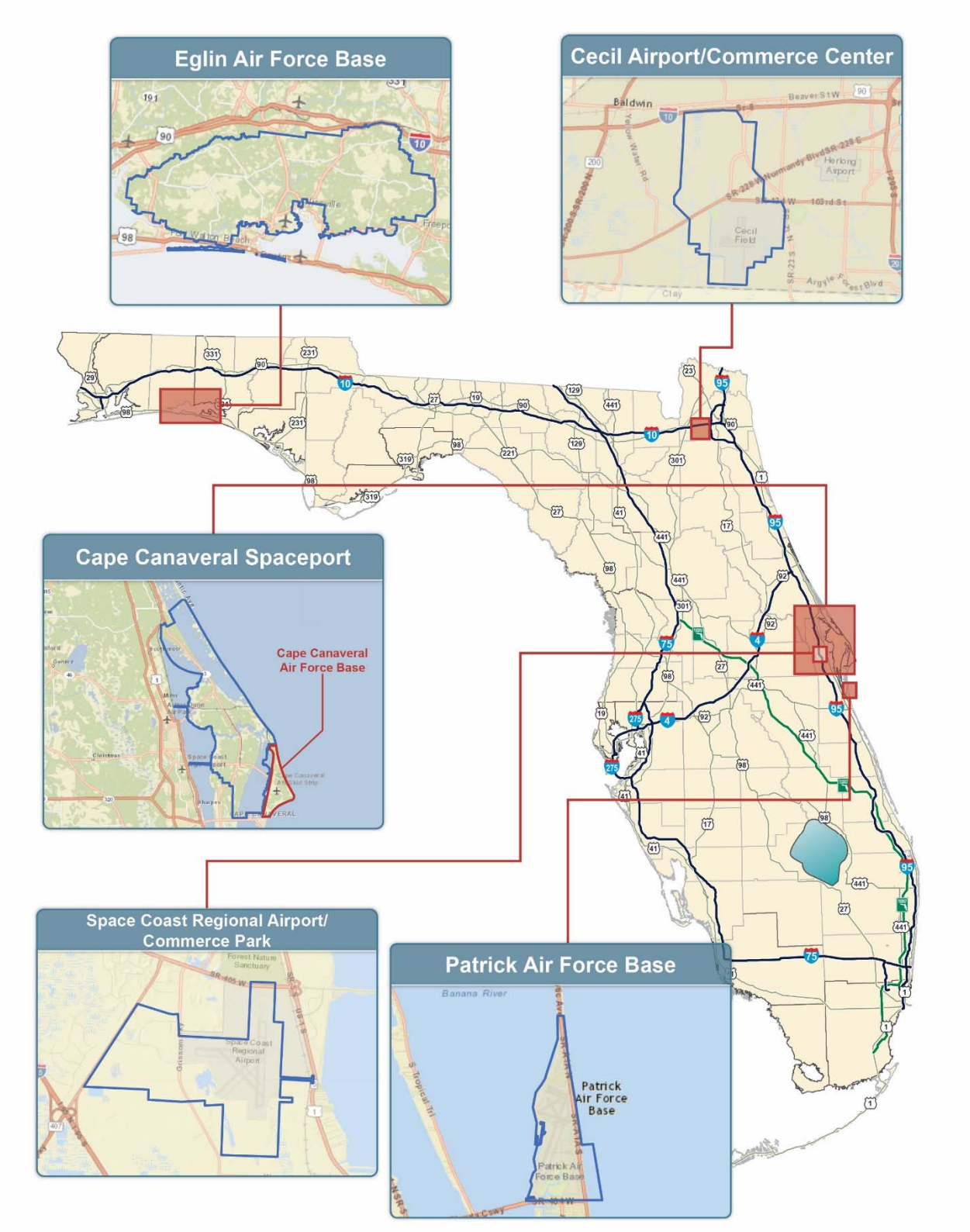
Space Florida's ability to develop spaceport infrastructure is statutorily limited to geographic areas called spaceport territories pursuant to section 331.304, Florida Statutes. Florida's Spaceport Territories are illustrated in **Figure 3**.

Infrastructure Ownership and Responsibility

NASA and the USAF are the property owners of the Kennedy Space Center and the Cape Canaveral Air Force Station. Land and existing spaceport infrastructure is leased, or otherwise granted, to Space Florida or aerospace partners by NASA and the USAF. Both Space Florida and aerospace partners may construct and own new infrastructure on federal land. Space Florida and aerospace partners assume responsibility for the site and infrastructure under their control.

As Florida's aerospace economic development authority, Space Florida supports NASA's and the USAF's missions and facilitates the growing commercial space sector. Space Florida is the conduit to coordinate and attract aerospace partners to invest and develop economic opportunities in Florida to further space technology and the aerospace industry. Responsibility for specific space facilities varies between Space Florida, aerospace partners, and lease agreements with NASA and the USAF. Ownership, lease arrangements, and responsibility for spaceport infrastructure may also vary for the remaining spaceport territories, depending on contractual agreements with the spaceports, Space Florida, and future aerospace partners.

Figure 3: Spaceport Territories



Spaceport Improvement Program - Program Management

One of the nationally recognized features of the Spaceport Improvement Program is the use of FDOT funds for spaceport planning, development, and capital improvements. These funds have been successfully used to attract aerospace partner investment and is turning Cape Canaveral Spaceport into a one of a kind multi-user spaceport. It indicates a strong commitment to our aerospace partners with an average of approximately $20 million designated for each year of FDOT's five year capital improvement plan.

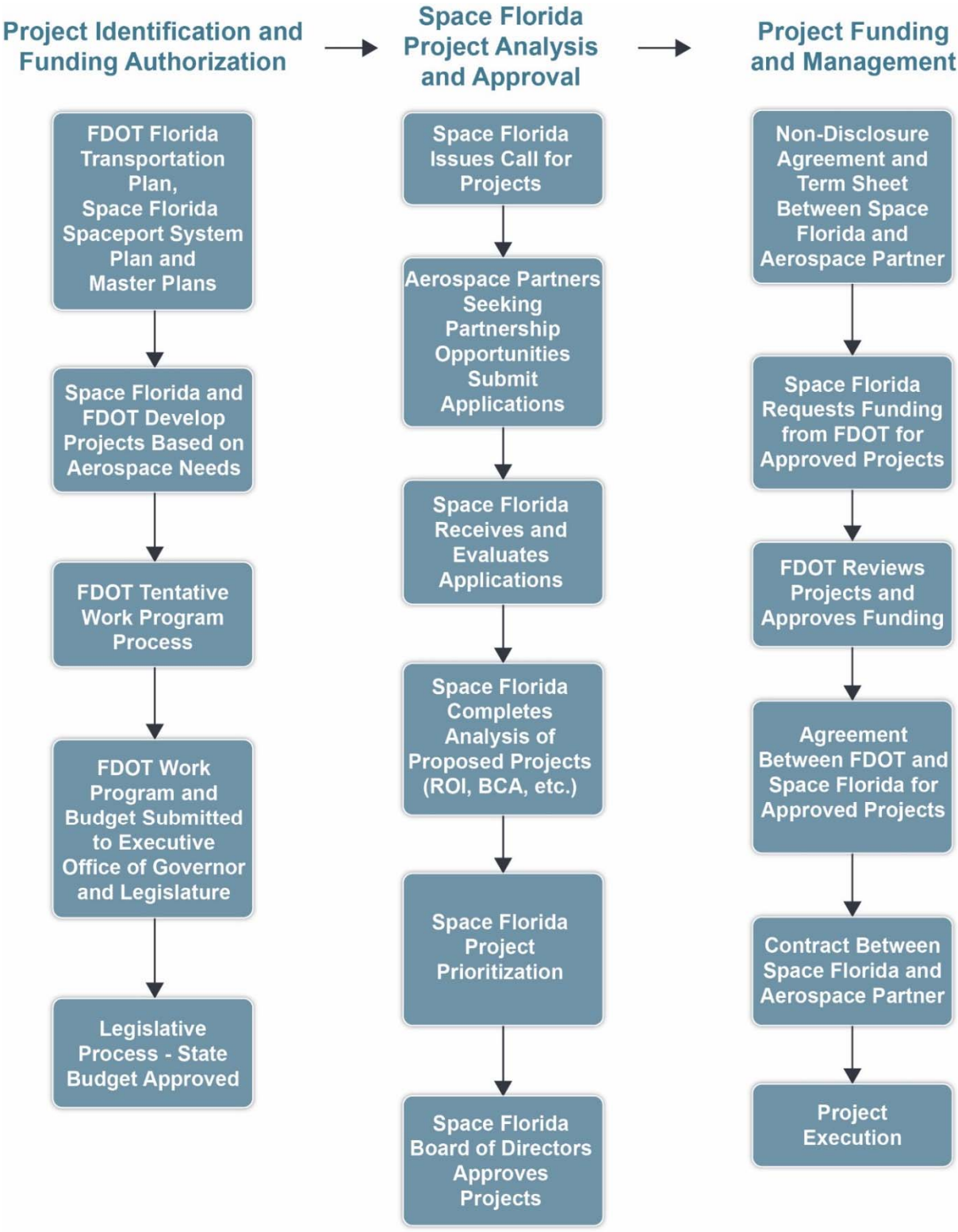
Overview – Project Development

In order to take projects from concept to concrete, FDOT and Space Florida have developed, and continue to refine, the following three processes to identify, allocate, and manage program funds:

- Project identification and funding authorization
- Space Florida's project analysis and approval
- Project funding and management

The three phases and steps are illustrated in more detail in **Figure 4**.

Figure 4: Spaceport Improvement Program Project Development



Project Identification and Funding Authorization

This phase basically provides for identifying needs in the FTP, the Florida Spaceport System Plan and the various spaceport master plans. Project related needs are identified by Space Florida and communicated to FDOT. Once needs are identified, FDOT includes the projects in the Five Year Tentative Work Program and submits the plan to the Governor's Office and the Legislature for review and approval as part of the state budget approval process.

Commercial Resupply Services 3

Florida Transportation Plan

FDOT has significant responsibilities relative to aerospace and spaceports in Florida. Established by Florida law in 1999, "space" is designated as a mode of transportation. Most importantly, Florida law establishes a process for incorporating spaceport and aerospace industry related needs into the Florida Transportation Plan (FTP) and the Strategic Intermodal System (SIS). Both the FTP and the SIS are the primary drivers for delivering state transportation product in Florida.

The FTP provides the policy framework for allocating FDOT's funding that will be spent to meet the long term transportation needs of residents, tourists, and businesses. The FTP identifies the goals and objectives and addresses the needs of the entire state transportation system. One of the stated goals of the FTP is to strengthen coordination among seaports, airports, spaceports, railroads and other modal partners.

The SIS is a statewide system of transportation facilities that play a critical role in moving people and goods to and from other states and nations, as well as among economic regions within Florida. The SIS serves as the state's highest priority for statewide mobility. Incorporating space and aerospace related needs into the FTP and the SIS is a significant commitment by the state to support a major sector of Florida's economy.

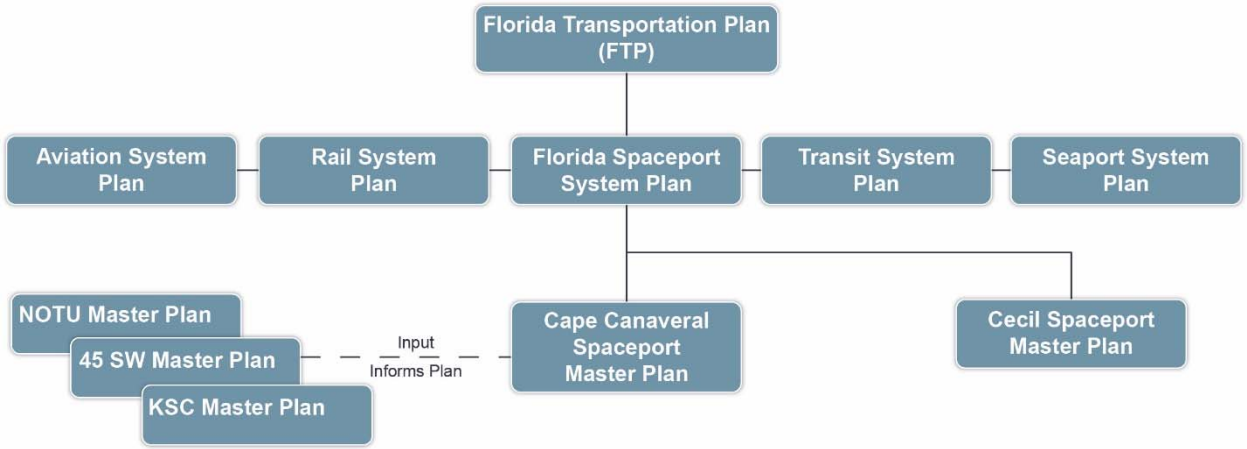
Florida Spaceport System Plan

Space Florida is required under state law to "develop a spaceport master plan for the expansion and modernization of space transportation facilities within spaceport territories" section 331.360 (3), Florida Statutes. The Florida Spaceport System Plan functions in this role, incorporating the various individual spaceport master plans across the state, including the Cape Canaveral Spaceport Complex Master Plan 2013 (**Figure 5**). The Spaceport System Plan is consistent with and considered a supporting document to the FTP and SIS. In conjunction with the Spaceport System Plan, Space Florida maintains a list of recommended capital projects eligible to be funded through FDOT. Each year, the project list is updated based on new project applications for funding and the projects unfunded from the previous year. Coordination between FDOT, Space Florida, and each spaceport in Florida ensures the use of state funds are maximized and enables Florida's spaceport system to grow to meet future needs.

Florida Spaceport System Plan Goals

- **Create a stronger economy where Florida's spaceports and aerospace businesses can thrive**
- **Guide public and private investment into emerging and growing aerospace enterprises and maximize the use of existing aerospace resources**
- **Enrich our quality of life while providing responsible environmental stewardship**
- **Advance a safer and secure spaceport transportation system for residents, businesses, and others**

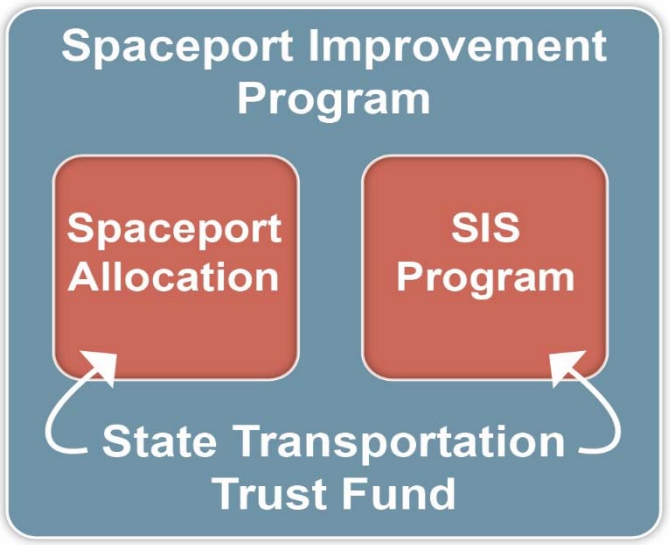
Figure 5: Florida Spaceport System Plan



Sources of Spaceport Improvement Program Funds

The Spaceport Improvement Program receives FDOT funds in two ways: first, a specific allocation to the Spaceport Improvement Program as part of the work program development process and second, through the FDOT's Strategic Intermodal System (SIS) (**Figure 6**). The SIS was established to enhance Florida's mobility and economic competitiveness and is made up of facilities of statewide and interregional significance.

Figure 6: Spaceport Improvement Program Funding



The program funding allocation and the SIS funding are combined and comprise the Spaceport Improvement Program. These funds include no federal contribution or aviation fuel tax funds.[3] Together, these funding sources help to sustain the most progressive and expansive spaceport system in the world. This handbook provides information only on the Spaceport Improvement Program and does not include information on federal, local, or other state funding sources. Although the background, eligibility requirements, and project prioritization processes differ between these two sources, the three processes used to identify, approve, and manage projects are the same.

Cecil Airport/Spaceport

Spaceport funds are allocated annually to the FDOT Central Office and distribution is coordinated by the Aviation and Spaceports Office. As detailed in this handbook, the Aviation and Spaceports Office collaborates closely with FDOT District offices and Space Florida to effectively evaluate funding requests, allocate funds to projects, and manage project delivery.

Project Types: Planning versus Capital Projects

Every spaceport project is different, with unique context, goals, program needs, and requirements, so a determination of the eligibility of specific projects is done during the early stages of a project. Eligible spaceport projects fall into two primary categories: *spaceport planning projects* and *spaceport transportation capital projects*. Projects eligible for funding include planning, land acquisition, and capital improvement projects. Specific projects include: land mitigation, processing facilities, utilities, safety, and launch facilities.

Spaceport Planning Projects

Spaceport planning projects identify aerospace needs and guides the development of future spaceport capital projects. Through the Spaceport Improvement Program, FDOT may provide up to 100% funding assistance to Space Florida for spaceport planning and project development. Unlike capital projects, Space Florida must provide FDOT a scope of work and proper cost estimate prior to committing funds for a planning project. If another entity such as a consultant is expected to perform the work, a third party agreement must be provided in advance of committing Program funds.

[3] Section 332.009, Florida Statutes, prohibits the use of aviation fuel tax revenues on space transportation projects.

Types of spaceport planning projects eligible for funding include:

Spaceport Planning Projects

Project Category Description	Potentially Eligible Projects
The purpose of spaceport planning is to lay the groundwork for the development of future spaceport infrastructure and aerospace economic development, while protecting the public, the environment, and the cultural resources of the state.	• Spaceport System Plan • Spaceport Master Plans • Environmental Assessments (EAs) • Environmental Impact Statements (EISs) • Economic Impact Studies • Master Drainage Plans • Noise Studies • Launch Site or Launch Vehicle Licensing

The Spaceport Improvement Program has funded several related planning projects, including:

- Florida Spaceport System Plan 2013 - Develops statewide spaceport policies and processes
- Cape Canaveral Spaceport Complex Master Plan 2013 - Guides capital development and investment at Cape Canaveral Spaceport
- Prepared a strategic framework for future development concept alternatives at Kennedy Space Center
- Special studies - Such as enhanced weather forecasting capabilities at horizontal launch and recovery facilities and assessments of legacy federal facilities for potential use by aerospace partners

Spaceport Capital Projects

Spaceport capital projects eligible for funding through FDOT's Spaceport Improvement Program include:

- Land Acquisition Projects
- Capital Improvement Projects
- Common Use Capital Projects

Shuttle Landing Facility

Spaceport Capital Project Examples

Project Category Description	Potentially Eligible Projects
Land Acquisition Projects	
Land Acquisition projects ensure proper ownership, development, and use of spaceport facilities and infrastructure.	• Spaceport development property identified in a spaceport master plan • Mitigation land easements • Property for right-of-way
Capital Improvement Projects	
Capital Improvement projects provide capital facilities and equipment at spaceports.	• Launch/re-entry facilities • Vehicle/payload processing facilities • Other landside projects (parking lots and structures, terminal buildings, etc) • Range facilities • Safety projects • Security projects • Utility projects
Common Use Infrastructure Projects	
Common Use Infrastructure projects serve more than one tenant, are rented/leased based on time/frequency of use, support multiple users as needed.	• Spaceport development property identified in a spaceport master plan • Taxiways/aprons/runways • Hangars (mechanical work/storage) • Fuel farms • Processing/clean rooms to support launches

This list is not exhaustive and some potentially eligible projects may not fall precisely into these categories. Further, not all projects that fall into these categories are guaranteed funding. Eligible applicants for funding must also meet other qualification criteria described in this handbook, and FDOT has the responsibility for making the final determination on the eligibility of each individual project.[4]

[4] Section 331.303(21), Florida Statutes, relates to project funding eligibility and states, "capacity improvements that enhance space transportation capacity at spaceports that have had one or more orbital or suborbital flights during the previous calendar year or have an agreement in writing for installation of one or more regularly scheduled orbital or suborbital flights upon the commitment of funds for stipulated spaceport capital improvements."

Provided below are examples of capital projects that include FDOT funding participation:

- Repurpose Launch Complex 39A (LC-39A) at Kennedy Space Center. This capital improvement project provides for significant modifications to increase the number of launches the facility can handle (capacity) and expands its capability to serve additional markets such as communications satellites, national security space payloads, and human spaceflight. LC-39A is a rocket launch site originally built for the Apollo program, and later modified for the Space Shuttle program.

- Participated in funding the design and construction of a crew access tower project at Launch Complex-41, Cape Canaveral Spaceport. State funding will enhance the tower's capability to accommodate additional space vehicle configurations and support additional human and cargo spaceflight capacity at the Spaceport.

Launch Complex 41

Tentative and Adopted Work Programs

Section 331.360, Florida Statutes, directs FDOT to coordinate in the development of spaceports and related transportation facilities, encourage coordination between airports and spaceports and foster interagency efforts to improve space transportation capacity and efficiency. The law also authorizes FDOT to provide technical assistance and funding to Space Florida for transportation related capital improvements that improve aerospace transportation facilities in Florida.

Space Florida has developed a spaceport system plan and master plans for expansion and modernization of space transportation facilities within spaceport territories. Space Florida submits the plan to the FDOT for funding, subject to the availability of funds. After review and approval, the Aviation and Spaceports Office then submits the approved projects to the appropriate FDOT District to be included in the District's Tentative Work Program. Prior to submittal of the Tentative Work Program to the FDOT Central Office, the plan is subject to a public hearing and a hearing before the MPO within the District. Following submission of each district work program to the central office, FDOT develops the Tentative Work Program based on the district work programs.

The FDOT Tentative Work Program is submitted to the Executive Office of the Governor and the Legislature no later than 14 days after the regular legislative session begins per section 339.135, Florida Statutes.

During the course of the legislative session FDOT's budget will be finalized as part of the overall state budget. Once the budget is voted on and approved by the Florida Legislature, the list of spaceport project priorities may need adjusting to account for changes in the actual funding amounts approved.

The addition of a new spaceport project, not included in the Tentative Work Program, may potentially reduce the overall allocation of funds to Space Florida and the spaceport program. This may directly impact funding for projects already approved and underway!

The 1990 Legislature passed the following law in an effort to discourage the identification of specific projects in the appropriations bill. The law states: *In accordance with section 339.135 (5) (a), Florida Statutes, the adopted work program may include only those projects submitted as part of the tentative work program developed under subsection (4), plus any projects that are separately identified by specific appropriation in the General Appropriations Act and any roll forwards approved pursuant to paragraph (6)(c). However, any FDOT transportation project which is identified by specific appropriation in the General Appropriations Act shall be deducted from the funds annually distributed to the respective district pursuant to paragraph (4)(a). In addition, FDOT may not include any project or allocate funds to a program in the adopted work program that is contrary to existing law for that particular year. Projects may not be undertaken unless they are listed in the adopted work program.*

The new state budget takes effect on July 1st, which is the first day of each new fiscal year. The FDOT Secretary adopts the work program and subject to the availability of appropriated funds by the Legislature, the FDOT may participate in the capital cost of eligible spaceport transportation capital projects.

Space Florida's Project Analysis and Approval

Project Submittals, Analysis, and Prioritization

Once a year, Space Florida solicits aerospace partner interest in spaceport partnership opportunities through a "Call for Projects" process. Interested aerospace partners submit project applications which then compete for Spaceport Improvement Program funding.

Requests for spaceport capital funds must be submitted to Space Florida for review and prioritization. At a minimum, proposed projects must:

- Be on spaceport territory property
- Included in an approved spaceport master plan
- Have or likely to obtain appropriate licenses, permits, and leases
- Meet the eligibility requirements in section 331.303(21), Florida Statutes[5]

Initially, Space Florida evaluates each application to separate space transportation capital projects from non-transportation projects – such as manufacturing, research, workforce development, and education. FDOT funding can only be used for transportation projects, which then move into the scoring and prioritization processes. Space Florida will use the qualifying applications to develop a proposed list of spaceport capital projects for submission to FDOT.

Commercial Resupply Services – Dragon Capsule

Though Space Florida issues their Call for Projects once a year, they do accept applications on a continuous basis. Submitted applications require specific data elements, which are used to determine if projects qualify for various funding programs. Then proposed projects are evaluated according to various metrics and then prioritized for available funding. The metrics used for project qualification are in accordance with existing spaceport system and master plans. Data used in these processes include project narrative, economic benefits, state benefits, project cost and level of funding requested, project schedule, launch schedule, and other economic development related data. This process allows Space Florida to maximize the effectiveness and potential return on the use of these funds. An example application is available on Space Florida's web site: http://www.spaceflorida.gov/STIMF.

[5] Section 331.303(21), Florida Statutes, relates to project funding eligibility and states, "capacity improvements that enhance space transportation capacity at spaceports that have had one or more orbital or suborbital flights during the previous calendar year or have an agreement in writing for installation of one or more regularly scheduled orbital or suborbital flights upon the commitment of funds for stipulated spaceport capital improvements."

FDOT places an emphasis on understanding the return on investment (ROI) that the state will realize by contributing funds toward major modal transportation projects. Space Florida performs either an economic or financial analysis on significant spaceport capital projects before FDOT funds are requested. In most cases the information Space Florida needs to conduct this analysis is already provided as part of the application. See **Figure 7** below.

After the updated project priority list is prepared, Space Florida's Board of Directors votes to approve the recommended projects.

Figure 7: Space Florida's Project Analysis/Prioritization Process

Project Funding and Management

FDOT evaluates the funding requested for each project based on benefit to the state, capital investment, and consistency with the FTP and SIS.

Under the Spaceport Improvement Program, Space Florida submits Board approved funding requests to FDOT. The Aviation and Spaceports Office reviews each request and determines whether to provide funding for the project. Each request includes a budget summary for the project reflecting requested state match and aerospace partner investment, project schedule, and other required financial information FDOT needs to evaluate the funding request. The summary includes:

- Number of jobs created, annual payroll, average wage, total capital investment
- New commercial market created
- Nominal Internal Rate of Return (IRR); Return on Investment (ROI)
- Benefit Cost Analysis (BCA)
- Economic benefits of the project; project readiness – launch schedule
- Long term customer commitment
- Narrative statement summarizing the project analysis and justification; and financial and economic basis for recommending state funding participation

Joint Participation Agreements

The Joint Participation Agreement (JPA) is the primary contract mechanism used to fund spaceport projects as authorized by section 331.360, Florida Statutes. Essentially, a JPA is a contract between FDOT and Space Florida, where FDOT agrees to reimburse Space Florida for eligible project costs. On most projects Space Florida will elect to contract with a third party for the work to be done.[6] JPAs are processed in accordance with the FDOT Contract Funds Management Funds Approval Procedure Topic No. 350-020-200 – www.dot.state.fl.us/proceduraldocuments and the Department of Financial Services Reference Guide for State Expenditures – www.myfloridacfo.com/Division/AA/Manuals/

All of the JPA components should be consistent and mirrored in the contract between Space Florida and the aerospace partner. The scope of work will be reviewed by FDOT to ensure consistency with language in the JPA. This allows Space Florida to pass the reimbursements from FDOT directly to the aerospace partner and includes components vital to the success of the project, including:

- Scope of Work
- Quantifiable Deliverables
- Budget
- Schedule
- Invoicing Requirements
- Method of Compensation
- Accounting Practices
- Records Management Requirements
- Public Information Requirements
- Single Audit Act Requirements
- Other Terms and Conditions

FDOT Funding for Capital Projects

A key component of developing a JPA is FDOT's level of funding participation towards a project. Although section 331.360, Florida Statutes, does not specify project funding shares, FDOT policy is to provide up to 50% of eligible capital project costs for spaceport capital projects. The remainder must be provided by others, such as Space Florida, licensed spaceports, or other aerospace partners. These funding shares were developed in order to:

- Be consistent with the funding participation of other FDOT modal programs i.e., SIS, seaports, and rail
- Maximize the use of state funds
- Ensure aerospace partners have a vested interest in the projects

[6] On most, if not all, projects the aerospace partner will be considered a sub-recipient. This is a key point because sub-recipients are subject to Single Audit Act requirements.

For some projects there may be overlap between the Spaceport Improvement Program and FDOT's Airport Improvement Program. For example, airport runways, taxiways, and aprons may be used by both space vehicles and aircraft and could be eligible for funding under both programs. In cases where such overlap exists, requests to fund space related projects through the FDOT's Airport Improvement Program, or other similar programs, will be handled as follows:

- A project that is predominately aviation related, but has some limited space related application or function, normal Airport Improvement Program funding shares apply.
- A project that is predominately space related, is not eligible for funding under the Airport Improvement Program. FDOT funding for spaceport related projects is provided under the Spaceport Improvement Program. Examples of predominately space related projects include:
    - Fuel farms for spacecraft – hazardous fuels
    - Launch control centers
    - Range safety infrastructure
    - Projects exceeding FAA design standards to accommodate spaceport operations

In 2014, section 331.371, Florida Statutes, was created to address strategic spaceport investments. The law authorizes FDOT, in consultation with Space Florida, to fund up to 100% of a project at strategic spaceport launch support facilities if:

- Important access and on-spaceport and commercial launch facility capacity improvements are provided
- Capital improvements that strategically position the state to maximize opportunities in international trade are achieved
- Goals of an integrated intermodal transportation system for Florida are achieved
- Feasibility and availability of matching funds through federal, local, or private partners are demonstrated

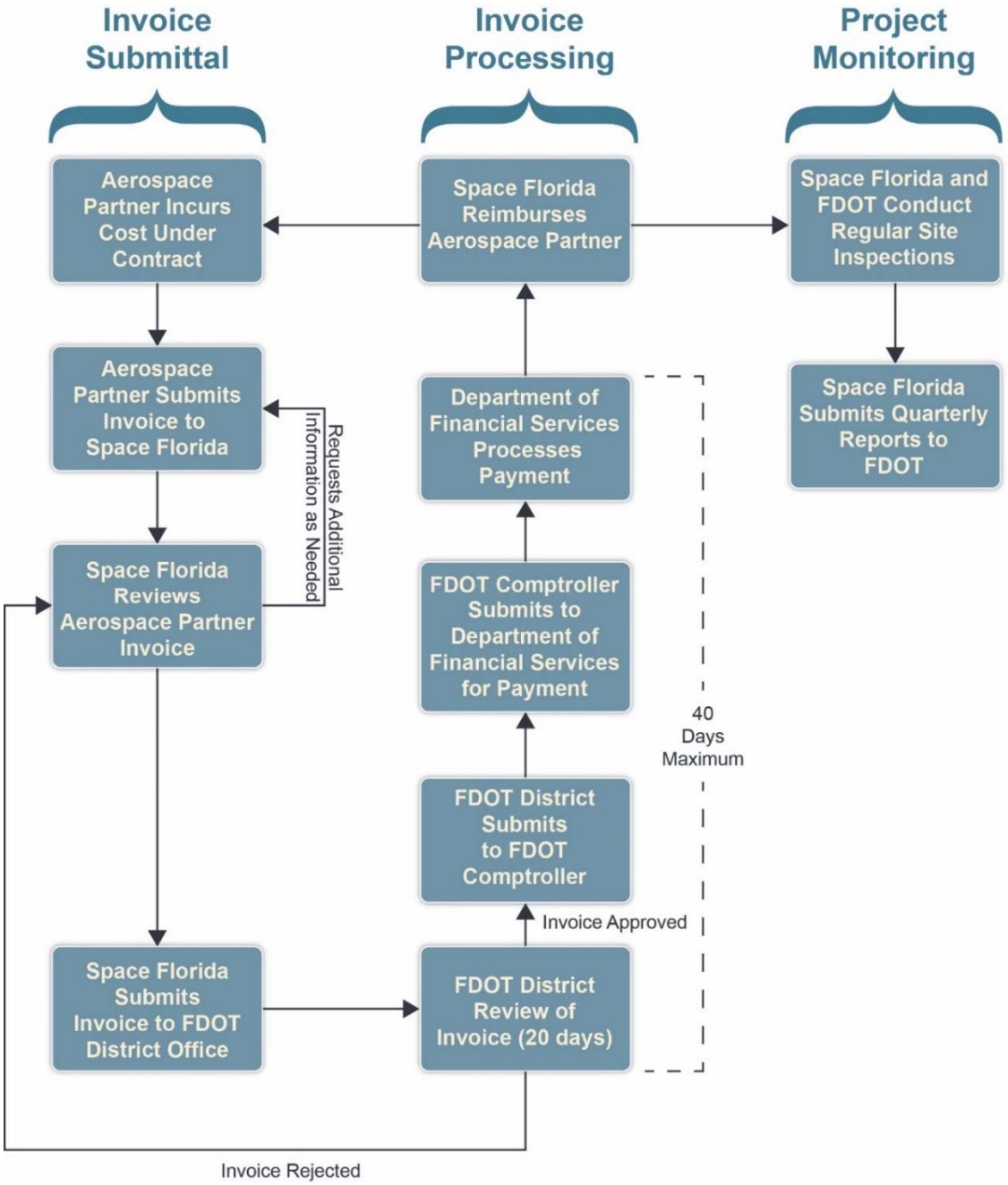
Finally, section 331.360, Florida Statutes, prohibits FDOT from funding Space Florida's operational and administrative costs. FDOT interprets this to mean costs related to Space Florida's operation as an organization. Spaceport program and project-related costs are not considered part of Space Florida's operations or administration and are eligible for FDOT funding.

Shuttle Landing Facility

Invoicing and Reimbursement

To ensure program funds are properly used, project funds are distributed on an invoice-reimbursement basis. Under this system the aerospace partner incurs the cost and is then reimbursed by FDOT, through Space Florida, for the expenditures. Therefore, it is in the aerospace partner's interest that Space Florida and FDOT's invoice processes function smoothly and in a timely manner. **Figure 8** explains this process.

Figure 8: Invoicing and Reimbursement Process



The invoicing process begins when the aerospace partner incurs costs associated with the spaceport project, as per the conditions of the JPA. The aerospace partner then submits draft invoices to Space Florida for an informal review to identify potential issues before it is submitted to the District. If Space Florida does not identify any changes to the draft invoice, they will submit the finalized invoice to the project manager at the FDOT District Office. The FDOT District will review the invoice for:

- Completeness
- Accuracy
- Compliance with the JPA contract conditions
- Progress
- Deliverables
- Consistency with field reviews
- Eligibility of expense line items

Per standard language in the JPA, FDOT staff has 20 days to either approve or reject the invoice. Approved invoices must be paid by FDOT within 40 days of submittal to the District. Rejected invoices will begin the process over when the corrected invoice is resubmitted. FDOT makes its payment to Space Florida, who in turn, passes the payment directly to the aerospace partner.

There are two important points to reinforce regarding the reimbursement process:

- Only eligible expenses incurred during the period of the contract may be reimbursed. Invoices containing costs incurred before the execution of the contract or after the expiration of the contract will be rejected.

- Only eligible expenses are subject to reimbursement. Invoices containing ineligible expenses will be rejected. Examples of typically eligible and ineligible expenses are provided below. The eligibility of any specific cost is ultimately dictated by state law, FDOT policy, and the terms of the JPA.

Typically Eligible and Ineligible Expenses

Typically Eligible Expenses	Typically Ineligible
Design/Studies	Maintenance costs
Demolition/Site Work	Operational costs
Direct construction costs ● Construction labor ● Construction materials ● Construction equipment Rental	Food, travel, and lodging are usually ineligible, but are highly dependent on the contract conditions.
Capital equipment purchases ● Will transfer with delivery of the project ● Are agreed to in advance by the Department and Space Florida	Non-capital equipment purchases ● Will not transfer with delivery of the project ○ Tools ○ Clothing
Permits	

To ensure timely reimbursement of expenses, questions should be addressed to Space Florida or the District project manager before submitting the invoice.

Safeguarding the State's Investment

FDOT and Space Florida make every effort to ensure the state's investment is protected and benefits are realized. FDOT and Space Florida work together to maximize the return on investment for all spaceport capital projects.

Project Monitoring and Inspection

Space Florida and FDOT strive to ensure projects are delivered in accordance with the JPA. Both Space Florida and FDOT routinely review and inspect projects to ensure accountability and performance objectives are met. Progress reports and management review of specific deliverables are accomplished periodically with the aerospace partners.

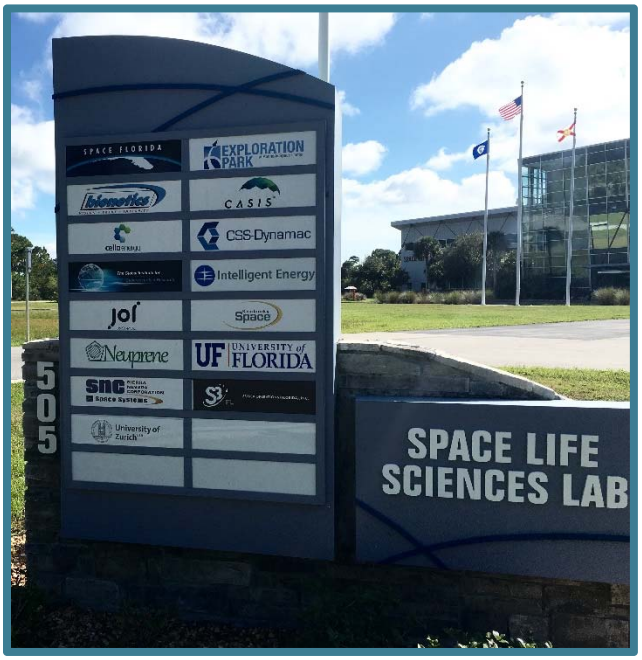
Representatives of Space Florida and FDOT District staff may attend pre-construction and project status meetings with the aerospace partner and contractor team. Regular field visits/inspections of the project site are also conducted by staff or their representative to verify:

- The conditions of the JPA are being met
- Progress is being reported accurately
- The work being performed is consistent with the scope of work

To help ensure a safe, productive, and timely field visit, these reviews are coordinated ahead of time with Space Florida, the aerospace partner, and contractor team, as appropriate.

Spaceport Improvement Program Sustainability

The Spaceport Improvement Program provides funding and technical support to Space Florida for aerospace transportation related capital improvements. Priorities are based on the Florida Spaceport System Plan, which reflects a sustainability framework consisting of goals and objectives to guide public and private investment into Florida's emerging and growing aerospace sector. Like other transportation modes such as aviation and transit, FDOT encourages spaceports to use Program funds for projects that bring returns to the spaceport and financial sustainability.



Space Life Sciences Lab

Investment Recapture for Spaceport Capital Projects

The FDOT and Space Florida work closely together on the allocation of state resources for spaceport capital projects in order to achieve strategic capital investment goals to facilitate non-state investment into emerging and growing aerospace. When appropriate, Space Florida may require the aerospace partner to meet certain bench-marks as a condition of state funding participation on a project. Such requirements are commonly referred to as "recapture" provisions and are intended to ensure benchmarks are met and protect the public's investment in a project.

Aerospace partners may be required to meet certain benchmarks.

FDOT Conflict of Interest Procedure

In accordance with FDOT's Conflict of Interest Procedure, the goal of the FDOT's contracting program is to procure contracts in a fair, open, and competitive manner. Firms representing the FDOT must be free of conflicting professional or personal interests so as to not hinder objective decision making and make it difficult to discharge their contractual obligations. A firm or its affiliate, that is the Engineer of Record (EOR) on a project, shall be considered ineligible to compete as a prime consultant for Construction Engineering Services (CEI) or testing services on that same project. Additional information on this procedure, Topic No. 375-030-006, can be found using this link: www.dot.state.fl.us/proceduraldocuments Also, see Conflict of Interests - Frequently Asked Questions at: http://www.dot.state.fl.us/construction/ConflictOfInterest/COI_Main.shtm

Final Points

Space Florida and FDOT work closely together to foster the growth and development of a sustainable and world-leading aerospace industry in Florida. FDOT's Spaceport Improvement Program is designed to stimulate private sector investment and commercial spaceport development in Florida. Most notably, the state funding processes identified in this handbook lay the groundwork for the improvement and expansion of Florida's spaceport system.

This handbook describes key requirements for: partnerships, application submittal, and project selection processes; JPA provisions, invoicing, and other project management topics; and strategies used to maintain the integrity of the program and its resources. This guidance also serves as a useful resource for stakeholders, including aerospace partners who are considering or are managing such partnerships with FDOT and Space Florida. In cases where the facts or circumstances require additional guidance, interpretation, or deviation from this guidance, stakeholders are encouraged to coordinate with the FDOT Aviation and Spaceports Office, or Space Florida as appropriate, to ensure compliance with applicable laws, rules, procedures, and plans.

Launch Complex 37 Delta IV

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Appendix

Statewide Contacts

For more information, please contact the FDOT Aviation and Spaceports office or Space Florida.

FDOT Aviation and Spaceports Office

Tom Duncan - (850) 414-4513
Spaceport Development Manager

Aaron Smith - (850) 414-4514
Aviation Manager

Space Florida

Mark Bontrager - (321) 730-5301 ext. 235
Vice President Spaceport Operations

Steve Szabo - (321) 730-5301 ext. 107
Spaceport Development Program Manager

Helpful Links

Please use the links below to access or download the information. For more information, please contact the FDOT Aviation and Spaceports Office or Space Florida.

FLORIDA STATUTES

Chapter 287 Florida Statutes – Section 287.057 Procurement of commodities or contractual services
Chapter 331 Florida Statutes – Aviation and Aerospace Facilities and Commerce
Chapter 332 Florida Statutes – Airports and Other Air Navigation Facilities
Chapter 339 Florida Statutes – Transportation and Finance
All statutes available at: www.leg.state.fl.us/STATUTES

FDOT

FDOT Work Program Instructions – Freight, Logistics & Passenger Operations Part III – Chapter 15, Aviation and Spaceports:
www.dot.state.fl.us/OWPB/Development/WP_instructions.shtm

FDOT Public Records Form:
www.dot.state.fl.us/proceduraldocuments

FDOT Procedure Topic No.: 375-030-006-c:
www.dot.state.fl.us/proceduraldocuments

FDOT Contract Funds Management Funds Approval Procedure Topic No. 350-020-200:
www.dot.state.fl.us/proceduraldocuments

FLORIDA DEPARTMENT OF FINANCIAL SERVICES

Department of Financial Services Reference Guide for State Expenditures:
www.myfloridacfo.com/Division/AA/Manuals/ (click on the Payments link)

SPACE FLORIDA

Space Transportation Infrastructure Matching Fund (STIMF) Application:
www.spaceflorida.gov/STIMF/

Florida Spaceport Systems Plan 2013:
www.spaceflorida.gov/docs/spaceport-ops/florida-spaceport-systems-plan-2013_final.pdf?sfvrsn=2

Cape Canaveral Complex Master Plan 2013:
www.spaceflorida.gov/docs/spaceport-ops/reduced-version_cape-canaveral-spaceport-complex-master-plan-2013.pdf?sfvrsn=2

Cecil Spaceport Master Plan 2012:
www.flyjacksonville.com/Cecil/Spaceport/spaceport-mp.pdf

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Webpage link:

www.dot.state.fl.us/aviation

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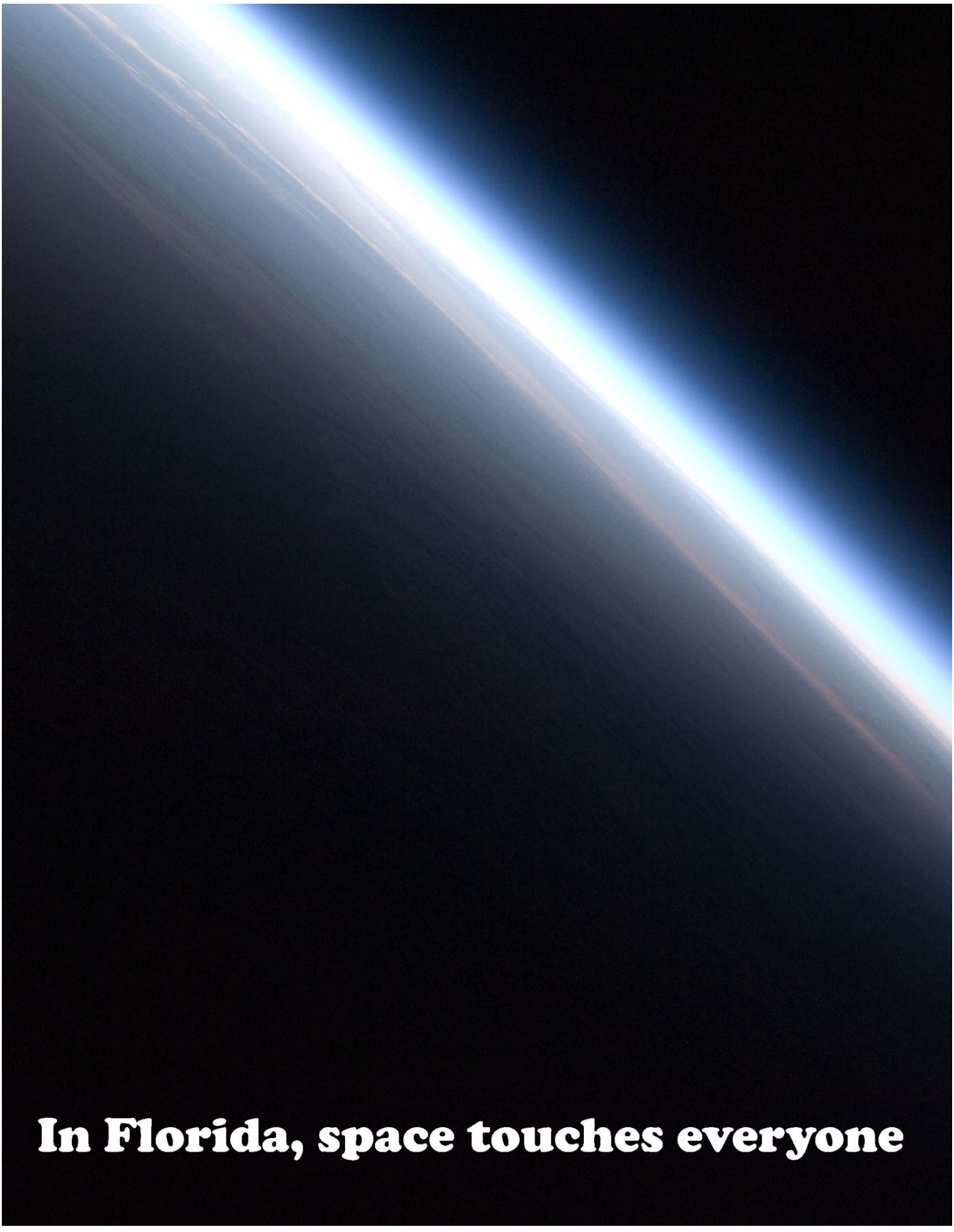
In Florida, space touches everyone