# CANAVERAL PORT AUTHORITY ANNUAL REPORT TO SPACE FLORIDA

2024





January 31, 2025

The Honorable Jeanette M. Nuñez Lieutenant Governor of Florida Chairman of Board, Space Florida via Electronic Mail @ <u>ltgovernorjeanette.nunez@eog.myflorida.com</u>

Robert Long President & Chief Executive Officer Space Florida via Electronic Mail @ rlong@spaceflorida.gov

Re: Port Canaveral 2024 Annual Report

Dear Lt. Governor Nuñez and Mr. Long:

As you may recall, the Canaveral Port District Charter, amended via Special Act of the Florida Legislature during the 2024 Regular Legislative Session and thereafter signed into law by Governor Ron DeSantis, contains a new Article XXI entitled "Commercial Space Launch Industry." This Article acknowledges and codifies the critical supportive role Port Canaveral plays in the growth and prosperity of the commercial space industry - an industry of significant strategic importance to the Space Coast region, the State of Florida, and the United States of America.

Section 1 of the Article requires Port Canaveral to submit by February 1 of each year an annual report to the Chair of the Space Florida Board of Directors detailing measures taken to support the industry. To that end, we are pleased to share with you the first Annual Report for the period covering through December 2024. Please feel free to share the Report with other Directors and members of the Executive Team as desired.

Should you have any questions about the attached Report, please do not hesitate to contact me. Thank you for your continued support of Port Canaveral and our thriving commercial space community.

Regards, CANAVERAL PORT AUTHORITY

**John Marca** (Jan 31, 2006 10:34 EST)

Captain John W. Murray Chief Executive Officer

cc: Wayne Justice, Chairman Canaveral Port Authority (via email)

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# 1. INTRODUCTION

The Canaveral Port District is an independent special taxing district and political subdivision of the State of Florida governed by the Canaveral Port Authority ("CPA") and empowered to operate Port Canaveral ("Port"). Since its official dedication on November 4, 1953, the CPA has invested in its land and water assets to create world-class infrastructure enabling the Port to provide commercial seaport services across numerous industries. Today, Port Canaveral is best known as the second busiest cruise port in the world. However, since its founding, the Port has played a vital and growing role in supporting the diverse cargo operations of the space industry.

# 2. HISTORIC ROLE IN SPACE EXPLORATION

Port Canaveral has been an active hub for America's space program from its inception. Since 1956, a variety of vessels have operated at the Port, including U.S. government ships providing crucial missile tracking data in areas beyond the reach of ground stations and at-sea recovery operations of missile cones and manned spacecraft.

As America's space program evolved, Port Canaveral's strategic location took on an invaluable role in the transportation process for rocket hardware designed and built for launches between 1960 and 2011. The Canaveral Locks, operated by the U.S. Army Corps of Engineers and completed in 1965, were re-engineered at NASA's request to accommodate the transport of the Saturn V rocket stages for the Apollo moon program and other launch vehicles in development. With this strategic improvement in place, the Port and the Canaveral Locks continued to support the transport of Space Shuttle rocket boosters from 1980 until the program's conclusion in 2011.



Pictured: The First Minuteman II Missile in Port Canaveral, 1964 Photo Credit: Cape Canaveral Space Force Museum

Following the conclusion of the Space Shuttle program, the U.S. government, particularly the Department of Defense and NASA, began to consider launch hardware and vehicles developed and operated by commercial space companies to support the nation's spaceflight missions. Recognizing this next evolution in the aerospace industry, on October 23, 2019, the Canaveral Port Authority reaffirmed the Port's commitment to the aerospace industry by passing *Resolution # RES-2019-011-EXE-3* in support of commercial aerospace companies using maritime assets to recover reusable space components. A copy of the Resolution is provided in Exhibit 1.

# 3. PORT CANAVERAL CHARTER

The Port's continuing role in America's space program, and its ongoing industry partnership with the aerospace companies, was further documented in 2024 as a part of the recurring 10-year review of the Port's Charter. Legislative language expressly confirming this commitment was included and adopted in the Port's Charter. Following approval by the Florida legislature and as signed by the Governor of Florida on June 14, 2024, Ch. 2024-283, Laws of Florida added Article XXI, Commercial Space Launch Industry to the Port's Charter. The new Article reads as follows:

ARTICLE XXI. COMMERCIAL SPACE LAUNCH INDUSTRY

Section 1. The Port Authority shall take reasonable measures to support the Commercial Space Launch Industry at Port Canaveral and shall submit by February 1 of each year, commencing February 1, 2025, an annual report to the chair of the Space Florida Board of Directors on such measures. The term "Commercial Space Launch Industry" means any company substantially engaged in the transport, operation, and recovery of space launch or landing services with active maritime operations at Port Canaveral.

Section 2. The Port Authority shall hold a public hearing at least once every 2 years to discuss the state of Commercial Space Launch Industry interests at Port Canaveral. The Port Authority shall invite representatives from the Commercial Space Launch Industry with active maritime assets or operations at Port Canaveral and Space Florida to attend the public hearing at least 45 days before the public hearing. The Port Authority shall provide Public Notice before holding the public hearing at a regularly scheduled Port Authority meeting. In addition, the Port Authority shall provide of the hearing via United States mail to the chair of the Space Florida Board of Directors at least 45 days before the public hearing.

Section 3. At the public hearing, representatives from the Commercial Space Launch Industry and Space Florida and members of the public will be permitted to discuss any issues, concerns, or proposals related to the growth of the Commercial Space Launch Industry at Port Canaveral. The Charter provision includes two (2) separate reporting requirements: an annual report to the Chair of the Space Florida Board of Directors with the first such report commencing on February 1, 2025, and a public hearing to be held once every two years.

This Report, the first annual report submitted pursuant to Section 1 of Article XXI of the Port's Charter, details Port Canaveral's support of the commercial space launch industry for the period ending December 31, 2024. As defined in the Charter, the Report focuses on companies substantially engaged in the transport, operation, and recovery of space launch or landing services with *active maritime operations at Port Canaveral* (emphasis added) and referred to herein as "Commercial Space Companies". Notwithstanding this focus, given the substantial number of commercial space companies emerging or entering the industry, the Port recognized the need for early coordination and planning essential to successful maritime operations. Sections of this Report, including Section 9 "Looking Ahead," discuss aerospace companies that are still in planning stages but are expected to have active maritime operations in the future.

# 4. ACTIVE COMMERICAL SPACE LAUNCH COMPANIES

Currently, three (3) Commercial Space Companies have active maritime operations at Port Canaveral: Space Exploration Technologies Corporation (SpaceX), Blue Origin, and Space Perspective. In 2024 these companies used the Port's berths to dock their maritime assets and Port facilities to offload and facilitate transport of their recovered components.

### 4.1 General Location of Operations

This section provides further detail of Commercial Space Companies operations, their operational footprint, and maritime fleets at Port Canaveral. For reference, a map of the overall Port facilities is attached as Exhibit 2, and Figure 1 depicts the location of operations predominantly occurring at North Cargo Berths 5 and 6 (NCB 5 and NCB 6), and within the Canaveral Cargo Terminal on the northside of the Port.



Figure 1: Northside locations of Commercial Space Companies Operations at Port Canaveral

The Canaveral Cargo Terminal is a 20-acre container terminal on the Port's northside leased to and operated by GT USA LLC, the U.S. subsidiary of Gulftainer, an international port operator based in the United Arab Emirates. The CPA signed a 35-year Marine Terminal Agreement with GT USA in June 2014 and assigned GT USA the responsibility of operating and further developing the Port's container and multi-purpose cargo terminal. Both before and after entering the Terminal Agreement, the Port made significant investments in the berth and terminal facilities to support this agreement, totaling \$37.1 million, with \$18.7 million funded through state grants.

As the operational concepts of the Commercial Space Companies developed and their maritime needs were more clearly understood, both SpaceX and Blue Origin established service agreements with GT USA to secure "operator specific" dedicated operational space within the Canaveral Cargo Terminal. As detailed below, the resulting dedicated operational space, combined with the Port's

multi-user facilities, berth infrastructure and equipment all serve to support SpaceX and Blue Origin recovery operations.

# 4.2 Space Exploration Technologies Corporation (SpaceX)

Port Canaveral's partnership with SpaceX began well before the company's first successful booster recovery, marking the start of a long-term collaboration that would shape the future of commercial space operations at the Port. In September 2015, Port Canaveral and SpaceX initiated discussions to develop a detailed operational plan for handling the recovery of rocket boosters. These early conversations focused on numerous critical aspects of safety, security and regulatory requirements necessary to support SpaceX's maritime assets, and the specific equipment required for offloading and transporting the company's recovered boosters out of the Port. The early establishment of this partnership between a publicly owned commercial seaport and a privately held commercial space company, laid the groundwork for seamless integration of SpaceX's recovery operations with Port Canaveral's infrastructure, helping SpaceX advance its mission of reusable rockets and contributing to the growth of the commercial space industry.

On April 8, 2016, a few short months after initial discussions commenced, SpaceX made history with the successful landing of a Falcon 9 booster on their autonomous drone ship *Of Course I Still Love You*. This operational success, followed by the rocket booster's transport to the Port for offloading, showcased the feasibility of integrating aerospace operations into a commercial maritime environment. The booster was then offloaded at NCB 6, a location that would become central to SpaceX's recovery operations.



Pictured: First successfully recovered SpaceX Falcon 9 Booster arrives at Port Canaveral's NCB 6, April 2016 Photo Credit: Canaveral Port Authority

#### 4.2.1 Landside Operations – SpaceX

In March of 2017, working through the Port's Real Estate Department, SpaceX leased an approximately 53,360 square foot Port owned facility located at 620 Magellan Road just south of State Road 401 ("S.R. 401"). Originally constructed in 1991, this facility was previously known as the "SpaceHab Payload and Processing" facility occupied by a company known as the first private company to own and operate space vehicles<sup>1</sup>, including the pressurized modules used to house experiments aboard NASA's Space Shuttles and the International Space Station. SpaceX leased the SpaceHab facility for five (5) years before returning it to the Port in 2022. As discussed below, the facility would later be leased to Blue Origin.

Today, SpaceX's operation within the Canaveral Container Terminal occupies approximately 3 to 4 acres (see Figure 1 for general location). Within this dedicated area, SpaceX has set up an office trailer and multiple storage buildings, establishing approximately 23,000 square feet of berth side facility space. The area also serves as storage for SpaceX's breakover equipment and other essential resources required to support the recovery operations.

#### 4.2.2 Waterside Operations – SpaceX

Since its operational onset at Port Canaveral, SpaceX has maintained an active presence of maritime assets. As shown on Table 1, the company's fleet in 2015 included six (6) vessels of three different types: Drone Ship (landing barge), Supply Vessel and Recovery Vessel (offshore support vessels). These vessels were docked at multiple berth locations within the Port.

Table 1: SpaceX Maritime Fleet (circa 2015)					
Drone Ships	Of Course I Still Love You (OCISLY)				
	Just Read the Instructions (JRTI)				
Supply Vessels	GO Navigator				
	GO Searcher				
	GO Quest				
<b>Recovery Vessel</b>	Mr. Steven				

As the frequency of SpaceX's recovery operations increased, the maritime fleet also continued to evolve and, at times, creating berth demands greater than previously experienced in Port Canaveral history. Despite the considerable operational tempo increases occurring each year, SpaceX's learned efficiencies allowed the company to achieve a record number of recovery operations in 2024 while maintaining a fleet of eight (8) vessels (reference Table 2).

<sup>&</sup>lt;sup>1</sup> SpaceHab, Inc., founded by former Smithsonian Institution scientist, Robert Citron, built these pressurized modules that flew on 22 space shuttle and space station missions. The company's name is a contraction of "Space Habitat".

Table 2: SpaceX Maritime Fleet (2024)			
Drone Ships	A Shortfall of Gravitas (ASOG)		
-	Just Read the Instructions (JRTI)		
Falcon 9 Recovery Vessels	Bob		
	Doug		
Dragon Recovery Vessels	Megan		
	Shannon		
Support Vessels	Signet Warhorse I		
	Signet Warhorse III		

SpaceX also contracts with permitted tug operators to handle vessel docking, undocking, and shifting while in Port.

#### 4.2.3 2024 Operational Successes - SpaceX

Since the beginning of their operations at Port Canaveral, SpaceX has achieved notable milestones in their launch hardware recovery operations, successfully recovering more than 220 boosters and 430 fairings. In 2024 alone, SpaceX set a new commercial space industry record by offloading a total of 69 boosters and 165 fairings at Port Canaveral.

With guidance and assistance from Port Canaveral, SpaceX has demonstrated their ability to adapt and innovate their recovery operations in a commercial seaport environment. While the company's method for managing recovered launch components differs significantly from "traditional" seaborn cargo operations, they have incorporated specialized handling equipment and executed precise maneuvers to manage large, intricate components. The company has shown a commitment to continuous improvement resulting in an impressive reduction in offload times. By optimizing their processes, SpaceX has successfully cut offload times by more than 50%.



Pictured: 3 SpaceX Boosters at the Canaveral Cargo Terminal, December 2024 Photo Credit: Canaveral Port Authority

### 4.3 Blue Origin, LLC

Blue Origin is the second Commercial Space Company that had active maritime operations at Port Canaveral in 2024. Port Canaveral began discussions with Blue Origin about their intended recovery and offload operations as early as May 2018, marking the start of a collaborative partnership to support the company's plans to land its New Glenn reusable booster on a purpose-built vessel in the Atlantic Ocean. These initial conversations aimed to identify and address infrastructure needs for their operation including, crane requirements, the arrival of their maritime assets, and potential road widenings and modifications to safely transport the significantly larger New Glenn booster.

Recognizing the importance of the Commercial Space Transport Route along S.R. 401 (depicted on Figure 1), Blue Origin reviewed the route and its intersection with Grouper Road, a Port-owned roadway, to identify possible obstructions. The review identified the intersection signal as an encroachment. As a result, Space Florida, in partnership with Blue Origin, secured grant funding from the Florida Department of Transportation's Economic Development Transportation Project Fund (EDTPF) to facilitate the signal's relocation. Working in collaboration with the Port's Engineering and Facilities Departments and FDOT, the signal relocation was completed in 2020 well before Blue Origin's planned transport of the first New Glenn booster.

#### 4.3.1 Landside Operations – Blue Origin

Today, Blue Origin is operating at multiple locations across the Port. In May 2022, the company began landside operations at the former SpaceHab Facility (previously leased to SpaceX). Working through the Port's Real Estate Department, Blue Origin entered a five-year lease to conduct aerospace component manufacturing, processing and refurbishment, research and development, storage, and related office support. In May 2023, the Port and Blue Origin amended this lease to include an approximate 2.17 acre vacant parcel adjacent to the building to support expansion of their operations and provide the company with additional parking. The now approximately 6-acre facility plays a critical role in Blue Origin's manufacturing, refurbishment, and research and development efforts. Its location is especially strategic, being geographically closer to their manufacturing complex at Exploration Park, which allows for efficient logistics and streamlined movement of materials and components between the two sites. Given its history and continuing importance, in 2024 Port Canaveral invested over \$600,000 to repair and replace portions of the SpaceHab Facility roof.

As Blue Origin ramped up its activities on Port and developed a recovery model similar to that of SpaceX, they ultimately chose NCB 6 within the Canaveral Cargo Terminal as their base for maritime recovery. This selection was made after Blue Origin completed a port-wide analysis where both North Cargo Berths 6 and 8 were identified as potential locations for their offload and recovery operations.

With the Canaveral Cargo Terminal selected as their preferred location and use agreements executed with GT USA, Blue Origin began constructing the necessary facilities to support their operations. This included the installation of an office trailer and a warehouse structure occupying over 6,000 square feet, to create dedicated workspace for their recovery teams. Additionally, Blue Origin is storing their proprietary breakover equipment and a custom manufactured Liebherr crane within Canaveral Cargo Terminal.

#### 4.3.2 Waterside Operations - Blue Origin

In September 2024, Blue Origin achieved a substantial milestone with the arrival of the first vessels in their maritime fleet (Table 3). The *Jacklyn*, a Landing Platform Vessel (LPV), is a purpose-built vessel specially designed by Blue Origin to support the recovery of its rocket boosters. The LPV is supported by the M/V *Harvey Stone*, an Offshore Support Vessel (OSV) providing logistical and navigational support for the recovery operation process. Blue Origin plans to use the LPV to recover the New Glenn reusable booster and offload at NCB 6.

Table 3: Blue Origin Maritime Fleet (2024)				
Landing Platform Vessel	Jacklyn			
Support Vessel	Harvey Stone			

In addition to its dedicated fleet, Blue Origin contracts with Port Canaveral authorized tug operators to handle vessel docking, undocking, and shifting while in Port.



Pictured: The Jacklyn LPV alongside NCB 6 at the Canaveral Cargo Terminal, September 2024 Photo Credit: Canaveral Port Authority

#### 4.3.3 2024 Operational Successes – Blue Origin

In August 2024, Blue Origin took a significant step forward in their operational capabilities with the New Glenn rocket booster. To ensure smooth and efficient booster recovery, Blue Origin showcased the essential process of transitioning New Glenn's first stage from its vertical (landing) position to horizontal (laydown) position using the company's 200-foot-tall simulator. Following this successful demonstration, Blue Origin proceeded with testing the logistics and transport processes involved in moving the booster from the Canaveral Cargo Terminal to S.R. 401 for its transport north to the company's facilities at Exploration Park. This transport "rehearsal" tested key elements including coordination with the Port's public safety and operations personnel, cargo tenants, and Brevard County Sheriff's Office to ensure safe and successful movement of the oversized load through the Port and onto the state highway.



Pictured: Blue Origin's Transport Rehearsal of the New Glenn at Port Canaveral's NCB 6, August 2024 Photo Credit: Canaveral Port Authority

### 4.4 Space Perspective, Inc.

The third Commercial Space Company with active maritime operations at Port Canaveral in 2024 is Space Perspective, a private space tourism company headquartered at the Space Coast Regional Airport in Titusville. Founded in 2019, the company is planning to offer a unique space travel experience to civilians. Space Perspective has developed a hydrogen-fueled balloon which it plans to launch at sea from a modified oceangoing vessel, with passengers onboard a uniquely designed flight capsule. After launching, the balloon and flight capsule will ascend to altitudes of 100,000 feet above earth.

#### 4.4.1 Operations at Port Canaveral – Space Perspective

In early 2023, Port Canaveral held a roundtable discussion with Space Perspective marking the first formal operational meeting with the company. This meeting brought together key members of Port Canaveral's leadership team, including the Port's CEO, Senior Harbormaster, and staff from multiple CPA departments: Cargo Operations, Business Development, Engineering, Public Safety and Security, Government Affairs, Real Estate, and Environmental. Space Perspective outlined their vision of operations including passenger embarkation and debarkation, homeporting their vessel at the Port year-round, handling hazardous materials and loading their balloon and capsule. These early conversations revealed some of the company's operational requirements while facilitating important discussions on challenges and possible solutions.

Unlike traditional cargo operations, Space Perspective's proposal involved homeporting their vessel at Port Canaveral for extended layberth operations. However, due to the Port's limited waterside footprint and the continuous demand for berth space, it was necessary to explore alternative options. The Port subsequently leveraged its knowledge of regional seaport operations and collaborative relationships within the maritime community to assist Space Perspective in identifying a viable alternative. As a result of these efforts, Space Perspective has been utilizing berth space in the Port of Fort Pierce for some of their most recent maritime needs.

#### 4.4.2 2024 Highlights - Space Perspective

Space Perspective conducted its first activity at Port Canaveral in September 2024. The company's flight capsule, *Spaceship Neptune*, was successfully loaded onto the *Marine Spaceport (MS) Voyager*, a dedicated maritime vessel designed for the transportation and launch of their capsule and balloon. This test included the capsule's safe transportation to the launch area, where the balloon was prepared and filled to lift the capsule to the edge of space. The capsule's mission was successful, and once the test flight was completed, the vessel returned to Port Canaveral where the capsule was carefully offloaded from the *MS Voyager*. This operation was a marked achievement for the company as it moves towards uncrewed flight testing.



Pictured: Space Perspective's capsule, *Spaceship Neptune*, loading onto the *MS Voyager* at Port Canaveral's NCB 6, September 2024 Photo Credit: Canaveral Port Authority

# 5. PARTNERSHIPS

### 5.1 Collaboration with Commercial Space Companies

Partnership, collaboration and consistent information sharing are essential to all operations conducted at Port Canaveral. This is particularly important for evolving commercial space operations. To help ensure essential information is accurately and efficiently communicated, a defined team of CPA staff has been committed to serve as liaisons, facilitating collaboration between various departments, external organizations and the Commercial Space Companies. A list of key members of the dedicated team of Port staff is provided in Exhibit 3. To ensure updates or changes in operations are understood and communicated in a timely manner, Port Canaveral holds quarterly meetings with the Commercial Space Companies known to be planning to include maritime assets in their concept of operations. These meetings also serve as a forum to exchange ideas, address needs and challenges and plan for future activities.

### 5.2 Collaboration with State Entities

Port Canaveral is actively and regularly engaged with Space Florida and the Florida Department of Transportation, participating in regular meetings and briefings to exchange information, operational updates and future needs and plans.

With more Commercial Space Companies on the horizon with evolving maritime needs in their operational portfolios, Port Canaveral collaborated with Space Florida to advocate for a state-level, multi-agency review of port berthing options to meet the anticipated demand for wharf space. Port

Canaveral's team—including the CEO, CFO, Harbormaster, and representatives from Cargo Operations, Business Development, Engineering, Public Safety and Security, Government Affairs, Environmental, and Legal departments—actively participated in multiple meetings and workshops in support of the study. The "Florida Spaceport System Maritime Intermodal Transportation Study" ("Wharf Study")<sup>2</sup> was released on May 2, 2024. The Report determined existing infrastructure was insufficient to meet the needs of the expanding Commercial Space Industry and identified near-term and long-term wharf solutions that could be developed outside the boundaries of Port Canaveral. Port Canaveral continues to work closely with Space Florida on completing Phase II of this important effort.

### 5.3 Collaboration with Federal and Other Local Entities

The Port's commitment to partnership extends further through its ongoing discussions, collaboration and regular operational briefings with Federal agencies, including NASA, the U.S. Space Force, Space Launch Delta 45, U.S. Coast Guard, U.S. Naval Ordnance Test Unit, U.S. Army Transportation Command and the Army Corps of Engineers. Port Canaveral took the leading role in changing the multi-agency communications of space launch notices to improve the coordination of accurate and timely Notices to Mariners to de-conflict commercial and recreational vessel operations from launch hazard areas.

The Port also has close working relationships with Canaveral Fire Rescue, Brevard County Sheriff's Office, and the Canaveral Pilots Association. These collaborations are essential to maintain operational readiness, ensure public safety and security, promote safe navigation in and around Port waterways, and to manage maritime traffic and logistical activities to preserve the integrity of the global maritime transportation system.

## 5.4 Safety, Security and Emergency Response Collaboration

Port Canaveral has contractual agreements with Brevard County Sheriff's Office (BCSO) for law enforcement and port security services and with Canaveral Fire Rescue (CFR) for fire protection and emergency response. Each department has a fundamental role in supporting the Commercial Space Company's recovery operations while ensuring public and operational safety.

On launch days, the Port employs BCSO deputies to manage traffic and crowd control resulting from the influx of visitors to watch a launch or witness the return to Port of a recovered booster by vessel. Often additional BCSO deputies are deployed along key Port access routes, such as State Road 528 and A1A to help direct traffic, prevent or alleviate congestion and minimize potential delays to port operations.

<sup>&</sup>lt;sup>2</sup> "State and Federal Space Stakeholders Release Florida Spaceport System Maritime Intermodal Transportation Study Feasibility Phase Report." Press release: May 2, 2024. <u>https://www.spaceflorida.gov/news/state-and-federal-space-stakeholders-release-florida-spaceport-system-maritime-intermodal-transportation-study-feasibility</u>

Canaveral Fire Rescue personnel engage in specialized training with the Commercial Space Companies, including confined space, high-angle, and rope rescue exercises to ensure response readiness. They also conduct detailed safety consultations, perform facility inspections, review permits to ensure compliance with safety regulations and issue hot work permits. In addition to these preventative efforts, CFR has responded to a variety of emergency incidents ranging from fires to trauma alerts.

# 6. OPERATIONAL COORDINATION AND SAFETY

Port Canaveral is a very active commercial seaport that operates 24/7, 365 days a year. A wide variety of operations take place across the Port at waterside locations (i.e., berths and bulkheads) and landside areas (i.e., dockside offload/load areas, cruise and cargo terminals, military bases, tenant leased uplands, etc.) that have restricted or limited access, secure and/or controlled environments. Some of these restricted or limited access areas are situated next to unrestricted, publicly accessible spaces, such as the Port's Cove District with retail merchants and restaurants, the Marina District with privately operated marinas and recreational boaters, as well as the Port's public boat ramps, Jetty Park campground, and beach. With that wide Area of Responsibility, the Port conducts regular and consistent communication and coordination across all operational areas to ensure the safety and security and efficient use of all facilities for all users.

### 6.1 Berth Utilization and Optimization

As the Port continues to document year-over-year increasingly high numbers of vessel calls, cruise passengers and cargo throughput, ensuring the efficient use of the Port's defined berth space is a top priority. CPA's Harbormaster has statutory authority<sup>3</sup> to manage Port Canaveral's commercial ship traffic and vessel berthing requests. This vital role is critical to optimizing the efficient arrival and departure of commercial vessels and to support efficient utilization of Port Canaveral's waterside facilities. The Harbormaster facilitates round-the-clock access and support for vessel operators by overseeing berth assignments, coordinating vessel arrivals and departures, and managing vessel discharge locations and relocations. Additionally, the Harbormaster acts as the Port's liaison with the U.S. Military to coordinate vessel movements, and works collaboratively with the Canaveral Pilots Association, U.S. Coast Guard, U.S. Customs and Border Protection and U.S. Army Corps of Engineers to ensure smooth and secure operations and safe navigation in the Canaveral Harbor.

Since the arrival of SpaceX's and Blue Origin's maritime fleets, NCB 6 has been their primary berth due to its proximity to their operational area located within the Canaveral Cargo Terminal. When this berth is occupied with vessels discharging traditional commercial cargos such as containers, dry bulk and breakbulk, or project cargo, the Harbormaster will identify and assign an alternate berth. This process requires a review of all scheduled vessel arrivals and berth availability.

<sup>&</sup>lt;sup>3</sup> Florida Statutes Title XXII. Ports and Harbors §.313.06

When necessary, an alternative berth will be assigned to accommodate a vessel, which may include unconventional locations such as a cruise terminal or the Cove District seawall on the southside of the Port.

#### 6.1.1 Berth Accommodations for Commercial Space Company Maritime Assets

Recognizing the increasing demands of wharf space, the Port in collaboration with the Canaveral Pilots Association invited representatives from SpaceX and Blue Origin to participate in a meeting on September 3, 2024, dedicated to exploring alternative berthing locations for their recovery vessels. The discussion focused on evaluating the capabilities and capacities of each cargo berth based on each Commercial Space Company's vessel specifications and aimed to identify locations that would not impact transiting vessel traffic. Following the conclusion of the meeting, specific cargo berths were identified as suitable berthing locations for various operations including offloading, layberthing and use during extenuating circumstances. Figure 2 details the use of Port Canaveral's waterside assets – cargo berths, cruise berths and bulkhead areas – for docking Commercial Space Companies' vessels in 2024. In the past year, the combined fleet of 12 commercial space company vessels—drone ships, landing platforms, recovery, supply and tug vessels – were at berth in Port Canaveral for a total of 1,502 days. These vessels were accommodated at northside and southside cargo berths – NCB 5, NCB 6, NCB 8, and SCB 1, and northside cruise terminals CT 5 and CT 10. Additionally, berth space was provided to commercial space company maritime assets along The Cove District seawall.



Figure 2: A total of 12 commercial space company maritime assets spent 1,502 days at berth in Port Canaveral in 2024.

#### 6.2 Port Safety and Security Measures

The Port's Public Safety and Security Department (PSS) works closely with the U.S. Coast Guard, Brevard County Sheriff's Office, and Canaveral Fire Rescue to maintain Port security and operational safety. Federal Regulation<sup>4</sup> requires the Port's PSS and, specifically, the Port's Facility Security Officer (FSO) to develop and implement the Port's Facility Security Plan (FSP) to ensure terminal security for all moorings at Port Canaveral berths and facilities. Port Canaveral's FSP does not include NCB 6. In accordance with the lease agreement with GT USA, they are, as the terminal operator, required to maintain an approved FSP. CPA PSS additionally conducts Hazard Identification Studies (HAZID) and manages all drone flight requests and daily approvals to maintain safety and security above and around the Port's critical infrastructure. By design and practice, these Port Security efforts are protecting the proprietary nature of commercial space companies' controlled operations.

#### 6.3 Heavy Weather Planning

The Port's Public Safety and Security Department also leads an annual comprehensive Heavy Weather Meeting for all Port users, partners, tenants and community representatives to prepare for hurricane season. This annual meeting serves as a platform to provide the Port community with understanding of the necessary requirements to plan and prepare for weather events; review federal and state emergency guidance and understand the plans and coordination by and between CPA, the U.S. Coast Guard, Brevard County Sheriff's Office, and Canaveral Fire Rescue for the coming season. Recognizing that each Commercial Space Company operates differently and may have proprietary or sensitive data and information, PSS coordinates and schedules individualized meetings to allow discussion and information exchange in a separate (exclusive) environment. These private sessions ensure confidentiality and allow for in-depth discussions that may not be suitable for sharing in a broader group setting.

# 7. PORT IMPROVEMENTS, ACQUISITIONS & SERVICES

CPA's Engineering Department and Building Official provide essential infrastructure support to address the specialized operations of the Commercial Space Companies. As SpaceX and Blue Origin expanded their activities within the Canaveral Cargo Terminal and at other Port locations, additional improvements have been necessary to meet the needs of their operations.

#### 7.1 Infrastructure Enhancements

Since the transport of their first recovered booster through Port Canaveral, SpaceX relied on an unimproved roadway extending from Magellan Road to the northern boundary of the Canaveral Cargo Terminal (depicted on Figure 1 as "Former Transport Route"). Although not an official roadway and not designed for high-traffic or specialized equipment, it was the most direct and

<sup>&</sup>lt;sup>4</sup> Code of Federal Regulation (CFR) Title 33, § 105.205

usable path from their operational area within the Terminal to S.R. 401. As such, the Port granted SpaceX an exclusive license to use this roadway during transport of its recovered boosters. SpaceX utilized this pathway until 2024 when they revised their operational plan to use Grouper Road to exit the Terminal.

In May 2023, Port Canaveral collaborated with Blue Origin and the U.S. Coast Guard to finalize an agreement allowing roadway modifications necessary to transport the New Glenn boosters from the Canaveral Cargo Terminal to their facility at Exploration Park. This agreement enabled the widening of Grouper Road, a Port-owned roadway, and the expansion of the gate into the Terminal. With the completion of this work and the relocation of the signal at Grouper Road and S.R. 401 (discussed in Section 4.3), the only remaining obstacle for transport through the Port occurred at the intersection of S.R. 401 and Payne Way. In August 2024, the CPA assisted with advancing this project by granting a temporary construction easement to allow pavement widening on the north shoulder of S.R. 401.

Beyond approvals and assistance in completing required road improvements, Port Canaveral has worked with GT USA and both SpaceX and Blue Origin in reviewing, approving and permitting facility improvements to the Canaveral Cargo Terminal as needed for each company's operation. Multiple improvement requests initiated directly by the Port's tenant, GT USA, have been addressed by various CPA departments. Improvements completed include installation of modular office buildings, warehouses, and fiber wiring. The Port and GT USA also executed a utility easement, outside the leased boundary, to enable Florida Power & Light to supply electricity to SpaceX's office complex.

### 7.2 Port Equipment Acquisition and Use

In early 2019, the CPA acquired its first Mobile Harbor Crane (MHC), a Liebherr *LHM 600*, to support its growing and diverse cargo operations. This \$5.7 million investment was partially funded by a \$2.7 million grant from the Florida Department of Transportation (FDOT). The new crane added cargo handling flexibility and significantly bolstered the Port's ability to handle heavy and specialized cargo, including aerospace components. Port Canaveral's Engineering and Cargo Operations departments collaborated with the SpaceX Recovery Team to discuss the company's lift handling needs and was able to customize this MHC to meet the requirements of handling the Falcon 9 booster. Blue Origin's operations introduced additional challenges due to the significantly larger size of the New Glenn first stage booster, which exceeded the handling capacity of this MHC. As such, Blue Origin invested in a customized Liebherr crane tailored specifically to support their recovery and offload operations.

Given the anticipated growth in the cargo and Commercial Space industry, the Canaveral Port Authority recognized the need to expand its capability and subsequently purchased two additional MHCs. The second MHC, an *LHM 600 EVO 6* series, was placed into service in March 2024. This MHC matches the capabilities of the first but features a 200-foot jib extension for enhanced reach. The total cost of this crane was \$7.4 million with \$3.7 million funded by a grant from the

Florida Department of Transportation. The third MHC was authorized for purchase by the CPA Board of Commissioners on March 27, 2024, with the CPA covering the entire \$8.1 million acquisition cost. The third crane, expected to enter service in the fourth quarter of 2025, includes upgrades and modifications to accommodate the handling of Relativity Space's recovered boosters. The investment in these MHCs has been noteworthy with SpaceX alone utilizing the Port's MHCs for approximately 180 days in 2024.

### 7.3 Streamlined Processes

Recognizing the unique aspects of the Commercial Space Companies' operations in comparison to traditional cargo activities, Port Canaveral has made efforts to streamline processes and reduce paperwork where practicable. These improvements include modifying the engineering analysis requirements for handling repeat heavy cargo lifts on the berths and refining the process for submitting vessel berthing requests to the Harbormaster. Additionally, a customized invoicing process was introduced resulting from the individualized agreements with tailored rates designed to align with each company's specific operational cadence and requirements.

# 8. SPECIAL EVENTS AND MEDIA COORDINATION

Port Canaveral has accommodated several special event requests from Commercial Space Companies wishing to acknowledge and celebrate with the public their individual milestones and achievements. This includes providing extra parking for their employees, visitors, VIPs and invited guests; providing logistical and CPA staff support for media accommodation and management to help ensure their events are executed smoothly, efficiently and successfully. These "outside the ordinary" operational efforts underscore the Port's commitment to supporting the diverse needs of all Port users while maintaining a focus on safety and efficiency.

# 9. LOOKING AHEAD

As the Commercial Space Launch Industry continues its rapid expansion, Port Canaveral remains at the forefront of operational readiness. The upcoming year promises more operational developments and challenges, with the anticipated launch of Blue Origin's New Glenn in early 2025. It is also anticipated that SpaceX will continue to increase its launch cadence and achieve milestones including flying its new Starship rocket from Cape Canaveral. These advancements highlight the growing challenges and complexity of managing simultaneous proprietary operations of multiple commercial space companies with the necessary operational requirement of taking place within shared spaces.

The CPA remains adamant that regular communication and operational updates with commercial space companies are essential and must include early reviews and strategic planning of simultaneous operations to minimize conflicts. As more Commercial Space Companies develop and evolve their maritime plans, the more critical maintaining efficiency becomes. To address

these challenges in part, the Port's Public Safety Department is collaborating closely with the U.S. Coast Guard, Brevard County Sheriff's Office, and Canaveral Fire Rescue to mitigate risks and streamline coordination for landside and waterside recovery operations.

# 9.1 Port Advocacy for Commercial Space Industry

Port Canaveral has played a key role in America's space program since its beginning. Today, as one of the nation's most active commercial seaports and a significant economic driver for the state of Florida, the Port continues to be an important advocate for the commercial space industry in Florida. The growth of commercial space operations in the Space Coast region is marked by the rapid pace of change. Commercial Space Companies continue to evolve and advance their concept of operations aiming to provide U.S. Government agencies, our military and global commercial organizations with reliable and affordable launch services for space missions.

#### 9.1.1 Advocacy Efforts

Port Canaveral has consistently advocated for support of the commercial space industry at the federal and state level. In early 2023, the Port initiated discussions with Space Florida to facilitate a state level, multi-agency review of port berthing options to meet the growing needs. The Port, as a key stakeholder in the region, was an active participant throughout the Wharf Study which was completed and released May 2, 2024. This represented the first critical step in addressing the burgeoning maritime needs of Florida's commercial space transportation sector. In late 2023, Port Canaveral facilitated a meeting between Space Florida and the U.S. Army Corps of Engineers ("Corps") to brief them on the "space wharf" concept and solicit guidance on approaches for developing near- and long-term solutions on federal lands and waterfront identified in the Wharf Study. Subsequently, in the spring of 2024, Port Canaveral successfully worked with U.S. Rep. Bill Posey to include wharf study language in the 2024 Water Resources Redevelopment Authorization Act directing the Corps to initiate a feasibility study to evaluate wharf facilities, navigational channels, and access limitations of proposed wharf sites adjacent to Port Canaveral.

Additionally, Port Canaveral took the leading role and worked collaboratively with the U.S. Coast Guard, Space Launch Delta 45 (SLD45) and Space Florida to change the multi-agency communications of launch notices and improve the coordination of accurate and timely Notices to Mariners to de-conflict commercial and recreational vessel operations from launch security zones and mission hazard areas. Port Canaveral was also a long-standing advocate for opening access to the military wharves located on the northside of the Middle Turning Basin for Commercial Space Companies with active maritime operations in Canaveral Harbor. In November 2024, SLD45 confirmed it was working on a draft memorandum of understanding (MOU) that will allow the Commercial Space Companies to berth at the U.S. Army Wharf.

# 9.2 Emerging Commercial Space Launch Industry Companies

Port Canaveral's Vice President, Business Development, Cargo and Aerospace is actively engaged with emerging aerospace companies, including Relativity Space, Stoke Space, and The Spaceport

Company, all of which are expected to incorporate a maritime component into their recovery operation. Each company has been invited to participate in meetings with Port Canaveral's leadership team, plus CPA staff from Cargo Operations, Engineering, Public Safety and Security, Environmental, and the Harbormaster. These meetings provide each company with the opportunity to share information about their developing launch capabilities and maritime recovery plans and to foster collaboration and ensure an understanding of their progress and future needs.

### 9.3 Infrastructure Planning for Space Transport Efficiency

The diverse commercial space fleet of mission support vessels and autonomous landing barges or platforms require access to a range of berthing facilities to conduct their various load/offload operations. As more Commercial Space Companies incorporate maritime components into their recovery strategies and plan to conduct offload operations at Port Canaveral, the Port will continue to take proactive steps to consider and implement improvements that could suit the needs of this unique industry while maintaining the necessary and required balance to ensure multipurpose use of Port infrastructure is available to all Port users.

# Exhibit 1

RES-2019-011-EXE-3



### CANAVERAL PORTAUTHOR ITY RESOLUTION # RES-2019-011-EXE-3

#### A RESOLUTION OF THE CANAVERAL PORT AUTHORITY TO AFFIRM ITS CONTINUED SUPPORT OF THE AEROSPACE INDUSTRY AND EXPLORATION

WHEREAS, Port Canaveral has played an important continuous role in America's space program since its inception.

WHEREAS, in 1961 the Mercury space capsule flown by astronaut Alan Shepard, the first American launched into space, was retrieved upon its return to earth by vessels home ported at Port Canaveral.

WHEREAS, in 1965, the Canaveral Lock was opened, connecting Port Canaveral's waters to the Banana River allowing successful transport of the Saturn rocket components from the Port to Kennedy Space Center launch facilities.

WHEREAS, during the space shuttle program, reusable solid rocket boosters retrieved at sea were towed through Port Canaveral and returned by water to Kennedy Space Center.

WHEREAS, today the operational concepts of commercial aerospace space companies incorporate water landings of their rockets.

WHEREAS, Port Canaveral has grown to be a world class gateway to new frontiers, including space.

WHEREAS, the Port is mindful of the evolving needs of the aerospace space industry and continues to be a strategic operational resource for the region's growing aerospace industry.

NOW, THEREFORE, BE IT RESOLVED, THE CANAVERAL PORT AUTHORITY affirms its support for space exploration and the continuing role of Port Canaveral to meet the growing needs of the aerospace industry. We acknowledge our long and shared history and affirm the Port will continue to remain committed to the growth of the space industry, which is so vital to this region, Florida and our nation.

DONE, ORDERED AND ADOPTED, this 23rd day of October 2019 at Port Canaveral, Brevard County, Florida. CANAVERAL PORTAUTHORITY

Micah Loyd, Chairman

Robyn Hattaway, Vice Chairman

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Exhibit 2



Overall Port Facilities Map

# Exhibit 3

#### Lead CPA Staff engaged in planning and coordination with Commercial Space Companies

Chief Executive Officer **Chief Financial Officer** Vice President & General Counsel Vice President, Government and Strategic Communications Vice President, Engineering and Construction Vice President, Cruise and Cargo Operations Vice President, Business Development, Cargo and Aerospace Vice President, Public Safety & Security Vice President, Information Technology Vice President, Facilities Optimization **Chief Building Official** Senior Harbormaster Senior Director, Environmental Senior Project Manager, Civil Engineering Senior Project Manager, Construction Senior Manager, Stakeholder Relations Assistant General Counsel Director, Communications and Public Affairs Director, Public Safety and Security Director, Real Estate Director, Risk Management Director, Cargo Operations Manager, Business Development, Cargo and Aerospace Manager, Government Relations IT Project Manager II Supervisor, Recreation and Events

