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1636

National Register of Historic Places Registration Form

This form is for use in nominating or requesting for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by Marking "x" in the appropriate box or by entering the information requested. If an item does not apply

ing documented, enter "N/A" for "not applicable." For functions, architectural classification, reas of significance, enter only categories and subcategories from the instructions. Place and narrative items on continuation sheets (NPA Form 10-900a). Use a typewriter, word processor, implete all items.
Property
e Operations and Checkout Building (O & C)
site number Manned Spacecraft Operations Building (MSOB) /8BR1693
ber NASA, John F. Kennedy Space Centernot for publication
Kennedy Space Centervicinity
a code FL county Brevard code 009 zip code 32899
deral Agency Certification
signated authority under the National Historic Preservation Act, as amended, I tify that this X nomination request for determination of eligibility meets entation standards for registering properties in the National Register of Historic meets the procedural and professional requirements set forth in 36 CFR Part 60. The property X meets does not meet the National Register criteria. The data this property be considered significant X nationally statewide lay. (See continuation sheet for additional comments.)
of certifying official/Title Date
AFONDATION AND SPACE ADMINISTRATION
Federal agency and bureau
of Certifying Official/Typle State Historic Preservation Office, Division of Historical Resources
Federal agency and bureau
Park Service Certification
that the property is: ed in the National Register. See continuation sheet. mined eligible for the cional Register. see continuation sheet. mined not eligible for the cional Register. ed from the National pister. (explain:)
signated authority under the National Historic Preservation Act, as amended, I tify that this _X nomination request for determination of eligibility meets intation standards for registering properties in the National Register of Historic meets the procedural and professional requirements set forth in 36 CFR Part 60. ion, the property X meets does not meet the National Register criteria. In that this property be considered significant _X nationally statewide lay. (See continuation sheet for additional comments.) Solution, NASA FEOGRAL PRESERVATION OFFICER: Nov. 19, 1999 of certifying official/Title Date AERONAUTICS AND SPACE ADMINISTRATION Federal agency and bureau nion, the property X meets does not meet the National Register criteria. continuation sheet for additional comments.) of pertifying official/Typle State Historic Preservation Office, Division of Historical Resources Federal agency and bureau Park Service Certification hat the property is: ed in the National Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. mined not eligible for the ional Register. See continuation sheet. Mined not eligible for the ional Register. See continuation sheet. Mined not eligible for the ional Register. See continuation sheet. Mined not eligible for the ional Register. See continuation sheet. Mined Not eligible for the ional Register. See continu

Number of Resources within Property (Do not include previously listed resources in the count.) Contributing Noncontributing 1 0 buildings 0 0 sites 0 0 structures 0 0 objects 1 0 Total Number of contributing resources previously listed in the National Register			
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resources previously listed			
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Current Functions (Enter categories from			
DEFENSE: aerospace facility DOMESTIC: institutional housing			
Materials (Enter categories from instructions.) foundationCONCRETE wallsCONCRETE roofsASPHALT other			
r			

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

other_____

Operations and Checkout Building	Brevard, FL			
Name of Property	County and State			
8. Statement of Significance				
Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualify the property for National Register Listi	Areas of Significance (Enter categories from instructions.)			
X A Property is associated with events that have made a significant contribution to the broad patterns of our history.	on OTHER: SPACE EXPLORATION ENGINEERING ARCHITECTURE			
B Property is associated with the lives of persons significant in out past.				
_X C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinguishable.	Period of Significance			
D Property has yielded, or is likely to you information important in prehistory or	ield,			
<pre>Criteria Considerations (Mark "x" in all the boxes that apply.) A owned by a religious institution or used for religious purposes B removed from its original locations C a birthplace or grave D a cemetery.</pre>	(Complete if Criterion B is marked above.) N/A Cultural Affiliation N/A			
 E a reconstructed building, object or structure. F a commemorative property. X G less than 50 years of age or achieved significance within the past 50 years. 	Architect/BuilderUNKNOWN			
Narrative Statement of Significance (Explain the significance of the property on one 9. Major Bibliographical References	or more continuation sheets.)			
<pre> preliminary determination of individual listing (36 CFR 67) has been requested previously listed in the National Register previously determined eligible by the National Register designated a National Historic Landmark</pre>	ng this form on one or more continuation sheets.) Primary location of additional data: State Historic Preservation Office Other State agency Kederal agency Local government University Other Name of repository: NASA: Kennedy Space Center			

Operations and Che	Breva	Brevard, FL				Brevard, FL			
Name of Property		County and State					County and State		
10. Geographical D	ata								
Acreage of Property	approximately 7.	3 acres							
UTM Reference									
(Place additional UTM r	references on a conti	nuation sheet.)						
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Verbal Boundary Des	cription								
(Describe the bound	aries of the prop	erty on a co	ontinu	ation sheet	:.)				
Boundary Justificat	ion								
(Explain why the bo		ected on a c	contir	nuation shee	et.)				
11. Form Prepared B									
name/title_Daniel_D		rly Hinder	Archi	tectural H	istorians				
organization Archae									
street & number P.O									
city or town Saraso				_					
Additional Document	ation								
Submit the followin	g items with the	completed for	orm:						
Continuation Sheets		en e							
Maps	15 minuto comical	indicating th			rion				
A USGS map (7.5 Of	15 minute series)	indicating th	ie bro	perty's locat	JOH.				
A Sketch map for h	istoric districts a	nd properties	havir	ng large acre	age or				
numerous resources.									
Photographs									
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Additional items	oo EDO for one		:	1					
(Check with the SHP	O of FPO for any	additional.	rcems.	.)					
Property Owner		6 011B0 B1	20. \						
(Complete this item		of SHPO or Fi	20.)						
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city or town	terent: This information	State	acted for	ZIP COde_	to the National				
Register of Historic Places list properties, and to ame in accordance with he Nati Estimated Burden Statement:	s to nominate properties and existing listings. Re onal Historic Preservat	s for listing or esponse to this r ion Act, as Amer	determ: equest ided (16	ine eligibility is required to 5 U.S.C. 470 et	for listing, to obtain a benefit seq.).				
response including time for reviewing the form. Dire Chief, Administrative Serviand the Office of Managemen	or reviewing instruction ct comments regarding to ce Division, National Page 1	n, gathering and his burden estim rk Service, P.O.	l mainta nate or Box 37:	ining data, and any aspect of 127, Washington	d completing and this form to the , DC 20013-7127;				

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Narrative Description Operations and Checkout Building

Year built: 1964

Facility name: Operations and Checkout (O & C) (also known as the Manned

Spacecraft Operations Building [MSOB])

Facility number: M7-355

Narrative Description of Facility Capabilities & Functions: This facility was used for assembly and checkout of the Apollo spacecraft modules and also provided crew training and preflight preparations (NASA 1974:9-2).

The Operations and Checkout (O & C) building is a five-story, 601,505 square foot structure located east of the Headquarters Building in the NASA Industrial Area. Completed in 1964, O & C, as the largest facility in the Industrial Area, was vital as the facility which checked the modular Apollo craft for systems integrity before it was united with the launch vehicle. The Operations and Checkout building also contained crew preparation areas, laboratories, medical facilities, and the Apollo mission high-altitude chambers, which were used to assemble and test the integrated command, service, and docking modules in a simulated space environment (Butowsky 1981:11).

Historic Functions

The building was divided into five functional areas: engineering and administration, auditorium and cafeteria, laboratory and control room, high bay and low bay assembly and test area, and utility and service area. These were further subdivided as necessary within the basic functions. The building was completely air-conditioned and had movable partitions and modular utilities to provide flexibility for interchange between the various areas (Butowsky 1981:51-52; Butowsky 1983: 27-28; NASA 1967b:10-57-58; NASA 1974:9-3).

Spacecraft were delivered to this building by special rubber-tired transporters and brought first into the low and high bay areas to check systems integrity. Once they were completely checked out and systems integrity was established, they were taken to the VAB for assembly on the launch vehicle (Butowsky 1981:51-52; Butowsky 1983:27-28; NASA 1967b:10-57-58; NASA 1974:9-3).

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Accommodations for astronaut preflight activities were also included in the O & C. Preflight activities included a crew preparation area, a technical and briefing area, transient quarters, and a bio-medical area (Butowsky 1981:51-52; Butowsky 1983:27-28; NASA 1967b:10-57-58; NASA 1974:9-3).

O & C contained instrumentation facilities for receiving, evaluating, and recording data from spacecraft during simulated and actual flight. It also contained clean rooms, a malfunction laboratory, a calibration laboratory, bio-medical and bio-chemical laboratories, acceptance checkout equipment, a quick look data station, and assembly and test areas. There were three 27½ ton bridge cranes, two integrated test stands, and two altitude chambers in the assembly and test areas (Butowsky 1981:51-52; Butowsky 1983:27-28; NASA 1967b:10-57-58; NASA 1974:9-3).

Astronaut Ouarters

The Astronaut Quarters on the third floor of O & C were designed to house astronauts during the weeks prior to launch. Apollo era astronauts received at least six weeks of training prior to launch at KSC. During this time the astronauts were housed in the Astronaut Quarters at O & C. In 1965 the Astronaut Quarters included nine bedrooms, offices, an exercise room, a conference room, a dining room and kitchen area, a laundry room, and a suit room. The suit room was a super-clean laboratory in which the astronauts were assisted into their "Pressure Garment Assembly" (PGA), or spacesuits. Test stands allowed technicians to perform and monitor spacesuit leak and contamination checks of spacesuits by pumping oxygen and compressed air from storage tanks to the garments. At the same time, bio-medical and communications attachments within the spacesuit were checked. Astronauts used this facility for all flight and training exercises involving suited astronauts (Spaceport News 1968:5; Gunter 1996).

Bio-Medical Laboratories

The Bio-Medical Laboratories in the O & C had a net area of 1,000 square feet. This subfacility included equipment for bio-medical experimentation, and the related operation, checkout, and maintenance. A bio-medical screen room and a Class 100,000 clean room were included in this laboratory. The laboratory was used for flight crew preflight physicals and checkout of flight medical experiments (NASA 1974:9-4-5).

Materials Analysis Laboratories

The Materials Analysis Laboratories in the O & C had a net area of approximately 12,000 square feet. These subfacilities were equipped with space environment testing devices: two mass spectrometers, an optical emission spectrograph, an X-ray image intensifier system, an electron

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microscope, an electron microprobe, two spectrophotometers, a random vibration system, an X-ray diffraction/fluorescence unit, and a clean room. All necessary equipment was available in this laboratory for the analysis of malfunctions to determine the basic failure of material or equipment (NASA 1974:9-7).

Clean Room, Test Station No. 2, Guidance and Navigation Laboratory

The Class 100,000 Clean Room Test Station No. 2, Guidance and Navigation Laboratory was a subfacility of the O & C. It had a net area of 2,360 square feet. The facility served as the Command Module Block I and Block II Universal Test Station. It was equipped for Block I Optical Subsystem test and checkout of guidance and navigation flight spares (pre-installation acceptance test) (NASA 1974:9-15).

Acceptance Checkout Equipment (ACE)

The Acceptance Checkout Equipment (ACE) system located in the O & C occupied a net area of 6,000 square feet. It provided a rapid checkout of systems or components associated with a space vehicle or other similar equipment (NASA 1974:9-17).

Common Use RF Checkout Equipment (CURFCOE)

Common Use RF Checkout Equipment (CURFCOE) ,located in the O & C, occupied a gross area of approximately 1,000 square feet. This subfacility was a receiving, recording, monitoring, and distributing facility for rf and video signals. It was capable of supporting Command Module, Service Module, S-band and C-band radar readouts, and television scan conversion (flight system). The working area of the floor was raised two feet above the structural floor to accommodate interconnections (NASA 1974:9-19).

Special equipment was available to check airborne cameras, provide test signals for scan converters, record slow scan television (10 frames per sec), and convert slow scan to standard (30 frames per sec). Voice communication the altitude chamber via rf and operational provided to was Data line interface with the Quick Look Data intercommunication systems. Station and the Acceptance Checkout Equipment was also provided by CURFCOE (NASA 1974:9-19).

Quick Look Data Station

The Quick Look Data Station (QLDS), with a net area of 3,000 square feet, occupied three bays of 0 & C. The QLDS permitted engineering experimenters to monitor testing and to observe any prior test data which may be viewed from tapes available in the storage area. As many as nine experimenters could monitor the QLDS at one time (NASA 1974:9-21).

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Assembly and Test Area--High Bay

The High Bay Assembly and Test Area subfacility of O & C, at 104 feet high and with a net area of 15,000 square feet, provided for integrated assembly of the spacecraft. The high bay, measuring approximately 157 feet long, 85 feet wide, and 104 feet high, was designed to house two altitude chambers used for assembly and test of the integrated Command Service Module in a simulated space environment. Systems and miscellaneous tests could also be conducted in the high bay area. Three 27½ ton bridge cranes were available in this area, one with a hook height of 82 feet and the other two with hook heights of 48 feet (NASA 1974:9-23).

Assembly and Test Area--Low Bay

The Low Bay Assembly and Test Area of O & C, with a net area of 41,275 square feet, was used for assembly and test of the Command Service Module, and related systems and subsystems. The low bay area at approximately 86 feet wide, 475 feet long, and 70 feet high was constructed with a crane hook height of approximately 48 feet. Two 17½ ton bridge cranes traveled the length of the bay and into the adjacent high bay area (NASA 1974:9-25).

Altitude Chambers

The two Altitude Chambers, located in the high bay of the O & C, were used for assembly and test of the integrated Command Service Module and Docking Module in a simulated space environment. The chambers were constructed with an overall height of 58 feet, a diameter of 34 feet, and a 28-foot clear working area inside the chamber. The chambers were capable of reaching a test altitude of 250,000 feet within one hour and could be repressurized in 16 to 30 minutes normally or in 2 minutes under emergency conditions. Sixteen pumps were used in various configurations to reach the desired altitude. Tests consisted of unmanned runs as well as manned tests made by the prime and backup crews (NASA 1974:9-27; Spaceport News 1968:2).

Integrated Test Stand

The Integrated Test Stand, which was located in the high bay of O & C, supported the Apollo Saturn in the integrated checkout and assembly of spacecraft equipment (NASA 1974:9-29).

Sferics Lighting Detection System

Instrumentals for the sferics system were placed in the National Weather Service office on the fourth floor of the O & C. Four racks and one console contained the equipment, controls, and display required for the central system (NASA 1974:9-31).

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Two sferics stations, one four miles north and one four miles south of the Vehicle Assembly Building, tracked any thunderstorm nearing the area. Each of these stations provided two loop antennas at right angles to each other for directional information; vertical whip antennas resolved the 180° ambiguity that would otherwise occur. Eight gradient and corona current detector stations also supported the sferics system (NASA 1974:31).

Signals from each antenna were fed into the X-Y axis of the two oscilloscope displays. These displays each provided a radial strobe. The strobes appeared on a vicinity map which was superimposed on the face of the system display. The point of intersection of the strobes represented the storm center. Field data were also received from electric field meters and field change meters (NASA 1974:31).

Rooftop Antennas, Instrumentation and RF Checkout Systems

The O & C Rooftop Antennas and Instrumentation and RF Checkout Systems were used for open-loop tests of the Command Service Module rf equipment when the spacecraft was located at the Vehicle Assembly Building and at Launch Complex 39. The antennas of this subfacility were employed in the checkout of HF, VHF, UHF, S-band, and C-band systems of the Command Service Module, and include the following: trihelix (200 to 310 MHZ), HF whip (8 to 15 MHZ), command helix (400 to 450 MHZ), S-band dish (2.1 to 2.3 GHz), single helix UHF (200 to 300 MHZ), 8 foot S-band dish (2.1 to 2.3 GHz), C-band horn (5.6 to 6 GHz), C-band dish (5.6 to 6 HGz), and VHF reflector (NASA 1974:9-33).

Current Functions

O & C is still in active use and has been reconfigured to accommodate the needs of the Space Shuttle program. It contains space for offices, laboratories, astronaut crew quarters, and payload assembly areas. The astronaut quarters and suit room for astronauts are still located on the third floor. Payloads which are integrated and processed horizontally are received, assembled, and checked out in the various test stands and Processing Rooms located in the high and low bay areas. They are then transported to the Orbiter Processing Facility (OPF) for mating with the orbiter or to the Vertical Processing Facility (VPF) to be combined with vertically processed payloads (Anon. 1994:26-28; O&C Payload Processing Area Data Sheet n.d.).

The Altitude Chambers, which originally were used to test environmental and life support systems on the Apollo lunar module and command module, were man-

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rated for crews to operate systems during tests. These facilities were critical to the moon missions. Presently the western altitude chamber is used for storage; the easternmost altitude chamber contains the Vertical Access Simulator (VAS). It is used for the Module Vertical Access Kit (MVAK) training of payload personnel to gain access to the Spacelab module while it sits vertically in the orbiter at the launch pad. The VAS contains a mockup of the orbiter middeck, the Spacelab transfer tunnel, and the Spacelab (Butowsky 1981:27, 51-52; Butowsky 1983:27-28; Anon. 1994:26-28; O&C Payload Processing Area Data Sheet n.d.).

Physical Description

O & C was designed in the International Style with two prominent, rectilinear, east/west oriented components on the north and south, connected by a major, offset north/south component. Although initially constructed in 1964, massive extensions were made within two years. The north wing was extended approximately 230 feet west and 180 feet east. The south wing was extended approximately 180 feet west and 45 feet east (NASA 1994:152-155).

The International Style originated with architects Walter Gropius, Ludwig Mies van der Rohe, and Le Corbusier in Europe in the late 1920s. Popular in the 1930s as the most modern style, its acclaim declined in the late 1940s but regained favor in the late 1960s and 1970s. This style is recognized by:

a complete absence of ornament and by forms in which effects of mass and weight are minimized for the sake of an effect of pure volume; compositionally, a balance of unlike parts is more often than not substituted for axial symmetry. Flat roofs, smooth and uniform wall surfaces, windows with minimal exterior reveals...and windows that turn the corner of the building are among the means by which the effect of volume is obtained. Skeleton construction of steel or reinforced concrete is typical...Horizontality - most marked in the ribbon window - and rectilinearity predominate (Whiffen 1992:247-249).

O & C was constructed with a concrete and steel skeletal frame supporting a concrete panel wall exterior. It displays the lack of ornament, effect of volume, flat roof, ribbon windows, skeleton construction of reinforced concrete, and horizontality which are hallmarks of the International Style.

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Unlike many International Style structures, O & C has a symmetrical facade and features an accentuated concrete skeletal frame (Anon. 1994:26-28; Butowsky 1981:51-52; Butowsky 1983:27-28; NASA 1967b:10-57-58; NASA 1974:9-3).

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Narrative Statement of Significance Operations and Checkout Building

Summary

O & C contributes to the Historic Cultural Resources of the John F. Kennedy Space Center, Florida, multiple property nomination under the historic context Apollo Program 1961-1975 and each of its three subcontexts under property type F. 2, Launch Processing Facilities. It is significant at the national level under NRHP Criterion A in the area of space exploration. O & C is also significant under Criterion C under engineering and architecture. Because this structure has achieved significance within the past 50 years and is of exceptional importance in the areas of space exploration, engineering, and architecture, Criteria Consideration G applies.

Significance

- O & C, constructed in 1964, possesses exceptional importance at the national level in the context of the Apollo program. Its significance is derived from its association with space exploration and engineering due to its historic function as the site where the Apollo spacecraft and crew were tested in the altitude chambers and the location where the astronauts were housed. As the building designed to test and monitor the modular Apollo craft, it was essential to the success of the Apollo missions.
- O & C has substantially retained its integrity of design, materials, workmanship, feeling, setting, location, and association. The building retains the unique altitude chambers and is still used for preflight activities and housing for astronauts. The structure also retains its specialized features designed to house computers and electronic equipment which made it innovative in its use of modern building technologies at the dawn of the computer age.

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Bibliography Operations and Checkout Building

Anon.

1994 Facts: John F. Kennedy Space Center.

Butowsky, Dr. Harry A.

1981 <u>Reconnaissance Survey: Man in Space</u>. U.S. Department of the Interior, National Park Service, Washington, D. C. November.

1983 <u>Cape Canaveral Air Force Station National Historic Landmark Federal Agency Nomination</u>. U.S. Department of the Interior, National Park Service, Washington, D. C. January 24.

Gunter, Nancy

1996 Personal interview with Daniel Delahaye and Kimberly Hinder, December 17.

National Aeronautics and Space Administration (NASA)

n.d. "O&C Payload Processing Area Data Sheet," MDS&DS Payload Operations F208.

1967a <u>Master Plan: John F. Kennedy Space Center</u>.

1967b Technical Facilities Catalog Volume II [NHB 8800.5 (II)]. March

1974 <u>Technical Facilities Catalog Volume II</u> [NHB 8800.5A (II)]. October.

1992 <u>Master Plan: John F. Kennedy Space Center (Volume I)</u>. October.

1994 Facilities Space Control Document: Industrial Area. October 31.

1995 <u>Facility Utilization Charts: NASA Facilities at KSC, CCAFS, and PAFB</u>. July 1.

Spaceport News

1968 "Astronauts Use Super-Clean Lab for Donning Spacesuits," John F. Kennedy Space Center, September 26.

Whiffen, Marcus

1992 <u>American Architecture Since 1780: A Guide to the Styles</u>. Revised ed. MIT Press, Cambridge, Massachusetts.

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Verbal Boundary Description Operations and Checkout Building

The rectilinear boundary extends approximately 10 feet from the outermost feature of each building elevation, roughly 625 feet from west to east and 510 feet from north to south. It does not include the non-historic Hazardous Waste Staging Building or any other building, structure, site, or object proximate to 0 & C.

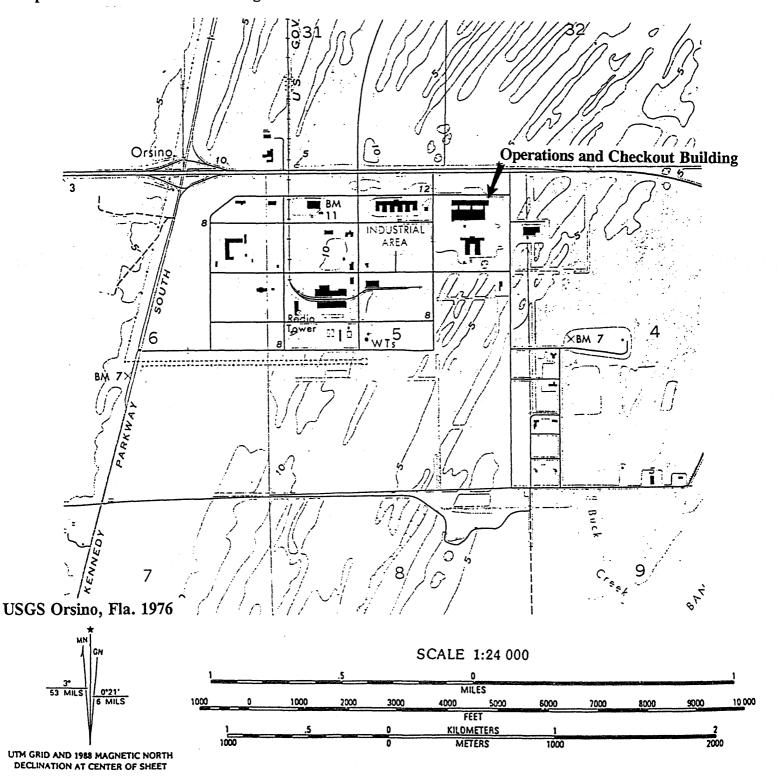
Boundary Justification

This includes the entire O & C and takes into account its irregular shape.

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USGS Map Operations and Checkout Building

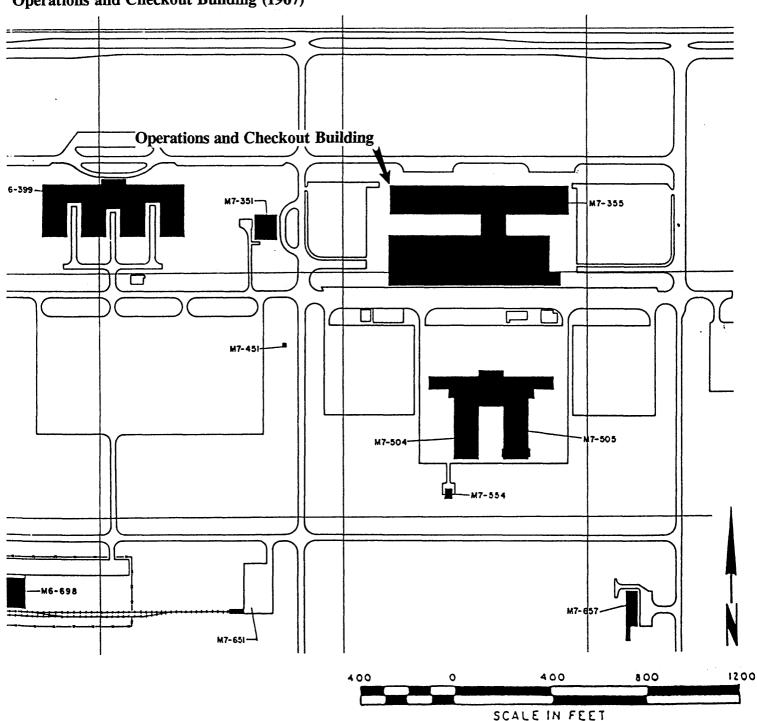


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Site Plan

Operations and Checkout Building (1967)



Source: NASA Master Plan, Sheet no. 11-4-B1, 1967.

NPS Form 10-900-a (8-86)

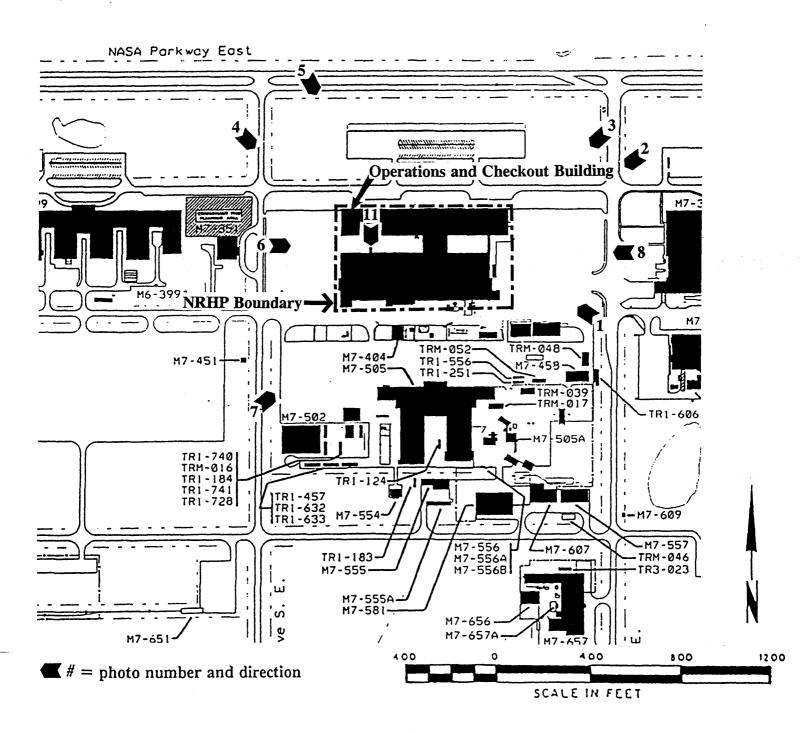
United States Department of the Interior National Park Service

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Site Plan

Operations and Checkout Building (1995)



Source: NASA Facility Utilization Charts, Chart K, July 1, 1995.

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- 1. Operations and Checkout Building (O & C)
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. June 1964
- 5. Kennedy Space Center
- 6. O & C, south and east elevations, looking northwest (100-KSC-64C-1519)
- 7. 1 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. November 1964
- 5. Kennedy Space Center
- 6. O & C, north and east elevations, looking southwest (100-KSC-64C-5543)
- 7. 2 of 15
- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. December 1967
- 5. Kennedy Space Center
- 6. O & C, north and east elevations, looking southwest (100-KSC-65C-3827)
- 7. 3 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. June 1966
- 5. Kennedy Space Center
- 6. O & C, north and west elevations, looking southeast (105P-KSC-66C-5577)
- 7. 4 of 15

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- 1. O & C
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. November 1996
- 5. Archaeological Consultants, Inc.
- 6. O & C, north elevation, looking southeast
- 7. 5 of 15
- 1. O & C
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. November 1996
- 5. Archaeological Consultants, Inc.
- 6. O & C, west elevation, looking east
- 7. 6 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. November 1996
- 5. Archaeological Consultants, Inc.
- 6. O & C, west and south elevations, looking northeast
- 7. 7 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Daniel Delahaye & Kimberly Hinder
- 4. November 1996
- 5. Archaeological Consultants, Inc.
- 6. O & C, east elevation, looking west
- 7. 8 of 15
- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. December 1965
- Kennedy Space Center
- O & C, interior and plan, Astronaut Quarters (104-KSC-65P-208)
- 7. 9 of 15

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Section number 11 Page 6

- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. December 1972
- 5. Kennedy Space Center
- 6. O & C, interior, Apollo 17 astronauts in the suit room (72-H-1519)
- 7. 10 of 15
- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. December 1972
- 5. Kennedy Space Center
- 6. O & C, Apollo 17 astronauts leaving the O & C for the launch pad after suiting up (108-KSC-72P-542)
- 7. 11 of 15
- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. March 1968
- 5. Kennedy Space Center
- 6. O & C, interior, low bay (116-KSC-68-2629)
- 7. 12 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. August 1968
- 5. Kennedy Space Center
- 6. O & C, interior, command module lifted onto work stand in high bay (108-KSC-68P-273)
- 7. 13 of 15

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- 1. O & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. February 1966
- 5. Kennedy Space Center
- 6. O & C, interior, altitude chambers (100-KSC-66C-1103)
- 7. 14 of 15
- 1. 0 & C
- 2. Brevard County, Florida
- 3. Kennedy Space Center
- 4. April 1970
- 5. Kennedy Space Center
- 6. O & C, interior, Acceptance Checkout Equipment (ACE) computer control room (107-KSC-70-1410)
- 7. 15 of 15