

S P A C E F L O R I D A



Cape Canaveral Spaceport Development Manual

VERSION 1.3

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Forward

The Cape Canaveral Spaceport Development Manual is a living document prepared and updated as needed by Space Florida. Its purpose is to assist users in understanding the processes, procedures, standards, and design criteria applicable to projects which are designed and constructed on sites under Space Florida's control located upon federal property within the boundary of the Cape Canaveral Spaceport (CCS).

The CCS is defined within Space Florida's authorizing statute as a geographical area that includes the entirety of NASA's John F. Kennedy Space Center (KSC) and the U.S. Space Force's Cape Canaveral Space Force Station (CCSFS). While both installations remain federal land, Space Florida is granted development rights, and the right to permit others to develop sites and projects, under the terms of numerous property agreements with NASA and the USSF. These property agreements define the land that has been made available for Space Florida's use, and define the processes which Space Florida will use to guide, review, and approve development projects.

It is Space Florida's intent to streamline the design and construction of commercial and other non-governmental projects on sites under its control within the CCS. Space Florida operates as an Independent Special District, with statutory authorities similar to those of a municipality with regard to land planning and adoption of design and construction standards, reviews, and approvals applicable to CCS sites and projects under its control. There is no other county or municipal development code jurisdiction or approval processes.

Except for defined Florida Building Codes and Life Safety Codes as governed by Space Florida's federal property use agreements, it is intended the development and design standards identified in this document establish general criteria to be used in directing future building placement and design, as well as site design at the CCS complex. It is Space Florida's preference to not prescribe specific design solutions, but rather suggest directions for those who will design and manage the facilities. While each new project will present its own set of unique circumstances, development and design standards should allow projects to exhibit a desired degree of consistency in form and character required by Space Florida and land owners, while simultaneously allowing flexibility to meet customer needs.

If you have any questions/comments regarding these documents you can contact Space Florida at 321-730-5301, or at their Corporate Office, located at 505 Odyssey Way, Suite 300, Exploration Park, Florida 32953.

Steve Szabo, P.E.
Vice President, Spaceport Planning & Development
Space Florida

ABBREVIATIONS

The following table of abbreviations applies to the entire CCS Development Manual. Some abbreviations may not apply to certain facilities within the CCS.

Acronym	Description
45 MSG	45 th Mission Support Group*
45 SFS	45 th Security Forces Squadron*
AAA	Airport Airspace Analysis
ADA	Americans with Disabilities Act
ACM	Asbestos Containing Material
AF	Air Force
AFSPCMAN	Air Force Space Command Manual
AHJ	Authority Having Jurisdiction
AIA	American Institute of Architects
ARC	Architectural Review Committee
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
ATCT	Air Traffic Control Tower
BA	Biological Assessment
BO	Biological Opinion
BOSS	Base Operations & Spaceport Services
BOT	Build-Operate-Transfer
C3PF	Commercial Crew and Cargo Processing Facility
CA	Construction Administrator
CCSFS	Cape Canaveral Space Force Station
CCNA	Consultants' Competitive Negotiations Act
CCR	Covenants Conditions and Restrictions
CCS	Cape Canaveral Spaceport
CCTV	Closed Circuit TV
CES/CEIE	Civil Engineering Squadron/Installation Management and Environmental Element
CFR	Code of Federal Regulations
CLOIS	Consolidated Launch Operations and Infrastructure Support
CM	Construction Manager
CMP	Construction Management Plan
CNS	Canaveral National Seashore
CO	Certificate of Occupancy
CoC	Certificate of Completion
COT	City Of Titusville
CPP	Commissioning Policy and Procedures
CPTED	Crime Prevention Through Environmental Design
CSA	Commercial Space Activities
CSI	Construction Specifications Institute
CSOSA	Commercial Space Operations Support Agreement
CVE	Convoy Vehicle Enclosure
CWA	Clean Water Act
DB	Design-Build
DD	Design Development
DBB	Design-Bid-Build

Acronym	Description
DBOM	Design-Build-Operate-Maintain
DDESB	Department Of Defense Explosives Safety Board
DoD	Department of Defense
DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EAB	Environmental Assurance Branch
EBS	Environmental Baseline Survey
EIFS	Exterior Insulation and Finish Systems
EIS	Environmental Impact Statement
EMB	Environmental Management Branch
EPA	Environmental Protection Agency (<i>same as USEPA</i>)
EPR	Excavation Permit Request
ESA	Endangered Species Act
ESP	Explosive Site Plan
EUL	Enhanced Use Lease
The Park	Exploration Park
FS	Florida Statutes
FAA	Federal Aviation Administration
FAA AST	Federal Aviation Administration Office of Commercial Space Transportation
FAC	Florida Administrative Code
FAR	Federal Acquisition Regulation
FBC	Florida Building Code
FCAA	Federal Clean Air Act
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGBC	Florida Green Building Coalition
FHWA	Federal Highway Administration
FNPS	Florida Native Plant Society
FOD	Foreign Object Debris
FS	Florida Statute
GBIGG	Green Building Initiative's Green Globes
GPM	Gallons Per Minute
GPS	Global Positioning System
HSPD	Homeland Security Presidential Directive
HVAC	Heating, Ventilation, Air Conditioning
ICD	Interface Control Document
IGCC	International Green Construction Code
IOMS	Infrastructure Operations and Maintenance Services
IPD	Integrated Project Delivery
ISC	Institutional Services Contract
ISO	International Organization for Standardization
JON	Job Order Number
KCA	Kennedy Center Agreement
KNPR	Kennedy NASA Procedural Requirements
KSC	Kennedy Space Center
LACB	Landing Aids Control Building
LC	Launch Complex
LCC	Launch Control Center
LEED	Leadership In Energy and Environmental Design

Acronym	Description
LLF	Launch & Landing Facility
LMP	Light Management Plan
LOM	Lighting Operations Manual
LPS	Low-Pressure Sodium
LSOL	Launch Site Operator's License
MAS	Mobile Access Structure
MINWR	Merritt Island National Wildlife Refuge
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
NA	Noise Analysis
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NAVAIDS	Navigational Aids
NBS	National Bureau of Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Administration
NGVD	National Geodetic Vertical Datum (1929 or 1983 as applicable)
NHPA	National Historic Preservation Act
NOTU	Naval Ordnance Test Unit
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPR	NASA Procedural Requirements
NRHP	National Registry of Historic Places
OAR	Owner's Authorized Representative
OE	Obstruction Evaluation
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
P3	Public Private Partnership
PA	Programmatic Agreement
PCC	Processing Control Center
PDF	Portable Document Format
PE	Professional Engineer
PF	Processing Facility
PIR	Pollution Incident Report
PM	Project Manager
PML	Probable Maximum Loss
POC	Point of Contact
PSO	Protective Services Office
QA/QC	Quality Assurance/Quality Control
QD	Quantity-Distance
QFPE	Qualified Fire Protection Engineer
R&D	Research & Development
REC	Record of Environmental Consideration
RFSPR	Range Flight Safety Program Requirements
RLV	Re-usable Launch Vehicle
RSAA	Reimbursable Space Act Agreement
RSOL	Reentry Site Operator License
S&MA	Safety & Mission Assurance
SF	Space Florida
SFPDMS	Space Florida Program Document Management System

Acronym	Description
SHPO	State Historic Preservation Officer
SIR	Shell Isolation Rating
SJRWMD	St. Johns River Water Management District
SLC	Space Launch Complex
SLD 45	Space Launch Delta 45*
SLF	Shuttle Landing Facility
SLSL	Space Life Sciences Laboratory
SME	Subject Matter Expert
SOQ	Statement of Qualifications
SOW	Statement of Work
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
TCO	Temporary Certificate of Occupancy
TOR	Task Order Request
TP	Tenant Projects
UAS	Unmanned Aerial Systems
UDS	Universal Documentation System
US	United States
USACE	United States Army Corps of Engineers
USDC	United States Department of Commerce
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGBC	United States Green Building Council
USSF	United States Space Force
UST	Underground Storage Tank
WON	Work Order Number
WORB	Work Order Review Board

*Some Departments are using 45th Space Wing while SLD 45 is in transition



Cape Canaveral Spaceport Development Manual

VOLUME 1

CAPE CANAVERAL SPACEPORT

CHAPTER 1 OVERVIEW

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CHAPTER 1 – OVERVIEW

1.1 Introduction

The intent of this Cape Canaveral Spaceport Development Manual (Development Manual) is to provide Space Florida's Tenants and contractors with an understanding of the criteria for the development of infrastructure and facility projects within Cape Canaveral Spaceport (CCS), Florida. The CCS consists of facilities and properties within Kennedy Space Center (KSC) which is primarily governed by the National Aeronautics and Space Administration (NASA) and Cape Canaveral Space Force Station (CCSFS) which is primarily governed by the United States Space Force (USSF). Property agreements are in place between Space Florida (SF), NASA, and USSF that transfer the responsibility for certain facilities and land areas to SF. These property agreements include design/construction standards and approval processes required by NASA and USSF that must be followed by SF and its Tenants. This Development Manual includes the standards and processes required by these agreements by specific description or reference. Regardless of the standards or processes within this document, SF has authority and responsibility, as the point of contact for the Tenant and will issue all approvals to the Tenant. Any reviews or approvals required under the agreements with NASA or USSF will be coordinated by SF. Development Standards and Design Criteria described in this document shall:

- ✓ Establish general criteria to be used in directing future facilities placement and design, and site design.
- ✓ Outline the specific development and design requirements mandated by property agreements, which Space Florida's potential customers and Tenants are required to comply with.
- ✓ Provide the framework for coherent development such that each new project and phase of development is consistent with the CCS overarching plan and vision.
- ✓ Avoid prescribing specific design solutions, but rather provide standards to those who will design and manage the facilities and infrastructure.

It is understood that each new project presents its own unique set of requirements and challenges. Therefore, these Development Standards are intended to allow projects to develop and exhibit a desired degree of consistency in form and character, while simultaneously allowing flexibility for innovation. A review of the process shall take place during initial meetings with the Tenant to address any exceptions or possible additions to the process based on the specific project. During the initial meetings, an overview of the Space Florida Program Document Management System (SFPDMS) will be discussed and process checklists will be provided. All submittals will be delivered to SF through the SFPDMS site.

1.2 CCS Development Manual Organization

This Development Manual consists of a series of volumes and chapters enabling the distribution of applicable development processes, procedures, standards, and criteria to Space Florida's CCS Tenants, architects, engineers, designers, and contractors engaged in site development and/or facility design/construction. Site and building development requirements, together with applicable processes and standards, are generally site or CCS area specific. To simplify the user's understanding of what applies to their specific project, SF will furnish, or users can utilize, only those volumes and chapters applicable to the area of the planned development. CCS Development Manual Volumes and Chapters and a brief description are as follows:

Volume 1: Cape Canaveral Spaceport – General overview and introductory information related to Space Florida administered development projects at CCS.

- ✓ Chapter 1: Overview

Volume 2: Kennedy Space Center – Processes and standards applicable for Space Florida-administered development within the KSC portion of the CCS.

- ✓ Chapter 1: General Requirements – Common processes and standards for all Space Florida administered development within KSC.
- ✓ Chapter 2: Launch & Landing Facility – Additional processes and standards specific to the Launch & Landing Facility (LLF).
- ✓ Chapter 3: Exploration Park – Additional processes and standards specific to Exploration Park.

Volume 3: Cape Canaveral Space Force Station – Processes and standards applicable for Space Florida administered development within the CCSFS portion of the CCS.

- ✓ Chapter 1: General Requirements – Common processes and standards for all Space Florida administered development within CCSFS.
- ✓ Chapter 2: Launch Complexes – Additional processes and standards specific to Launch Complexes.
- ✓ Chapter 3: Processing and Other Facilities – Additional processes and standards specific to processing and other facilities.

Volume 4: Design Criteria – Specific technical requirements associated with infrastructure improvements as defined by Space Florida partnering agencies and the Construction Specification Institute's (CSI) Standard Construction Specifications.

Volume 5: Space Florida Projects – Specific requirements for projects funded only by SF.

- ✓ Chapter 1: General Requirements – Standards and processes applicable for development of Space Florida procured projects.

1.3 Scope and Purposes

This Development Manual establishes specific design/construction standards and criteria for infrastructure, buildings, and other facilities, which are owned, operated, funded or maintained by SF within the spaceport territory boundary of CCS. It also serves to provide design/construction standards and criteria for all other facilities constructed within the boundaries of property which has been out granted to SF's use and development pursuant to property agreements such as land lease, easement, or other agreement. This includes launch and integration complexes at CCS under the management of SF.

It is not SF's intent to limit or dismiss the experience, knowledge or talent of the designer or contractor. Therefore, SF encourages developers, designers, contractors, and tenants to recommend alternative solutions where deviations are beneficial. However, adherence to these standards and criteria will result in project development that conforms to the goals and objectives of SF and complies with its various property agreements with partner agencies.

The facilities located on CCS for which SF maintains responsibility as asset owner or development administrator are located on property owned by the U.S. Government under the jurisdiction of NASA or the USSF. As such, the property owners maintain certain access rights to all facilities and may have a limited role in project coordination and the approval process; however, SF remains the approval authority, primary coordinator, and point of contact for all development projects implemented under its authorities and responsibilities within the CCS.

1.4 Space Florida Organization

SF is an Independent Special District of the State of Florida, created by Chapter 331, Part II, Florida Statutes (FS), for the purpose of fostering the growth and development of a sustainable and world-leading space industry in Florida. SF uniquely serves as the single point of contact for all space-related functions of the State to strengthen Florida's position as a global leader in aerospace research, investment, exploration, and commerce. SF has a variety of agreements for the use and management of land, facilities and campuses within the CCS, either with NASA or USSF. These agreements provide SF with the right to use and develop defined areas of the CCS, and also specify SF's responsibilities in managing design and construction activities carried out by SF itself or others (e.g. Tenants) under its administration.

The CCS territory is defined in Chapter 331, Part II, FS with a geographic territory that includes all of KSC and CCSFS. The CCS also consists of infrastructure and physical assets which are designed, constructed, and operated under the authority of SF. SF prepares and periodically updates the "Space Florida Cape Canaveral Spaceport Master Plan," to define goals and strategies for the modernization and expansion of CCS in support of both commercial space activities and U.S. Government space missions. For additional information about the CCS Complex Master Plan and Space Florida, refer to <http://www.spaceflorida.gov/>.

SF is specifically chartered and directed to develop partnerships to renew and upgrade infrastructure at KSC and CCSFS, improving access for commercial launch activities and pursuing the development of commercial spaceport capabilities. It is empowered to acquire and develop property, infrastructure, and facilities to carry out these and other duties. As an Independent Special District, SF has powers and authorities similar to those of a municipality with regard to its administration of development activities. SF is empowered to enter into cooperative agreements with local government entities, as it finds appropriate, to carry out its responsibilities. Tables 1 and 2 show key SF Personnel and CCS Facilities/Assets leased or owned by SF. Figure 1 shows a map of the CCS with major areas and complexes identified.

Table 1: Space Florida Key Personnel

Name	Title
Steve Szabo, PE	Vice President, Spaceport Planning & Development
Pete Eggert	Vice President, Environmental Health and Safety
James Moffit	Sr. Director, Launch & Flight Operations
Pat McCarthy	Director, Spaceport Operations
Lauren Farrell	Director, Spaceport Improvement Program
Anthony Maddox	Director, Facilities

Table 2: Space Florida's CCS Facilities/Assets

Facility	Facility Description	KSC/CCSFS
Area 57 East	Vehicle Integration	CCSFS
Area 57 West	Vehicle Integration	CCSFS
Commercial Crew and Cargo Processing Facility (C3PF – formerly OPF3)	Vehicle Processing	KSC
Processing Control Center (PCC)	Launch Team Training; Launch Processing System Maintenance	KSC
LLF Air Traffic Control Tower (ATCT)	Air Traffic Control	KSC
LLF Convoy Vehicle Enclosure (CVE)	Hangar; Storage	KSC
LLF Landing Aids Control Building (LACB)	LLF Control Center; Office Space; LLF Terminal	KSC
LLF Media Operations Building	Office Space; Operations; Observations	KSC
LLF News Building	Storage; Office Space	KSC
LLF Re-usable Launch Vehicle (RLV) Hangar	Vehicle Processing; Office Space; Operations and Maintenance Facility	KSC
LLF Runway 15-33, Apron, Taxiway A & Towway (concrete pavement)	Horizontal Launch and Landing Facility	KSC
LLF Fuel Farm	JetA Fuel Farm/Tanks	KSC
Space Launch Complex 20	Vertical Launch	CCSFS
Space Launch Complex 46	Vertical Launch	CCSFS
SpaceX Launch Control Center (LCC)*	Office Space and Launch Controls	CCSFS
South Campus Office (Administration Building 90326)*	Office Space	CCSFS
Exploration Park Space Life Sciences Laboratory (SLSL)*	Research and Development; Office Space; Space Florida Headquarters	KSC
Exploration Park Phase 1*	Office, Vehicle Integration, and Manufacturing	KSC
Exploration Park Phase 2*	Office, Vehicle Integration, and Manufacturing	KSC
Exploration Park Phase 3* (South Campus)	Office, Vehicle Integration, and Manufacturing	KSC

* These facilities are located outside the secured boundary limits of KSC, and CCSFS which can be accessed by the general public.

CAPE CANAVERAL SPACEPORT



1.5 Authority of Space Florida

FS 331.319 (2) grants Space Florida's Board the authority to: Prohibit within the spaceport territory the construction, alteration, repair, removal, or demolition, or the commencement of the construction, alteration, repair (except emergency repairs), removal, or demolition, of any building or structure, including, but not by way of limitation, public utility poles, lines, pipes, and facilities, without first obtaining a permit from the board or such other officer or agency as the board may designate, and prescribe the procedure with respect to the obtaining of such permit.

No building or other improvements will be erected, constructed, placed, removed, occupied or permitted to exist on any land parcel under Space Florida's management responsibility until:

- ✓ A pre-application meeting is held with SF to review proposed improvements;
- ✓ The proposed use of such building or improvement has been approved by Space Florida in writing;
- ✓ Schematic designs and plans, in compliance with this Development Manual, have been submitted to and approved in writing by SF; and,
- ✓ Final plans and specifications in the form and content provided in this Development Manual have been submitted to and approved in writing by SF.

SF may appoint professional consultants, authorized agents and representatives at their discretion to assist in performing duties on their behalf, including, but not limited to, any necessary inspection of a parcel or improvement.

1.6 Request for Variances and/or Interpretation Statement

It is recognized that variances to the referenced standards and/or other design criteria in this document may be necessary to meet the unique needs of clients and their projects. A request for variance shall be submitted along with any substantiating documentation to SF's Project Manager/Facilities Manager for approval. Any request to SF for variance from requirements enforced by NASA, USSF, Florida Department of Transportation (FDOT), St. Johns River Water Management District (SJRWMD), Florida Department of Environmental Protection (FDEP), Federal Aviation Administration (FAA), and other applicable regulatory agencies will require documented concurrence from that agency. Upon receipt of the Request for Variance and/or Interpretation Statement, SF shall provide a written response within 10 business days; however, larger requests requiring third party reviews may take more time.

1.7 Procedures for Changes to this Development Manual

Proposed changes to this Development Manual should be submitted to Space Florida. Requests for changes, additions, or deletions shall include a justification for the proposed change with a complete description of the change proposed and shall be accompanied by sufficient technical analyses to support the change or addition. This Development Manual will be updated and modified on a routine basis by SF. Upon receipt of the Request for Changes to the Manual, SF shall provide a written response within 10 business days; however, larger changes to the Development Manual requiring a third-party review may take more time.

1.8 Space Florida Insurance and Bond Requirements

The following paragraphs outline the general insurance requirements for Space Florida Tenants at CCS. The specific insurance requirements will be as documented in the property agreement

between SF and the Tenant. Unless otherwise specified, all insurance limits shall be determined by SF based on the specific Tenant project and usage. The limits, so determined, shall be escalated every fifth year as reasonably determined by SF using appropriate indices to generally ensure that the amounts are increased to keep up with currency inflation. Per the agreement conditions, SF, FDOT, NASA, USSF and/or other entities shall be listed as additional insured.

1.8.1 General Contractor Insurance Requirements

A current insurance certificate(s) is required for every developer or contractor performing work on the premises of CCS. The minimum coverage required for each project must be verified for each category as follows:

- a. Commercial general liability insurance, including contractual liability, broad form property damage liability, fire legal liability, products and completed operations, and medical payments;
- b. Business auto liability insurance;
- c. Workers' compensation insurance;
- d. Builders Risk Insurance; and,
- e. Employer's liability insurance.

1.8.2 Tenant or Operator Insurance Requirements

For all Tenants or operators, a current insurance certificate is required to cover the loss of or damage to U.S. Government property as a result of any activities conducted by the Tenant.

The Tenant or Operator shall maintain insurance to protect against loss or damage to improvements, whether the improvements are SF, Tenant, or operator improvements, as a result of any activities conducted by the Tenant or operator.

Insurance coverage in general shall meet statutory minimums as applicable. Prior to activities at CCS, Tenant or operator shall provide proof of adequate insurance for damage to U.S. Government property and SF improvements. Based on the Tenant or operator planned activities, the insurance requirements necessary or appropriate will be determined based on the risks to U.S. Government property and SF improvements.

If applicable, the Tenant or operator shall provide separate insurance coverage for actual space launch activities as required by their launch operator license issued by the FAA, e.g., Probable Maximum Loss (PML) insurance.

1.8.3 Performance and Payment Bonds

Prior to beginning of construction, the construction contractor shall provide to SF, in a form acceptable to SF, two bonds for each contract; specifically, a performance bond and a payment bond, each with good and sufficient surety or sureties acceptable to SF. For projects within the KSC boundary, Space Florida and NASA shall be named on such bonds as co-payees.

1.9 Development Forms and Process Documentation

Space Florida forms and processes are located and updated online. Users must be approved to access the website. Access to the website and can be requested by going to: <https://www.spaceflorida.gov/request-for-access/>



Cape Canaveral Spaceport Development Manual

VOLUME 2

KENNEDY SPACE CENTER

CHAPTER 1 GENERAL REQUIREMENTS

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SECTION 1 – INTRODUCTION

1.1 Introduction

The intent of this Chapter is to highlight the common requirements associated with the processes and design/construction standards for development of Cape Canaveral Spaceport (CCS) infrastructure and facility projects on land under the responsibility of Space Florida (SF) within the boundaries of Kennedy Space Center (KSC).

This includes required reviews by NASA and compliance with specific NASA standards mandated by the specific Property Agreements (including Environmental Baseline Survey) between NASA and SF. In all cases, SF will be the final approval authority and will perform required coordination with NASA.

The majority of processes and standards presented in this Chapter are common to all development within CCS with modification depending on if development is within the KSC property boundary. When CCS is referenced in this Chapter, it shall be interpreted as that portion of the CCS within the boundary of KSC only.

For Launch & Landing Facility (LLF), former Shuttle Landing Facility (SLF), specific requirements refer to Volume 2 Chapter 2. For Exploration Park project specific requirements refer to Volume 2 Chapter 3.

SECTION 2 – DESIGN

2.1 Design Standards Introduction

Designers are encouraged to consider demonstration projects that engage new technologies in partnership with entities around CCS and SF.

It shall be noted that within the general context of promoting a cohesive physical environment, this CCS Development Manual is nevertheless meant to encourage the creativity of building and site designers. This Development Manual is not prescriptive in its definition of absolute requirements for what constitutes visual interest or most effectively promotes interaction. Rather, it recommends that such issues be addressed with thoughtfulness and care. Instead of providing a rigid set of rules, this manual is intended to allow the designers as much flexibility as possible to achieve the ultimate goals and concepts described herein. Accordingly, a variety of design expressions are both desirable and encouraged. Nevertheless, by adhering to the key principles defined above, CCS shall develop, over time, a strong contextual tie to the environment, a coherent identity, and a distinct sense of place.

2.2 NASA Standards

The following Kennedy NASA Procedural Requirements (KNPR) and NASA Procedural Requirements (NPR) apply to the development and operation of facilities at the CCS and can be obtained from the following web sites:

<https://procurement.ksc.nasa.gov/PPD/Documents>;
<https://tdglobal.ksc.nasa.gov/search/general.html>; and,
<https://nodis3.gsfc.nasa.gov/>

NASA-STD-8719.11B (ensure latest revision is being used), Safety Standard for Fire Protection (<https://standards.nasa.gov/standard/nasa/nasa-std-871911>) as it relates to fire sprinkler and fire alarm systems, associated occupancy, and hazard classifications. This standard also serves as a simple NASA specific reference to those FBC and National Fire Protection Administration (NFPA) requirements that are applicable at KSC, or to cover situations where there are no applicable codes.

KSC-STD-E-0012, Facility Grounding and Lightning Protection, latest edition if facility presents an explosive hazard to NASA facilities or personnel or can impact NASA mission related operations.

It is the Tenant/Contractor's responsibility to ensure that the applicable NASA procedural requirements as shown in Table 1 are followed on all TP.

Table 1: NASA Procedural Requirements

SECTION	DESCRIPTION	LLF	EP	PF	LC
KNPR 8715.3-3	KSC Safety Procedural Requirements	X	X	X	X
KNPR 8715.5	Range Flight Safety Program Requirements	X			X
KNPR 1860.1	KSC Radiation Protection Program	X	X	X	X
KNPR 1860.2	KSC Nonionizing Radiation Protection Program	X	X	X	X
NASA Form 1509	Facility Project - Brief Project Document	X	X	X	X
NASA Form 1510	Facility Project Cost Estimate	X	X	X	X
NASA STD 8719.11	Safety Standard for Fire Protection	X	X	X	X
KSC STD E-0012	Facility Grounding and Lightning Protection	X		X	X
KNPR 9715.2	Comprehensive Emergency Management Plan	X	X	X	X
KSC Form 21-608	NASA-KSC Environmental Checklist	X	X	X	X
KCA 4185	Programmatic Agreement for Management of Historic Properties	X	X		X
KSC Form 21-555	NASA-KSC Pollution Incident Report	X		X	X
NASA Form 1046,	Transfer and/or Notification of Acceptance of Accountability of Real Property.	X	X	X	X
KNPR 8830.1	Facility Asset Management Procedural Requirements	X	X	X	X

LLF: Launch & Land Facility; EP: Exploration Park; PF: Processing and Other Facilities; LC: Launch Complexes

2.3 Design of Streets and Roadways

FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance (Florida Greenbook) for Streets and Highways, latest version, shall govern the design of streets, and roadways. These standards can be obtained via the FDOT website:

<http://www.dot.state.fl.us/>

Tenant construction of facilities may also include construction of access roads, lighting, or additional right of way improvements pending the approval of SF. Tenants shall discuss the additional construction, abutting the Tenant's, with SF.

2.4 Laws and Regulation

The laws, regulations, and statutes shown in Table 2 shall apply to all projects where applicable. Please note, additional laws, regulations, and statutes may apply.

Table 2: Laws and Regulations

Regulation	Reference	Description	LLF	EP	PF	LC
Florida Statute	255.253	Sustainable Building Rating	X	X	X	X
Protection of Historic Properties	36 CFR Part 800	Protection of Historical Properties	X			X
Florida Statute	373	Water Resources	X	X	X	X
29 U.S. Code	Chapter 15	Occupational Safety and Health	X	X	X	X
Hazardous Materials	40 CFR Part 302	Designation, Reportable Quantities, and Notification	X		X	X
	40 CFR Part 355	Emergency Planning and Notification	X		X	X
	49 CFR Parts 171-180	Hazardous Materials Regulations	X		X	X
	Title 40 Part 112	Oil Pollution Prevention	X		X	X
10 U.S Code	Section 2692	Storage, Treatment and Disposal of Non-Defense Toxic and Hazardous Materials		X		
Florida Administrative Code	FAC Chapter 62-150	Hazardous Substance Release Notification	X		X	X
	FAC Chapter 62-770	Petroleum Contamination Site Cleanup Criteria	X		X	X
Petroleum Storage Tanks	FAC Chapter 62-761	Underground Storage Tank (UST) Systems	X	X	X	X
	FAC Chapter 62-762	Aboveground Storage Tank (AST) Systems	X	X	X	X
Davis Bacon Act*	40 U.S.C. 3141-3148	Local prevailing wages on public works projects for laborers and mechanics	X	X	X	X

- a. LLF: Launch & Land Facility; EP: Exploration Park; PF: Processing and Other Facilities; LC: Launch Complexes
- b. *Use Davis Bacon Act wage rates only when applicable.

2.5 Codes and Standards

The design and construction of all facilities and improvements shall be in compliance with all applicable local, state, and federal laws and regulations, including Chapter 373, Florida Statutes; and in conformance to the latest edition of the Florida Building Code and other design and construction standards adopted by the State, and in effect prior to the start of design. All building and site access shall comply with Americans with Disabilities Act (ADA) requirements. Some of these requirements may include industry standards from the following organizations, and other pertinent acronyms, shown in Table 3.

Table 3: Organization Acronym's

ACRONYM	STANDARD DESCRIPTION
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute International
ADA	Americans With Disabilities Act
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASSE/SAFE	American Society of Safety Engineers
ASTM	American Society of Testing and Materials
AWWA	American Water Works Association
AWS	American Welding Society
CFR	Code of Federal Regulation
DOD	Department of Defense
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulations
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
IES	Illuminating Engineering Society of North America
NETA	International Electrical Testing Association
IEC	International Electrotechnical Commission
KNPR	Kennedy NASA Procedural Requirements
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SJRWMD	St. Johns River Water Management District
UL	Underwriters Laboratories
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USSF	United States Space Force

2.6 Sustainability

SF is committed to conserving energy and natural resources by applying sustainable design practices intended to conserve energy, water, and other renewable and non-renewable resources. Tenants shall incorporate the adopted State of Florida Sustainability Standards into design and construction of their facilities. The Tenant has the option of selecting one of the rating systems approved for use in FS Section 255.253.

From FS 255.253:

“Sustainable building rating or national model green building code” means a rating system established by the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) rating system, the International Green Construction Code (IGCC), the Green Building Initiative’s Green Globes (GBIGG) rating system, the Florida Green Building Coalition (FGBC) standards, or a nationally recognized, high-performance green building rating system as approved by the department.” The IGCC is not a standard but is intended to be used as a jurisdictional and municipal building code for new construction and major renovations.

The selected rating system and rating tier shall be included by the Tenant/Contractor in the submitted NASA Form 1509 Template (refer to Appendix 2-1A). Refer to Appendix 2-1B for more information on the acceptable sustainability standards.

Designers are encouraged to consider demonstration projects that engage new technologies. Projects should also be respectful of their location within the Merritt Island National Wildlife Refuge (MINWR) and the Canaveral National Seashore (CNS), through restoration of habitat and use of native materials.

2.7 Site Development

2.7.1 Setbacks and Site Layout

Land use shall be in conformance with SF and KSC master plans. There are no established zoning, open space or minimum setback requirements unless identified in Volume 2 Chapters 2 and 3 for LLF and Exploration Park respectively.

2.7.2 Site Access and Parking

The location and quantity of curb cuts and driveway connections serving any Parcel must be approved by SF.

There are no established minimum parking requirements. The number of required parking spaces is evaluated on a case-by-case basis and compared to the requirements of other local jurisdictions as a reference. The number of required spaces and parking lot dimensions shall be coordinated and agreed upon with SF based on a methodology proposed by the Tenant or designer. The minimum number of handicap parking spaces shall be per ADA and Florida Statute Chapter 553. The designer shall propose a parking methodology and provide the number of spaces per square foot required and proposed, handicap spaces required and proposed, bicycle spaces required and proposed, loading zones, and totals. Parking lot design shall incorporate fire truck accessibility and be approved by the KSC AHJ.

2.7.3 Stormwater Management

SJRWMD regulates construction of drainage systems, stormwater treatment ponds, large uses of water, and other types of projects. Each Tenant shall provide the necessary means to assure complete drainage, water quality treatment, and attenuation within and immediately adjacent to its leased parcel and provide adequate stormwater control facilities to comply with the requirements of the SJRWMD.

2.7.4 Drainage

Any construction activity with more than 1,000 square feet of new impervious surface requires a stormwater management report signed and sealed by a Professional Engineer (PE), licensed in the State of Florida.

Gutter spread calculations are required for any new or extension of roads and shall include the following minimum requirements:

- a) A 10-year, 24-hour tail water condition shall be used. The rainfall intensity shall be four inches/hour.
- b) A minimum of one travel lane (12 feet wide) will be required to be maintained in the worse condition. The hydraulic grade line shall be six (6) inches below the inlet invert.

2.7.5 Erosion and Sedimentation Control

FDEP is the agency responsible for reviewing, processing, and issuing NPDES permits. SWPPPs shall be designed in accordance with FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities. A monthly report of NPDES inspections shall be submitted to SF.

2.7.6 Fire Hydrants

Use International Organization for Standardization (ISO) method per NFPA. Per NFPA 291, the body of the hydrants shall be red for a private system and must contain a cap color depending on its flowrate. Depending on the fire hydrant's flowrate, the cap shall be:

- Blue for 1,500 gallons per minute (GPM) or more
- Green for 1,000 to 1,499 GPM
- Orange for 500 to 999 GPM
- Red for flowrate below 500 GPM

2.7.7 Hydraulic Analysis and Water Demand

Water main design shall comply with FDEP requirements. Hydrant flow tests should be requested at the pre-application conference. A hydraulic analysis should be completed for any system requiring a main extension to the potable water system (private or public).

Calculations shall show all water demand requirements within the structures and methodology used for determination of meter size and service lateral size.

2.7.8 Lift Stations

Lift station design shall comply with FDEP requirements. Calculations shall include estimated sewer flows, peak factor used, velocities, head loss, pump selection information, pump curve, run time in both minimum and maximum cycles, wet well capacity and size, pumps on levels, pumps off levels, lag times and buoyancy calculations.

2.7.9 Standard Construction Details

During the design preparation phases of projects which require SF permitting/approval or for information purposes, Tenants and designer shall review the industry standards for construction.

2.8 Architecture

It is strongly recommended that the Tenant and designer consult with SF and KSC during the early phase of a project. Review meetings during the concept phase will be used to express/discuss specific concerns with any architectural aspects of the project.

2.8.1 Building Aesthetics

Recognizing Tenant buildings need to be designed to meet the operational needs of the specific Tenant, the following guidance is provided relative to the aesthetics of the structures:

- a) Single large box-like building masses should be avoided where the operational space requirements allow for changes in building mass and appearance. Changes in building mass should not be cosmetic or decorative in nature.
- b) Durable materials shall be used for building exteriors including architectural precast, natural metals, anodized aluminum, clear glass and natural stone. Differentiation of material to accent any public entrance of the building is suggested. Front entries shall be enhanced areas of the building facades. Accessible routes and equipment shall be integrated with the entries and building design.
- c) Painted materials should be finished in shades of gray, silver, or light colors. Painted brick, stone and concrete are not permitted. The use of bold or bright colors on painted materials shall be limited and subject to SF approval. Reflective glass and Exterior Insulation and Finish Systems (EIFS) shall not be permitted.
- d) Roof top mechanical equipment should be positioned or screened from view. Ground level mechanical and electrical equipment should be enclosed in a structure integrated into the building design, where possible, or screened. Direct sightlines from public ways to mechanical equipment, tanks, transformers, generators, and the like shall not be allowed.
- e) Truck delivery / loading areas shall be located at the sides or rear of the building where possible, with visual screening provided to any delivery/loading area that is visible from the front of the building. Long-term truck parking areas shall be screened visually with fencing or landscaping.
- f) Waste and recycling areas on the site shall be visually screened.

2.8.2 Architectural Design

Architecture and building material selection shall be compatible with the CCS Master Plan context and Florida coastal location including:

- a) New construction and rehabilitation shall comply with the FBC regarding environmental design factors such as wind damage prevention, mold prevention, and insect protection.
- b) Non-combustible construction is recommended.

- c) Site design shall be compatible with the building type, geometry, and convenient accessible routes to building entries.
- d) Energy saving features and sustainable design features beyond building code requirements are recommended.
- e) Front entries of buildings shall provide overhead weather protection and window openings shall have sun protection. General shading of areas close to the building is recommended.
- f) Roof drainage shall be compatible with the proposed building envelope and site drainage plan and shall direct water away from high pedestrian traffic areas.
- g) Noise-producing operations related to building function, internal or external, shall have acoustic noise reduction measures provided.
- h) Building and site security measures shall be discreet in design and placement. Razor- wire and similar security fence measures are prohibited.
- i) Buildings close to flight lines or runway access shall have Foreign Object Debris (FOD) prevention measures.

2.8.3 Signage

Tenant shall not use NASA or SF name or logo in any form on any signage. Signage on the exterior of buildings or free-standing signage within the lease area is limited to Tenant company name and logo (commercial signage) except for way finding and code required signage.

Way finding and code required exterior signage shall be approved by SF/NASA including graphics, fonts, and color. Building shall have appropriate building number or street number indicated on front of the building.

The location, size and construction of commercial signs will be subject to the prior approval of SF/NASA. Internally illuminated signs must be approved by SF/NASA and the requirements of paragraph 3.8.6 Exterior Lighting. All wall signs must be mounted flat on the surface of the walls and may not project above the roof line of any building nor extend more than twelve inches from the building wall on which it is located. No hand-painted, animated, or flashing signs will be permitted. Each lease parcel may have one free standing sign located at the primary entrance to the lease parcel. The sign must be no closer than ten feet to the entrance drive and must be set back no less than 10 feet from the lease boundary line. The design of the entrance sign shall be consistent with these standards and will require specific written approval from SF/NASA. Each building will be permitted one additional free standing or fascia type sign at the primary entrance to such building. No part of any free-standing sign may exceed an above-grade height of six (6) feet.

No more than four colors (including black and white) will be permitted on any sign. Exceptions may be made by SF/NASA for company logos, so long as the Tenant of the Parcel obtains prior written approval of SF/NASA for such variance. No signs using vacuum-formed plastic lettering or day-glow colors will be permitted on any Parcel.

2.8.4 Landscaping

There are no established requirements for tree preservation. Landscaping in the form of turf, shrubs, and plants shall be utilized in all non-paved areas within the Tenant's leased area. Plant and shrub material shall be selected based on soil conditions, low water

requirements/summer drought tolerance, ease of maintenance, and compatibility with the native vegetation in the surrounding area. Use of xeriscape is encouraged. For acceptable materials consult the Florida Native Plant Society (FNPS). Maximum grades for landscaping areas shall be 1:3. Landscaping breaks at large vehicle parking areas or linear rows of parking spaces are recommended.

2.8.5 Noise

All structures, whose primary function is to house people-oriented activities, shall be designed with a suitable combination of building materials and execution of construction details in accordance with established architectural and acoustical principles to reduce the noise between the outside and inside of the building to the applicable regulatory following levels.

The methodology to be used shall be the Shell Isolation Rating (SIR) method set out by the U.S. Department of Commerce (USDC), National Bureau of Standards (NBS) *"Design Guide for Reducing Transportation Noise In and Around Buildings"* - Publication: Building Science Series No. 84.

The design shall take into account all possible paths into the facility to include, but not limited to walls, roofs, windows, doors, and ventilation openings.

2.8.6 Exterior Lighting

Exterior lighting on a Tenant lease shall be limited to internal lighting of signs, security, and safety illuminations of adjacent streets, parking areas, loading areas, service areas, access drives, walkways and building entrances and exterior lighting of overall building surfaces. The location, design, materials, and type of any exterior lighting shall be subject to the approval of SF. Such lighting shall not produce any excessive glare or reflection onto any portion of any adjacent street or parcel or into the path of any oncoming or passing vehicle. No flashing, animated or intermittent lighting shall be visible from the exterior of any building. All parking lots, loading areas, service areas, pedestrian walkways, and security lights, whether wall-mounted or free-standing, must be concealed source fixtures, where the lenses do not project below the opaque section of the fixture. Lighting fixtures for parking areas shall be selected from SF standards and may only be varied with the prior approval from SF. All lighting on a parcel shall be coordinated as to intensity to provide for an attractive overall lighting plan and must be approved in writing by SF.

All new facilities or modifications will require a Lighting Operations Manual (LOM) to be submitted to, and approved by, SF. The USFWS considers all KSC property to be in proximity of the beach. Amber lights are required for all KSC properties. Artificial lighting is known to adversely affect sea turtle nesting and hatchling emergence at KSC/MINWR beaches. This LOM must describe light use operation methodologies directed toward reducing adverse impact of artificial lighting on all wildlife.

Refer to Appendix 2-1C KSC Exterior Lighting Requirement prepared by NASA for additional details.

2.9 Hazardous Material, Fuel, and Propellant Storage

Storage of hazardous materials, fuel and propellants shall be in accordance with all Federal and State regulations and applicable codes and only if approved by SF.

2.10 Explosive Siting

Explosive siting shall be in accordance with KSC NASA Standards. An analysis is required to be submitted for review and approval by NASA.

2.11 Utility Locates

All utility services located on or adjacent to any parcel, including, without limitation, any underground telephone, natural gas, high pressure gases, water, sewer, communications, or electric lines or connections, shall be located. No digging or dirt moving shall occur before all utilities have been located and properly staked out.

SECTION 3 – PROJECT REVIEW & CONSTRUCTION PROCESSES

3.1 KSC Project Overview

Where NASA is referenced, SF is the point of contact and governing authority. NASA is included by reference to indicate its involvement in reviews and approvals as may be mandated by agreements between SF and NASA. If required, those interactions with NASA will be coordinated by SF.

Where NASA is referenced, it shall be inclusive of their support contractor(s) who provide operations and maintenance services. The majority of construction projects will involve coordination with NASA contractors.

3.2 Space Florida Building Department

SF is responsible for code compliance on all construction projects where SF has a lease agreement with NASA. An SF Building Permit must be obtained from the Space Florida Building Department in order to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system or to perform any other construction work on property for which SF is responsible. The Tenant/Contractor shall be responsible for the payment of all permit fees associated with the construction effort.

The Space Florida Building Department consists of:

- SF serving as the Building Department responsible for permit and Certificate of Occupancy or Completion.
- Space Florida's Florida Building Code Licensed Agent (FBC Agent) responsible for third party plans review and inspection. SF has agreement(s) with third-party organization(s) to perform building code plan reviews and inspections for vertical construction governed by the Florida Building Code (FBC). The City of Titusville currently provides FBC code reviews, inspections, and recommendations to SF for issuance of building permits and Certification of Occupancy.
- KSC Authority Having Jurisdiction (KSC AHJ) responsible for life safety and fire protection code compliance. KSC AHJ's design review/approval and inspection of construction shall be required for code compliance of the site infrastructure and building construction as necessary to support a certification of occupancy or completion.

3.3 KSC Site Development Preliminary Approvals

3.3.1 Initial Coordination

KSC Site Development Preliminary Process (Figure 1), KSC Site Design Development Process (Figure 2), KSC Construction Phase Process (Figure 3), and KSC Construction Inspection Process (Figure 4), provided under subsection 3.12 Flow Charts, show the general processes for obtaining review and approval for Tenant projects. A review of the process shall take place during initial meetings with the Tenant to address any exceptions or possible additions to the process based on the specific project. During the initial

meetings, an overview of the Space Florida Program Document Management System (SFPDMS), where submittals will be received through, and the process checklists will be instructed. Tenants are encouraged to include their designer during this initial coordination.

3.3.2 Tenant Questionnaire

Prior to commencing the design of a proposed project, Tenant must first complete and submit a New Tenant Questionnaire and obtain SF/NASA written concurrence to proceed with the planned improvement. SF will provide the Tenant Questionnaire to the Tenant during the initial/introduction business development meeting.

3.3.3 NASA Form 1509

NASA Form 1509 Facility Project - Brief Project Document (see Appendix 2-1A.1) is required for all facility improvement projects as KSC. Early in the design process, Tenant shall submit a completed Form 1509 describing any improvement equal to or greater than \$100,000. If applicable, submit a Form 1510 Facility Project Cost Estimate (see Appendix 2-1A.1) showing preliminary construction cost.

Tenant shall include with the Form 1509 applicable drawings, building sustainability goal, and cost estimate. SF will submit the 1509 to NASA for approval. NASA KSC approval typically takes one to three months depending on the complexity of the project as some projects require NASA Headquarters approval. Tenants shall refer to lease agreements between SF and NASA for any additional requirements. For certain projects NASA will require independent 3rd party verification/compliance of design documents.

If the review of the Form 1509 submission by NASA determines that the requested modification affects a critical or controlled configuration, additional information will be required. The Form 1509 and additional requested information would then be presented to the NASA Configuration Control Board. The Tenant will be required to support this effort with additional information and submission through SF. If possible, Fire Protection Design Analysis performed by the Qualified Fire Protection Engineer (QFPE) should be provided in conjunction with the NASA Form 1509.

3.3.4 KSC Environmental Checklist

KSC Form 21-608 11/18 - KSC Environmental Checklist (see Appendix 2-1A.3) is required for projects that have a potential environmental impact. The purpose of the KSC Environmental Checklist is to identify the environmental regulations that apply to the proposed construction or to the operation of the completed work, structure, or facility. KSC Form 21-608 11/18 shall be completed by the tenant and submitted for SF review. SF will have to sign and submit the form if there is a property agreement in place between SF and NASA.

After the review of the checklist, NASA/SF will issue a Record of Environmental Consideration (REC) and determine any and all categorical exclusions and will outline specific requirements to be implemented in the Tenant's development.

In addition to construction impacts, tenants must prepare and submit KSC Form 21-608 11/18 to receive NASA Excavation permit approvals for engineering investigations such

as geotechnical borings and archaeological surveys.

3.3.5 Siting Approval

Once the Tenant has a preliminary dimensioned site layout, submit the layout and a short description of the project to SF. SF will then submit a “Siting Request” package to NASA for approval. Reviews are conducted by KSC Departments including as Master Planning, Fire, Environmental, Safety, Security, Roadways, Utilities, and others. The Siting Request process takes approximately four weeks. All facilities will require a KSC Building Number which will be generated by NASA based on the approved site plan.

To prepare the preliminary layout, Tenant’s designer may request existing conditions GIS, record documents and historical documents. SF through the SF-appointed NASA KSC Liaison, shall request information through the NASA KSC Engineering Document Center.

3.3.6 Right of Entry and Real Property Agreement

Engineering investigations and construction activities will require a right of entry, license, and/or enhanced use lease with NASA KSC. Space Florida typically has or will enter into such agreements with NASA then sublease or equivalent to Tenant. The Tenant shall provide a boundary survey to define the property and easements associated with the project. The Tenant will be responsible for the payment of the survey.

At the end of a lease term when the Tenant vacates the property, the Tenant will prepare an exit Environmental Baseline Survey (EBS).

3.3.7 Real Property Transfer

During the design phase, Tenant and SF shall begin coordination with NASA to determine if any improvements will be transferred to SF or NASA. If an improvement is to be turned over to NASA, there is a process to formally convey the real property utilizing NASA Form 1046. The property agreement typically defines the process for the construction approvals and turnover of the improvements. This may be a new facility, permanent significant improvements to an existing facility, or infrastructure improvements.

3.4 Environmental Planning

Tenant shall obtain all required categorical exclusion, environmental permits, licenses, registrations, and approvals. Tenant shall prepare all permit applications and pay all permit application fees directly to the regulatory agency. Before any permits are submitted to the regulatory agency, Tenant shall submit for approval a copy of the permit to SF. If required by the permit application, the NASA Environmental Assurance Branch (EAB) shall sign permit applications as the landowner or utility system owner. Tenant shall submit copies of all permits, licenses, registrations, and approvals to SF within five (5) business days after receipt from the regulatory agency. Tenant shall ensure that all operations, activities, equipment, and facilities are in full compliance with all permit conditions.

3.4.1 National Environmental Policy Act

Tenant shall be responsible for preparation of all environmental documentation, including Environmental Assessments (EA) or Environmental Impact statements (EIS) required by regulatory agencies to support its development and/or operations and for obtaining all necessary approvals of the same. Preparation of documents shall be coordinated with SF Environmental Health and Safety Program Manager and follow regulatory processes.

3.4.2 Stormwater Management Permitting

The Surface Water and Stormwater Management System within CCS are under the jurisdiction of the St. Johns River Water Management District (SJRWMD). Each Tenant shall provide the necessary means to assure complete drainage within and immediately adjacent to its leased parcel and provide adequate storm water control facilities to accomplish such objective in accordance with the requirements of the SJRWMD. With advanced notification to SF and NASA, tenants can coordinate with the SJRWMD Palm Bay Office for any permit determinations or requirements. All permitting applications must be signed by NASA KSC prior to submittal to SJRWMD.

3.4.3 Wetlands Dredge and Fill Permitting

The United States Army Corps of Engineers (USACE) is responsible for the regulation and enforcement of the Clean Water Act (CWA), Section 404 and permits certain activities of dredging and/or filling of wetlands. Proposed activities are regulated through a permit review process that in late 2020 was overtaken by FDEP. An individual 404 permit is required for potentially significant impacts. Individual permits are reviewed by FDEP, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. With advanced notice to SF and NASA, project proponent shall contact the FDEP for permit determinations and requirements.

3.4.4 Stormwater Discharge for Construction Activities Permitting

All construction sites that disturb one acre or greater of land are required to obtain coverage under the Generic Permit for Stormwater Discharge from Large and Small Construction Activities. FDEP 62-621.300(4) (a). Sites one acre or greater must complete a Notice of Intent (NOI) - FDEP form 62- 621.300(4)(b) to comply with FDEP National Pollutant Discharge Elimination System (NPDES) Phase II Construction Permit. FDEP is the agency responsible for reviewing, processing, and issuing NPDES permits. The NOI and the permit application fee must be submitted to FDEP for issuance of the NPDES Permit. A copy of the NOI and SWPPP must be submitted to the SF prior to construction.

3.4.5 Water and Wastewater Permitting

The water and wastewater permits within CCS are under the jurisdiction of NASA, USSF and FDEP. Wastewater permits also need to be approved by the USSF for discharge to their wastewater treatment plant. Each Tenant shall provide the necessary means to assure proposed water, including water for fire protection, and wastewater systems meet the requirements stated within the applicable permit. Before any permits are submitted to the appropriate agency, Tenant shall submit for approval a copy of the permit to SF.

3.4.6 Air Permitting

NASA holds a facility-wide Federal Clean Air Act (FCAA) Title V Air Operation Permit issued by the FDEP that governs air emissions from dozens of regulated emission sources and hundreds of insignificant emission sources across NASA. Tenants will need to comply with the existing facility Title V permit. Tenant shall contact and coordinate with SF prior to:

- a) The operation, reactivation, or modification of an existing emission source/activity,
- b) The construction of any new air emission source, or
- c) The initiation of an activity producing air emissions.

3.5 Building Permitting

3.5.1 Permit Application and Plans Review Overview

To document compliance with the FBC, Tenant/Contractor (Applicant) shall submit a SF Building Permit Application to SF for review and approval. This application is provided at a kickoff meeting. Once the application is approved and permit fees have been paid, drawings shall be submitted for review and approval. The SF Building Department will review drawings and specifications for compliance with FBC and applicable NASA KSC design standards.

Applicant shall submit plans, design documents and deliverables at agreed upon milestones to SF and other regulatory governing agencies. SF Building Department will provide plans review for compliance with these standards and the FBC, as well as construction inspection for code compliance. This review and inspection does not relieve the Applicant from the responsibility of performing QA/QC reviews and inspections on all design and construction work. Table 4 (on page 33) includes a Summary of Approvals required for construction projects at KSC. Note that additional approvals may be required depending on the scope of the project.

Applicant acknowledges that it is required to comply with the building code requirements identified in the FBC, and applicable Fire and Life Safety codes, using the edition that is most recent to the Commencement Date. Applicant further acknowledges that it is required to comply with such building code requirements regardless of whether the applicable local or state authority asserts jurisdiction over the improvements on the property.

The Tenant may submit for a waiver in order to hire an independent third-party FBC Agent in place of the SF FBC Agent. The FBC Agent should be a licensed by the State of Florida and shall comply with the “alternative plans review and inspection process” in Florida Statutes, Chapter 553, Building Construction Standards. The Tenant shall submit sufficient documentation with the waiver for reasons to consider allowing the Tenant to hire their own FBC Agent. If the Tenant hires their own FBC Agent, the SF Building Department will conduct an audit of all of the documentation from the Tenant-Hired FBC Agent. The documentation must include certificates of compliance in accordance with Florida Statutes Section 553.791(11). The audit will require that the Tenant pay a reduced permit fee before a CO or Certificate of Completion (CoC) is issued.

3.5.2 Permit Fee

Building Plan Review and Permit Fees payment shall be paid to the FBC Agent prior to the start of plan review and issuance of an SF Building Permit. Furnish to the SF Building Department an SF Permit Application, which will be used to calculate the plan review cost and construction permit fee.

3.5.3 Fire Protection & Life Safety

KSC AHJ's plans review/approval and inspection of construction shall be required for the determination of life safety code compliance and fire protection code compliance of the site infrastructure and building construction as necessary to support a certification of occupancy. At KSC AHJ's direction, Tenant (not Contractor) shall hire a licensed third-party, with a Qualified Fire Protection Engineer (QFPE), to perform plans reviews for code compliance and inspect construction to support the KSC AHJ's issuance of acceptance documentation (CO, TCO, or CoC). The QFPE, and personnel working on behalf of the QFPE, shall be approved by the KSC AHJ.

Design documents shall be provided for review and comment at up to three design review intervals in order for any KSC AHJ concerns to be identified in a timely manner. All submittals and QFPE reviews/approvals shall be submitted to SF through the SFPDMS to be forwarded to KSC AHJ, as appropriate. Note that additional approvals may be required depending on the scope of the project.

3.5.4 Submittals

The Applicant shall submit to the SF Building Department submittals through the SFPDMS using the standard transmittal form in Portable Document Format (PDF) format. SF will provide instructions directly to Tenant for naming documents, workflow, and approval for all submittals. The following items should be submitted as one complete package when applicable:

- a. Complete and dated plans and specifications (including traffic control plans if applicable) of sufficient clarity to indicate the location, nature and extent of the work proposed and with sufficient detail to indicate that the proposed work conforms to the provisions of the FBC, applicable NASA Standards, this CCS Development Manual, and other applicable codes, laws, statutes, orders, and regulations. The Tenant shall submit plans in PDF and any hard copies required, for review at the following levels of completion; Schematic/Conceptual Design, Design Development, and Construction Documents as defined by American Institute of Architects (AIA) standards. All plans shall be 22 x 34 inch format. Plans and specifications shall be prepared by an architect or engineer or other design professional licensed in the State of Florida to practice as such and shall bear the seal of the design professional responsible for preparation of the plans and specifications. Submit PDF of construction documents and other hard copies that may be necessary for the pre-construction and pre-application meetings. For building construction projects, provide the following information on the cover sheet of the drawings:
 - i. Project Number
 - ii. Structure ID Number (Provided by NASA if new structure)

- iii. Tenant contact information name, address, and phone number
 - iv. Design firm/consultant name, address, phone number, and license number
 - v. The edition of the codes under which the project is designed
 - vi. Sustainable Rating System
 - vii. Building Code Use and Occupancy Classification
 - viii. Building Code Construction Type
 - ix. Design Occupant Load and Exiting Analysis
 - x. Whether an automatic sprinkler system is provided
 - xi. U-factors of building envelope systems and a statement signed and sealed by the architect of record that the building envelope complies with the Energy Code
 - xii. Tabulation of building components and systems and a statement signed and sealed by the Engineer of Record that all building components and systems comply with the Energy Code.
- b. Completed NASA Forms referenced in Appendix 2-1A and applicable support documentation.
- c. If applicable, completed FAA Airspace Study Application Form or Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) shall be submitted. Approval from the FAA and NASA is required for projects resulting in airspace obstructions, changes affecting the Launch & Landing Facility, helicopter landing sites, or for the use of cranes and certain other construction equipment. Before submitting to FAA, all submittals shall be approved by SF and NASA.
- d. Identification of deferred submittals or approvals:
 - i. Prior to installation of fire protection or fire alarm systems, an electronic set (PDF) and any required hard copies of shop drawings, hydraulic calculations and related submittal data must be submitted to SF, who shall deliver them to Fire Protection Consultant and KSC AHJ for review and approval. Tenant is responsible for Fire Protection Consultant plan review and approval.
 - ii. Any state required permits or presence of state required inspectors shall be coordinated by the Tenant (Elevator Certification). Work related to these systems may not proceed until the related shop drawings and related submittals have been approved by KSC AHJ.
- e. Completed Design Submittal Content Checklist (Appendix 2-1D) with each major design submittal.
- f. Construction Work Plan which shall address, but not be limited to, the following sections:
 - i. Introduction
 - ii. Construction Utilization Layout (trailers, temporary utilities, tanks, equipment, laydown, MOT, etc.)
 - iii. Health and Safety Plan
 - iv. Deferred Submittals Anticipated
 - v. Quality Control Plan – Inspections and QA/QC Testing
 - vi. Contractor Key Personnel Contact Information
 - vii. Construction Schedule and Phasing Plan (if applicable)

3.5.5 Review Period

Upon receipt of the Submittals via the SFPDMS, SF shall respond via the same system within 10 business days; however, larger submittals requiring third-party reviews may take longer. Some submittals will take up to 30 days as they may require NASA (local/headquarters) or other permitting agency approvals.

3.5.6 Permit Issuance

No physical work shall start until an SF Building Permit is issued. Before a permit is issued, the following will be required:

- FBC Agent and KSC AHJ shall provide letters of recommendation for permit issuance.
- NASA Form 1509
- KSC Form 21-608 11/18
- Excavation Permit Request (EPR) Form. See Appendix 2-1A.5
- SF Building Department has approved the SF Building Permit Application.
- Plans for the proposed project are in compliance with the FBC, CCS Development Manual, and all other applicable code requirements.

SF shall issue an SF Building Permit in the form of a permit card.

3.6 Pre-Construction Coordination

The Tenant shall contact the SF Building Department for the purpose of scheduling a pre-construction conference. The conference should include the Tenant, the Tenant's Prime Contractor, and the Contractor's major Subcontractors. The Contractor will be briefed on rules, regulations, and procedures to be followed for construction projects at CCS. The Contractor must submit an emergency phone list, any required submittals, applicable Notices of Commencement or environmental permits, and a construction schedule. After posting the SF Building Permit and placing approved construction documents at the project site, the Contractor may begin construction.

3.6.1 Excavation Permits

All excavations, cores, bores, and digging operations associated with construction or design investigations (geotechnical borings, soft digs, etc.) require a Dig Permit requested using the electronic KSC Excavation Permit Request (EPR) form found at <https://extapps.ksc.nasa.gov/EPR/Home/Dashboard>. Before any excavations or digging activities occur the Tenant is required to perform utility locates within the impacted area. Tenants shall complete the electronic KSC EPR form and provide it to SF a minimum of 5 days prior to the proposed work. Once SF reviews and agrees with the digging operations proposed in the Dig Permit, SF will submit the dig permit to NASA. SF will assist in coordinating all digging activities with ISC Duty Office Support, 321-861-5050 and Sunshine 811, each day prior to commencing any digging or excavation work. An approved Dig Permit number shall be required for permission to proceed. The dig permit will not be approved until the Siting Request has been approved.

Once a dig permit is approved, the contractor may request to obtain a No-Dig Waiver.

Through coordination with SF, an Excavation Category Waiver, KSC Form 50-1 (refer to Appendix 2-1A), can be submitted to NASA KSC for approval. Obtaining a No-Dig Waiver would allow the contractor to dig during critical days/no dig days.

3.6.2 Trailer Set-Up

Office trailers, storage trailers, storage boxes, etc. shall be tied down in accordance with the Florida Department of Highway Safety and Motor Vehicles, Division of Motor Vehicles, Chapter 15C-1, and NASA-STD-8719.11B. This document includes specific requirements like the following:

- A minimum 25-foot distance between each structure
- If occupying the structure for over 180 days, Fire protection is required if the space is over 5,000 square feet, and Fire Alarm is required if the space is over 2,500 square feet.
- If occupying the structure for less than 180 days, spot smoke alarms are acceptable.

Materials stored at trailer site shall be located within lot limits. Chain link security fences may be erected at the trailer site. Fences shall be approved by NASA.

3.6.3 Removal Work

The Contractor shall not disturb the existing infrastructure beyond that indicated or necessary per contract documents. Temporary shoring and bracing for support of building components to prevent settlement or other movement shall be as required to protect the work and existing facilities. The Contractor shall coordinate with SF and NASA for hauling of material offsite. Typically, NASA does not want Contractors to remove earthwork off federal property/KSC limits. All contaminated soils removal or relocation shall be coordinated with NASA and SF.

3.6.4 Utility Outages

During the course of construction activities, it may become necessary to temporarily disconnect/shut-down a utility, or fire hydrant, in order to complete the facility modification or to add a new system to the KSC utility network. This is done with either a Request for Utility Outage or a Task Order Request. The request is prepared by the contractor for submittal to SF PM for submission to NASA. Electrical outages require the Request for Utility Outage Form (refer to Appendix 2-1A.7) to be completed and submitted to SF. Water and all other requests require KSC Form 50-202 NS 09/14 (refer to Appendix 2-1A.8) to be completed and submitted to SF. Each request will require a JON Number which will be assigned by SF.

3.6.5 Oversize/Overweight Load Permits

When working with Oversize/Overweight loads, Contractor shall provide advanced notification prior to entering property to NASA and SF. In addition to necessary Federal Highway Administration (FHWA) permitting, Contractor needs approval from NASA prior to entering the property by obtaining a NASA Oversized Vehicles KSC Permit. The Oversize/Overweight loads will not be allowed to enter until NASA Oversized Vehicles

KSC Permit is approved. The maximum allowable weights not needing special permits can be found in the 23 CFR Part 658.17, issued by the FHWA

3.6.6 Open Burning Instructions

The following requirements apply to open burning at KSC:

A burn control number must be issued by the Florida State Division of Forestry. The first step for the Tenant/Contractor is to contact the Cocoa Work Center, 321-690-6465. They will schedule an onsite inspection to make sure the setbacks, piles, and equipment are properly set up. The Cocoa Office will send the onsite inspection paperwork to the Orlando District Field Unit – 407-888-8767 – This is who issues the valid burn control number to the requester prior to the KSC Fire Inspector issuing a Hot Work/Burn permit. The Orlando District Field Unit will issue a customer number to the contractor performing the burning. The contractor must call the Orlando District Field Office every day before burning for a Burn Authorization Number.

The Fire Management Officer of US Fish & Wildlife: 321-861-6695, must also be notified.

Once a burn control number has been obtained from the Florida State Division of Forestry, and the USFWS service has been notified, Tenant/Contractor should contact the duty office for a burn permit 321-861-5050. Then a KSC Fire Inspector will schedule an appointment on location and check for these verifications and review their requirements for the burn permit. The permit can only be issued for 30 days at a time. It is recommended that the Tenant/Contractor schedule the KSC Fire Inspector a day or two ahead of time to have them onsite the first day a Burn Authorization number is obtained. Typical notification required for KSC Fire inspector is 48 hours, call 321-861-5050.

The following requirements should be noted on the KSC hot work/burn permit under the Special Instructions Section:

- The Kennedy Space Center Dispatch and the nearest Fire Station will be notified of the burn
- A 75-foot clearance shall be maintained from the burn area and all brush land
- Burning will only be performed from daylight to dusk
- A qualified Heavy Equipment Operator with bulldozer or front-end loader with rake will be on site to monitor each burn area.
- No burning will be started or continue should winds reach 18 knots steady state.
- The burning material will be fully extinguished prior to the monitor leaving the site.
- Burning must be more than 1,000 feet away from an occupied building

Summary of Tenant/Contractor steps to complete:

1. Obtain approval from SF for open burning at the proposed site.
2. Prepare the site for burning
3. Notify USFWS
4. Notify Forestry – Cocoa Field Office for inspection
5. Give KSC Spaceport Integrated Schedulers three (3) business days notification for review of impacts
6. Contact Orlando Forestry Office for Burn Authorization Number
7. Contact KSC Fire Inspector for Hot Work/Burn Permit

3.7 Construction and Inspection

3.7.1 Inspection Parties

The FBC Agent and Fire Protection Consultant shall perform the required inspections of construction and record the results of these inspections by utilizing the SFPDMS. In addition, the Tenant shall provide SF, utilizing the SFPDMS, with copies of all inspection reports, as well as the disposition of any comments on those reports. SF shall perform independent inspections, as necessary, of Tenant construction projects implemented on the facilities/property for which they are responsible.

The Tenant/Contractor will be required to hire an independent engineering firm to perform building threshold inspection services (Threshold Inspector). The independent engineering firm shall be licensed by the State of Florida and approved by SF.

3.7.2 Inspection Points

An inspection is required by SF Building Department and others as applicable before covering or concealing any electrical, plumbing, utility, mechanical, fire sprinkler, fire alarm, emergency lighting, smoke control systems or structural systems. Tenants shall coordinate with SF, the inspector and inspection requirements may vary by project. All applicable authorities will be identified at the onset of each project.

Work may not progress beyond any point for which an inspection is required until the Contractor receives an approved inspection report for the inspected work. Prior to completion of construction, a punch list inspection shall be performed with SF personnel or their representative. All punch list items shall be addressed prior to final completion of construction activities. An example of an Inspection Checklist is provided as Appendix 2-1E. This general format should be followed, and the content customized to the specific inspection requirements of each TP.

3.7.3 Punch Lists

Depending on the complexity of the construction project, SF reserves the rights to issue construction phase(s) dependent punch lists. The punch list shall be documented in electronic format editable by others. At substantial completion of the overall construction project, SF shall issue a final substantial completion punch list. Upon a mutually agreed time frame, between substantial completion and final completion, SF and Tenant shall conduct a pre-final completion inspection at which time a final punch list shall be prepared. All punch list items shall be completed prior to final completion of the project.

3.8 Contract Closeout and Closeout Documentation

3.8.1 As-Built / Record Documents

As-Built / Record Documents (as-constructed) reflecting the final installation after all modifications and changes shall be furnished to the project's designated SF Contact at the end of each construction project. Record specifications shall be those used for the actual construction, marked with changes made by addendum, change order, or product substitution. Provide an electronic record drawings and specifications. Record drawings shall be provided in AutoCAD, ARCGIS (shape/.shp file type), and PDF formats. Hard

copies of the record drawings and specifications may be required as well. All file transfers shall be submitted to the SFPDMS. If the files are too large, the files shall be written to a flash drive or other SF approved storage devices. All files shall be uncompressed in the file format specified by SF. The flash drive and files contained on the flash drive shall be appropriately labeled. The record drawings shall include, but not be limited to, the following information:

- a) The final location of all alignments, and material type of all underground utilities.
- b) The final location of all structures, buildings, roads, parking areas, and other elements of the project.
- c) The final locations of all heating and air conditioning equipment, ductwork, air devices, piping, or other devices necessary to the operation of the Heating, Ventilation, and Air Conditioning (HVAC) systems.
- d) The final locations of all plumbing equipment, pumps, piping, necessary for the operation of the plumbing systems.
- e) The final locations of all the electrical equipment, devices, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes, panel identification, and any other information necessary to identify and locate the equipment.
- f) All initiating devices such as flow switches/pressure switches for fire protection systems.
- g) Initiating devices, wiring sequence, wiring method, and connections of the components of the protective signaling system as installed. The drawings shall include color codes and terminal identifications.
- h) The final locations of all the communications equipment, devices, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes.
- i) The final locations of all the security equipment, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes.
- j) All abandoned piping and underground utilities or structures.
- k) Location of any identified, but undisturbed asbestos remaining encapsulated.

All site work shall require as-built survey documentation for record information and shall be obtained by a surveyor who is a registered Professional Land Surveyor in the state of Florida.

3.8.2 Operations and Maintenance Manuals and Warranties

For SF projects, records transfer shall also include Operations and Maintenance (O&M) manuals, and facility operation manuals, for all systems and equipment; copies of all approved construction submittals and change orders; all acceptance test records and construction approvals; all manufacturer and contractor warranties; and any other documents required by the contract documents.

3.8.3 Certificates of Occupancy/Certificates of Completion

Tenant/Contractor shall not occupy, utilize, or operate facilities impacted by the construction without issuance of CO or CoC.

A CO will be issued for the construction of any building or the alteration of an existing

building where the alteration changes the occupancy from the existing CO of the building. A CoC will be issued for any construction or alteration of a facility where the occupancy is not changed.

Partial project acceptance or a Temporary Certificate of Occupancy (TCO) may be requested by Tenant/Contractor for beneficial occupancy and the contractor shall make every effort to accommodate. Depending on punch list items and the condition of the project, SF may issue a TCO to allow beneficial occupancy for the tenant. When the punch list is complete, a final inspection will then determine acceptability for a CO. Both the TCO and the CO shall be issued by after approval from the KSC AHJ.

Upon acceptance of the work, all the required submittals have been received, all required inspections have been performed, all permits have been closed and the receipt of the required signed and sealed As-Built, Record Documents, and correction or completion of any outstanding items of work as listed in the punch list (if applicable), the SF Building Department shall issue the CO or CoC.

In order to issue a CO or CoC, SF Building Department requires:

- FBC Agent letter of recommendation for CO or CoC.
- QFPE letter of compliance stating that the facility complies with all applicable codes and standards prior to requesting AHJ final acceptance testing to support the issuance of the CO.
- KSC AHJ final inspection to make sure the fire protection and life safety requirements have been met.
- KSC AHJ CO letter.

3.9 Safety Reporting – Mishaps and Close Calls

NASA-KSC shall provide security and emergency response services for KSC in accordance with the service levels specified in the RSAA for routine patrols of the vicinity and premises of KSC, and as applicable, shall coordinate law enforcement activities with the Brevard County Sheriff's Office. Security for entry to, or activities within, individual Tenant facilities shall be the responsibility of the individual Tenants. All vehicles, construction equipment, and personnel entering NASA-KSC limits are subject to NASA inspections.

All occupants of CCS shall comply with the most current version of (KNPR) 8715.3-3, KSC Safety Procedural Requirements for Partners Operating in Exclusive-Use Facilities.

NASA shall provide fire and emergency response services for CCS in accordance with the service levels specified in the Reimbursable Space Act Agreement (RSAA) on the basis of developed square footage of buildings and structures, the building types, and types of occupancy.

3.10 Security and KSC Badging

All security badges are issued by NASA-KSC Badging Office. Badge forms shall be filled out by SF Tenants and returned to SF for processing. SF representative will review, sign-off, and submit the forms to NASA-KSC Badging Office. All permanent badges (more than 30 calendar days) will require security background checks. Two forms of valid identification are required for the badging process. The badging guidelines can be reviewed in Appendix 2-1F.

3.11 Protective Service

NASA Protective Service Officers shall be contacted for any traffic roadway impacts and lane closures. No outside police officers, non-NASA unarmed security, or off-duty USFWS agents can be utilized for lane closures. All Maintenance of Traffic plans and lane closures shall be coordinated through a NASA KSC Protective Service Officer. NASA KSC will invoice SF for support Services. Tenant/Contractor shall coordinate lane closures two weeks in advance of the needed NASA KSC Protective Service Officer support.

3.12 Flow Charts

The flow charts provided in this section show the general process for obtaining review and approval for all Tenant projects at CCS. The flow charts include Figure 1: KSC Site Development Preliminary Process, Figure 2: KSC Site Design Development Process, Figure 3: KSC Construction Phase Process, and Figure 4: KSC Construction Inspection Process. Depending on the specific project and its location, exceptions to the process, primarily with respect to outside reviews, may occur. A review of the process shall take place during the initial meetings with the Tenant to address any exceptions or possible additions to the process based on the specific project.

Figure 1: KSC SITE DEVELOPMENT PRELIMINARY PROCESS

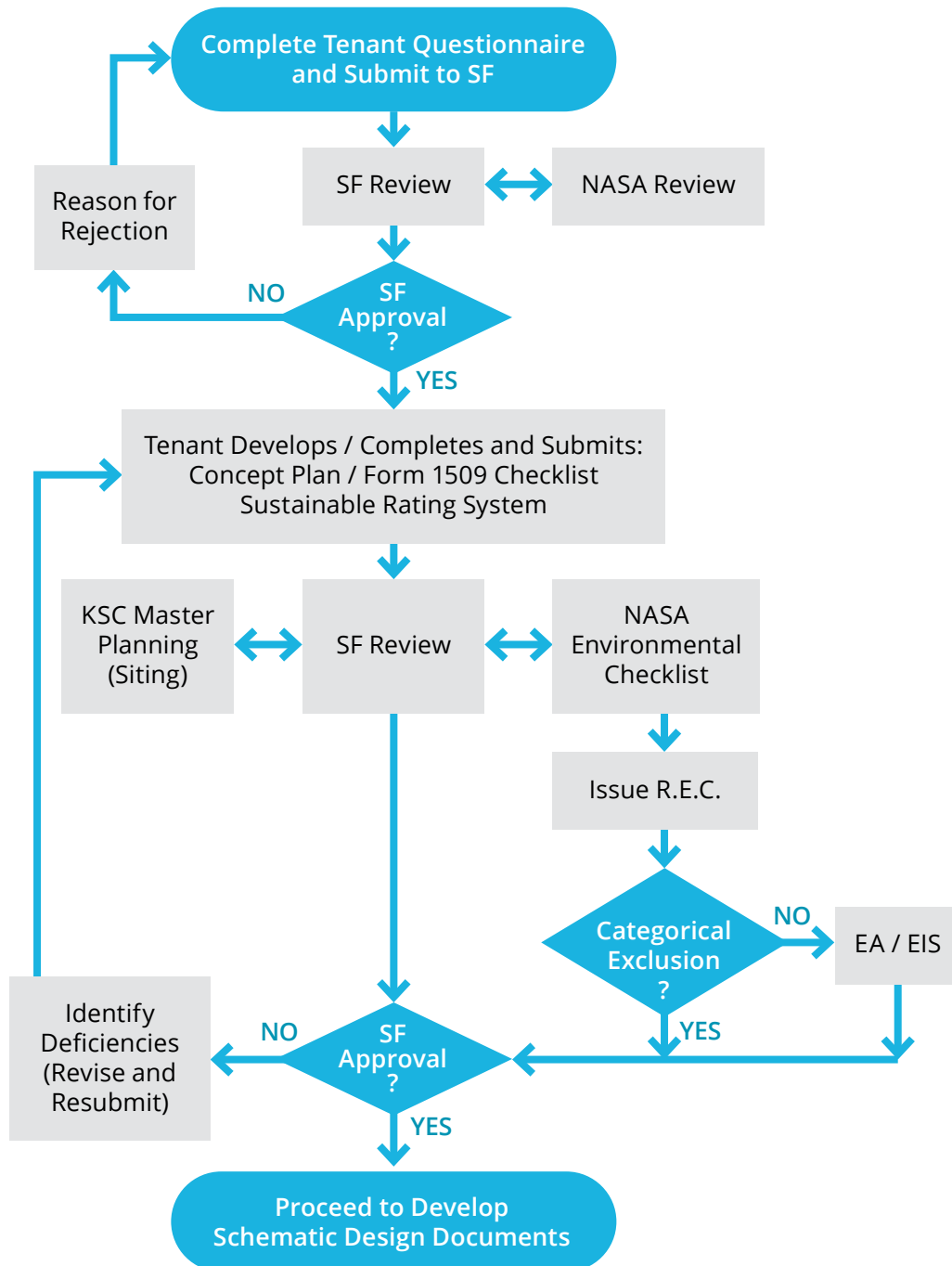
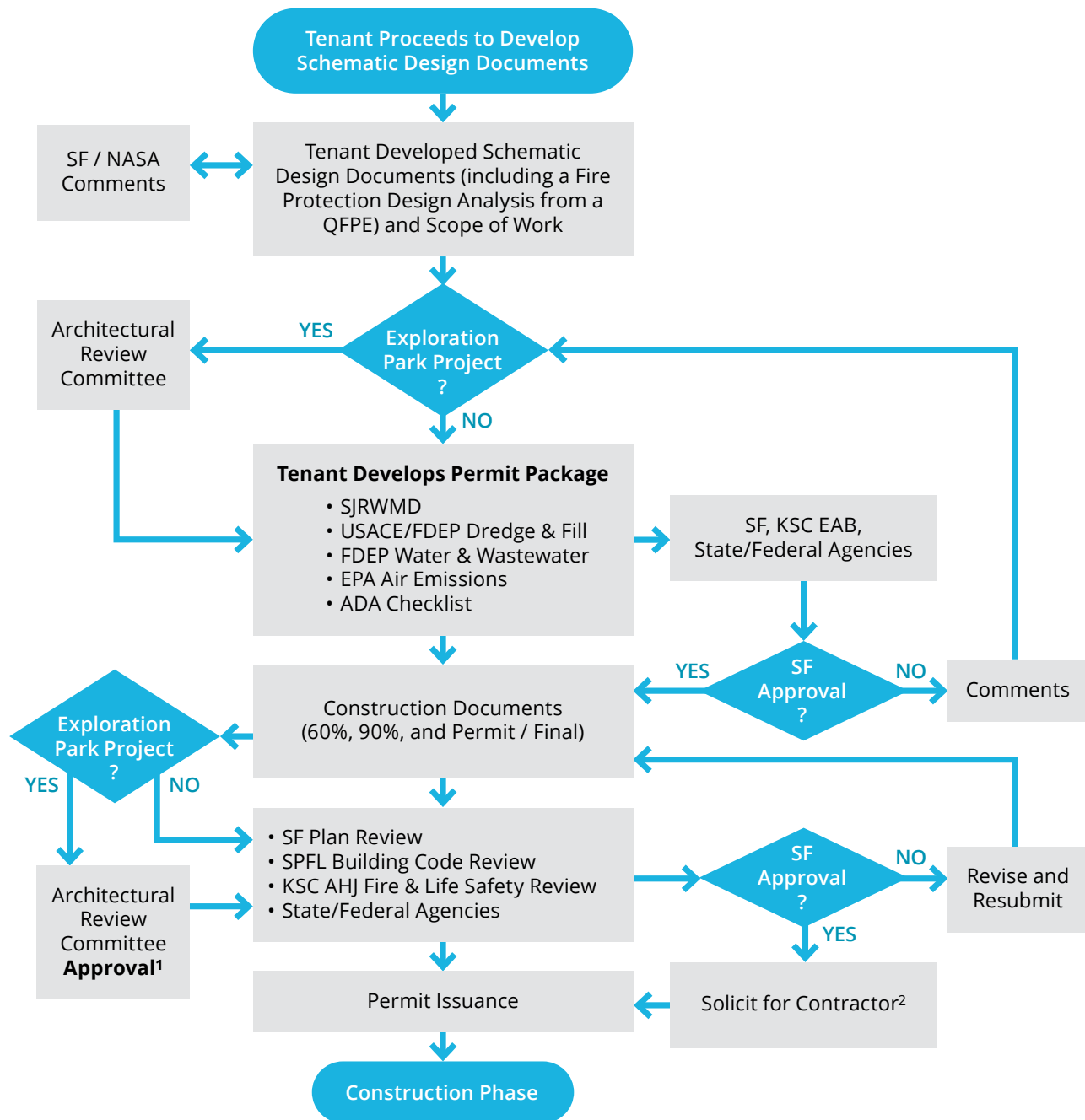


Figure 2: KSC SITE DESIGN DEVELOPMENT PROCESS

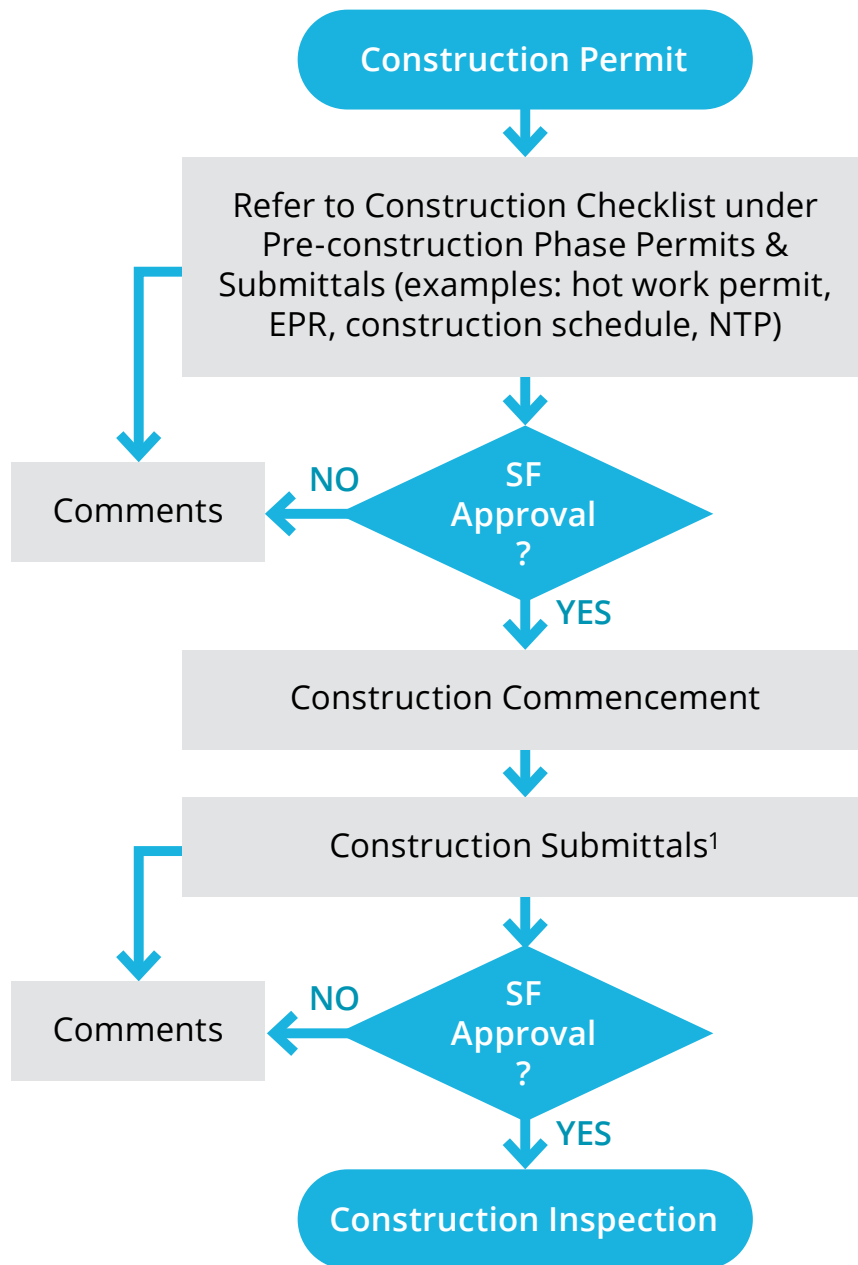


1. Architectural Review Committee MUST approve before process continues (Volume 2 Chapter 3).

2. This step can be done anytime in the above process but needs to be done before issuance of a construction permit.

Note: Some steps may not be necessary depending on the project and Space Florida's discretion.

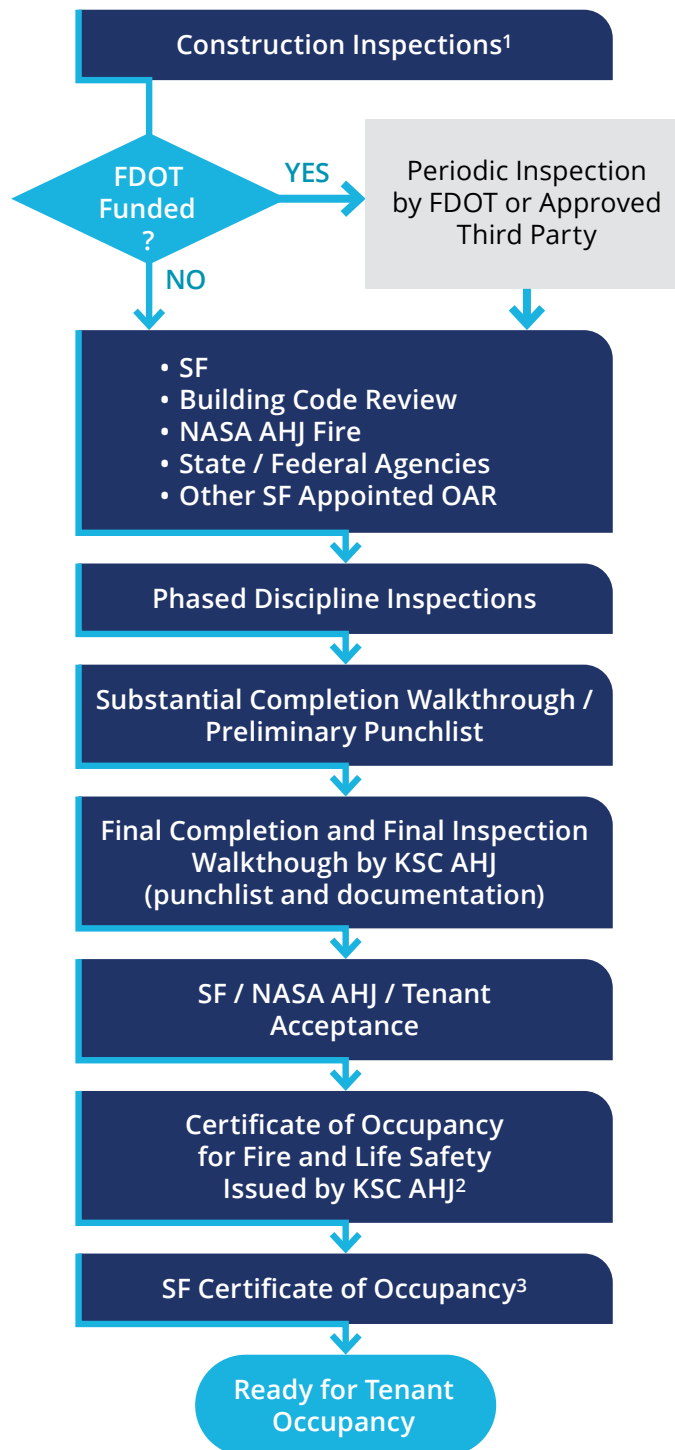
Figure 3: KSC CONSTRUCTION PHASE PROCESS



1. For examples refer to Construction Permit Checklist under "Construction Phase Inspections & Approvals."

Note: Some of these steps may not be necessary depending on the project and Space Florida's discretion.

Figure 4: KSC CONSTRUCTION INSPECTION PROCESS



1. To be completed for each work area or phase as necessary.
2. Can be phased with a TCO provided.
3. If the project is a building modification, a Certificate of Completion will be issued in lieu of a CO.

3.13 Design and Construction Checklist

The Design and Construction Checklist is an example checklist that is followed by SF and SF Tenants design/construction projects. For reference to the KSC-specific checklist please refer to Appendix 2-1G.

3.14 Submittals Examples

Below are examples of Submittals referenced above Flow Charts and Checklists.

PRECONSTRUCTION SUBMITTALS EXAMPLES

1. Design/Construction Drawings and Specifications
2. Contractual/Frontends Submittals
3. NASA Form 1509 Facility Project
4. KSC Form 26-312V3 NS Utility Locate/Excavation Permit Request
5. KSC 21-608V2 NS Environmental Compliance Checklist
6. Certification of Insurance and Construction/ Performance Bond
7. Environmental Protection Plan
8. Health and Safety Plan
9. Fire System Documentation
10. Construction Schedule
11. Submittal Register
12. Schedule of Values
13. Performance of Work Plan
14. Contractor Key Personnel Contact Information/KSC Emergency Contact Information
15. Quality Control Plan
16. Stormwater Permit/SWPPP
17. Sustainability Verification Preliminary Checklist
18. Hydrant Flow Verification (for adequate fire water supply)
19. Fire Protection Design Analysis (from a Qualified Fire Protection Engineer)

CONSTRUCTION SUBMITTALS EXAMPLES

1. Equipment/Submittals
2. Site Plans
3. HVAC/Controls Drawings
4. Fire Protection
5. Shop Drawings
6. Utility Outages/Connection

MANDATORY INSPECTIONS EXAMPLES

1. Environmental Protection Plan Implementation
2. Contract Specifications: Earthwork/Excavation of Unsuitable Material/
Concrete/Structural Components
3. Fire Alarm System, Fire Protection System, and Life Safety Systems
4. OSHA Compliance Inspections
5. Quality Hold Point Inspections as Required in Design Documents

6. Building Code Required Inspections
7. Substantial Completion for Each Phase
8. KSC AHJ/Life Safety Systems Final Inspection (Certificate Issuance Inspection)
9. Certificate of Occupancy (CO), Certificates of Completions (CoC), Temporary Certificate of Occupancy (TCO)
10. Third Party QFPE Acceptance/Affidavit
11. Elevator State Inspection

CONSTRUCTION CLOSEOUT DOCUMENTS EXAMPLES

1. As-Built Documents (Signed/Sealed)
2. Record Documents in AutoCAD
3. O&M Manuals
4. Warranties
5. Spare Parts/Attic Stock
6. Permitting Agency Closeout
7. Release of Liens
8. Sustainability Certification or Rating Verification
9. Certificate of Materials.
10. Service Agreements
11. Commissioning Documentation
12. Testing Reports/Manufacturer's Start-Up Reports
13. Fire Department Access Procedure (gate access, lockbox, etc.)
14. Facility Operations Manual (where applicable)

3.15 Summary of Approvals

Table 4 includes a Summary of Approvals required for construction projects at KSC. Note that additional approvals may be required depending on the scope of the project.

Table 4: Summary of Approvals

APPROVALS AND INSPECTIONS	SF	NASA	USSF	FDEP	SJRWMD
DESIGN PHASE					
<u>PRELIMINARY APPROVALS</u>					
Tenant Questionnaire	✓	✓			
Concept Plan	✓	✓			
Form 1509 (Including Sustainable Rating System Selection)	✓	✓			
Environmental Checklist	✓	✓			
NASA Siting Request (NASA KSC Internal Departments)	✓	✓			
<u>PLANS</u>					
Schematic Design Package (15 and/or 30%)	✓	✓			
Fire Protection Design Analysis	✓	✓			
Design Development Package (60%, 90%)*	✓	✓			
Construction Documents (100%/Bid)*	✓	✓			
<u>PERMITS</u>					
Environmental Resource (Stormwater Management) Permit	✓	✓			✓
Wetlands Dredge and Fill	✓	✓		✓	
Stormwater Discharge NPDES	✓	✓		✓	
Potable Water Construction Permit	✓	✓		✓	
Wastewater Discharge Permit	✓	✓	✓	✓	
Air Emissions Permit	✓			✓	
Construction Building Permit*	✓				
Burn Permit	✓	✓			
Dig Permit	✓	✓			
CONSTRUCTION PHASE					
<u>SUBMITTALS</u>					
Brevard County Notice of Commencement	✓				
Environmental Protection Plan	✓				
Fire System Documents*	✓	✓			
Health and Safety Plan	✓				
Stormwater Pollution Prevention Plan (SWPPP)	✓			✓	
Submittals Required by Contract Documents*	✓				
Close-Out Documents	✓				
Life Safety Plan	✓	✓			
<u>MANDATORY INSPECTIONS</u>					
Environmental Protection Plan Implementation	✓				
Cast-in-Place Concrete Formwork and Reinforcement Placement*	✓				
Excavation of Unsuitable Material	✓				
Florida Building Code*					
Fire Protection System (Fire Alarm and Suppression)	✓	✓			

*Coordinated with FBC Agent

APPENDICES

2-1A – FORMS

2-1B – SUSTAINABILITY STANDARDS

2-1C – KSC EXTERIOR LIGHTING REQUIREMENT

2-1D – DESIGN SUBMITTAL CONTENT CHECKLIST

2-1E – INSPECTION CHECKLIST

2-1F – KSC BADGING GUIDELINES

2-1G – DESIGN AND CONSTRUCTION PROJECT CHECKLIST

APPENDIX 2-1A – FORMS

1. NASA Form 1509 Facility Project – Brief Project Document
2. NASA Form 1510 Facility Project Cost Estimate
3. KSC 21-608 11/18 KSC Environmental Checklist
4. NASA Form 1046 Transfer and/or Notification of Acceptance of Accountability of Real Property
5. Excavation Permit Request
6. KSC Form 50-1 NS Excavation Category Waiver
7. BOSS Form MSO-F-0004 (6/19) - Example of Request for Utility Outage
8. KSC Form 50-202 Task Order Request
9. KSC Form 21-555 NASA KSC Pollution Incident Report (to be provided in the future)
10. Airspace Study Application (to be provided in the future)

National Aeronautics and Space Administration					Facility Project-Brief Project Document					PROJECT ID		PROJECT CODE			
PROJECT TITLE							INSTALLATION/PROGRAM OFFICE			DATE		SUB/REV. NUMBER			
APPROVED FACILITY PROJECT COST ESTIMATE	ITEMS (LIST)				AMOUNT		RELATED COST DATA <i>(Not included in the Approved Facility Project Cost Estimate, but required to make the facility initially operable)</i>								
							RELATED COSTS INVOLVED		SS (Amount)		PER (Amount)		DESIGN (Amount)		
							<input type="checkbox"/> YES (Identify) <input checked="" type="checkbox"/> NONE								
	TOTAL ▶				\$0.00		OTHER RELATED EQUIPMENT	ITEM		AMOUNT		ITEM		AMOUNT	
								TO BE PURCHASED				FUTURE FUNDING			
	ACTIVATION														
TRANSFER OF EXCESS				OTHER REAL ESTATE											
CATEGORY	JUSTIFICATION		WORK				EXISTING				OTHER (Specify)				
FUND SOURCE	TYPE		IDENTIFICATION												
SCOPE/DESCRIPTION															
BASIS OF NEED															
PDRI	of possible at % design			PROJECT APPROVAL	SUBMITTED BY		SIGNATURE AND TITLE						DATE		
SCHEDULE DATES			START		COMPL	CONCURRENCE BY		SIGNATURE AND TITLE						DATE	
	PER					JX CONCURRENCE		SIGNATURE AND TITLE						DATE	
	DESIGN					APPROVED BY		SIGNATURE AND TITLE						DATE	
	CONSTRUCTION														
	ACTIVATION														
OPERATIONAL															

Facility Project-Brief Project Document (Continuation Sheet)		PROJECT CODE	
PROJECT TITLE	INSTALLATION/PROGRAM OFFICE	DATE	SUB/REV. NUMBER

NASA: NASA_1510

U.S. Federal Form: NASA: NASA_1510

FORM NUMBER:	NASA_1510
FORM TITLE:	U.S. Federal Form: NASA: NASA_1510
U.S. GOVERNMENT AGENCY:	NASA
POINTS OF CONTACT:	Agency Forms Management Officer
USERS:	NASA
FILE FORMATS:	PDF
OPTIMIZED?	<input checked="" type="checkbox"/>
PRINTABLE?	<input checked="" type="checkbox"/>
FILLABLE?	<input checked="" type="checkbox"/>
SAVABLE?	<input checked="" type="checkbox"/>
OBTAINING FROM:	(1) USA-Federal-Forms.com, (2) Fillable.com
ISSUANCES:	
ADOPTED?	<input type="checkbox"/>
PRESCRIBED?	<input type="checkbox"/>
PREVIOUS EDITIONS ACCEPTED?	<input type="checkbox"/>
FORM CONTROLLED?	<input type="checkbox"/>
SPONSOR:	
SUBSPONSOR:	
FUNCTION CODE:	
MANDATORY PRINT SPECIFICATIONS:	
PRIVACY ACT IMPLICATIONS?	<input type="checkbox"/>
RCS:	
IRCN:	
OMB:	



Facility Project Cost Estimate

INSTALLATION/PROGRAM OFFICE	DAT E
PROJECT TITLE	SUBMISSION/REVISION
	PROJECT CODE
BASIS OF COST ESTIMATE	PROJECT ID

I. SUMMARY OF COST ESTIMATE

DESCRIPTION	AMOUNT a.	PERCENT b.
1. ENGINEERING ESTIMATE		
2. COST ADJUSTMENT (Enter percentage of item 1a to right in column 2b)		
3. SUBTOTAL (1+2)		
4. CONTINGENCIES (Enter percentage of item 3 to right in column 4b)		
5. SUPERVISION, INSPECTION AND ENGINEERING SERVICES (Enter percentage of items 3a and 4a to right in column 5b)		
6. OTHER BURDEN COSTS		
7. TOTAL BUDGET ESTIMATE (3+4+5+6) SAY		

8. IDENTIFICATION OF COST ADJUSTMENT (Item 2, above) AND OTHER BURDEN COSTS (Item 6, above)

II. PLANNING AND DESIGN

DESCRIPTION	STATUS				
	NEEDED a.	IN-WORK b.	COMPLETE c.	IN-HOUSE/AE d.	COST e.
1. PRELIMINARY ENGINEERING REPORT					
2. SPECIAL STUDIES (Specify)					
3. FINAL DESIGN					
4. SUPERVISION AND ADMINISTRATION OF DESIGN SERVICES					
5. TOTAL PLANNING AND DESIGN COST					

III. RELATED COST DATA (Not included in this Approved Facility Cost Estimate, but required to make the facility initially operable.)

1. RELATED COSTS INVOLVED <input type="checkbox"/> a. YES (Identify in items 2 through 10) <input type="checkbox"/> b. NONE		2. PER (Amount)	3. DESIGN (Amount)	
OTHER RELATED EQUIPMENT BREAKOUT	ITEM	AMOUNT	ITEM	AMOUNT
	4. TO BE PURCHASED		8. ACTIVATION	
	5. TRANSFER TO EXCESS		9. OTHER REAL ESTATE	
	6. EXISTING		10. OTHER (Specify)	
	7. FUTURE FUNDING			

KSC Environmental Checklist

1. PROJECT TITLE:		2. PROJECT NO.:	
3. PROJECT LOCATION: <input type="checkbox"/> KSC <input type="checkbox"/> CCAFS <input type="checkbox"/> PAFB <input type="checkbox"/> OTHER _____		4. FACILITY NAME/NO.:	
5. REQUESTOR/PROJECT LEAD: _____ ORG/MAIL CODE: _____		6. PHONE NO.:	
7. PREPARER OF CHECKLIST: _____ ORG/MAIL CODE: _____		8. PHONE NO.:	
9. PROJECT DESCRIPTION: <i>(Provide site plans, maps, etc. as separate attachment(s))</i>			
10. a-r. Check the appropriate box (Yes, No, Undetermined) to identify if any component of the proposed project (including, but not limited to: construction, installation, demolition, removal, activation or operation) will involve any of the items listed. Use the attached instructions. Provide more specific information for each item marked Yes or Undetermined in the third column.			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	a. <u>Construction/Modification/Demolition</u> : Constructing, altering, expanding, modifying (other than routine maintenance), or demolishing any building, pavement or structure.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	b. <u>Land Impacts</u> : Land disturbance, soil addition or removal, digging, grading, trenching, alteration or removal of vegetation, equipment/material staging area required, stockpiling and any activity in or near surface water (including ditches and low-lying areas).		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	c. <u>Hazardous Material and Hazardous, Controlled or Universal Waste</u> : Use, storage, generation and/or disposal of any hazardous or toxic material, petroleum products or paint coatings.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	d. <u>Asbestos Containing Material (ACM)</u> : Disturbance of construction material that may contain asbestos (i.e., roofs, walls, ceilings, floor tile, piping insulation, caulk, etc.).		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	e. <u>PCBs</u> : Disturbance or replacement of electrical distribution systems, communication systems, lightning protection, transformers, non-liquid PCB materials or any other items believed to contain PCBs, including paint coatings.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	f. <u>Painting</u> : Initial application or repainting of a facility (interior or exterior), structure or utility.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	g. <u>Paint, Sealant, Caulking Removal</u> : Includes surface preparation such as sandblasting, scraping, water blasting or chemical stripping of existing paint coatings. Specify method.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	h. <u>Dewatering</u> : Use of conventional wellpoints, hydraulic pumps, or other means to transfer groundwater (including water in utility manholes) for project activities including utility trenching, foundation work, roadbed construction, stormwater treatment pond, and borrow excavation.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	i. <u>Stormwater</u> : Construction of new building, pavement, impervious, or semi-impervious surface and/or modification of an existing stormwater system. Give approximate square feet of impervious surface being added.		Sq Ft
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	j. <u>Drinking/FIREX Water</u> : Installation or modification of potable water system. Include diameter of new water piping if known.		inches
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	k. <u>Domestic/Industrial Wastewater</u> : Installation or modification of domestic sewer system, including septic tank systems, generation of process wastewater or modification to a system that handles or transports wastewater, including condensate lines, washdown effluent, outfalls, holding ponds and non-point source discharges associated with industrial applications/processes.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	l. <u>Air Emissions</u> : Installation or alteration of a stack, scrubber, exhaust fan, vent, generator, fume hood, cooling tower, boiler, halon fire suppression system, HVAC system, refrigeration system; or discharge from painting or sandblasting. Describe emission source.		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	m. <u>Open Burning</u> : Burning of any land clearing debris.		

<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	n. <u>Tanks</u> : Construction, modification, or repair of aboveground or underground storage tanks (including piping and/or containment). Give commodity stored and capacity.	gallons
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	o. <u>Transformers/Generators</u> : Installation, replacement or repair of transformers, generators, or any other oil-filled equipment. Give capacity.	gallons
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	p. <u>Exterior Lighting</u> : Installation, refurbishment or modification of exterior lighting.	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	q. <u>Radiation</u> : Generation of ionizing or non-ionizing radiation or use of any radiation source.	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undetermined	r. <u>Other</u> : Please describe any other aspect of the proposed action that could potentially affect the environment. Use separate sheet if necessary.	

Environmental Checklist Preparation Instructions

1. **Project Title**: Title of proposed action as it appears on the work order or programming document.
2. **Project Number**: Insert SON, WON, PCN, DBEH, SXHT, MAXIMO or other authorized work identification number, as appropriate.
3. **Project Location**: Check box for applicable installation where work will be conducted. For off-site work, identify location.
4. **Facility Name/Number**: Use the proper name for the facility where work is being conducted and the assigned facility number. If proposed action is not directly associated with a facility, use the closest facility for reference.
5. **Requestor/Project Lead**: List name of individual who has requested the proposed action. If this individual cannot be identified, or no single individual is responsible for submitting the work requirement, then list the person who is most familiar with the proposed action, such as the design engineer or project lead, and their mail code.
6. **Phone Number**: Telephone number of individual identified in #5.
7. **Preparer of Checklist**: List name of individual who completed the checklist and their mail code.
8. **Phone Number**: Telephone number of individual identified in #7.
9. **Project Description**: Provide a brief, complete description of the proposed project. Include size of project and site, proposed uses, and any known plans for the future. Attach additional information including site plans, maps, statement of work, etc.

Attaching additional information within Adobe PDF software:

1. Click the "Attach File(s)" button
2. The attach dialog appears. Select the file you want, then click "open." The file appears in the Attachments window. Or
3. Click the paper clip icon on the left side, then drag and drop the files into the Attachments window.

Note: If you hold down the Ctrl or Shift keys you can select multiple files at one time.

Instructions can also be found in the Help within the Adobe PDF software.

10 a.-r. The items listed in this section could be included in, or result from, the work that is being proposed. To the best of your knowledge, indicate by checking the applicable box if any of these items could be affected by the proposed work. check the "UNDETERMINED" box if you are not certain. If further information is required to complete item 10 a.-r., please reference the additional instruction sheet.

Environmental Checklist Additional Information and Instructions

Section 10a.-r.

The following additional information/instructions should be applied to Environmental Checklist Sections 10a.-r.

- a. **Construction:** Some proposed construction activities may not have their scope defined well enough to allow easy identification of potential environmental concerns, and certain facilities and certain types of construction activities have restrictions or constraints that may not be easily identifiable. An example may be disposal of wastes from a construction or demolition project as opposed to waste generated from normal operations and maintenance (O&M) type projects. Types of waste accepted at the KSC Class III Schwartz Road Landfill are listed on the EPB (Environmental Program Branch) web page at [KNPR 8500.1 Chapter 14 Landfill](#). The proposed project must reflect the proper disposal method in the design specifications to ensure compliance with existing permits.
- b. **Land Impacts:** Areas of major environmental concern associated with this item include the loss of vegetation and disturbance of land that may provide habitat for various types of wildlife. Disturbance of the ground could impact burrowing animals, such as the gopher tortoise. Other issues include the disposal of vegetation from land clearing, underground utilities, archaeological sites, wetlands, etc. If your project includes any type of vegetation removal, land clearing, tree trimming (other than routine landscape maintenance), digging, grading or activity in or near wetlands/surface waters, check yes for this item.
- c. **Hazardous Material and Hazardous, Controlled, or Universal Waste:** A number of items have the potential to adversely effect human health or the natural environment. Consequently, use of these items in the construction and/or operation of the proposed project will require special storage, handling and disposal. Hazardous materials usually constitute items that possess any one or more of the following characteristics: corrosive, flammable, toxic and/or reactive. Should hazardous materials be included in your proposed project, the EPB may be able to identify an acceptable non-hazardous alternative through the Pollution Prevention (P2) program. Wastes generated from use of hazardous materials will generally be classified as hazardous wastes, which require special handling and disposal.
- d. **Asbestos Containing Material (ACM):** Due to the age of many of the buildings and structures on KSC and CCAFS, it is likely that if your project affects an existing facility, ACM may be encountered. If the project involves new construction or is remote from existing structures and/or utilities then it is unlikely that any ACM would be disturbed by your action(s). Many of the existing facilities have already been sampled and the ACM has been identified. Contact the KSC Industrial Hygiene Office at 867-2400 to determine if the project will impact a known ACM source or access [KNPR 8500.1 Chapter 6, Section 6.5](#). If the potential for the presence of ACM exists, sampling must be requested so a determination can be made for all possible sources.
- e. **PCBs:** Polychlorinated Biphenyls (PCB) are chemicals that are primarily found in some types of fluids used in electrical equipment, i.e., electrical transformers, switches, ballasts, etc. Non-liquid PCBs may also be present in older paint coatings, caulking and other materials. Consequently, all projects or jobs that will come in contact with any fluid filled electrical equipment, or non-liquid materials suspected of containing PCBs should include sampling and analysis for PCBs. A current analysis (within six months) must accompany each fluid-containing piece of electrical equipment requiring disposal.
- f. **Painting:** Painting, depending on the method and contents of the paint, can generate hazardous or controlled wastes. Use of paint thinner and chemical stripper typically results in generation of waste requiring special handling and disposal. If known, please indicate if these painting related materials are to be used. If your project includes any painting check yes for this item and include specific information regarding paint contents, other hazardous materials to be used and painting methodology, as applicable.
- g. **Paint, Sealant, Caulking Removal:** Removal of existing paint coatings, sealants and caulking can generate hazardous or controlled wastes. In some cases, old paint coatings containing lead and/or other metals as well as non-liquid PCBs will require specific abatement procedures and special disposal of wastes generated. If your project includes any paint, sealant, or caulking removal activities check yes for this item and include specific information regarding paint contents, other hazardous materials to be used, and paint or sealant removal methodology.
- h. **Dewatering:** If the proposed project will require the pumping of water to support construction activities, a permit may be required. There are a number of variances and quantity thresholds based upon the amount of water being transferred and the area where the water will be discharged. Therefore, if your project requires dewatering, check yes and the EPB will determine permit applicability.
- i. **Stormwater:** Stormwater is an environmental concern primarily due to potential impacts of rainwater runoff from an impervious surface into the surrounding area. An impervious surface prevents stormwater from percolating into the ground. Consequently, the St. Johns River Water Management District (SJRWMD) requires a permit to be obtained and a stormwater management system to be constructed when a large impervious surface is created. The threshold for obtaining a permit varies from 4000 square feet for surfaces specifically supporting vehicular traffic, such as roads, parking lots, stabilized areas, etc., to 9000 square feet for buildings inclusive of all other impervious surfaces. The permit threshold can also be "tripped" by adding to or modifying an existing impervious surface, so do not assume the project will not require permitting if new impervious area is below the above thresholds. If you check "yes", please identify the number of square feet involved.
- j. **Drinking/FIREX Water:** Check yes if the proposed project involves work that would affect a potable water line. Environmental concerns with work that affects water lines are: 1. The disturbance of a water line typically lowers water quality and therefore, requires disinfection and sampling prior to use; 2. Some connections and/or additions to the existing water system require a permit. Supply as much design information as possible relating to potable water system changes (e.g., new vs. extension, pipe diameter, etc.). Permit determinations and applications will be handled by the EPB.
- k. **Domestic Wastewater/Industrial Wastewater:** Environmental concerns include potential impacts to the operation of the Wastewater Treatment Plant and Florida Department of Environmental Protection (FDEP) permit conditions. New connections and septic tank installations may require permitting, inspection, and/or certification. Therefore, check yes if the proposed project will involve installation of new wastewater sources or in any way affect the existing sanitary sewer system. Industrial wastewater is any water-based waste stream, discharge, wash water, deluge outfall, etc., that would result from conducting an industrial-type operation. The source of this wastewater typically requires permitting and therefore, must be identified to the environmental office as soon as possible. In addition, early environmental coordination could result in the identification of a process alternative that may preclude or minimize the waste stream.
- l. **Air Emissions:** If the project (either during construction or operation) would discharge any substance into the air, other than vehicular or normal construction equipment exhaust, check yes and describe the source of the emission. Some emission sources may require State and/or Federal permitting for both construction and operation.
- m. **Open Burning:** If any land clearing debris will be burned during construction, check yes. The Florida Department of Forestry requires notification in accordance with FAC 51-2 Open Burning. Coordination with the KSC Fire Marshall is also required.

- n. **Tanks:** Any vessel that stores liquids, other than drinking water, must be evaluated for potential environmental effects. Some tanks require registration with the State based upon the quantity and type of material being stored. All tanks must be identified in the tank management program and various containment and piping requirements may apply. If you suspect the involvement of any new or existing tanks, including associated piping or containment, check yes and the EPB tank program managers will identify any regulatory requirements.
- o. **Transformers/Generators:** If any oil-filled equipment is to be modified, replaced or installed, check yes. There are specific handling, removal and waste disposal guidelines to follow as well as Spill Prevention, Control and Countermeasures (SPCC) requirements to be met.
- p. **Exterior Lighting:** Exterior lights at or near Atlantic Coast beaches in Florida have been proven to disrupt sea turtle nesting. Consequently, NASA has developed exterior lighting policies to minimize adverse impacts to threatened and endangered sea turtles that nest on KSC beaches. Should the project include exterior lights, either new or replacement of existing, check yes and the EPB will review the design of your project to ensure compliance with the applicable policies. Typically, exterior lights that are not directly related to a color rendition or explosion proof requirement will be the lowest wattage, low pressure sodium fixtures that meet the needs of your request. Exterior lighting requirements are located on the EPB web page at: [KNPR 8500.1 Chapter 24, Section 24.1.5 D](#).
- q. **Radiation:** Various types of mission related equipment has the potential to emit radiation that could effect human health and the well being of other living organisms. Typically, the project/job requestor is aware of the dangers associated with the equipment being constructed, installed, modified or maintained. However, in some cases, work may be requested that would take place within a zone of influence for an existing piece of equipment, thereby requiring shut-down or some other operational constraint. Therefore, if you know the project will involve a radiation source, or is in the vicinity of a potential source of radiation (radar, microwave transmitter, etc.) check yes.
- r. **Other:** If aspects of the proposed project do not fit into any of the above categories, but may have an effect on the natural environment, explain in the space provided. This space should also be used to explain or identify specific aspects of the above items, as necessary. If there is not enough space to adequately explain the item you are describing, please attach an additional sheet and reference a continuation sheet in case they should become separated.



National
Aeronautics and
Space
Administration

Transfer and/or Notification of Acceptance of Accountability of Real Property

1. FROM (Installation/Activity):		2. DATE		3. JOB NO.		(Installation Use Only)			
		4. CONTRACT NO.		5. PROJECT NO.					
6. TO (Installation/Activity):		7. TYPE OF TRANSACTION							
		a. FACILITIES DATA				b. OCCUPANCY AND COMPLETION DATA		c. TRANSFER	
		(1) <input type="checkbox"/> NEW CONSTR. (2) <input type="checkbox"/> EXISTING FACIL.				(1) <input type="checkbox"/> BENEF. OCCUP. (2) <input type="checkbox"/> PHYSICAL COM.		(1) <input type="checkbox"/> BETWEEN INSTAL.	
		(3) <input type="checkbox"/> CAPITAL IMP. (4) <input type="checkbox"/> OTHER (Specify)				(3) <input type="checkbox"/> FINANCIAL COM. (4) <input type="checkbox"/> OTHER (Specify)		(2) <input type="checkbox"/> OTHER GOVT. AGENCY	
ITEM NO.	FACILITY CLASS. CODE	FACILITY DESCRIPTION	NO. OF UNITS	TYPE	UNIT. OF MEAS.	TOTAL QUANTITY	COST	DRAWING NUMBER(S)	REMARKS
8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
TOTAL COST							\$0.00		

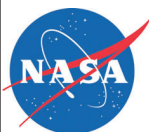
CERTIFICATION *(The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the owning agency except for the deficiencies listed below)*

18. AUTHORIZED BY <i>(Signature)</i>	19. TITLE	20. DATE
21. ACCEPTED BY <i>(Signature)</i>	22. TITLE	23. DATE
		24. PROPERTY TRANSACTION NO.

25. CONSTRUCTION DEFICIENCIES

26. EXPLANATORY NOTES

See attached spreadsheet. Refer to EUL section 3.2 (item 5. of Rev. C) and Exhibit E for non-monetary consideration.
Blue Origin OLS Early & Final Site Development Record Drawings 8/10/2018



Transfer and/or Notification of Acceptance of Accountability of Real Property

INSTRUCTIONS

The page number and the total number of pages comprising each transaction shall be shown in the space provided at the top right-hand part of the form.

ITEM 1. - Self-explanatory.

ITEM 2. - DATE . Enter date of preparation.

ITEM 3. - JOB NO . Enter NASA job number, if applicable.

ITEM 4. - CONTRACT NO . Enter NASA contract number, if applicable.

ITEM 5. - PROJECT NO . Enter the number assigned to identify the project with appropriate construction or capital improvement.

ITEM 6. - Self-explanatory.

ITEM 7. - TYPE OF TRANSACTION . Enter an "x" in the appropriate box in block 7a to indicate whether the transfer and/or notification of acceptance of accountability covers new construction, existing facilities or capital improvements to existing facilities. If the "other" category is used, explain in item 26, "Explanatory Notes." In addition, insert an "x" in the appropriate box of block 7b to indicate whether acceptance is being made at time of beneficial occupancy, physical completion or financial completion (*with respect to new construction and capital improvements*). If the "other" category is used, explain in item 26, "Explanatory Notes."

ITEM 8. - ITEM NO . Each single entry will be identified as an item number, and this item number will be shown in this column.

ITEM 9. - FACILITY CLASSIFICATION CODE . Enter the applicable classification code as cited in the Manual.

ITEM 10. - FACILITY DESCRIPTION . Enter the descriptive nomenclature of the facility.

ITEM 11. - NO. OF UNITS . Enter the number of units in terms of buildings or other structures.

ITEM 12 - TYPE . Enter the type of construction; i.e., "P" for permanent, "S" for semi-permanent or "T" for temporary.

ITEM 13 - UNIT OF MEASURE . Enter as appropriate "SF" for square feet, or "Acres," etc.

ITEM 14. - TOTAL QUANTITY . Enter the total quantity applicable (*i.e., acres, square feet, etc.*) for the line item.


ITEM 15. - COST . - Indicate by item number and description the appropriate cost.

ITEMS 16 & 17 , - Self-explanatory.

ITEMS 18, 19, & 20 . Enter the signature and title of the person preparing the transaction and the date.

ITEMS 21, 22, 23, & 24 . Enter the signature and title of the person authorized to accept accountability of the real property, including date and transaction number.

ITEMS 25 & 26 . Self-explanatory.



Excavation Permit Requests

[Submit New Permit Request](#)

Permit Request Number

Search

Permit Request

Submitter



*Last Name <input type="text" value="Last Name"/> <small>The last name of the person requesting this permit.</small>	*First Name <input type="text" value="First Name"/> <small>The first name of the person requesting this permit.</small>	*E-Mail Address <input type="text" value="E-mail"/> <small>The Company's e-mail address of the person requesting this permit.</small>
*Company Name <input type="text" value="Company Name"/> <small>The name of the company the permit is for.</small>	Address <input type="text" value="Address"/> <small>The company address.</small>	
City <input type="text" value="City"/>	State <input type="text" value="State"/>	Zip Code <input type="text" value="Zip Code"/>
*Phone <input type="text" value="-- -- --"/> <small>The company phone number.</small>	Fax <input type="text" value="Fax Number"/> <small>The company fax number.</small>	

Contractor/Excavator

Copy Submitter Information

Company Name <input type="text" value="Company Name"/> <small>The name of the contracting/excavating company for this permit.</small>	Phone <input type="text" value="Phone Number"/> <small>The company phone number.</small>	
Last Name <input type="text" value="Last Name"/> <small>The last name of contractor or excavator for this permit.</small>	First Name <input type="text" value="First Name"/>	E-Mail Address <input type="text" value="E-mail"/> <small>The Company's e-mail address of the Contractor/Excavator.</small>

Permit

*Permit Type <div>-- Select Permit Type --</div> <small>Select the type of permit you are requesting.</small>	*Request Justification <input type="text" value="Request Justification"/> <small>Please justify why this permit is being requested.</small>
*Start Date <div><input type="text" value="__/__/__"/> </div> <small>The first day the permit should be valid for.</small>	Estimated Completion Date <div><input type="text" value="Estimated Completion Date"/> </div> <small>The last day the permit should be valid for.</small>
Work Order Number <input type="text" value="Work Order Number"/>	JON <input type="text" value="JON"/>
Contract PCN <input type="text" value="Contract PCN"/>	

This is a screen shot only, please use the following link to submit your Excavation Permit Request: <https://extapps.ksc.nasa.gov/EPR/Home/Dashboard>

Excavation Category Waiver

Send completed form to the Excavation Permit Administrator
 KSC-ISC-DigPermit@mail.nasa.gov
 Phone: 321-867-2180

Excavation Category Waivers are requested when normal work must be completed during a time not allowed by the category code assigned to the Excavation Permit. Excavation Category Waivers are only issued to a requester holding an already approved permit. Excavation Category Waivers are NOT emergency locate requests.

Excavation Permit Number	Vehicle / Payload / Operation
Planned Work Dates	Category Codes Impacted
Location (include map)	
Justification	
Requester Name	Requester Telephone Number
For Use by the Excavation Permit Administrator. Do not write below this line.	
Waiver Number	
KSC Approval - Required for waivers in category codes 1 - 6. *	
Signature of the NASA Test Director (NTD) is required for all waivers in every category code on the Kennedy Space Center	Date
Notes / Restrictions or Additional Information	



REQUEST FOR UTILITY OUTAGE

NOTE: Please allow 10 days for Outages to be processed.

1. OUTAGE TYPE	2. REPORTED DATE	3. BOSS LV or HV SUPPORT NEEDED?	
4. REQUESTER'S NAME AND ORGANIZATION		5. EMAIL ADDRESS	
6. OUTAGE SUMMARY DESCRIPTION			
7. OUTAGE WORK ORDER NUMBER (REQUIRED)		8. JON IF NO WORK ORDER NUMBER	
9. LOCATION & DESCRIPTION OF WORK REQUEST			
10. FACILITIES/AREA AFFECTED		11. REASON FOR OUTAGE	
12. POSSIBLE RESULT OF OUTAGE DENIAL		13. DURATION (HOURS)	14. OUTAGE TIME REQUESTED (DATE & TIME)
15. ALTERNATE DATE & TIME REQUEST	16. SIGNATURE OF REQUESTER		17. OFFICE & CELL NUMBER
18. ADDITIONAL REMARKS			

Task Order Request

Submit form to: KSC-TASK-ORDER-REQUESTS@mail.nasa.gov

Services/Support Authorization From:

- ☐ Commercial Space Launch Act (CSLA) Subagreement
☐ Enhanced Use Lease (EUL) / Use Permit
☐ Space Act Agreement (SAA)
☐ Other

Services/Support Provided to: (Partner Name)

NASA/Kennedy Agreement Number:

Mission: (If applicable)

Need Date

Control Number (to be completed by NASA)

TECHNICAL POINT OF CONTACT

Name

Phone Number

Email Address

Authorized Requester (*Print Name*)

Date of Request

Description of Desired Services/Support:

Task Order Request

Services/Support Authorization From:

- ☐ Commercial Space Launch Act (CSLA) Subagreement
☐ Enhanced Use Lease (EUL) / Use Permit
☐ Space Act Agreement (SAA)
☐ Other

Services/Support Provided to: (Partner Name)

NASA/Kennedy Agreement Number:

Mission: (If applicable)

Need Date

Control Number (to be completed by NASA)

TO BE COMPLETED BY NASA

Services/Support Offered:

Proposed Schedule

Estimated Cost

Funds Available?

☐ Yes ☐ No

NASA Project Engineer (*Print Name*)

NASA Project Engineer (*Email Address*)

Phone Number

NASA Approver (*Print Name*)

NASA Approver (*Signature*)

Date

Partner Concurrence (*Print Name*)

Partner Concurrence (*Signature*)

Date

APPENDIX 2-1B – SUSTAINABILITY STANDARDS

Sustainability Standards

The following standards shall be implemented by the Tenant with regards to sustainable design practices and project certification for design and construction associated with CCS. The 2008 Florida Energy Conservation and Sustainable Buildings Act require Florida agencies to use one of the sustainable rating systems approved in FS Section 255.253. There are four different systems that can be used.

Space Florida Goal

Tenants shall be allowed to choose the system that is most applicable for the planned improvements. This shall allow Tenant flexibility for selecting the system that best meets their project needs. The project, at a minimum, shall be certified by one of the rating systems provided below.

Space Florida shall require Tenants follow FS 255.253 which states:

“Sustainable building rating or national model green building code” means a rating system established by the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) rating system, the International Green Construction Code (IGCC), the Green Building Initiative’s Green Globes rating system, the Florida Green Building Coalition standards, or a nationally recognized, high-performance green building rating system as approved by the department.” The IGCC is not a standard but is intended to be used as a jurisdictional and municipal building code for new construction and major renovations.

Tenant shall submit records showing adherence to the sustainability standards set forth within this Development Manual.

Construction in Exploration Park shall meet, as a minimum, the sustainable design standards represented by one of the three sustainable rating systems identified in section 255.253, Florida Statutes, that are also identified below as NASA-approved. Rating system standards approved by NASA include United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) NC rating system, the Green Building Initiative's (GBI) Green Globes NC rating system, and the Florida Green Building Coalition (FGBC) commercial standards. The latest released version of the selected rating system in effect at the time design work commences on a given project shall be utilized for that project. Construction shall meet, as a minimum, one of the following levels under the selected rating system: LEED “Silver,” FGBC “Silver,” or GBI “2 Globes”, unless it has been clearly demonstrated that such levels are not feasible due to the nature of the construction or planned operations, and a waiver has been granted by NASA-KSC. Each Form 1509 submittal shall be accompanied by information identifying which sustainable building rating system is being followed, which rating level is being pursued, what specific track and or level within the applicable sustainable building rating system is being followed (e.g. Building Design and Construction, Commercial Building, etc.) and if certification is or is not being pursued. NASA-KSC will review the proposed level to determine whether it meets the requirements before approving the NASA Form 1509. Certification of the project by the rating system organization is not mandatory but is strongly encouraged. In lieu of certification, a qualified third-party under direction from the Space Florida building official may perform rating system verification checks during planning, design, construction, and operational phases to score and certify the project using the selected rating system scorecard/checklist. Credentials for the qualified third-party shall be provided to NASA KSC. The project will be registered with the rating system agency and the scoring documentation demonstrating that the project meets the agreed upon rating level shall be provided to NASA-KSC prior to the certificate of occupancy being issued by Space

Florida. Appropriate credit for Space Florida's Exploration Park infrastructure design and site features may be counted toward each facility project's score in determining compliance with the selected rating system.

Rating System Overview

Each system uses its own set of criteria for the purpose of rating. Each has a different point system, professional accreditation requirements, application methods, and cost. Side-by-side comparisons are difficult since each project is unique. A summary of each system is presented below.

1. Green Building Initiative's Green Globes rating system

Several years ago, U.S. General Services Administration elevated Green Building Initiative's Green Globes (GBIGG) to the same status as LEED as the two recommended third-party certifications systems for the U.S. government. GBIGG certification has one of four levels (i.e., 1 to 4 globes) and requires achieving minimum thresholds up to 1,000 points. It has no minimum criteria, but instead rates buildings on the green building practices that the builder has chosen to include resulting in more flexibility. It does not require any ongoing documentation, but documentation is required as proof of compliance during the third-party assessment. GBIGG requires third-party design review of building documentation and onsite assessment(s). Subject areas include:

Sustainable sites

- Energy efficiency
- Water efficiency
- Materials and resource use
- Indoor environmental quality
- Emissions
- Project/environmental management

2. USGBC LEED Rating System

LEED covers the design, construction, and operations of all types of buildings. LEED points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. Ten bonus credits are available, four of which address regionally specific environmental issues. A project must satisfy all prerequisites and earn a minimum number of points to be certified. Third-Party certification is required. It Includes four levels of certification—Certified, Silver, Gold, or Platinum. Subject areas are very similar to GBIGG and IGCC including:

- Sustainable sites
- Energy efficiency
- Water efficiency
- Materials and resource use
- Indoor environmental quality
- Emissions
- Operations and maintenance

3. FGBC Rating System

The Florida Green Commercial Building Standard covers all commercial occupancies listed in the FBC. It uses a tiered rating system. Certification is awarded at different levels according to points achieved over the project's adjusted minimum required points. Bronze = 0 - 50 points over min., Silver = 51-100 points over min., Gold = 101-150 points over min., and Platinum = 150 > points over min. Subject areas are very similar to Green Globes, IGCC, and LEED including:

- Energy efficiency
- Water conservation
- Site preservation
- Health
- Materials selection
- Project management
- Disaster mitigation

APPENDIX 2-1C – KSC EXTERIOR LIGHTING REQUIREMENT

KSC EXTERIOR LIGHTING REQUIREMENT

SECTION 1.0 REQUIREMENT AND REGULATIONS

Kennedy Space Center (KSC) is required to protect marine turtle nesting habitat by the National Environmental Policy Act (NEPA) and the U.S. Fish and Wildlife Service (FWS) through the Endangered Species Act (ESA). The NEPA of 1969, as amended (42 U.S.C. 4321-4370d), and according to the procedures of implementation of NEPA for NASA [[Title 14, Code of Federal Regulations, part 1216](#) subparts 1216.1 and 1216.3], requires federal agencies to assess how programs and associated actions may affect the environment. As part of this assessment, KSC has coordinated with the FWS on the effects of exterior lighting on protected species. The FWS has issued an interim biological opinion (BO) based on their review of historical and anticipated future light management activities by KSC, and the associated effects on the loggerhead (*Caretta caretta*), green (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), hawksbill (*Eretmochelys imbricata*), and Kemp's ridley (*Lepidochelys kempii*) sea turtles in accordance with Section 7 of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq*).

SECTION 2.0 PURPOSE

The purpose of this Requirement is: 1) to insure that KSC is compliant with the special conditions of the BO (Attachments 1 and 2) to provide clear guidance to project and/or facility managers who are required to comply with the KSC exterior lighting requirements.

Light Management Plans (LMPs) will be developed in accordance with this light management policy at KSC for all new facilities that are in close proximity to the beach, have lighting directly visible from the beach, and/or may cause significant sky glow. LMPs will be submitted to the Environmental Management Branch (EMB) for review and approval.

SECTION 3.0 IMPLEMENTATION

- 3.1 All projects that will be installing exterior lighting or lighting that is visible from outside the building must submit an environmental checklist to EMB ([KSC Form 21-608V2 NS](#)) ([KDP-P-1727](#)). The checklist is submitted by the project manager, facility manager, or the equivalent (PM) to EMB.
- 3.2 Within seven days of submittal of the checklist, the PM will receive either a request for further information or a record of environmental consideration (REC) from EMB.
 - 3.2.1 If the REC determines that there will be no adverse affect on the sea turtles no further action will be required. However, if the REC determines that there may be an adverse affect on sea turtles (i.e. a violation of the BO) a LMP will be required.
- 3.3 The PM will be responsible for the development of a LMP that meets the criteria set forth in Section 5.0 of this Requirement. EMB will have a subject matter expert (SME) available to assist the PM with the plan.

- 3.4 The PM will submit the proposed lighting plan to EMB for review and comment.
 - 3.4.1 If the LMP meets the guidelines, then a memorandum of acceptance will be generated by EMB and sent to the PM.
 - 3.4.2 If the LMP does not meet the guidelines, EMB will provide comments for plan revision by the PM.
- 3.5 In some cases, safety for employees and/or the program assets may supersede the FWS BO requirements; and a variance from the LMP requirements must be requested (see Section 6.0 of this policy).
 - 3.5.1 LMPs that include variances from the guidelines established herein will be reviewed by both the EMB and the FWS. This review cycle will continue until the EMB has satisfied its reporting requirements to the FWS.
 - 3.5.2 Notification of approval will be sent to the PM by EMB.
- 3.6 The final approved plan will be cataloged in the EMB Light Plan Compliance electronic data file and the PM should retain a copy for future reference.
- 3.7 Any modifications to the project site/structure(s) that result in exterior lighting changes must go through the process again as outlined above.

SECTION 4.0 COMPLIANCE COORDINATION

- 4.1 Once every two years, the appropriate personnel, including but not limited to, engineers, facility managers, and any other representatives that design and/or enforce lighting at KSC, will attend a sea turtle lighting workshop conducted by EMB or its agent.
- 4.2 These same personnel will allow EMB and/or agents of EMB to post educational data and notices related to sea turtle nesting season at their facilities as indicated in the BO.
- 4.3 Affected facilities will be inspected annually by EMB, their agents, or FWS. EMB is required to conduct periodic compliance inspections and report all findings to FWS on an annual basis.
- 4.4 Currently, hatchling or adult sea turtle disorientation rates cannot exceed 3%, as described in the BO. If that occurs, the FWS will require reinitiating consultation and a review of the reasonable and prudent measures KSC has taken. Any changes that result from the consultation will be incorporated into this Requirement and will affect all existing and future projects.

SECTION 5.0 GENERAL EXTERIOR LIGHTING DESIGN GUIDELINES

- 5.1 The LMP must, at a minimum, identify on a plan drawing all exterior lighting fixtures and other lights that may be visible at night. The plan must include details of each type of fixture to be used, such as lamp type, wattage, installation height, and proposed operation schedule.
- 5.2 Facilities that are in close proximity to the beach, have lighting directly visible from the beach, and/or may cause significant sky glow will prohibit use of exterior lights between 9 p.m. and dawn from May 1 through October 31. If night activities that are essential to safety/security, support launch-related activities at active launch complexes, or night operations training require exterior lighting at night the PM may apply for a variance from these lighting restrictions as described in Section 6.0.
- 5.3 Lights with wavelengths from 585 - 590 nm and lowest wattage possible should be used for all exterior lighting applications. Lights with wavelengths between 320 and 560 nm, such as metal halide and mercury vapor lights, should not be used in any exterior lighting applications. Low-pressure sodium (LPS) lights are preferred if LPS can meet operational requirements. In cases where there are specific requirements calling for the discernment of colors, the PM may apply for a variance from the LMP as described in Section 6.0 below.
- 5.4 Energy conservation standards will be incorporated into all lighting designs.
- 5.5 All exterior light fixtures should be positioned so that:
 - 5.5.1 The point source of light or any reflective surface of the light fixture is not directly visible from the beach.
 - 5.5.2 Areas seaward of the frontal dune are not illuminated. Frontal dune is defined as the first natural or manmade mound of sand that is located landward of the beach and has sufficient vegetation, height, continuity, and configuration to offer protective value.
 - 5.5.3 Light is directed downward and away from the beach at beachfront facilities and downward and in the direction of the task being performed at non-beachfront facilities.
 - 5.5.4 All lights should be shielded and/or recessed.
 - 5.5.5 Photocells should only be used to support security or other mission-specific requirements that occur on a regular schedule each night (e.g., parking lots will not routinely utilize photocells unless mission operations occur 24 hours a day, 7 days a week). Automatic timers can be used instead of, or in addition to, photocells to control lighting during actual hours of operation. Timers can also be used in locations where personnel are not readily available to manually extinguish lights. Where random security

monitoring is required, motion detector switches that keep lights off except when approached can be used. Such switches should turn lights on for the minimum duration possible.

- 5.6 Task lighting should be used for temporary operational activities rather than permanent light fixtures. Task lighting must conform to the same restrictions as permanent lighting. Switches should be used rather than timers or photocells.
- 5.7 Exceptions to the guidelines will be evaluated on a case-by-case basis through the variance process described in Section 6.0 below.







SECTION 6.0: VARIANCE PROCESS







- 6.1 Exceptions to the guidelines in Section 5.0 above will be evaluated by EMB and FWS.
- 6.2 The PM will submit a narrative documenting the necessity for using a light source that does not meet the requirements of the KSC Exterior Lighting Guidelines. The documentation of the variance request will include, but not be limited to, the regulation, Requirement, protocol requirement for the light source, and description of the specific circumstances surrounding the need.
- 6.3 The PM, with the assistance of EMB, will be responsible for mitigating any negative effects that may result from light use approved through the variance process. Corrective actions for negative effects will be determined by the EMB throughout consultation with the FWS.
- 6.4 EMB will concur/non-concur with variance request via email notification to PM.





LIGHT FIXTURES SCHEDULE




GENERAL / BUILDING LIGHTING				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
EMO-1	TYPE: EMERGENCY ONLY MANUFACTURER: EMERGI-LITE BY ABB CATALOG No: 12PR40NC2LG WATTS: 8 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: WHITE	GENERAL BUILDINGS, OFFICES		
EXO-1	TYPE: EXIT ONLY MANUFACTURER: EMERGI-LITE BY ABB CATALOG No: WPREMACR WATTS: 2.5 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: WHITE, RED LETTERS	GENERAL BUILDINGS, OFFICES		
EMC-1	TYPE: EMERGENCY AND EXIT COMBO MANUFACTURER: EMERGI-LITE BY ABB CATALOG No: WPR1240H-R2LG WATTS: 10 VOLTS: 120-277 MOUNTING: CEILING OR WALL-MOUNT COLOR: WHITE, RED LETTERS	GENERAL BUILDINGS, OFFICES		
FLB-1	TYPE: FLOODLIGHT - BULLET MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESFB1 WATTS: 21-32 VOLTS: 120-277 MOUNTING: GROUND MOUNTED COLOR: BLACK	LANDSCAPING, SIGN + WALL ILLUMINATION	EXTERIOR, WET LOCATIONS	
FLS-1	TYPE: FLOODLIGHT - SQUARE MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-AD25Q WATTS: 50 VOLTS: 120-277 MOUNTING: KNUCKLE-MULTIPLE COLOR: BLACK	FLAG POLE	5000 K, AREA FLOOD, DECORATIVE WALL SCONCE, POLE LIGHTING, FLAG POLE LIGHTING, SIGN LIGHTING.	
FLSL-1	TYPE: FLOODLIGHT - SLIM LINE MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESKH45-LED-PS-UNV-250W-5000K WATTS: 250 VOLTS: 120-277 MOUNTING: WALL + MULTIPLE OTHER OPTIONS COLOR: BLACK	OUTDOOR GUARD SHACK (Note - exempt from Amber color requirement per security / high-color rendition reasons)	5000 K, LISTED FOR WET LOCATIONS	
FLHO-1	TYPE: FLOODLIGHT - HIGH-OUTPUT MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESFD2X200WUNVV600NM WATTS: 500 VOLTS: 120-277 MOUNTING: POLE, WALL COLOR: BRONZE	OUTDOOR HIGH-OUTPUT FLOOD	AMBER, 600 NM.	
HAZ2-1	TYPE: HAZARDOUS LOCATION, 2 FT LINEAR MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-HLV2AQ WATTS: 58-77 VOLTS: 120-277 MOUNTING: WALL, CEILING COLOR: METALLIC-ALUMINUM	CLASS 1 DIVISION 2 HAZARDOUS LOCATIONS	5000 K	
HBII-1	TYPE: HIGH-BAY - INDOOR INDUSTRIAL MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESHB200W27V50KWLDLM WATTS: 200 VOLTS: 120-277 MOUNTING: PENDANT MOUNTED COLOR: BLACK	WAREHOUSE, INDUSTRIAL BLDGS	5000 K	
HBIO-1	TYPE: HIGH-BAY - INDOOR OFFICE MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: HE-ENV-180W-LED-LHB-PS-UNV-5000K WATTS: 180 VOLTS: 120-277 MOUNTING: SURFACE, PENDANT MOUNTED COLOR: WHITE	OFFICES	5000 K	


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LBP-1	TYPE: LOW-BAY PENDANT MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESLPLIN WATTS: 20-35 VOLTS: 120-277 MOUNTING: PENDANT-MOUNT COLOR: WHITE	BUILDINGS, INTERIOR	5000 K	
ORC-1	TYPE: OUTDOOR ROUND CANOPY MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESVNL40-LED-PS-UNV-45W-5000K WATTS: 45 VOLTS: 120-277 MOUNTING: SURFACE MOUNTED COLOR: BLACK	OUTDOOR CANOPY, PARKING GARAGES	5000 K	
OSC-1	TYPE: OUTDOOR SQUARE CANOPY MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESVN43-LED-PS-UNV-60W-5000K WATTS: 60 VOLTS: 120-277 MOUNTING: SURFACE MOUNTED COLOR: BLACK	OUTDOOR CANOPY, PARKING GARAGES	5000 K	
SL2-1	TYPE: SHOP LIGHT - 2' MANUFACTURER: ALEDDRA CATALOG No: ASL-SELTF6-12W-850 WATTS: 12 VOLTS: 110-277 MOUNTING: SUSPENDED MOUNT COLOR: WHITE	BUILDINGS, INTERIOR, WORKSHOPS, GARAGES, STORAGE AREAS, BASEMENTS	5000 K	
SL4-1	TYPE: SHOP LIGHT - 4' MANUFACTURER: ALEDDRA CATALOG No: ASL-SELTF12-23W-850 WATTS: 23 VOLTS: 110-277 MOUNTING: SUSPENDED MOUNT COLOR: WHITE	BUILDINGS, INTERIOR, WORKSHOPS, GARAGES, STORAGE AREAS, BASEMENTS	5000 K	
TR22-1	TYPE: 2' X 2' TROFFER MANUFACTURER: ALEDDRA CATALOG No: AL-PL40D2250H WATTS: 30 VOLTS: 100-277 MOUNTING: T-BAR LAY-IN OR SUSPENDED MOUNT COLOR: WHITE	BUILDINGS, INTERIOR, CONDITIONED AND UNCONDITIONED (DAMP) SPACES	5000 K, NEW CONSTRUCTION AND RETROFIT APPLICATIONS	
TR22ROR-1	TYPE: 2' X 2' TROFFER - REDUCED OUTPUT RETROFIT KIT MANUFACTURER: ALEDDRA CATALOG No: AT-R4-15W-XDZ-50K WATTS: 15 VOLTS: 110-277 MOUNTING: INSTALLS INTO EXIST TROFFER HOUSING COLOR: WHITE	BUILDINGS, INTERIOR, CONDITIONED SPACE	5000 K, ONLY FOR RETROFIT APPLICATION	
TR24-1	TYPE: 2' X 4' TROFFER MANUFACTURER: ALEDDRA CATALOG No: AL-PL54D2450H WATTS: 48 VOLTS: 100-277 MOUNTING: T-BAR LAY-IN OR SUSPENDED MOUNT COLOR: WHITE	BUILDINGS, INTERIOR, CONDITIONED AND UNCONDITIONED (DAMP) SPACES	5000 K, NEW CONSTRUCTION AND RETROFIT APPLICATIONS	
TR24ROR-1	TYPE: 2' X 4' TROFFER - REDUCED OUTPUT RETROFIT KIT MANUFACTURER: ALEDDRA CATALOG No: AT-R7-25W-XDZ-50K WATTS: 25 VOLTS: 110-277 MOUNTING: INSTALLS INTO EXIST TROFFER HOUSING COLOR: WHITE	BUILDINGS, INTERIOR, CONDITIONED SPACE	5000 K, ONLY FOR RETROFIT APPLICATION	
VT14-1	TYPE: VAPOR TIGHT 1X4 (NARROW-BODY) MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESCT2-VT4-LED-PS-UNV-75W-5000K WATTS: 75 VOLTS: 120-277 MOUNTING: SURFACE MOUNTED COLOR: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	
VT14LO-1	TYPE: VAPOR TIGHT 1X4 (NARROW-BODY) LOW OUTPUT MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: WATTS: VOLTS: 120-277 MOUNTING: SURFACE MOUNTED COLOR: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	


VT24-1	TYPE: VAPOR TIGHT 2X4 (WIDE-BODY) MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESCT4-VT4-LED-PS-UNV-149W-5000K WATTS: 149 VOLTS: 120-277 MOUNTING: SURFACE MOUNTED COLOR: WHITE	SHOWER AREAS, MECHANICAL ROOMS, HIGH-HUMIDITY AREAS, NON-CONDITIONED SPACES	5000 K	
WPA-1	TYPE: WALL PACK - ANGLED MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-AMBER600NM-40W-LEDLWPCO-PS-UNV-UNV-U-4 WATTS: 40 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: BRONZE	EXTERIOR	AMBER, 600 NM	
WPM-1	TYPE: WALL PACK - MINI MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESWP12QF1X23U5K WATTS: 23 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: BRONZE	EXTERIOR	5000K	
WPR-1	TYPE: WALL PACK - ROUND MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EESWPC36QC1X25U5KC WATTS: 25 VOLTS: 120-277 MOUNTING: WALL MOUNTED COLOR: BRONZE	BATHROOM/BARBER SHOP LIGHTING, PARKING AREAS, PERIMETER LIGHTING, ENTRANCE & WALKWAYS	5000 K	
WSCU-1	TYPE: WALL SCONCE CURVED MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-WS WATTS: 10 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: AVAIL IN SATIN NICKEL OR BRONZE	ARCHITECTURAL INTERIOR	COOL WHITE, 5000 K UPON REQUEST	
WSDC-1	TYPE: WALL SCONCE DOUBLE CONE MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-HGWS WATTS: 10 VOLTS: 120-277 MOUNTING: WALL-MOUNT COLOR: AVAIL IN SATIN NICKEL OR BRONZE	ARCHITECTURAL INTERIOR	COOL WHITE, 5000 K UPON REQUEST	


GENERAL / BUILDING LIGHTING - LED RETROFIT LAMPS				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
E26LED-1	TYPE: E26 LED SCREW-IN MANUFACTURER: ALEDDRA CATALOG No: AAL-7.7WA19-E26-40K WATTS: 8 VOLTS: 120 MOUNTING: E26 SCREW-IN BASE COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	4000 K (5000 K AVAILABLE AS 'MADE TO ORDER')	
T5LED4-1	TYPE: T5 LED RETROFIT LAMP - 4FT MANUFACTURER: ALEDDRA CATALOG No: LLT-4-T5-22-50K WATTS: 28 VOLTS: 120-277 MOUNTING: N/A (RETROFIT FOR EXIST T5 4' LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K	
T8LEDSS2-1	TYPE: T8 LED RETROFIT LAMP W/SAFETY SWITCH - 2FT MANUFACTURER: ALEDDRA CATALOG No: LLT-2-T8-10W-DBA-D-50K WATTS: 10 VOLTS: 110-277 MOUNTING: N/A (RETROFIT FOR EXIST T8 2' LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, DIFFUSED LENS	
T8LEDSS4-1	TYPE: T8 LED RETROFIT LAMP W/SAFETY SWITCH - 4FT MANUFACTURER: ALEDDRA CATALOG No: LLT-4-G-T8-12W-DBA-50K WATTS: 12 VOLTS: 110-277 MOUNTING: N/A (RETROFIT FOR EXIST T8 4' LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K	

T8LEDBB2-1	TYPE: T8 LED RETROFIT LAMP W/BATTERY BACKUP- 2FT MANUFACTURER: ALEDDRA CATALOG No: YSH-T806-Y01-09(G13)5000K WATTS: 9 VOLTS: 100-277 MOUNTING: N/A (RETROFIT FOR EXIST T8 2' LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, required to operate on an always-on circuit in order to keep the battery charged at all time	
T8LEDBB4-1	TYPE: T8 LED RETROFIT LAMP W/BATTERY BACKUP- 4FT MANUFACTURER: ALEDDRA CATALOG No: YSH-T812-Y01-18(G13)5000K WATTS: 18 VOLTS: 100-277 MOUNTING: N/A (RETROFIT FOR EXIST T8 4' LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, required to operate on an always-on circuit in order to keep the battery charged at all time	
ULED2-1	TYPE: U-BEND LED TUBE, 2 FT MANUFACTURER: ALEDDRA CATALOG No: LLT-2U-T8-15W-BA-D-50K WATTS: 15 VOLTS: 120-277 MOUNTING: N/A (RETROFIT FOR EXIST 2' U-BEND LAMP) COLOR: WHITE	BUILDINGS, INTERIOR - CONDITIONED SPACE	5000 K, DIFFUSED LENS	

WALKWAY LIGHTING				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
WT-1	TYPE: WALKWAY LIGHT (TURTLE PROTECTION AREAS) MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: HE-ENV-90W-LED-LFLAMBER-600NM-PS-UNV-ST WATTS: 90 VOLTS: 120-277 MOUNTING: POLE MOUNTED COLOR: BRONZE	WALKWAY LIGHTING	600 NM AMBER	

PARKING LOT LIGHTING				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
PT-1	TYPE: ROADWAY LIGHT (TURTLE PROTECTION AREAS) MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: HE-ENV-180W-LED-LFL-AMBER-600NMPS-UNV-ST WATTS: 180 VOLTS: 120-277 MOUNTING: POLE MOUNTED COLOR: BRONZE	PARKING LOT LIGHTING	600 NM AMBER	

ROADWAY LIGHTING				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
RT-1	TYPE: ROADWAY LIGHT (TURTLE PROTECTION AREAS) MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: HE-ENV-180W-LED-LFL-AMBER-600NMPS-UNV-ST WATTS: 250 VOLTS: 120-277 MOUNTING: POLE MOUNTED COLOR: BRONZE	ROADWAY LIGHTING	600 NM AMBER	

POLES				
MARK	DESCRIPTION	LOCATION	COMMENTS	PICTURE
SQM-1	TYPE: POLE - SQUARE METALLIC MANUFACTURER: ENVIROLUX ENERGY SYSTEMS CATALOG No: EES-SSP SERIES WATTS: N/A VOLTS: N/A MOUNTING: SURFACE MOUNT (TO ANCHOR BOLTS) COLOR: BLACK	WALKWAY, PARKING LOT		

APPENDIX 2-1D – DESIGN SUBMITTAL CONTENT CHECKLIST

Item #	Conceptual Plan Submittal Content Description	Included in Submittal?		
		YES	NO	N/A
1	Tenant Questionnaire			
2	Conceptual Site Plan			
3	AF Form 332			
4	AF Form 103			
5	Completed Responses to Requests for Additional Information (if applicable)			

Item #	Schematic Designs & Plans Submittal Content Description	Included in Submittal?		
		YES	NO	N/A
1	Updated description of parcel use and parcel activities and operations			
2	Schematic Design Drawings (single line drawings)			
a	- Civil Plans (incl. site plan, location of utilities)			
b	- Landscape & Irrigation description			
c	- Architectural Plans (incl. floor plans, rendering of building and ext. improvements with building material info and signage)			
d	- Structural, Fire Protection, Plumbing, Mechanical, Electrical, and Site Lighting descriptions			
3	Applicable Building Rating System Sustainability Checklist and Supporting Documentation (as required)			
4	Completed Responses to Requests for Additional Information (if applicable)			

Item #	Design Development Plans Submittal Content Description	Included in Submittal?		
		YES	NO	N/A
1	Design Development Plan Drawings			
a	- Civil Plans (incl. site plan, location of utilities)			
b	- Landscape Plans (incl. irrigation plan)			
c	- Architectural Plans (incl. floor plans, life safety plans, rendering of building and ext. improvements with building material info and signage)			
d	- Structural Plans			
e	- Fire Protection Plans (incl fire suppression, fire alarm and other life safety systems as required.)			
f	- Plumbing Plans			
g	- Mechanical Plans			
h	- Electrical Plans (incl. exterior lighting plan)			
2	Design Development Specifications			
3	Tenant Developed Permit Package			
a	- Environmental Permit Application			
b	- Documents Required by NASA Record of Environmental Consideration (REC)			
c	- Waste Water Discharge Permit Application			
d	- Air Emissions Permit Application			
e	- Potable Water Permit Application			
f	- Stormwater Discharge Permit Application			
3	Updated Building Rating System Sustainability Checklist and Supporting Documentation (as required)			
4	Completed Responses to Requests for Additional Information (if required)			

Item #	Final/Construction Plans & Specifications Submittal Content Description	Included in Submittal?		
		YES	NO	N/A
1	Final Construction Plan Drawings			
a	- Civil Plans (incl. site plan, utility plans, grading/drainage plans, and details of exterior features i.e.- walks, courtyards, screening, etc.)			
b	- Landscape Plans (incl. irrigation plan)			
c	- Architectural Plans (incl. floor plans,life safety plans, rendering of building and ext. improvements with building material info and signage plan)			
d	- Structural Plans			
e	- Fire Protection Plans (incl fire suppression, fire alarm and other life safety systems as required.)			
f	- Plumbing Plans			
g	- Mechanical Plans			
h	- Electrical Plans (incl. exterior lighting plan)			
2	Construction Plan Specifications			
3	Final Building Rating System Sustainability Checklist and Supporting Documentation (as required)			
4	Completed Responses to Requests for Additional Information (if required)			

NOTE: All USSF and Space Florida reviews of the above submittals are intended for code compliance, life safety, environmental, sitework and lease compliance reasons only.

APPENDIX 2-1E – INSPECTION CHECKLIST



Facility CO Inspection Checklist

Status Date:

1st Floor	Inspection/Request Type	Approval Date	Approved By
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
City of Titusville	Above Ceiling		
City of Titusville	Final Electrical		
City of Titusville	Final Mechanical		
City of Titusville	Final Plumbing		
City of Titusville	Final Building		
City of Titusville	Final Energy		
City of Titusville	Final Accessibility		
Mezzanine Floor	Inspection/Request Type	Approval Date	Approved By
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
City of Titusville	Above Ceiling		
City of Titusville	Final Electrical		
City of Titusville	Final Mechanical		
City of Titusville	Final Plumbing		
City of Titusville	Final Building		
City of Titusville	Final Energy		
City of Titusville	Final Accessibility		
City of Titusville	Final Gas		
2nd Floor	Inspection/Request Type	Approval Date	Approved By
NASA Fire Dept.	Above Ceiling		
NASA Fire Dept.	Final Life Safety		
NASA Fire Dept.	Final Sprinklers		
NASA Fire Dept.	Final Fire Alarm		
City of Titusville	Above Ceiling		
City of Titusville	Final Electrical		
City of Titusville	Final Mechanical		
City of Titusville	Final Plumbing		
City of Titusville	Final Building		
City of Titusville	Final Energy		
City of Titusville	Final Accessibility		

[illegible]

APPENDIX 2-1F – KSC BADGING GUIDLINES

I. Visitor Badge:

- 1 to 29 days
- 2 forms of Government issued ID
- Temporary badge form request

II. Center Specific Local Badge: 30 to 179 days

- Fingerprint
- IdMAX request
- 2 forms of Government issued ID

III. PIV or Long Term Center Specific Local Badge: Over 179 days

- NACI Required (Investigation)
- Fingerprints
- E-QIP account set up with the following information sent to Denise Kenkel by Space Florida Badging Official
 - a. Full Name
 - b. Social Security Number
 - c. Date of Birth
 - d. Place of Birth
 - e. Email address of applicant
- IdMAX request
- Do NOT need to submit a 20-162 as the system will automatically generate it.
- 2 forms of Government issued ID

IV. Foreign Visitor request:

- Foreign visitor IdMax request form
- Scanned colored copy of Passport and/or Visa
- Signed *Certification of Conditions and Responsibilities for Escort of Foreign Nationals on Kennedy Space Center* by PIV Badge holder foreign escort
- Allow 2 weeks for Friendly countries
- Allow 30 days for designated countries

Note: All Kennedy Space Center badges are acknowledged on CCAFS **EXCEPT** Foreign visitor badges.

Visitor Badge – Can only be obtained once. If you request a 29-day badge, countdown will begin immediately Whether the person is on center on those days or not. **Use days wisely!**

Local Badge – This badge is used for anything over 29 days up to 6 months. Used mostly for, but not limited to construction workers, vendors, or consultants needing more than 29 days on Center.

Long Term Center Specific Local badge – Anything longer than 179 days up to the duration of the contract. This badge is used only for Kennedy Space Center/CCAFS and will require an investigation.

PIV Badge - Anything longer than 179 days up to the duration of the contract. This badge is recognized for **ALL** NASA centers. PIV badge holders are also eligible to be foreign visitor escort permitted that the training is taken.

Foreign Visitor Badge – All persons that are not US Citizens and are cleared through NASA Security Specialist/International Visitor Coordinator. Duration of badge is contingent on NASA.

APPENDIX 2-1G – KSC DESIGN & CONSTRUCTION CHECKLIST

PROJECT NAME:				Status Key	
PERMIT: S000.0				Complete or N/A	
PHASE: Pre-Construction, Construction, Post-Construction				Submitted, Review Process in Progress	
STATUS DATE:				Has not been submitted yet	
PRE-APPLICATION MEETING:					
Type	Item #		Status	Notes	
		Permit Issued Date:			
Design Phase Permits & Approvals					
KSC/USSF	1	Tenant Sublease	Required		
	2	Tenant/Development Concurrence on Federal Property (NASA/USSF)	Required		
	3	Sustainability Standards (Examples: LEED, FGBC, NASA Form 1509, 1510)	Required		
	4	Environmental Documents (NASA Checklist 21-608/AF 813 Request for Environmental Impact Analysis)	Required		
	5	KSC Site Plan Approval / AF Form 332 Base Civil Engineering Work Request	Required		
Env. Regulatory	6	St. Johns River Water Management District Environmental Resource Permit	Required		
	7	USACE Dredge and Fill Permit	Required		
	8	FDEP Water / Wastewater Construction Permit			
SF Auth	9	Architectural Review Committee (ARC) / Sustainability (<i>not applicable at CCSFS</i>)	Required		
	10	Florida Building Code Concurrence (typically 30 days per review)	Required		
	11	KSC/CCAFS Life Safety & AHJ Concurrence (typically 30 days per review)	Required		
	12	Space Florida Approved Drawings (allow 30 Calendar days per review)	Required	For Space Florida to issue a permit, Items 1-12 must be complete if applicable. A pre-construction meeting must also take place prior to issuance of permit and start of work.	
	Design Drawing Submittals				
	13	Concept	Required		
	14	Final (100%) Drawings Signed & Sealed	Required		
Pre-Construction Phase Permits & Submittals					
Permits	15	KSC Excavation Permit or CCSFS Form AF 103 Dig Permit (and include AF Form 332)	Required		
	16	Burn Permit/USFWS			
	17	Department of Navy/Naval Ordnance Test Unit (NOTU) (<i>not applicable at KSC</i>)			
	18	USAF 45th Airfield Construction Waiver (<i>not applicable at KSC</i>)			
	19	FAA 7460 Obstruction Notice of Actual Construction or Alteration	Required		
Env. Regulatory	20	Environmental Documents (KSC Record of Environmental Consideration (REC) and other documents: LOM, EA, FONSI, EIS, etc./AF813 Request for Environmental Impact Analysis)	Required		
	21	FDEP NPDES NOI	Required		
	22	Notice of Commencement to applicable agencies including: FDEP Water, FDEP Wastewater, SJRWMD, & USACE	Required		

PROJECT NAME:				Status Key	
PERMIT: S000.0				Complete or N/A	
PHASE: Pre-Construction, Construction, Post-Construction				Submitted, Review Process in Progress	
STATUS DATE:				Has not been submitted yet	
PRE-APPLICATION MEETING:					
Legal	23	Insurance	Required		
	24	Payment & Performance Bonds (Requires SF to complete Notice of Commencement to be filed by the Contractor at Brevard Clerk of Courts)	Required		
Work Plan	25	Work Plan - Items A-F can be combined into one package if desired.	Required		
	A	Construction Utilization Layout (trailers, temp utilities, tanks, equipment, laydown, MOT...)	Required		
	B	Health and Safety Plan	Required		
	C	Hurricane Preparedness Plan			
	D	Deferred Submittals Anticipated	Required		
	E	Quality Control Plan	Required		
	F	Contractor Key Personnel Contact Information	Required		
	G	Construction Schedule	Required		
SF Auth	26	Pre-construction meeting with SF and any approving agencies	Required		
	27	Space Florida Notice to Proceed (NTP)	Required		
Construction Phase Inspections & Approvals					
SF Auth	28	Space Florida Building Department Stamped Plan Set (kept at job site)	Required		
	29	Fire Protection Plan, including Life Safety	Required		
	30	Lighting Plan	Required		
	31	Material Testing and Reporting Documents	Required		
	32	Additional Construction Submittals TBD:	Required		
Final Construction Documents and Approvals					
SF Auth	33	Final Certification of Material	Required		
	34	Final As-Built Plans / Signed and Sealed	Required		
	35	Sustainability Certification or rating verification	Required		
	36	Florida Building Code CO Recommendation	Required	FBC Final Inspection required and Letter of Recommendation for CO.	
	37	NASA/CCSFS Life Safety & Fire Protection CO	Required	AHJ or approved 3rd Party Final Inspection required and CO for Life Safety and Fire Protection only.	
	38	SF Final CO	Required	Space Florida Building Department Final Inspection and acceptable completion of Items 32 and 33.	

SPACE FLORIDA



Cape Canaveral Spaceport Development Manual

VOLUME 2

KENNEDY SPACE CENTER

CHAPTER 2 LAUNCH & LANDING FACILITY

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SECTION 1 – INTRODUCTION

1.1 Introduction

Refer to Volume 1 Cape Canaveral Spaceport Chapter 1 Overview for general information on development within CCS. Refer to Volume 2 Kennedy Space Center Chapter 1 General Requirements for information associated with development within the confines of KSC.

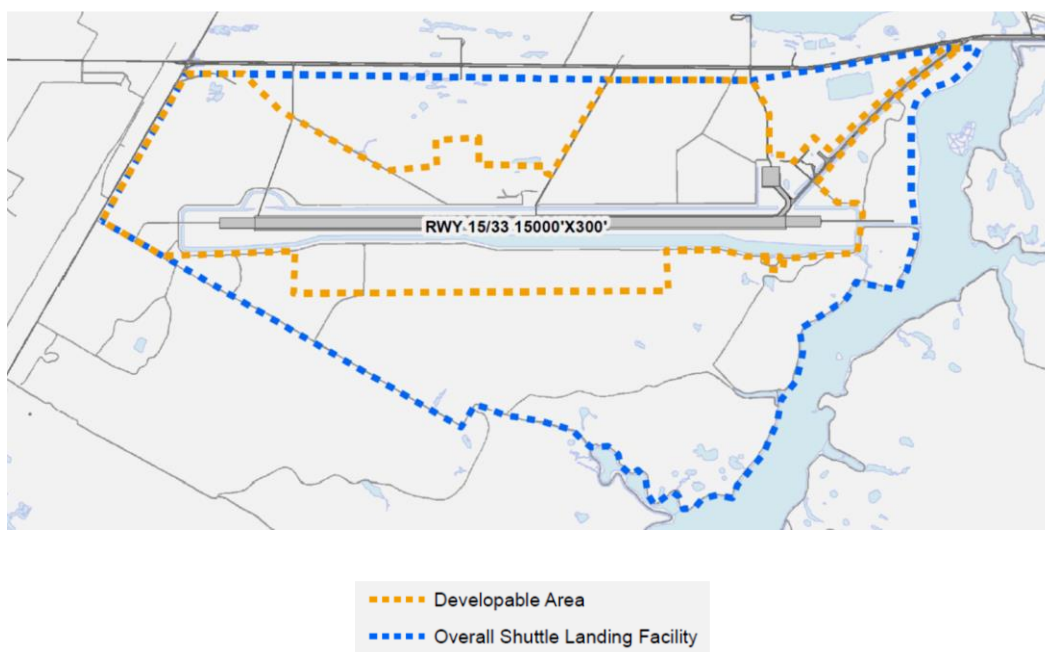
The Development Standards establish general criteria to be used in directing future building placement and design, and site design as the CCS Launch & Landing Facility (LLF) Development Concept is implemented. Refer to Appendix 2-3A for the LLF Development Concept Plan.

Potential Space Florida (SF) Tenants can request to review the agreement between SF and NASA titled, “KCA-4412 *The Property Agreement between the National Aeronautics and Space Administration John F Kennedy Space Center and Space Florida for the Transfer of Operations and management of the Shuttle Landing Facility*”, dated June 22, 2015 from SF, herein referred to as the Agreement.

1.2 LLF Area Overview and Description

The land area that has been transferred to SF’s management and development responsibility encompasses approximately 4,432 acres as shown in Figure 1 below. This includes the runway and associated support facilities used during NASA’s Space Shuttle Program and a defined area of about 2,077 acres available for future development. The LLF was granted a Launch Site Operator License (LSOL) from the Federal Aviation Administration Office of Commercial Space Transportation (FAA AST) in November 2018 and a Reentry Site Operator License (RSOL) in February 2021. The LLF is registered as a Private Florida Airport with the FDOT.

Figure 1: LLF Property Area



SECTION 2 – PROCESSES

2.1 LLF Project Type, Permitted Uses, and Prohibited Users

All SF Tenants shall adhere to the following project types, permitted uses, and prohibited uses as mandated by the Agreement.

2.1.1. Project Types

Facilities designed, developed, funded, or constructed only by SF shall be referred to as "Space Florida Projects (SF Projects)." All other construction projects shall be referred to as Tenant Projects (TP).

2.1.2. Permitted Uses

The following Commercial Space Activities (CSA) are permitted at the LLF consistent with current applicable laws.

1. Processing, flight, and refurbishment of commercial and Government suborbital and orbital launch systems requiring horizontal takeoff and/or recovery;
2. Processing and integration, and/or recovery and storage, of space mission payloads requiring use of permitted flight systems;
3. Advanced aerospace vehicle flight testing and operations, including Unmanned Aerial Systems (UAS) and spaceflight training or development-related experimental aircraft;
4. Commercial and Government spaceflight or aerospace research mission support aviation operations;
5. Commercial and Government mission management and program support aircraft operations;
6. Chartered air service, including passenger aircraft associated directly with CSA;
7. Spaceflight vehicle or payload hardware delivery cargo aircraft operations;
8. Other cargo operations supporting the CSA or other activities at KSC or Cape Canaveral Space Force Station (CCSFS);
9. Aviation flight test and development;
10. Advance air traffic or space traffic management systems development and testing, including but not limited to development of systems and technologies to integrate UAS and commercial space transportation into the National Air Space (NAS) system;
11. Straight line aerodynamic and engine technology vehicle testing;
12. Related manufacturing, assembly, and storage of materials, components, and flight or ground support equipment;
13. Related warehousing and logistics;
14. Related development, construction, and operation of common area improvements (e.g., aprons, taxiways, fuel and commodity storage areas, and space launch vehicle preparation areas);
15. Related development, construction, and operation of user parking areas, offices and support facilities, visitor facilities including but not limited to those designed for tourism (e.g., flight viewing and educational exhibits);
16. Related administrative, operations, and support facilities; and,
17. High energy systems research, development, and testing.

All Tenants, and use of the LLF, are subject to the approval of both SF and NASA. The enumerated CSA are intended to operate as specific guidelines on the types of activities that SF and NASA consider desirable and are not intended to operate as a limitation on SF and NASA's right to approve or disapprove other uses, occupancies, or activities at the LLF.

2.1.3. LLF Prohibited Uses

The following are not permitted at the LLF:

1. General Aviation businesses;
2. Scheduled passenger air service (except for chartered passenger air service as described above); and,
3. Industrial manufacturing unrelated to space transportation, aerospace flight systems, or space mission payloads.

SECTION 3 – DESIGN STANDARDS

3.1. FAA Licensing

SF obtained an LSOL and an RSOL for the operation of the LLF in support of commercial space transportation activities which may contain additional requirements established by the FAA. All infrastructure development projects shall comply with the requirements of the LSOL and RSOL.

In addition, Tenants and users of the LLF planning to engage in commercial spaceflight operations will be required to obtain the appropriate FAA AST license and/or permit. The FAA AST issues a commercial launch operator license or experimental permit when it is determined that a launch or reentry proposal to test equipment, design or operating techniques will not jeopardize public health and safety, property, U.S. national security or foreign policy interests, or international obligations of the United States. Each launch operator shall obtain a commercial launch operator's license from the FAA AST in accordance with CFR Title 14 Chapter III Parts 415/417, 431 and 435. The Streamlined Launch and Reentry License Requirements shall comply with CFR Title 14 Chapter III Part 430. These standards and licensing guidance are available from the FAA AST and may be obtained from the FAA website: <https://www.faa.gov/space/licenses>

3.2. Airfield Design

All airfield infrastructure improvements for runway, aprons and taxiways shall be in accordance with the latest edition of the applicable FAA Advisory Circulars identified in Table 1. As necessary, SF and Tenant shall utilize additional FAA Advisory Circulars/ standards associated with airfield planning, operations, maintenance and infrastructure development that can be downloaded from the FAA website: http://www.faa.gov/regulations_policies/advisory_circulars/

Table 1: Airport Design Guidelines

Advisory Circular*	Title
150/5300-13B	Airport Design
150/5370-10H	Standards for Specifying Construction of Airports
150/5320-6G	Airport Pavement Design and Evaluation
150/5340-1M	Standards for Airport Markings
150/5340-18G	Standards for Airport Sign Systems
FAA 150/5340-30J	Design and Installation Details for Airport Visual Aids
150/5370-2G	Operational Safety on Airports During Construction
150/5345-46E	Specification for Runway and Taxiway Light Fixtures
	Document Information

** Latest edition at time of design should be used.*

3.3. Architectural

3.3.1. Building Height and Setbacks

Building heights are limited to Line-of-Sight requirements associated with the Air Traffic Control Tower (ATCT) and airfield safety surfaces as defined under FAR part 77. Tenant shall provide its ATCT Line-of-Sight study and FAR Part 77 documentation for proposed building as required by SF.

Building setbacks shall meet the following minimum distances:

- a) Runway Centerline: 1,500 feet
- b) Taxiway Centerline: Aircraft Design Group VI Object Free Area as defined in FAA Advisory Circular 150/5300-13 Airport Design (Latest Edition)
- c) Lease/property line: 25 feet (Note: Building Code separations may supersede).

3.3.2. Glare

It is imperative that all structures be glare controlled. Inherently high reflective materials, such as glass veneered curtain walls, shall not be used as a major building element. It is preferable to use non-reflective bronze glass as opposed to highly reflective silver or gold glass. All high sheen materials such as aluminum or stainless-steel panels must be coated or clad with light-absorbing finish. Light colored aggregates on roofs are acceptable. Designers should review FAA requirements prior to final design.

3.4. Utility Demarcations

SF and SF Tenant shall be responsible to coordinate all utility demarcations and additional demarcations can be negotiated in the tenant agreement. Appendix 2-2B LLF Demarcation Plans identifies the existing demarcations specified in the Agreement.

3.5. NASA Standard for Grounding

The latest edition of the NASA Procedural Requirement KSC-STD-E-0012, applies for Facility Grounding and Lightning Protection if facility presents an explosive hazard to NASA facilities or personnel or can impact NASA mission related operations. For more information on NASA Standards and procedural requirements, please reference Volume 2, Chapter 1.

SECTION 4 – LLF OPERATIONS RELATED STANDARDS

4.1 Flight Safety Compliance

SF shall follow a tailored version of NPR 8715.5, Range Flight Safety Program Requirements (RFSPR). The tailoring process shall be where SF and NASA S&MA review and jointly document applicable requirements and responsibilities for LLF operations based on the terms below:

- a) All FAA Licensed Commercial Launch Operations shall be conducted in accordance with KCA-4394 Memorandum of Understanding (MOU) between 45th Space Wing and NASA on Enabling Range Flight Safety Services for FAA Licensed Launch Operations from KSC.
- b) SF will be responsible for ensuring risk analysis is performed for all flight activities occurring at the LLF (excluding conventional piloted aircraft). SF shall provide the risk analysis and NASA facility impact probabilities to NASA for Class C and D activities as defined in Exhibit H.
- c) NASA will be responsible for reviewing and verifying all provided data, and verifying all risk to NASA personnel and property is acceptable. NASA shall provide the results of their analysis to SF. Flight activities will not occur for Class C and D activity (as defined in Exhibit H), until NASA has deemed the risk to NASA personnel and property is acceptable.

4.2 Environmental Compliance and Reporting

4.2.1 Definitions

- a) **Hazardous Material:** any substance that is (a) defined under any Environmental Law (as defined below) as a hazardous substance, hazardous waste, hazardous material, pollutant, or contaminant; (b) a petroleum hydrocarbon, including crude oil or any fraction or mixture thereof; (c) hazardous, toxic, corrosive, flammable, explosive, infectious, radioactive, carcinogenic, or a reproductive toxicant; or (d) otherwise regulated pursuant to any Environmental Law.
- b) **Environmental Law:** all Federal, State, and local laws, statutes, ordinances, regulations, rules, judicial and administrative orders and decrees, permits, licenses, approvals, authorizations, and similar requirements of all Federal, State, and local governmental agencies (including NASA) or other governmental authorities pertaining to the protection of human health and safety or the environment, now existing or later adopted.
- c) **Agreement Activities:** the activities that are part of the ordinary course of SF's business in accordance with the Permitted Uses.
- d) **Materials:** the materials handled, used, or stored in the ordinary course of conducting Agreement Activities.

- e) **Permit Applications:** permit application forms and supporting documentation, Notice of Intent forms and supporting documentation, registration forms, license forms, or other regulatory approval requests.

4.2.2 Environmental Baseline Survey (EBS)

An EBS dated February 28, 2014 has been prepared for the LLF and represents environmental conditions and matters affecting the LLF as of June 22, 2015. Any potential soil or water contamination not identified in the EBS shall be immediately reported to SF. The EBS can be requested from the SF Environmental Manager.

Upon vacating a facility or lease area, the Tenant shall prepare an updated EBS for that facility or lease area to set forth the environmental conditions and matters affecting LLF at the time of the vacation. The updated EBS shall be submitted to SF for approval and acknowledgement by NASA. Sampling of soil and/or surface and ground water may be required to verify environmental conditions. The Tenant shall be liable for and required to remedy any environmental conditions and matters affecting the LLF that are found to be a result of the Tenant's activities.

4.2.3 General Compliance

All operations, activities, equipment, and facilities shall be in compliance with all Federal, State of Florida, and local environmental laws, statutes, regulations, and ordinances. Tenant shall be solely responsible for compliance with aforementioned environmental regulatory requirements including environmental permits. If formal enforcement actions are taken against SF/NASA for environmental violations due to Tenant actions or inactions, Tenant shall reimburse SF/NASA for any fines or penalties.

4.2.4 Historical and Cultural Resources

The LLF has been deemed eligible for listing on the National Registry of Historic Places (NRHP). Prior to any modifications, repairs, improvements, alterations, the undertaking must be coordinated with SF/NASA using the NASA EC process, for evaluation to determine if the proposed project will have an adverse effect to the historic properties under the National Historic Preservation Act (NHPA), implementing regulations (36 CFR Part 800, Protection of Historic Properties), or Programmatic Agreement (PA) for Management of Historic Properties at KSC (KCA-4185). If an adverse effect is determined by SF/NASA, SF/NASA shall identify the effect of the activity on the historic property and consult with State Historic Preservation Office (SHPO) as appropriate in accordance with the PA. Any adverse effect determination may take up to three (3) to six (6) months depending on the complexity of the project.

The Tenant shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archaeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity. In the event such items are discovered at the LLF, the Tenant shall cease its activities at the site, immediately notify SF, and protect the site and material from further disturbance until SF/NASA give clearance to proceed. Any costs resulting from this delay shall be the responsibility of Tenant.

4.2.5 Waste Management and Disposal

All wastes generated by the Tenant shall be properly containerized, stored, labeled, manifested, shipped, and disposed of by the Tenant in full regulatory compliance at the Tenant's expense. Hazardous wastes generated by the Tenant shall be manifested, shipped, and disposed of under the Tenant U. S. Environmental Protection Agency (USEPA) hazardous waste generator identification number.

4.2.6 Spill Reporting and Cleanup

Tenant shall take measures to prevent the release of hazardous materials at, about, or beneath LLF facilities. The liability of the Tenant under this section shall survive the termination of its lease with respect to acts or omissions that occur before such termination.

4.2.6.1 Spill Reporting and Notifications

Tenant shall immediately report spills, releases, or emissions of hazardous materials that exceed a Reportable Quantity to SF and the following entities:

- a. NASA emergency responders by calling (321) 867-7911;
- b. Off-site agencies or authorities (such as the National Response Center, Florida State Watch Office, and Florida Department of Environmental Protection) as required by Federal and State of Florida regulations; and,
- c. NASA EAB by calling (321) 867-9005.

Reportable Quantities for hazardous materials are defined by various federal and State of Florida regulations such as, but not limited to, 40 CFR Part 302, 40 CFR Part 355, 49 CFR Parts 171-180, Florida Administrative Code (FAC) Chapter 62-150, and FAC Chapter 62-770.

Tenant shall also immediately report any spill or release of hazardous materials (regardless of quantity) to pervious surfaces or environmental media (such as grass, soil, groundwater, surface water, sediment, and gravel) to SF and the NASA EAB by calling (321) 867-9005.

Pavement with unsealed cracks or expansion joints can be considered pervious surfaces if hazardous materials can migrate to environmental media below. A spill to impervious surface that is not adequately cleaned up within a reasonable timeframe (not to exceed six (6) hours) or prior to a storm event is considered a spill to pervious surface for purposes of this section.

Whenever Tenant is required to report a spill or release to SF and NASA, Tenant shall also complete a written NASA Pollution Incident Report (KSC Form 21-555) and submit it to SF and the NASA EAB within three (3) calendar days after the incident or discovery.

4.2.6.2 Spill Cleanup

Tenant shall clean up all spills regardless of media impacted and quantity spilled. Tenant has the discretion to utilize their own spill cleanup capability or to request support (via the emergency operator) from the NASA spill team to clean up the spill. Whenever the NASA

spill team responds to a spill, Tenant shall either reimburse NASA for those costs or establish a support agreement directly with the NASA spill team company. Tenant shall be responsible for shipment and disposal of all cleanup waste and contaminated environmental media as described in Waste Management and Disposal.

All spills and releases to pervious surfaces or environmental media (such as grass, soil, groundwater, surface water, sediment, and gravel) shall be cleaned up to State of Florida residential standards unless approved in writing by SF and the NASA EAB. After the cleanup action has been completed, Tenant shall prepare a written cleanup report (which includes a description of the corrective actions taken, a map showing the spill location, general dimensions of the affected area using Global Positioning System (GPS) coordinates, photos of the spill before and after cleanup, and confirmatory sampling results providing evidence of adequate cleanup). For cleanup actions completed during a calendar quarter, Tenant shall deliver cleanup reports to SF no later than the end of the following calendar quarter.

4.2.7 Spill Prevention, Control, and Countermeasures (SPCC)

The LLF has a facility wide SPCC plan. Tenant shall comply with applicable oil pollution prevention regulations under Title 40 Chapter 1 Subchapter D Part 112 of the CFR. If required, Tenant shall develop, maintain, and implement a SPCC plan for its oil storage activities. Tenant shall coordinate with LLF in updating the facility wide SPCC plan.

4.2.8 Registered Petroleum Storage Tank System

Tenant shall comply with applicable petroleum storage tank system regulations (FAC Chapters 62-761 and 62-762). For new petroleum storage tank systems, Tenant shall register the system with the Florida Department of Environmental Protection (FDEP) and arrange for required installation inspections with the Brevard County Natural Resource Management Office prior to putting the tank system into service. If control and operation of an existing registered petroleum storage tank system is being transferred as a part of the facilities involved in the lease agreement, Tenant shall transfer the registration from SF to Tenant and become responsible for maintaining compliance. Tenant shall provide a copy of all storage tanks registration forms to SF and the NASA.

4.2.9 Sanitary Sewer Discharges

The domestic wastewater system and treatment is operated and maintained by NASA, but any new extensions are SF's responsibility to own and maintain. Wastewater collection from Tenant/lease holder facilities is the responsibility of the Tenant from the facility to a designated demarcation point from which NASA assumes responsibility.

Prior to discharging any non-domestic wastewater into the sanitary sewer system, Tenant shall obtain a written discharge approval from SF and both the NASA domestic wastewater collection/transmission system operator and the CCAFS domestic wastewater treatment plant operator. Costs associated with obtaining a written discharge approval shall be on a reimbursable basis to NASA. Otherwise the wastewater must be containerized and shipped to an off-site treatment or disposal facility.

4.2.10 Recordkeeping

Tenant shall maintain copies of all required environmental permits, licenses, registrations, regulatory approvals, waste manifests, laboratory analyses, reports, plans, compliance records, NASA ECs, and regulatory notifications on-site and make them available for review by SF upon request.

4.2.11 NASA Compliance Oversight

As the landowner, NASA has a responsibility to ensure that the Tenant is complying with environmental laws and regulations. NASA and SF shall participate in periodic environmental audits of LLF operations to exchange information; review current and future LLF activities; confirm compliance with environmental regulations and permits; review environmental spills and remediation progress; discuss regulatory agency inspections and findings; coordinate on air permitting; etc. In addition, SF Tenants shall allow NASA personnel access to conduct spot inspections of Tenants facilities, systems, compliance records, or wastes if NASA personnel have reason to believe that a potential environmental non-compliance situation exists or that an unpermitted spill or release to the environment has occurred. Tenant shall attend all spot inspections of their facilities and provide corrective action responses for all identified violations, findings, and deficiencies by the due date in the inspection letter. Tenant shall be responsible for immediately correcting all violations, findings, and deficiencies identified in the inspection letter at Tenant's expense.

4.2.12 Other Agency Inspections

Tenant/lease holders shall report findings of all other regulatory agency inspections or audits, including, but not limited to EPA, FDEP, Brevard County Natural Resources, etc. Additionally, any notices of violation must be reported to SF and cured as soon as practicable.

4.2.13 Environmental Land Management

The land surrounding the LLF is part of the Merritt Island National Wildlife Refuge (MINWR). The U. S. Fish & Wildlife Service (USFWS) perform habitat management per a long-standing interagency agreement (KCA 1649 rev B) between NASA and the USFWS. The USFWS conducts prescriptive burns to effectively maintain and enhance wildlife habitat and reduce the occurrence and severity of wildfires. The USFWS has primary responsibility for wildfire suppression on KSC. Prescribed burn approval shall be coordinated with NASA under established procedures, with notification to SF and its Tenants of scheduled burns within the LLF lands. A list of LLF fire management units scheduled for prescribed burning shall be provided to NASA and SF each calendar year. Prescribed burns shall be conducted under specific conditions to avoid impacts to the LLF. Additionally, the USFWS is responsible for treatment and removal of non-native invasive plants and animals on refuge lands. MINWR shall continue to provide nuisance wildlife response within the LLF boundary.

4.3 Licensing, Airfield Operations and Management

All space vehicle launch and reentry operators and individual launch operations shall be licensed by the FAA. Copies of all FAA licenses shall be provided to SF prior to any launch or reentry operations.

4.4 Hazardous Material, Fuel, and Propellant Storage

Storage of hazardous materials, fuel and propellants shall be in accordance with all Federal and State regulations and applicable codes and as approved by SF.

Proposed propellant storage shall be accompanied by an Explosive Site Plan (ESP) with appropriate Quantity-Distance (QD) calculations in accordance with FAA AST. The ESP will be subject to review and approval of the FAA AST and NASA KSC. Proposed propellant storage shall not adversely impact any other Tenant or operations at the LLF.

4.5 Explosive Siting and Range Safety

Explosive siting shall be in accordance with FAA AST and NASA KSC Standards. The approval process of Explosive Siting will include a combination of SF, FAA AST, and NASA KSC as applicable.

APPENDICES

2-2A – LLF EXHIBITS

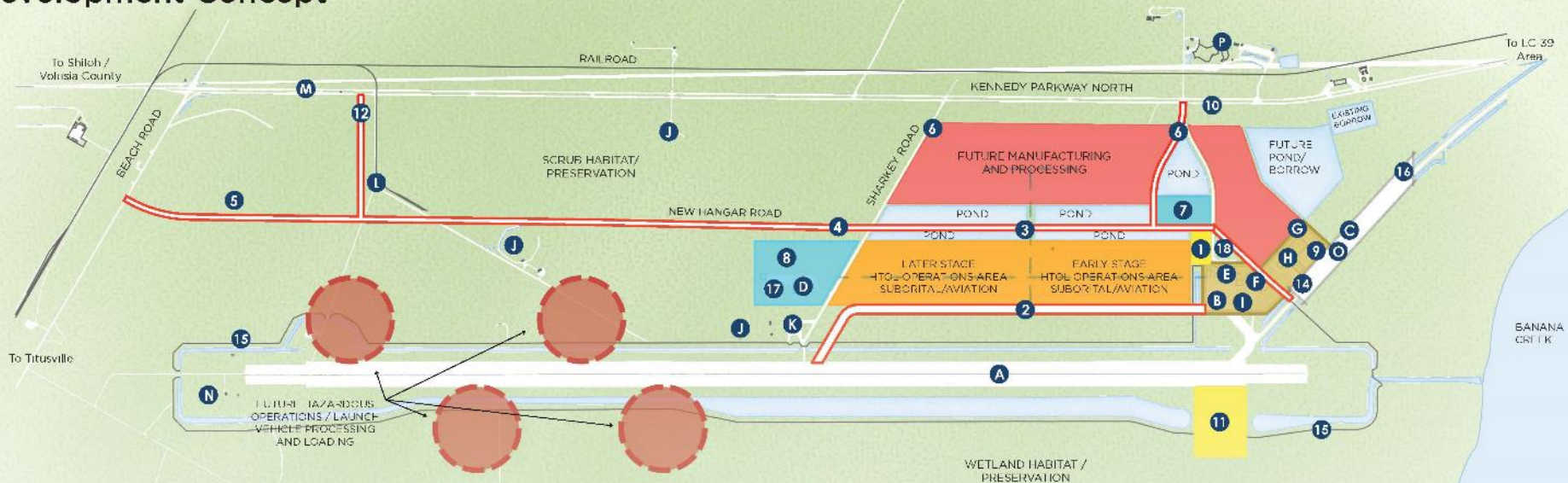
2-2B – LLF DEMARCATION PLANS

APPENDIX 2-2A – LLF EXHIBITS

1. LLF Development Concept (Master Plan)
2. LLF Overall Block Layout
3. LLF Overall Conceptual Layout
4. LLF Overall Layout Plan
5. LLF Mid-Field Layout Plan
6. LLF South-Field Layout Plan
7. LLF Boundary Survey and Description
8. LLF Developable Area Lease Description

Shuttle Landing Facility (SLF) Development Concept

Space Florida Concept Plan



Existing Facilities and Infrastructure

- A Runway - 15,000' x 300' (concrete)
- B Apron - 480' x 540' (concrete)
- C Taxiway (Towway) to LC-39 Area (concrete)
- D Air Traffic Control Tower / Media Operations Building
- E Flight Operations Building and Parking Area
- F Fire Station (ARFF)
- G RLV Hangar (Space Florida asset)
- H Convoy Vehicle Enclosure (equipment storage)
- I Covered Equipment Storage
- J Weather / Radar Sites Operated by Others
- K Equipment Parking and Weather Instrumentation
- L Railroad Service
- M Security Gate
- N Vertical Landing Test Facility (to be removed by others)
- O Security Gate
- P KSC Visitor Complex Tour Stop

Capital Improvement Projects

- 1 Fuel Farm
- 2 Taxiway Extension
- 3 Southfield Roadway / Utility / Railroad / Drainage Corridor
- 4 Midfield Roadway / Utility / Railroad / Drainage Corridor
- 5 Northfield Roadway / Utility / Railroad / Drainage Corridor
- 6 Entry Feature / Roadway
- 7 Administrative / Guest Area
- 8 Guest Viewing and Parking Area
- 9 Operations Hangar (renovate Convoy Vehicle Enclosure)
- 10 Security Gate (notional)
- 11 Propellant and Fuel Loading Area
- 12 Existing Road Improvements
- 13 Off-site Wetlands Mitigation / Preservation (not shown)
- 14 Taxiway (Towway) Widening to RLV Hangar
- 15 Airfield Security Fencing
- 16 Suborbital Rocket Test Stand
- 17 New Flight Operations Facility
- 18 Maintenance & Storage Facility

MAP LEGEND

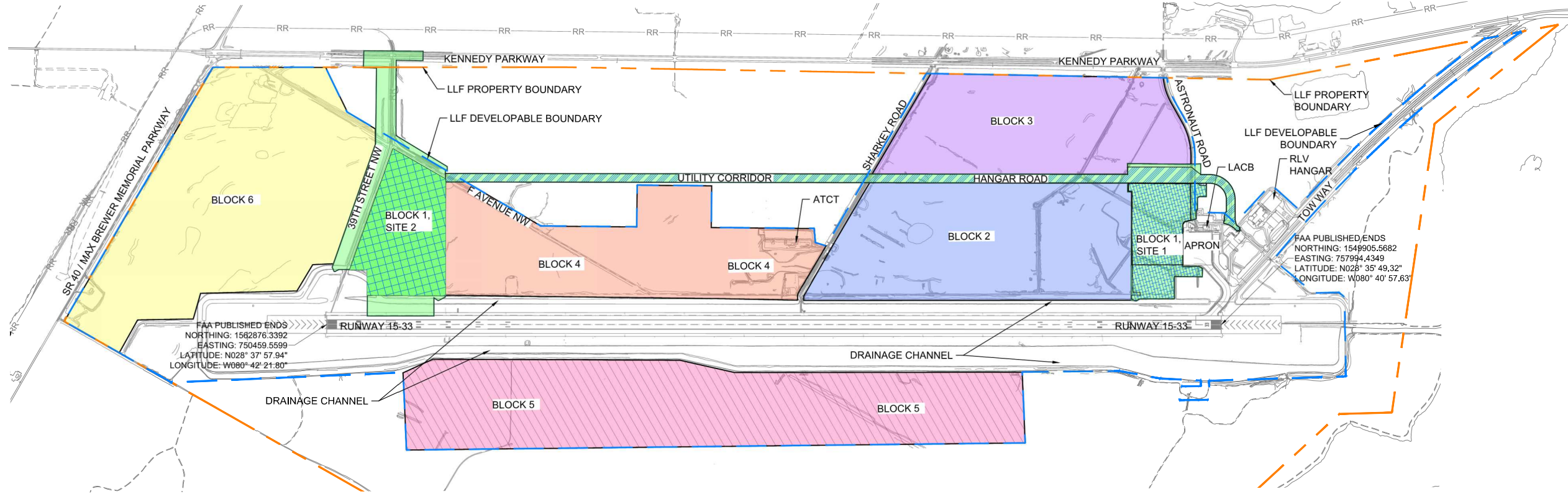
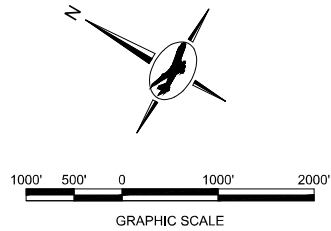
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- Suborbital/Specialized Aviation
- Existing Operations
- Operations/Guest
- Fueling
- Pavement - Airfield and Roads
- Hazardous Operations/ Launch Vehicle Processing

Cape Canaveral Spaceport Horizontal Launch & Landing Facility



Space Transportation and
Technologies Support Systems

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BLOCK 1, SITE 2	45.0
BLOCK 2	221.3
BLOCK 3	173.5
BLOCK 4	203.4
BLOCK 5	319.9
BLOCK 6	319.1

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	BLOCK 1 BOUNDARY, OVERALL
	BLOCK 1, SITE 1 DEVELOPABLE AREA
	BLOCK 1, HANGAR ROAD / UTILITY CORRIDOR
	BLOCK 1, SITE 2 DEVELOPABLE AREA
	BLOCK 2 BOUNDARY
	BLOCK 3 BOUNDARY
	BLOCK 4 BOUNDARY
	BLOCK 5 BOUNDARY
	BLOCK 6 BOUNDARY

SPACE FLORIDA



AECOM

AECOM TECHNICAL SERVICES, INC.
7650 W. COURTNEY CAMPBELL
CAUSEWAY
TAMPA, FLORIDA 33607

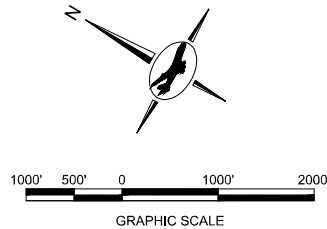
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DATE
12/16/2022

PROJECT NAME
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FACILITY BLOCKS 1
THROUGH 6
DEVELOPMENT AREAS

SHEET TITLE
OVERALL BLOCK
LAYOUT

EXHIBIT NO.
1



CONCEPT
NOT FOR CONSTRUCTION

DATE

12/16/2022

PROJECT NAME

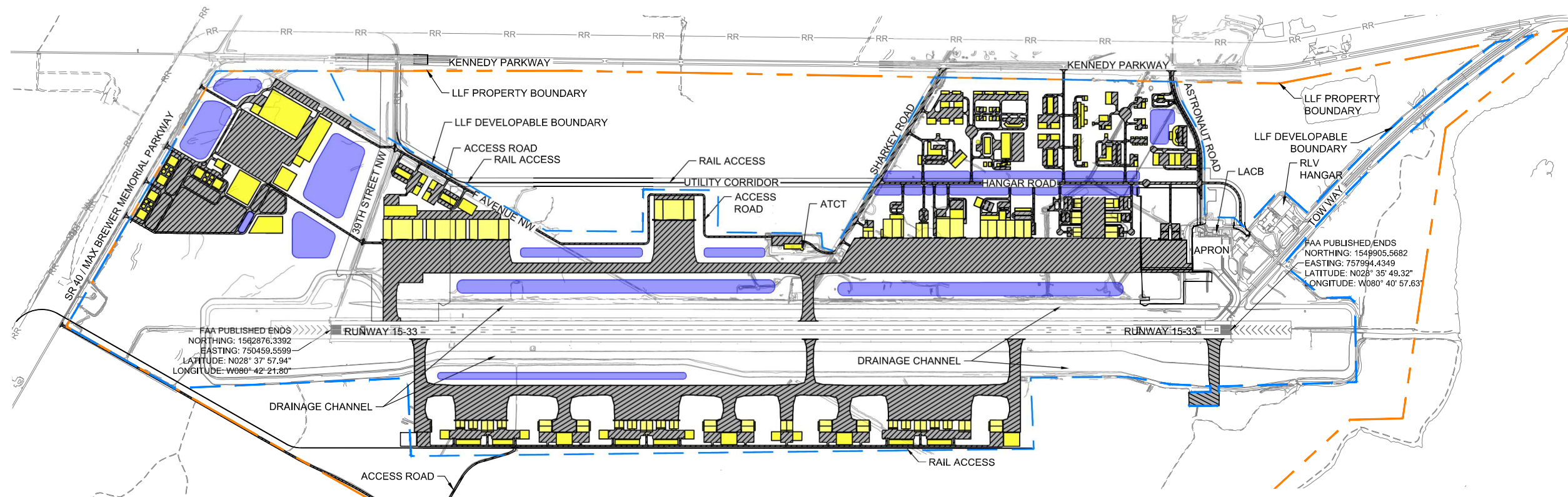
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THROUGH 6
DEVELOPMENT AREAS

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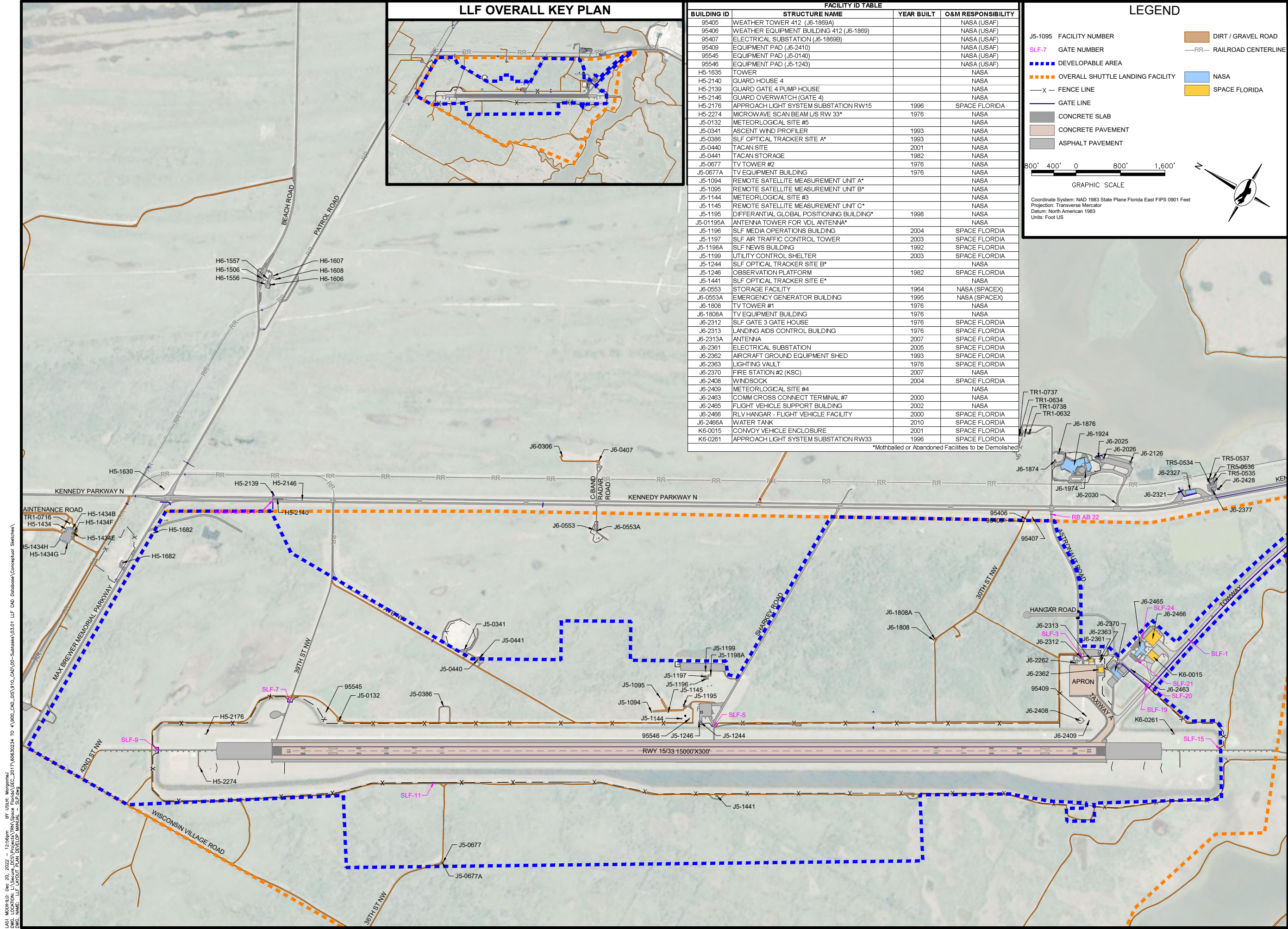
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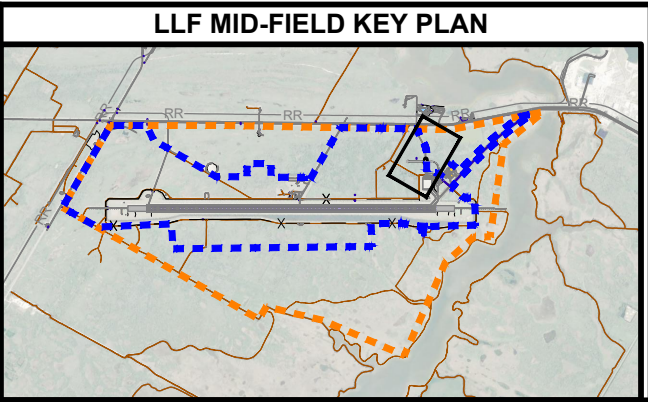
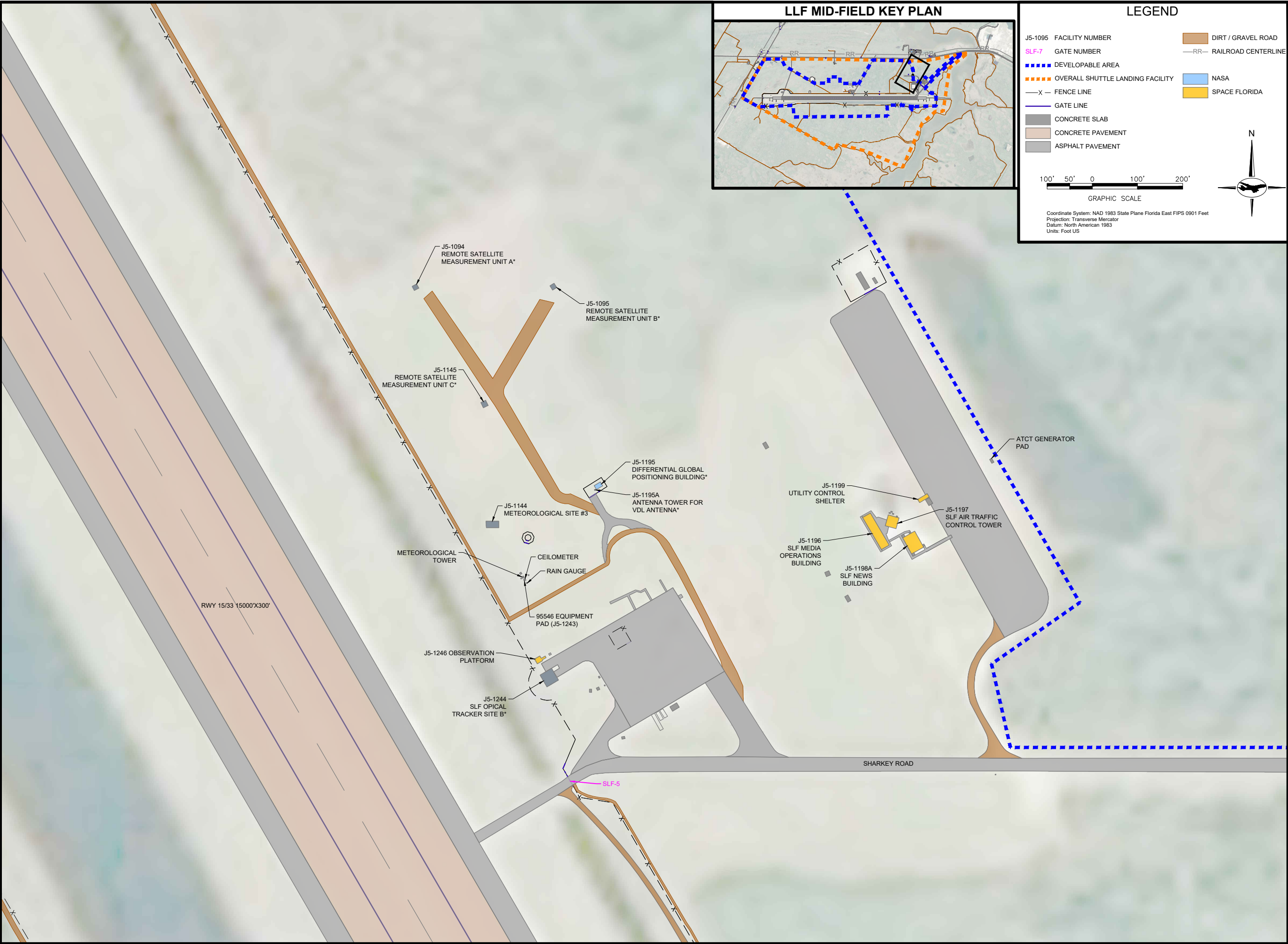
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- LLF OVERALL BOUNDARY
- PAVEMENT
- BUILDINGS
- WET RETENTION PONDS



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SLF-7	GATE NUMBER		RAILROAD CENTERLINE
	DEVELOPABLE AREA		NASA
	OVERALL SHUTTLE LANDING FACILITY		SPACE FLORIDA
	FENCE LINE		
	GATE LINE		
	CONCRETE SLAB		
	CONCRETE PAVEMENT		
	ASPHALT PAVEMENT		

100' 50' 0 100' 200'

GRAPHIC SCALE

Coordinate System: NAD 1983 State Plane Florida East FIPS 0901 Feet
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

N

SPACE FLORIDA

AECOM

AECOM TECHNICAL SERVICES, INC.
7650 W. COURTNEY CAMPBELL
CAUSEWAY
TAMPA, FLORIDA 33607

CONCEPT
NOT FOR CONSTRUCTION

DATE

DECEMBER 20, 2022

PROJECT NAME

LAUNCH AND LANDING FACILITY

SHEET TITLE

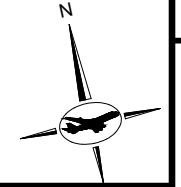
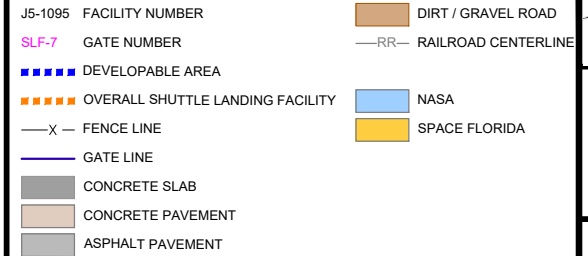
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2 OF 3

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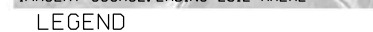
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A TRACT OR PARCEL OF LAND LYING WITHIN THE BOUNDARY OF THE JOHN F. KENNEDY SPACE CENTER, AS DESCRIBED IN OFFICIAL RECORDS BOOK 1075, AT PAGE 131 AND 132 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA AND BEING MORE FULLY DESCRIBED AS FOLLOWS:

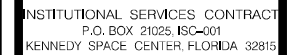
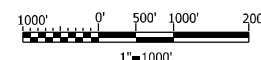
CONTAINING 4432.70 ACRES MORE OR LESS.
SUBJECT TO ANY AGREEMENTS, EASEMENTS OR RESTRICTIONS OF RECORD.

1. MAP COORDINATES REFER TO THE FLORIDA STATE PLANE COORDINATE SYSTEM AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983. PER 1990 ADJUSTMENT.
2. BEARINGS, DISTANCE AND COORDINATES REFER TO GRID.
3. TO CONVERT GRID DISTANCE TO GROUND DISTANCE DIVIDE GRID DISTANCE BY 0.99995232556 (PROJECT SCALE FACTOR).
4. ADDITIONS OR DELETIONS TO THIS SURVEY MAP OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
5. THIS SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
6. SURVEY FIELD DATE: 11-17-2013.

I HEREBY CERTIFY THAT THE SURVEY DEPICTED HEREON
IS TRUE AND MEETS THE MINIMUM TECHNICAL STANDARDS
SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL
SURVEYORS AND MAPPERS IN CHAPTER 5J-17 FLORIDA
ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027,
FLORIDA STATUTES.



N:	NORTH	W:	WEST	RGE:	RANGE
S:	SOUTH	SEC:	SECTION	GL:	GOVERNMENT LOT
E:	EAST	TWP:	TOWNSHIP	ID:	IDENTIFICATION



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION JOHN F. KENNEDY SPACE CENTER NASA KENNEDY SPACE CENTER, FLORIDA	KENNEDY SPACE CENTER SHUTTLE LANDING FACILITY BOUNDARY SURVEY AND DESCRIPTION
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DESIGNED BY ENGINEER		
CHECKED BY DRAFTER		
CHECKED BY CHECKER		
APPROVED BY MANAGER		
REVIEWED BY ENGINEER		
RESPONSIBLE PE / KA / REG		

DONALD C. LANTHORNE, P.L.S.
DONALD C. LANTHORNE, P.L.S. DONALD C. LANTHORNE, P.L.S.

BOUNDARY SURVEY

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SPACE FLORIDA



Cape Canaveral Spaceport Development Manual

VOLUME 2

KENNEDY SPACE CENTER

CHAPTER 3 EXPLORATION PARK

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SECTION 1 - INTRODUCTION

1.1 Introduction

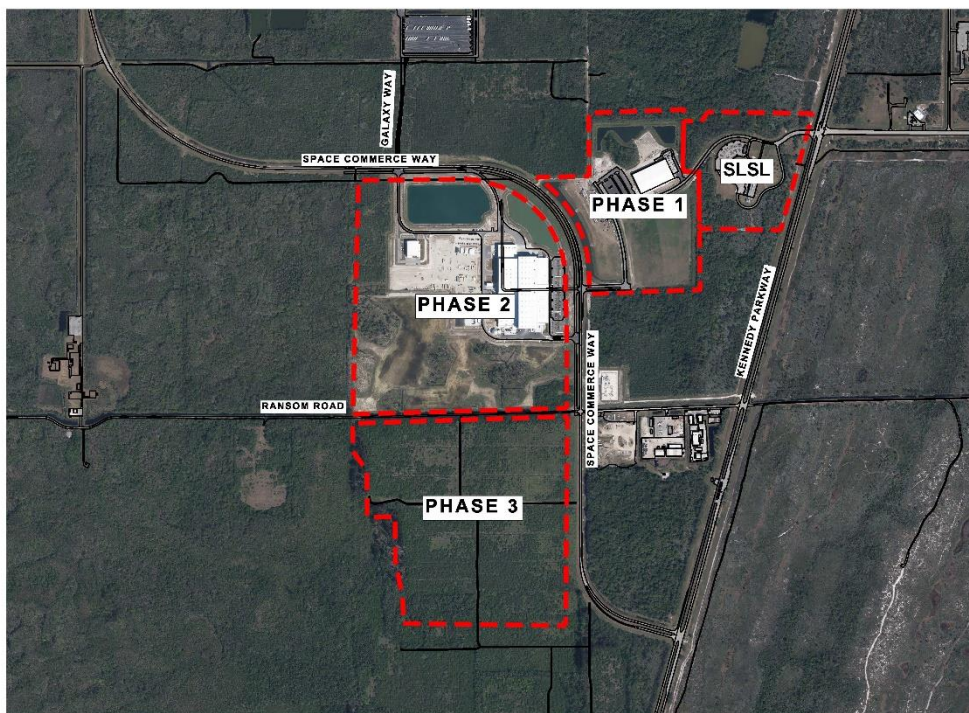
Exploration Park (“the Park”) is a leading-edge research and innovation business park at Kennedy Space Center (KSC), located within Cape Canaveral Spaceport (CCS), Florida. Exploration Park shall possess an evident sense of place, character and functionality representing the priorities and aspirations of Space Florida (SF), National Aeronautics and Space Administration (NASA), KSC, and its Tenants. Refer to Appendix 2-3A.2 for the Park’s Development Concept Plan.

Potential Exploration Park Tenants can request to review the agreement between SF and NASA titled, “*NASA John F. Kennedy Space Center Enhanced Use Lease*”, dated December 19, 2008 from SF. Potential Exploration Park Tenants can request to review the “*Exploration Park at Kennedy Space Center Declaration of Covenants, Conditions, and Restrictions*” (CCRs), dated September 20, 2012, herein referred to as the Agreement.

1.2 Exploration Park Area Overview and Description

The land area identified in the Agreement to SF comprises of the SLSL, Phase 1, Phase 2, and Phase 3 etc. The SLSL is approximately 45 acres, Phase 1 is approximately 60 acres, and Phase 2 is approximately 139 acres. Phase 3 (South Campus) is approximately 90 acres. Figure 1 below shows these areas within Exploration Park.

Figure 1: Exploration Park Property Areas



SECTION 2 - PROCESSES

2.1 Tenant Eligibility and Park Use Guidelines

SF in conjunction with NASA shall have the right to approve, disapprove, or approve subject to conditions, all uses and Tenants for Exploration Park. Without limiting NASA's right or discretion to approve or disapprove each use and Tenant, the following criteria shall serve as a guideline for Tenant eligibility to sublease from SF, a dedicated development site, building, or space within a multi-tenant facility. The criteria which serve as guidelines are:

- a) Activities which have a requirement or demonstrated benefit for close proximity to KSC / Cape Canaveral Space Force Station (CCSFS) facilities or personnel, are related to the NASA mission, or are related to space commerce and commercialization;
- b) Activities related to research and technology development with known or potential application to activities in space or improvement of life on earth, including but not limited to, energy-related, life sciences, or environmental activities;
- c) Activities of an academic/educational nature with current or potential partnership with NASA/CCAFS;
- d) Activities offering support services that may reasonably be required by the Park Tenants or resident government and contractor organizations of KSC/CCAFS, e.g. technical support, business services, and incidental, limited retail support services as deemed appropriate to support the needs of Tenants. Retail sales shall not significantly compete with merchandise sales of the KSC Visitor Complex.

The above criteria are intended to operate as general description of the types of Exploration Park activities which SF considers desirable and are not intended to operate as a limitation on SF's right to approve or disapprove uses, Tenants, or activities within the Park. The above criteria are not intended to grant any rights or benefits to, or be enforceable by, any Park Tenants, users, occupants, or any third party.

2.2 Project Type, Permitted Uses and Prohibited Uses

Tenants shall adhere to the following project types, permitted uses, and prohibited uses as mandated by the Agreement.

2.2.1 Permitted Uses

SF has the right to approve all uses and Tenants in Exploration Park. Subject to such approval, each parcel and the improvements constructed thereon may be used for light manufacturing and assembly, office, processing, professional, laboratory, research, development, education and such other uses and activities as are permitted under those laws or ordinances which may be appropriated to such parcel and which are expressly sanctioned and approved by SF. Such uses will be undertaken subject to the terms of this agreement and the limitations imposed by applicable laws, ordinances, and the Agreement. The existence of a less stringent requirement under applicable laws and ordinances will not excuse adherence to any stricter requirement under this agreement.

2.2.2 Prohibited Uses

The Agreement prohibits certain uses in Exploration Park including highly hazardous activities; heavy industrial manufacturing; warehousing as a stand-alone use; hotels or other major tourist facilities; and political, social or religious affiliated organizations. In addition to those uses prohibited by the Agreement, the following uses are prohibited:

- a) The manufacture, storage or distribution of products which increase fire, explosion or other hazards on adjacent parcels or areas adjacent to the property;
- b) Any business or operation which creates a public or private nuisance, or the emission of a dust, odor, smoke or gases deemed by SF to be hazardous or unreasonable;
- c) Any residential dwelling or hotels or motels;
- d) Any amusements or game rooms or similar establishments including, without limitation to, the use of pinball machines, electronic games or similar apparatus;
- e) Any building, improvement or use which violates applicable federal, state or local law;
- f) Mobile home parks or trailer courts, either temporary or permanent;
- g) Junkyard;
- h) Vehicle or equipment disassembly, provided that vehicle service maintenance performed entirely in an enclosed building may be proposed as a permitted use subject to approval by SF;
- i) Mining or drilling for and/or removal of coal, oil, gas or other minerals;
- j) Commercial excavation of building or construction materials or quarrying of any materials;
- k) Composting;
- l) Dumping, disposal, incineration or reduction of garbage, sewage, offal or other refuse;
- m) Husbandry of animals, fowl or fish;
- n) Any activity involving the generation, storage, treatment, disposal, handling or use of hazardous waste, hazardous substances, toxic substances or hazardous materials which are in violation of applicable federal, state or local laws or regulations; and,
- o) The installation of storage tanks, including, without limitation, those used for storage of water, propane gas or other fuels or chemicals, unless first approved in writing by SF.

SECTION 3 – DESIGN STANDARDS

3.1 Key Design Principles

There are four key design principles that govern the organization and character of open spaces and buildings for Exploration Park: Connectivity, Community, Cohesiveness, and Sustainability. These principles establish consistency and evoke a distinctive setting and sense of place across the Park's development.

3.1.1. Connectivity

Both physical and visual connections are encouraged to facilitate movement throughout the Park and to foster a sense of unity. A network of roadway and pedestrian circulation systems serves to physically link buildings and open spaces throughout the Park. While the predominant roadway system provides a sense of order and organization to the development of the Park, the freedom of pedestrian movement shall be given priority. Connectivity is achieved by establishing an axis of sightlines that visually links focal points throughout the Park. See Appendix 2-3B for typical roadway sections for Exploration Park. Tenant, as part of a development project, is expected to extend sidewalks and/or walking trails beyond their parcel limits to offer Park occupants more connections.

3.1.2. Community

The guidelines support a hierarchy of communal spaces that encourages interaction among the Park's users. These spaces shall be organized around specific program clusters, re-orienting individuals in laboratories and offices to larger communities within their respective areas. These communal spaces, in turn, are visually and physically connected to larger, more collective space. They also provide a favorable image of the Park's mission to the surrounding KSC and Central Florida – Space Coast community.



3.1.3. Cohesiveness

Cohesiveness aims to promote visual consistency among the Park's architecture and landscape over the course of development. Collectively, adjacent buildings maintain similarity by abiding to a common strategy of massing, orientation, and general organization. Building designers are encouraged to incorporate a complementary palette of materials and colors. The Park's landscape maintains cohesiveness through the consistent use of native plant material, paving materials, signage and lighting. Cohesiveness among the Park's buildings and open space enhances the legibility and identity of the Park and promotes collaboration among its users. Through the review process of SF, the Park's cohesiveness shall be ensured.

3.1.4. Sustainability

Construction in Exploration Park shall meet, as a minimum, the sustainable design standards represented by one of the three sustainable rating systems identified in section 255.253, Florida Statutes, that are also identified below as NASA-approved. Rating system standards approved by NASA include United States Green Building Council (USGBC), Leadership in Energy and Environmental Design (LEED) NC rating system, the Green Building Initiative's Green Globes (GBIGG) NC rating system, and the Florida Green Building Coalition (FGBC) commercial standards. The latest released version of the selected rating system in effect at the time design work commences on a given project shall be utilized for that project.

Construction shall meet, at a minimum, one of the following levels under the selected rating system: LEED "Silver," FGBC "Silver," or GBIGG "2 Globes," unless it has been clearly demonstrated that such levels are not feasible due to the nature of the construction or planned operations, and a waiver has been granted by NASA-KSC. Each NASA Form 1509 submittal shall be accompanied by information identifying which sustainable building rating system is being followed, which rating level is being pursued, what specific track and/or level within the applicable sustainable building rating system is being followed (e.g. Building Design and Construction, Commercial Building, etc.) and if certification is or is not being pursued. NASA-KSC will review the proposed level to determine whether it meets the requirements of this Section 6.3 before approving the NASA Form 1509.

Certification of the project by the rating system organization is not mandatory but is strongly encouraged. In lieu of certification, a qualified third-party hired by Tenant and approved by the SF Building Department may perform rating system verification checks during planning, design, construction and operational phases to score and certify the project using the selected rating system scorecard/checklist. Credentials for the qualified third-party shall be provided to NASA-KSC. The project will be registered with the rating system agency and the scoring documentation demonstrating that the project meets the agreed upon rating level shall be provided to NASA-KSC prior to the certificate of occupancy being issued by SF. Appropriate credit for SF's Exploration Park infrastructure design and site features may be counted toward each facility project's score in determining compliance with the selected rating system.

3.2 Planning Guidelines

The guidelines below address recommended strategies for both Phase 1 and 2 of the Park. Phase 1 of the Park is intended to be a campus setting consisting of offices and research & development (R&D) facilities for the advancement of space-related research, space craft, fabrication and assembly.

Phases 2 and 3 of the Park are intended for space craft fabrication, assembly, and processing in larger and more isolated facilities. Therefore, some of the recommended guidelines for Phase 1 are not applicable to Phases 2 and 3. Recommendations that are not applicable to Phases 2 and 3 are shown in *italics*.

All coordination and clarifications shall be submitted to SF. In case of discrepancies, SF manager shall decide.

3.2.1. Key Design Principles

The Open Space Guidelines recommend strategies for the creation of inviting outdoor spaces that contribute to the interaction of all users of the Park. The adoption of these recommendations will positively influence the ways in which these spaces are used, the frequency of their use, and their impact for a healthy work environment. Well-articulated open space, defined either by adjacent buildings, landscape elements, or pedestrian paths, should serve as places of respite and engagement with colleagues. Open spaces and building courtyards should be designed as intentional places, enhancing connectivity between and among buildings, not as “land left over”. Recommendations fostering a secure, comfortable, and welcoming atmosphere for open space activity will contribute to the Park’s overall sense of community. Durability and ease of maintenance will ensure the long-term success of these important outdoor spaces.

The Park lies within the Merritt Island National Wildlife Refuge (MINWR) where natural habitat protection and restoration should also be part of the overall open space strategy. Existing wetlands should be protected and enhanced through integrated stormwater management and treatment plans that capture runoff from the developed areas. Landscape materials located along the drainage courses should be native to the area further expanding the existing habitat. The following recommendations should be used as guidelines for design at Exploration Park:

- a) *Categorize outdoor areas by their likely or intended use and level of activity: direct pedestrian transit, casual pedestrian passage, personal solitude, quiet reflection, informal social engagement by both small and large groups, and structured activities (i.e. scheduled discussion, recreation, social gatherings).*
- b) *Develop outdoor rooms (courts, arcades, cloisters, plazas) in locations that will invite convenient access and use.*



- c) *Outdoor spaces should be scaled and proportional in response to their intended or presumed use: smaller spaces for intimate gatherings, large spaces for collective social uses.*
- d) *While preserving the continuity of experience and expression in the design of all open space, such areas should also be individualized, both in response to their intended use and as a means to grant each a unique identity. Landscape features such as fountains and other water elements, sculptures, framed vistas, and specialized planting areas may be employed as focal signatures for individual outdoor spaces.*
- e) *Where large-scaled activities and social uses are anticipated, create broadly open, flat lawns or plazas. Provide shaded edges with seating for passive outdoor activities.*
- f) *Identify areas of highest population density and pedestrian traffic (particularly those adjacent to major building entries) and consider them for use as outdoor cafés and meeting areas. Based on anticipated intensity of use, provide adequately scaled seating, lighting, power and data resources, and shade structures.*
- g) *Provide comfortable outdoor seating. Although the scale, configuration, and design of this seating should vary in response to each open space's intended or anticipated use, the style, color, and materials of the seating should be drawn from a common design vocabulary. Provide appropriate outdoor accessories: trash receptacles, information kiosks, and directional signage, also drawn from a common design vocabulary.*
- h) *Orient open spaces to take best advantage of solar warming in winter and conversely, provide such spaces with areas of shade in summer, either through the use of landscape elements or physical structures (trellises, overhangs, canopies, shelters, and other building elements). Anticipate the effect of adverse weather events – for example wind and/or rain and provide appropriately scaled and oriented responses: screening or shelter and solar orientation.*



- i) Screen outdoor spaces from adjacent distractions through the use of arcades, colonnades, gateways, plantings, walls or fences while still preserving an inviting, welcoming character.
- j) If the specific building design includes an arrival forecourt, provide outdoor space features to accommodate both passive and active uses as they relate to the building. Consider including site walls to define edges and bollards to define limits for vehicles. Achieve a pedestrian-scale arrival that reduces the scale of buildings; strategies include an overhead plane of trees and seating areas.
- k) For the construction of all outdoor spaces, use durable materials including masonry, architectural concrete, break-resistant glazing and non-corrosive metals. The colors and finishes of these materials are to be drawn from a common and complementary palette subject to approval by SF.

3.2.2. Pedestrian Accommodation

To the extent that pedestrian pathways offer opportunities for incidental social interaction, accommodations are also recommended to foster collaboration by incorporating shaded respites and break points. The following recommendations shall be used as guidelines for design at Exploration Park:

- a) *At major pedestrian intersections, strategically position breakout areas designed to offer seating and collaborative opportunities.*
- b) *Safety and security should be a primary design consideration; include security 'blue light' call boxes appropriately space along walkways.*

3.2.3. Vehicular Accommodations

These vehicular accommodations link campus destinations but are subordinate to pedestrian movement as a means to promote connectivity. The following recommendations shall be used as guidelines for design at Exploration Park:

- a) Develop a hierarchy of vehicular use based on the anticipated volume and specific need for access including daily commuting, alternative non-pedestrian transit (bicycles), visitor arrival and departure, service and delivery access and emergency access. This hierarchy shall discourage intra-campus vehicular transit and limit the intersection of roadways with major pedestrian paths, favoring pedestrians and bicycles over service and private vehicles in multi-modal areas. Utilize this hierarchical system to inform the specific design of each roadway.
- b) Design streets throughout the Park for safe multi-modal movement. Where feasible, segregate commuter and visitor traffic from service and delivery traffic.
- c) Provide facilities and amenities that promote alternative means of travel to and from the Park, such as car-pool information kiosks, ride share programs, bulletin boards, bus shelters, shuttle stops, maps, and visitor directions.



- d) Place required bicycle parking areas along multi-modal streets and near major activity centers, building entryways and major open spaces.
- e) Establish drop-off zones near major activity centers and building entries for convenient use. Provide shelter and seating for waiting areas, attractive landscaping, and adequate lighting.

3.3 Security and Life Safety

To promote community, designs shall address the Crime Prevention through Environmental Design (CPTED) principles of informal surveillance, lighting, defensible space, appropriate landscaping and logical wayfinding. Design shall maximize visibility and foster positive interactions among the users of the Park, except for required utility screening. In addition, certain hazardous materials will not be permitted in Exploration Park and are addressed in the Exploration Park CCR. Any design issues pertaining to life safety and security are to be coordinated with SF and meet the requirements of the FBC and NASA AHJ.

3.4 Architectural

The Tenant will be required to complete and submit the Exploration Park Declaration of Covenants, Conditions and Restrictions (CCR) Checklist (refer to Appendix 2-3D) to SF with the Architectural Review Committee submittal package. During the design phase, Tenant shall coordinate with SF.

3.4.1. Building Aesthetics

Recognizing Tenant buildings need to be designed to meet the operational needs of the specific Tenant, the following guidelines are provided relative to the aesthetics of the structures.

- a) *The designs of buildings within the Park are to be timeless and not connected to a specific style of architecture. New buildings shall reflect a 'family resemblance' to existing buildings in the Park through common references to size, scale, massing of similar forms, and compatible building materials.*

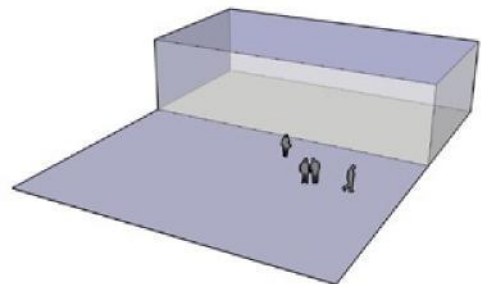


Figure 2: Inappropriate articulation for building entry

- b) *Program requirements should be balanced with the desire to maintain the overall Park sense of place, so that buildings should generally respond to the heights of buildings around them. Heights of buildings organized around defined open-spaces or corridors shall be in the same range to ensure consistency and legibility of the buildings edge.*
- c) *Building widths will be determined by the optimal floorplates of their specific use and program requirements. Building design should allow for optimized daylighting. Overall building length shall be limited to avoid excessive consumption of land and to avoid creating a barrier-effect.*
- d) *To assist with campus wayfinding, building entries shall be obvious, accessible and clearly visible from the main corridors and access routes.*
- e) *Primary building facades should avoid long or massive uninterrupted walls with no relationship to human scale and shall, therefore, be articulated through changes in material, color texture, or planes.*

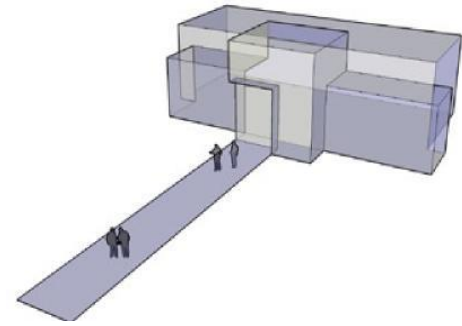


Figure 3: Appropriate articulation for building entry

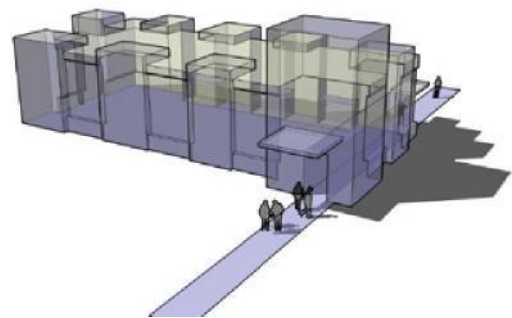


Figure 4: Over articulation for building entry

3.4.2. Signage

Signage shall conform to the requirements of Volume 2, Chapter 1, Section 3.83 Design Standards Signage.

Signs should be designed to signal the Park's entry, convey information and assist with wayfinding, promoting the Park's connectivity and collegiality. The standards further promote cohesiveness by providing a consistent approach to the design of signs. Standards for the use of legible, durable and low maintenance signs will contribute to the Park's cohesiveness. The design of the sign family should have an obvious continuity and relationship to one another through the use of branding designations, font, color, materials, profile and scale. See Appendix 2-3C for additional information for wayfinding signage.

3.5 Buffer Areas/Irrigation

Unless otherwise expressly approved in writing by SF, each parcel shall have landscaped buffer areas along its boundary lines as follows:

- a) 25 feet adjacent to the curb of all streets; and
- b) 15 feet along Parcel lot lines adjacent to other Parcels.

All of the above buffer areas located within any parcel shall be landscaped and maintained by the lessee of such parcel. All such buffer areas which are located adjacent to any of the identified roads or streets (including, without limitation, the portion thereof located within any public right-of-way) shall be required to be irrigated at the cost of the lessee of such parcel. Parking shall not be permitted within these buffer areas, but vehicular access will be permitted to cross the buffers in such locations as are approved by SF.



3.6 Utility/Infrastructure Coordination

The SF Operation and Maintenance Manager / Contractor will be the point of contact for all utility coordination, roadway closures, and necessary outages for water, sewer, power, communications, and irrigation systems. The point(s) of contact will be identified by SF at the initial kickoff meeting. The SF Operation and Maintenance Manager / Contractor will also be the point of contact for any necessary NASA provided coordination.

APPENDICES

2-3A – EXPLORATION PARK LEGAL DESCRIPTIONS

2-3B – ROAD CROSS SECTIONS

2-3C – WAYFINDING SIGNS

2-3D – EXPLORATION PARK AT KSC DECLARATION OF COVENANTS, CONDITIONS, & RESTRICTIONS CHECKLIST

APPENDIX 2-3A – EXPLORATION PARK LEGAL DESCRIPTIONS

(Per NASA John F. Kennedy Space Center Enhanced Use Lease”, dated December 19, 2008)

1. Exploration Park Phase 1
2. Exploration Park Phase 1a
3. Exploration Park Phase 1b
4. Exploration Park Phase 2
5. Exploration Park Phase 3
6. *Exploration Park Phase 4 (Future)*
7. Site Development Master Plan/Parcel Layout

SKETCH OF DESCRIPTION

EXPLORATION PARK

PHASE 1

LAND DESCRIPTION

A TRACT OF LAND LYING ON THE JOHN F. KENNEDY SPACE CENTER IN SECTION 1, TOWNSHIP 23 SOUTH, RANGE 36 EAST AND IN SECTION 6, TOWNSHIP 23 SOUTH, RANGE 37 EAST, BREVARD COUNTY, FLORIDA, AND BEING MORE FULLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SAID SECTION 6, TOWNSHIP 23 SOUTH, RANGE 37 EAST, SAID CORNER HAVING A FLORIDA STATE PLANE COORDINATE VALUE OF NORTH 1517391.76 AND EAST 760442.16, AS DERIVED FROM A NATIONAL GEODETIC SURVEY TRIANGULATION STATION "STATIC 1965", THENCE N00°08'54"E ALONG THE WEST LINE OF SAID SECTION 6, FOR A DISTANCE OF 1321.03 FEET TO THE POINT OF BEGINNING; THENCE N00°19'12"E, FOR A DISTANCE OF 212.47 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHWESTERLY AND HAVING A RADIUS OF 1325.00 FEET; THENCE NORTH-WESTERLY 1304.55 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 56°24'42" TO A POINT ON THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 36 EAST; THENCE N88°58'45"E, ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER, FOR A DISTANCE OF 596.06 FEET TO THE SOUTHWEST CORNER OF GOVERNMENT LOT 14, SECTION 6, TOWNSHIP 23 SOUTH, RANGE 37 EAST; THENCE N00°34'28"W, ALONG THE WEST LINE OF SAID GOVERNMENT LOT 14, FOR A DISTANCE OF 714.28 FEET; THENCE N88°00'43"E, FOR A DISTANCE OF 1077.62 FEET; THENCE S01°00'02"W, FOR A DISTANCE OF 698.50 FEET; THENCE S89°02'59"E, FOR A DISTANCE OF 180.90 FEET; THENCE S00°37'54"E, FOR A DISTANCE OF 1331.85 FEET; THENCE S88°00'43"W, FOR A DISTANCE OF 1255.33 FEET TO THE POINT OF BEGINNING.

CONTAINING 60.0 ACRES MORE OR LESS.

NOTES:

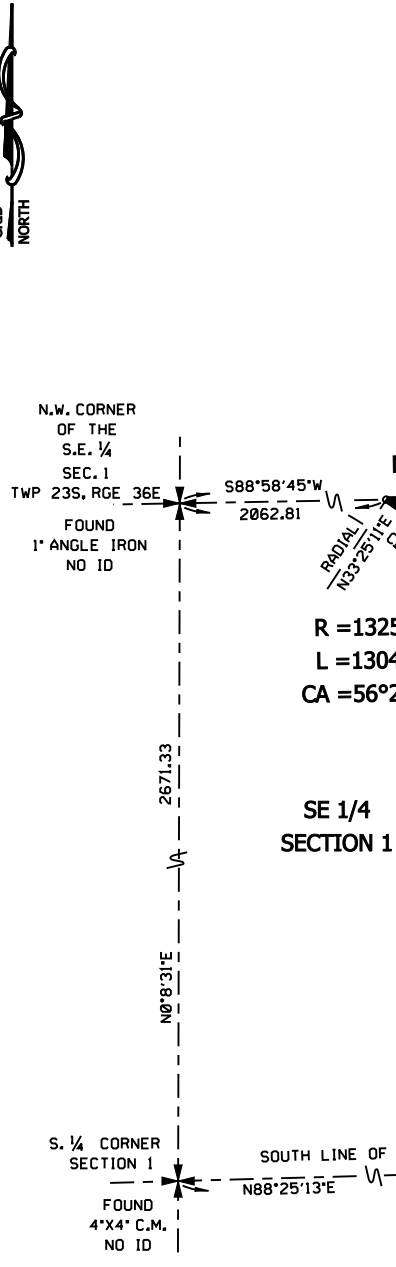
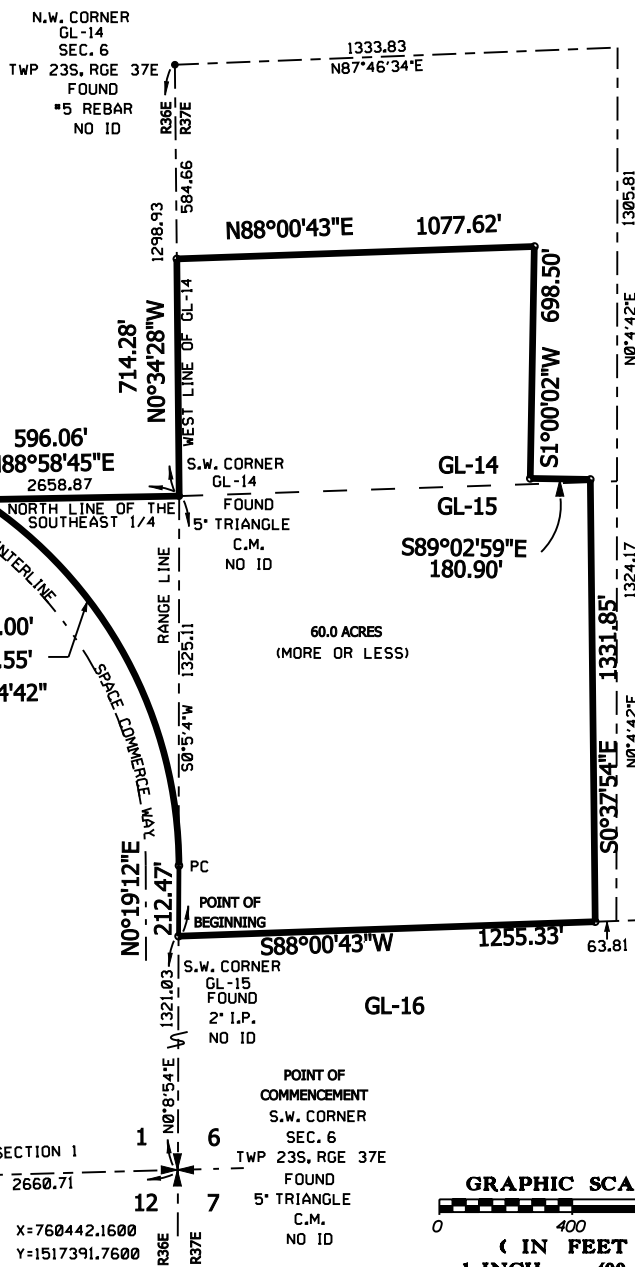
1. FLORIDA STATE PLANE COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (1990).
2. BEARINGS, DISTANCES, COORDINATES AND ACREAGE REFER TO GRID.
3. BEARING REFERENCE LINE: N00°08'54"E, THE WEST LINE OF GL-16.
4. NOT A BOUNDARY SURVEY.

ABBREVIATIONS

- PC POINT OF CURVATURE
IP IRON PIPE
GL GOVERNMENT LOT
CM CONCRETE MONUMENT
NGS NATIONAL GEODETIC SURVEY

GRAPHIC SCALE

0 400 800
(IN FEET)
1 INCH = 400 FEET



ISC

INSTITUTIONAL SERVICES CONTRACT
6060, EAO BUILDING
KENNEDY SPACE CENTER, FLORIDA 32816

SPECIFICATION:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER, NASA
KENNEDY SPACE CENTER, FLORIDA

EXPLORATION PARK
PHASE 1

REVISIONS
1. ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. IT IS TO BE USED FOR THE PURPOSES SPECIFIED IN THE CONTRACT AND IS NOT TO BE DISTRIBUTED OUTSIDE THE AGENCY OR FOR OTHER THAN OFFICIAL USE.

REVISIONS
2. THIS DRAWING IS THE PROPERTY OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. IT IS TO BE USED FOR THE PURPOSES SPECIFIED IN THE CONTRACT AND IS NOT TO BE DISTRIBUTED OUTSIDE THE AGENCY OR FOR OTHER THAN OFFICIAL USE.

WON NO:		10174728	
CAD DWG NO:		96K01980	
CAD FILE NO:		P0198000.001	
NAME		SIGNATURE	DATE
DESIGNED BY ENGINEER			
DRAWN BY DRAFTER			
CHECKED BY CHECKER			
APPROVED BY SUPERVISOR			
DRAWN BY ENGINEER			

DESCRIPTION

REVISIONS

REVISIONS

SKETCH OF DESCRIPTION

EXPLORATION PARK

PHASE 1a

ISC

INSTITUTIONAL SERVICES CONTRACT
90650, E&O BUILDING
KENNEDY SPACE CENTER, FLORIDA 32815

LAND DESCRIPTION PHASE 1a

A TRACT OF LAND LYING ON THE JOHN F. KENNEDY SPACE CENTER IN SECTION 1, TOWNSHIP 23 SOUTH, RANGE 36 EAST AND IN SECTION 6, TOWNSHIP 23 SOUTH, RANGE 37 EAST, BREVARD COUNTY, FLORIDA, AND BEING MORE FULLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SAID SECTION 6, TOWNSHIP 23 SOUTH, RANGE 37 EAST, SAID CORNER HAVING A FLORIDA STATE PLANE COORDINATE VALUE OF NORTH 1517391.76 AND EAST 760442.16, AS DERIVED FROM A NATIONAL GEODETIC SURVEY TRIANGULATION STATION "STATIC 1965". THENCE N00°08'54"E ALONG THE WEST LINE OF SAID SECTION 6, FOR A DISTANCE OF 1321.03 FEET; THENCE S88°00'43"W, FOR A DISTANCE OF 562.08 FEET THE POINT OF BEGINNING, ALSO BEING THE BEGINNING OF A NON-TANGENT CURVE CONCAVE WESTERLY AND HAVING A RADIUS OF 1895.00 FEET AND TO WHICH A RADIAL LINE BEARS S84°16'27"E; THENCE NORTHERLY 536.01 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 16°12'23" TO A POINT ON A RADIAL LINE; THENCE S79°31'10"W, ALONG SAID RADIAL LINE FOR A DISTANCE OF 310.00 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHWESTERLY AND HAVING A RADIUS OF 1895.00 FEET; THENCE SOUTHERLY 1277.75 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 33°12'06" TO A NON-RADIAL LINE; THENCE N0°34'28"W, ALONG SAID NON-RADIAL LINE FOR A DISTANCE OF 317.56 FEET; THENCE N88°00'43"E FOR A DISTANCE OF 804.59 FEET; THENCE S01°00'02"W, FOR A DISTANCE OF 698.50 FEET; THENCE S89°02'59"E, FOR A DISTANCE OF 180.09 FEET; THENCE S0°37'54"E, FOR A DISTANCE OF 1331.85 FEET; THENCE S88°00'43"W, FOR A DISTANCE OF 693.25 FEET TO THE POINT OF BEGINNING.

CONTAINING 30.53 ACRES MORE OR LESS.

ABBREVIATIONS

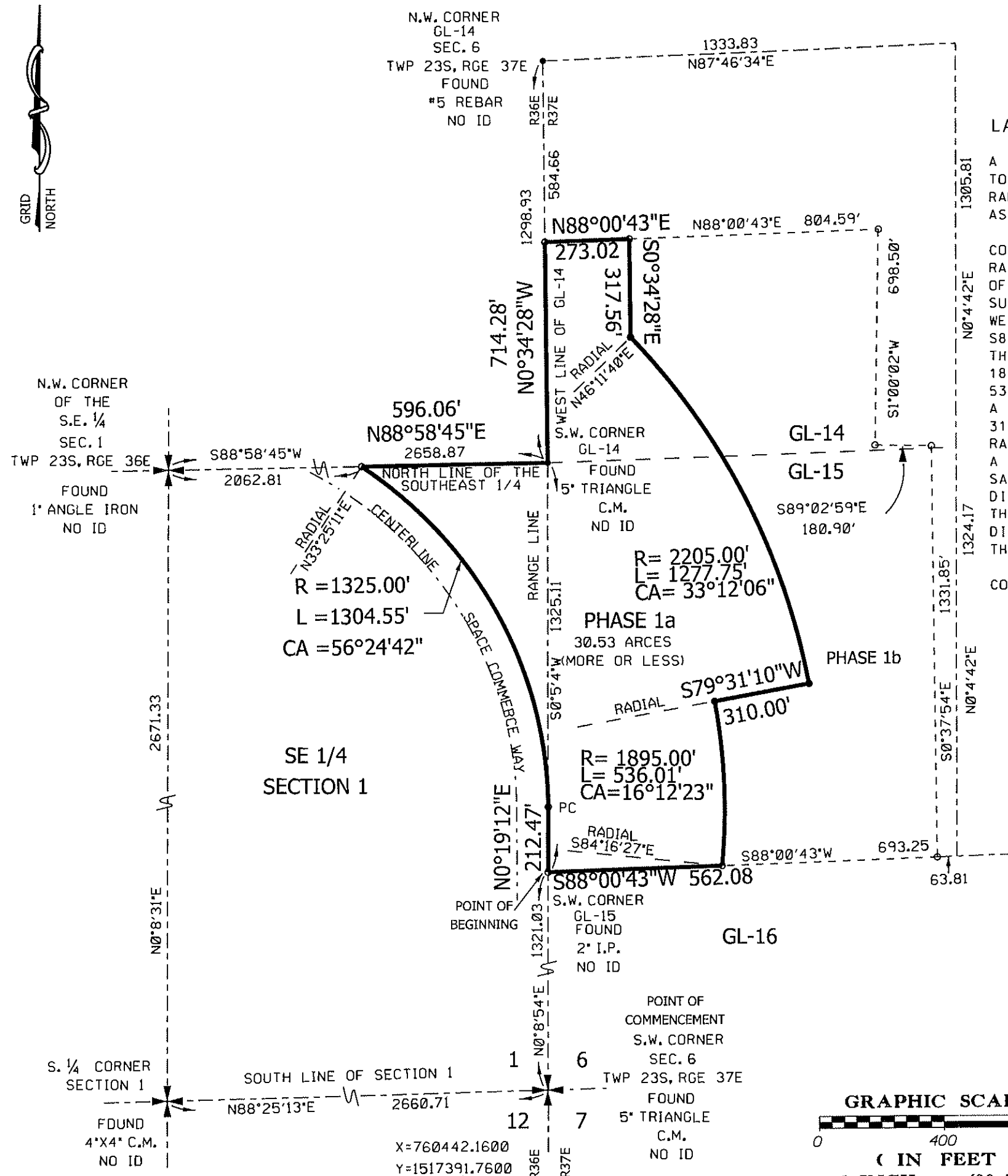
PC POINT OF CURVATURE
IP IRON PIPE
GL GOVERNMENT LOT
CM CONCRETE MONUMENT
NGS NATIONAL GEODETIC SURVEY

NOTES:

1. FLORIDA STATE PLANE COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (1990).
2. BEARINGS, DISTANCES, COORDINATES AND ACREAGE REFER TO GRID.
3. BEARING REFERENCE LINE: N0°08'54"E, THE WEST LINE OF GL-16.
4. NOT A BOUNDARY SURVEY.

GRAPHIC SCALE

0 400 800
(IN FEET)
1 INCH = 400 FEET



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER, FLORIDA

EXPLORATION PARK
PHASE 1a

REVISIONS
DATE
BY
REASON

WON NO: 10174726
CAD DWG NO: 98K01980
CAD FILE NO: F0198000.001
NAME SIGNATURE DATE
ENGINEER
DRAFTER
CHECKER
SUPERVISOR
ENGINEER

DESCRIPTION

PHASE 1b

INSTITUTIONAL SERVICES CONTRACT
60650, E&O BUILDING
KENNEDY SPACE CENTER, FLORIDA 32815

CONSTANT.

SPECIFICATION:

24A SONGS.

AL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER, NASA
KENNEDY SPACE CENTER, FLORIDA

EXPLORATION PARK
PHASE 1b

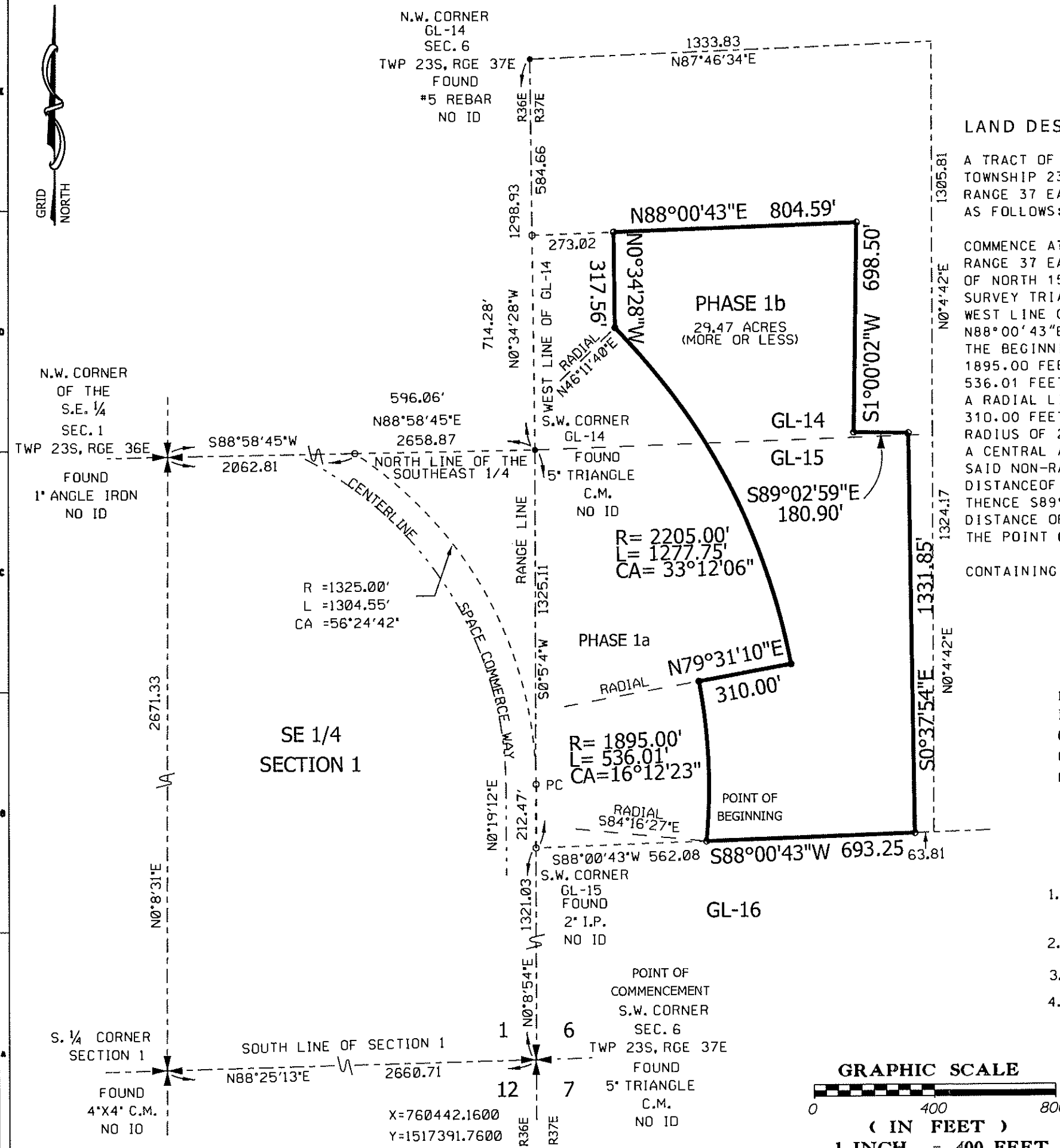
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WON NO:		10174726	
CAD DWG NO:		95K01980	
CAD FILE NO:		F0195000.001	
NAME		SIGNATURE	DATE
DESIGNED BY			
ENGINEER			
DRAWN BY			
DRAFTER			
CHECKED BY			
CHECKER			
APPROVED BY			
SUPERVISOR			
DESIGNED BY			
ENGINEER			

DESCRIPTION

DATE: 10/1/77

SUFFY 1 of 1



SKETCH OF DESCRIPTION

EXPLORATION PARK

PHASE 2

LAND DESCRIPTION

A TRACT OF LAND LYING ON THE JOHN F. KENNEDY SPACE CENTER IN SECTION 1, TOWNSHIP 23 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND BEING MORE FULLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHEAST CORNER OF SAID SECTION 1, TOWNSHIP 23 SOUTH, RANGE 36 EAST, SAID CORNER HAVING A FLORIDA STATE PLANE COORDINATE VALUE OF NORTH 1517391.76 AND EAST 760442.16, AS DERIVED FROM A NATIONAL GEODETIC SURVEY TRIANGULATION STATION "STATIC 1965". THENCE S88°25'13"W, ALONG THE SOUTH LINE OF SAID SECTION 1, FOR A DISTANCE OF 240.40 FEET; THENCE N00°07'25"W, FOR A DISTANCE OF 30.01 FEET TO THE POINT OF BEGINNING; THENCE S88°25'13"W, FOR A DISTANCE OF 2421.07 FEET TO A POINT ON THE WEST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 1; THENCE N00°08'31"E, ALONG SAID WEST LINE OF THE SOUTHEAST QUARTER, FOR A DISTANCE OF 2637.16 FEET; THENCE N89°23'03"E, FOR A DISTANCE OF 1317.94 FEET TO THE BEGINNING OF A CURVE CONCAVE SOUTHWESTERLY AND HAVING A RADIUS OF 1080.00 FEET; THENCE SOUTHEASTERLY 1705.74 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 90°29'33" TO A POINT; THENCE S00°07'25"E, FOR A DISTANCE OF 1507.00 FEET TO THE POINT OF BEGINNING.

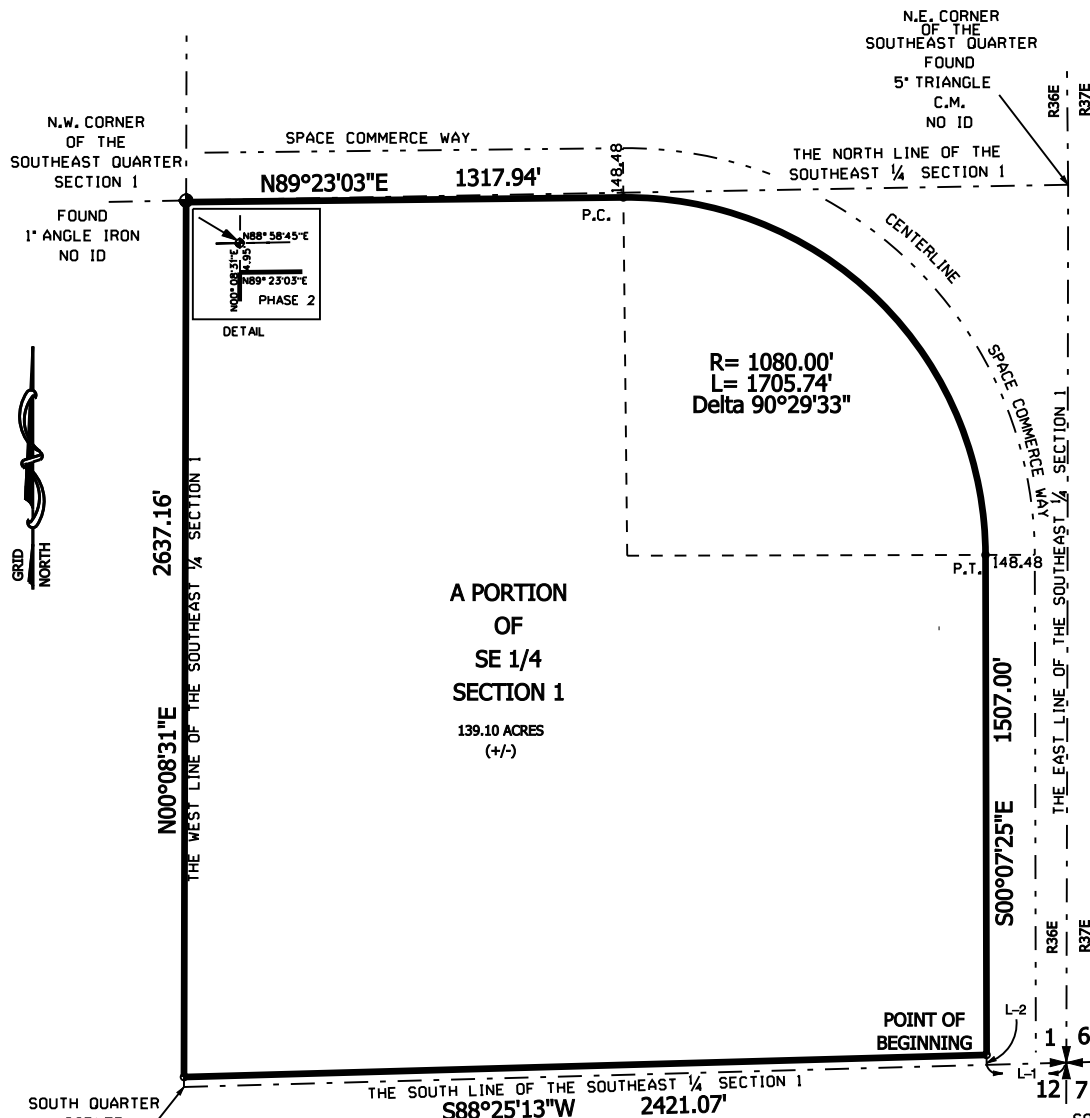
CONTAINING 139.10 ACRES MORE OR LESS.

NOTES:

1. FLORIDA STATE PLANE COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (1990).
2. BEARINGS, DISTANCES, COORDINATES AND ACREAGE REFER TO GRID.
3. BEARING REFERENCE LINE: S88°25'13"W, THE SOUTH OF THE SOUTHEAST QUARTER SECTION 1.
4. NOT A BOUNDARY SURVEY.

ABBREVIATIONS

PC POINT OF CURVATURE
PT POINT OF TANGENT
IP IRON PIPE
GL GOVERNMENT LOT
CM CONCRETE MONUMENT
NGS NATIONAL GEODETIC SURVEY



GRAPHIC SCALE

0 400 800
(IN FEET)
1 INCH = 400 FEET

LINE TABLE

LINE	BEARING	DISTANCE
L-1	S88°25'13"W	240.40
L-2	N00°07'25"W	30.01

ISC

INSTITUTIONAL SERVICES CONTRACT
80850, B&O BUILDING
KENNEDY SPACE CENTER, FLORIDA 32815

SPECIFICATION:

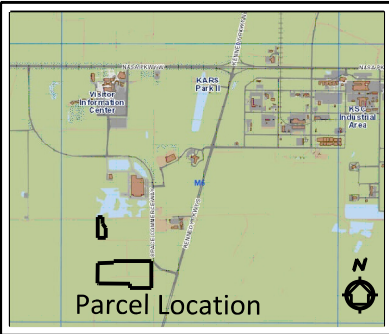
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JOHN F. KENNEDY SPACE CENTER, NASA
KENNEDY SPACE CENTER, FLORIDA

EXPLORATION PARK
PHASE 2

WON NO:	10174728	
CAD DWG NO:	98K01980	
CAD FILE NO:	F0198000.001	
NAME	SIGNATURE	DATE
DESIGNED BY ENGINEER		
DRAWN BY DRAFTER		
CHECKED BY CHECKER		
APPROVED BY SUPERVISOR		
SIGNED BY ENGINEER		

DESCRIPTION

REV: 1 of 1



Location Map (Not to Scale)

Legal Description:

Parcel A:
A parcel of land lying on the John F. Kennedy Space Center, Florida, in Section 12, Township 23 South, Range 36 East, Brevard County, Florida, described as follows:

Commence at the northeast corner of Section 12, Township 23 South, Range 36 East; thence S88°26'13"W 240.07 feet along the north line of said Section 12; thence S00°08'25"E 2021.66 feet to the Point of Beginning; thence S00°08'25"E 1220.56 feet; thence N89°58'20"W 965.00 feet; thence N00°21'23"E 197.76 feet; thence N89°46'32"W 1418.56 feet; thence N69°12'27"W 51.04 feet; thence N00°01'40"E 907.29 feet; thence N88°29'06"E 727.50 feet; thence N89°51'39"E 1699.53 feet to the Point of Beginning. Containing 59.816, acres more or less.

Parcel B:
Commence at the northeast corner of Section 12, Township 23 South, Range 36 East; thence S88°26'13"W 240.07 feet along the north line of said Section 12; thence N00°08'25"W 30.01 feet; thence S88°26'13"W 2201.38 feet along the centerline of Ransom Road to the Point of Beginning; thence S00°08'21"E 303.03 feet; thence S36°57'27"E 235.21 feet; thence S00°08'21"E 455.65 feet; thence S89°51'39"W 363.72 feet; thence N00°01'40"E 941.51 feet; thence N88°26'13"E 220.09 feet to the Point of Beginning. Containing 6.578, acres more or less.

Total 66.394 acres, more or less.

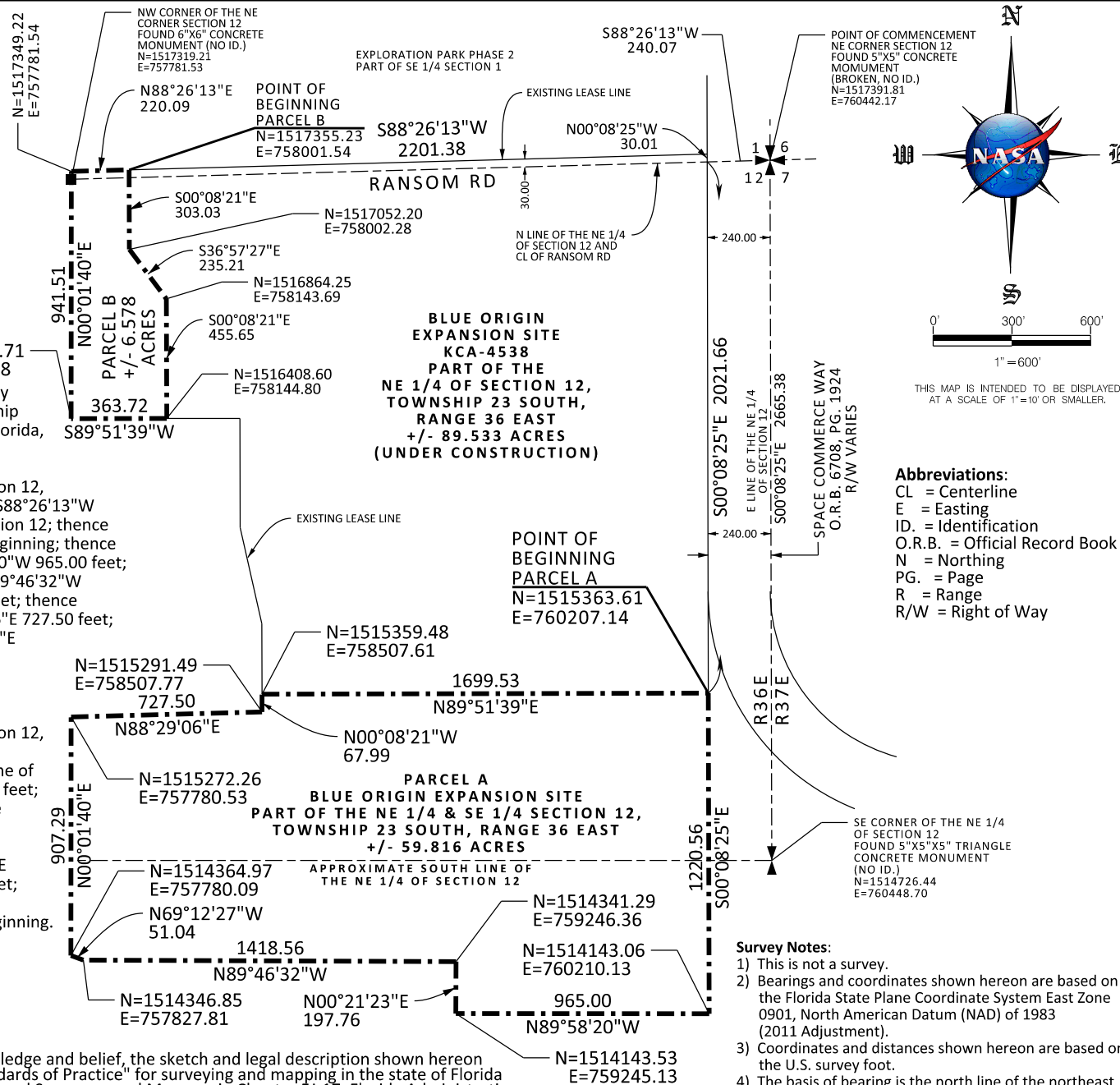
Surveyor's Certification:

I hereby certify that to the best of my knowledge and belief, the sketch and legal description shown hereon was prepared in accordance with the "Standards of Practice" for surveying and mapping in the state of Florida as set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

David J. Irwin
Florida Surveyor and Mapper
Registration No. LS6672
Email: david.j.irwin@nasa.gov; Mail Code: BOSS-4520

Not valid without the signature and the original seal of a Florida licensed surveyor and mapper.

November 9, 2021
Date of Sketch



Survey Notes:

- 1) This is not a survey.
- 2) Bearings and coordinates shown hereon are based on the Florida State Plane Coordinate System East Zone 0901, North American Datum (NAD) of 1983 (2011 Adjustment).
- 3) Coordinates and distances shown hereon are based on the U.S. survey foot.
- 4) The basis of bearing is the north line of the northeast quarter of Section 12, Township 23 South, Range 36 East, having a bearing of N 88°26'13" E.
- 5) Lands shown hereon were not abstracted for Rights-of-Way, easements, ownership, adjoiners, or other instruments of record.
- 6) This sketch and legal description meets the "Standards of Practice" as set forth by the Florida Board of Professional Surveyors and Mappers in rule 5J17.050-.052, Florida Administrative Code.

BOSS BASE ORIGIN SITE SURVEYING SERVICE	
KENNEDY SPACE CENTER, FLORIDA 32899	
HAZARDOUS MATERIALS: FIELD: BELOW ARE THE KNOWN HAZARDOUS MATERIALS RELATED TO THE PROJECT REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.	
SUSPECTED LEAD	YES NO
SUSPECTED ASBESTOS	8 8
THE SUBCONTRACTOR ENCOUNTERS OR SUSPECTS AN UNIDENTIFIED HAZARDOUS MATERIAL THAT PRESENTS THEM FROM PERFORMING THE CONTRACT WORK, THE SUBCONTRACTOR IS NOT TO OBTAIN THE MATERIAL IN QUESTION AND NOTIFY THE CONTRACT SUPERVISOR AT ONCE.	
SPECIFICATIONS: THIS FORM IS PART OF A CONSTRUCTION DOCUMENT SET WHICH INCLUDES SPECIFICATIONS AND NOTES.	
PROJECT:	
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION JOHN F. KENNEDY SPACE CENTER, FLORIDA KENNEDY SPACE CENTER	
KENNEDY SPACE CENTER FACILITY NAME, NUMBER	
BLUE ORIGIN EXPANSION SITE	
REVISIONS:	
1. THIS SKETCH AND LEGAL DESCRIPTION MEETS THE "STANDARDS OF PRACTICE" AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN RULE 5J17.050-.052, FLORIDA ADMINISTRATIVE CODE.	
COPYRIGHT 2021. ALL RIGHTS RESERVED. REPRODUCTION OR USE IN ANY FORM OR BY ANY MEANS, WITHOUT WRITTEN PERMISSION OF DAVID J. IRWIN, IS PROHIBITED.	
FORM NO. 1000000000	
CAD DWG NO. 81000000	
CAD FILE NAME: 0000000000	
NAME	SIGNATURE
ENGINEER	DATE
DRAWER	
CHECKER	
MANAGER	
ENGINEER	
DAVID J. IRWIN, P.S.M.	
SKETCH AND LEGAL DESCRIPTION	
V-1	



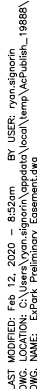
CONSULTANT

AECOM
7650 W. Campbell Courtney Causeway
Suite 700
Tampa, Florida 33607-1462
T 1-813-286-1711
www.aecom.com

SHEET TITLE

PRELIMINARY ABC
PARCEL LAYOUT

SHEET NUMBER





CONSULTANT

AECOM
7650 W. Campbell Courtney Causeway
Suite 700
Tampa, Florida 33607-1462
T 1-813-286-1711
www.aecom.com

DRAWING STATUS

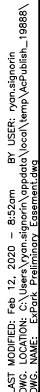
Date: February 2020

SHEET TITLE

PRELIMINARY EIGHI
PARCEL LAYOUT

PROJECT NUMBER _____

SHEET NUMBER



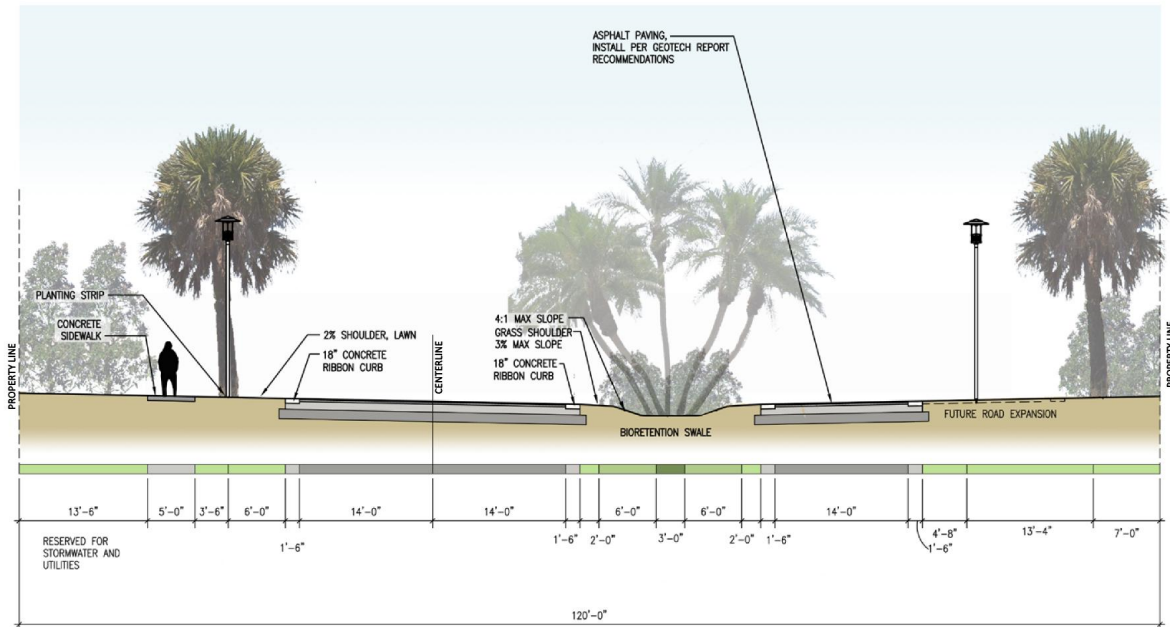
APPENDIX 2-3B – ROAD CROSS SECTIONS

ROAD CROSS SECTIONS

PRIMARY ROAD

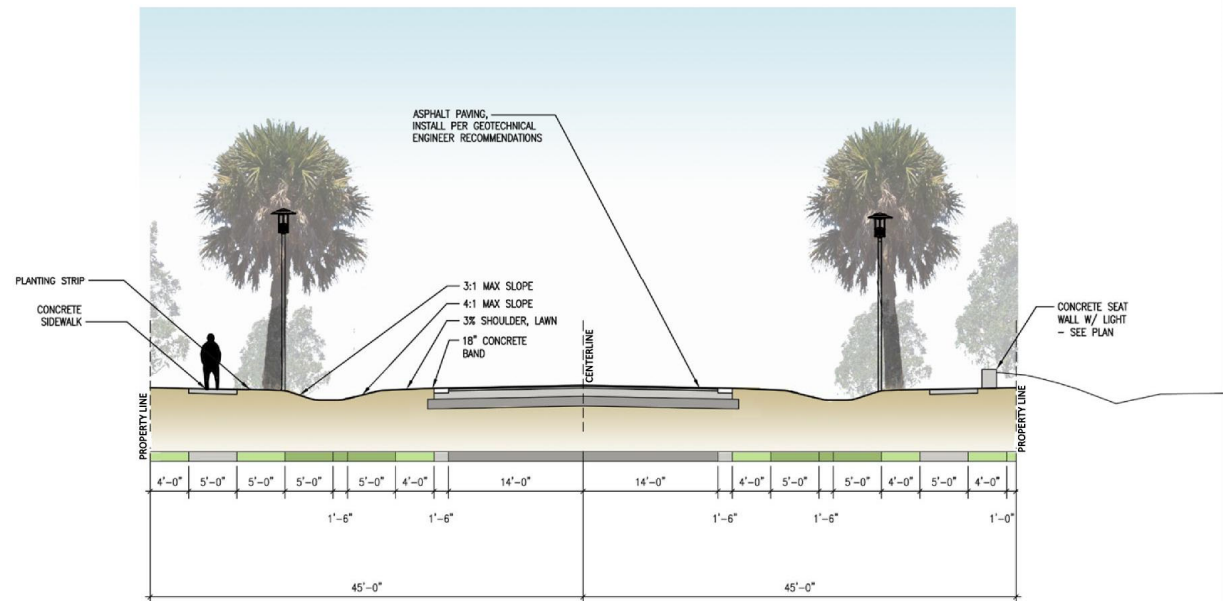
DIVIDED ROAD - MEDIAN IN CENTER

CROSS SECTION SHOWN INCLUDES RIGHT TURN LANE ONTO SPACE COMMERCE WAY



SECONDARY ROAD

2-WAY TRAFFIC WITH SWALES ON EACH SIDE

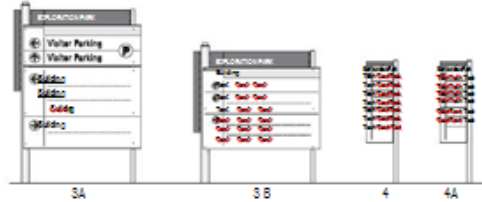


APPENDIX 2-3C – WAYFINDING SIGNS

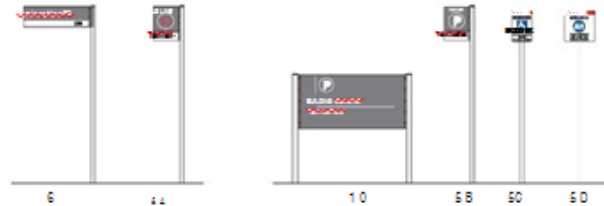
WAYFINDING SIGNS



GATEWAYS



VISITOR INFORMATIONAL & DIRECTIONAL

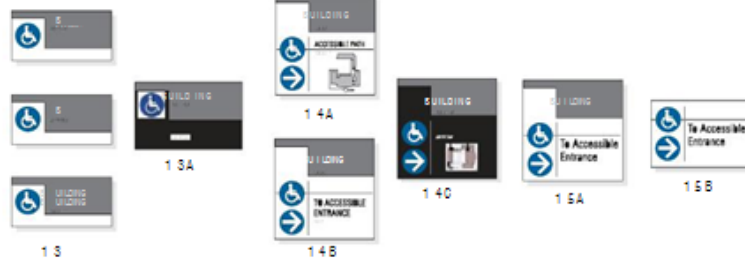


STREET NAME AND BUS STOP IDENTIFICATION

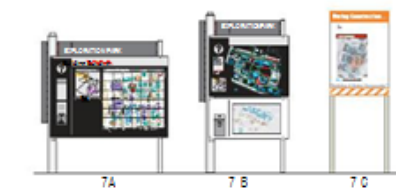
PARKING LOT IDENTIFICATION



BUILDING IDENTIFICATION



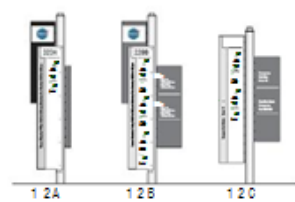
ACCESSIBLE SIGNAGE SYSTEM



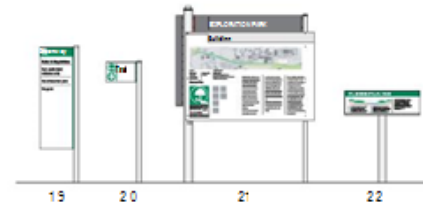
VISITOR ORIENTATION KIOSKS



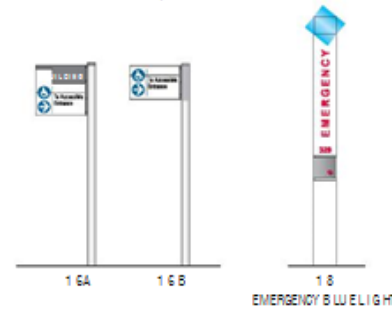
CAMPUS DISTRICT GATEWAYS



RETAIL IDENTIFICATION



SUB DISTRICT/NEIGHBORHOOD



EMERGENCY BLUE LIGHT

**APPENDIX 2-3D – EXPLORATION PARK AT KENNEDY SPACE
CENTER DECLARATION OF COVENANTS, CONDITIONS, AND
RESTRICTIONS CHECKLIST**



EXPLORATION PARK AT KENNEDY SPACE CENTER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS CHECKLIST

Project:		ARC Date:	
Reviewer:		Submittal Type:	
Date Received:		Received from:	
Status:			
<input type="checkbox"/>	Approved	<input type="checkbox"/>	Revise & Resubmit
<input type="checkbox"/>	Approved As Noted	<input type="checkbox"/>	For Information Only

Exploration Park ("Exploration Park" or "the Park") is a leading-edge research and innovation park at Kennedy Space Center KSC, located within Cape Canaveral Spaceport (CCS), Florida. Exploration Park shall possess an evident sense of place, character and functionality representing the priorities and aspirations of Space Florida, National Aeronautics and Space Administration Kennedy Space Center NASA, and its Tenants.

– Cape Canaveral Spaceport Development Manual, Volume 2, Chapter 3, Section 1.1

	ITEM	COMMENTS
	§3.04. Content of Submittals. The following submittals shall be made to the Architectural Review Committee pursuant to this Article:	
<input type="checkbox"/>	(a) Schematic Designs and Plans. Five (5) sets of schematic designs and plans complying with the requirements of this §3.04(a) must be submitted for each matter under review by the Architectural Review Committee. If approved by the Architectural Review Committee, two (2) such sets will be returned to the Lessee/applicant within 45 days after the date of the submission to the Architectural Review Committee. A Lessee's submission under this §3.04(a) must include all of the following materials:	
<input type="checkbox"/>	1. A description of the proposed use of the Parcel and any Improvements (including, without limitation, all business and other activities and operations to be conducted thereon), in sufficient detail, so as to permit the Architectural Review Committee to make an informed judgment as to whether the proposed use is a permitted use under the terms of this Declaration;	
<input type="checkbox"/>	2. A description of proposed activities and operations to be conducted on the Parcel, in sufficient detail to permit the Architectural Review Committee to make an informed judgment as to the nature and extent of any contemplated noise, odor, glare, vibration, smoke, dust, gas, radiation or liquid or other waste that may emanate or be released from the Parcel or any Improvements located thereon;	
<input type="checkbox"/>	3. An accurate artist's rendering or artist scale model of the proposed Buildings and Improvements, depicting the location of adjacent buildings, landscaping, screening, signs and other Improvements;	
<input type="checkbox"/>	4. Floor plans, cross sections and elevations of all sides of any proposed Building or other Improvement to be constructed on a Parcel, including, without limitation,	

	proposed external screening;	
<input type="checkbox"/>	5. Representative samples of all materials proposed for use on any exterior surface of all Buildings and Improvements, including, without limitation, colors and textures;	
<input type="checkbox"/>	6. A site plan showing location and design of Buildings, Improvements, driveways, driveway intersections with the streets, curbs, parking areas, loading areas, maneuvering areas and sidewalks;	
<input type="checkbox"/>	7. Location of all utilities, such as storm water, water, sewer, power, telephone, cable, etc.;	
<input type="checkbox"/>	8. A landscape plan specifying location, size and type of all plant materials (including all existing trees to be preserved on the Parcel);	
<input type="checkbox"/>	9. A proposed signage plan for the Parcel, locating and illustrating all signs and graphics;	
<input type="checkbox"/>	10. An exterior lighting plan, illustrating fixture locations, mounting heights and colors;	
<input type="checkbox"/>	11. Complete responses to all requests for additional information, clarifications or corrections earlier conveyed to the Lessee/applicant by the Architectural Review Committee.	
<input type="checkbox"/>	(b) Final Plans and Specifications. Five (5) sets of final plans complying with the requirements of this §3.04(b) must be submitted for each matter under review by the Architectural Review Committee. If approved by the Architectural Review Committee, two (2) such sets will be returned to the Lessee/applicant within 45 days after the date of the submission to the Architectural Review Committee. A Lessee's submission under this §3.04(b) must include all of the following materials:	
<input type="checkbox"/>	1. Final architectural plans for all proposed Buildings and other Improvements to be constructed on the Parcel prepared by Florida licensed architects and engineers;	
<input type="checkbox"/>	2. To the extent not previously submitted and approved, any of the submittals required by §3.04(a);	
<input type="checkbox"/>	3. Appropriate specifications for all construction to be undertaken on any particular Parcel;	
<input type="checkbox"/>	4. A grading plan showing, among other things, the natural grade of the Parcel prior to the commencement of any site work or other construction on any Parcel, as well as the proposed changes to such pre-existing natural grade;	
<input type="checkbox"/>	5. Location and design of all utilities, such as storm water, water, sewer, power, telephone, cable, etc., with details to be provided for all utility structures located above ground;	
<input type="checkbox"/>	6. Details of all walks, courtyards, screening and other exterior features;	
<input type="checkbox"/>	7. A complete irrigation plan with appropriate details;	
<input type="checkbox"/>	8. A complete signage plan for the Parcel, locating and illustrating all signs and graphics;	
<input type="checkbox"/>	9. A summary of all temporary construction conditions – that is, the location of any office, trailer, storage areas and temporary signs; and	
<input type="checkbox"/>	10. Complete responses to all requests for additional information, clarifications or corrections earlier conveyed to the Lessee/applicant by the Architectural Review Committee.	
	(c) Additional Guidelines. The Architectural Review Committee may establish in writing additional guidelines setting forth in more detail the required content of any schematic designs and/or final plans and specifications to be submitted for its review and approval. Any guidelines promulgated by the Architectural Review Committee under this §3.04 will supersede the required content of such schematic designs and/or plans and final plans and specifications as set forth in this section, so long as such guidelines are consistent with providing the Architectural Review Committee with information necessary to approve or disapprove schematic designs	

	and/or plans and final plans and specifications pursuant to this section. Both before and after the establishment of such guidelines, the Architectural Review Committee may request such additional information or responses as it may deem necessary to permit it to perform its approval and review function hereunder.	
	§3.05. Factors to be Considered by Architectural Review Committee. The Architectural Review Committee will have the right to disapprove any schematic designs or plans or final plans and specifications submitted to it on any reasonable grounds, including, without limitation, the following: See CCRs.	
<input type="checkbox"/>	§3.08. Review Fee. An architectural review fee of \$2,000.00 will be paid to the Architectural Review Committee at such time as the schematic designs and plans are submitted to the Architectural Review Committee for its review under §3.04(a). The amount of the architectural review fees may be modified from time to time by the Architectural Review Committee to reflect changed circumstances, such as inflation.	
<input type="checkbox"/>	§3.13. Public and NASA Approvals. In addition to the approval of the Architectural Review Committee, all plans and specifications for the erection, construction, placement, alteration, removal, maintenance or use of any Improvement on a Parcel shall also be subject to and must be in compliance with all applicable zoning, building and other applicable regulations, now existing or hereafter established, including, without limitation, permitting and other regulations of NASA or of Brevard County, the State of Florida or any other political subdivision which now has or may hereafter acquire jurisdiction over the Parcel. In any situation in which any provision of this Declaration is at variance with any zoning, building or other applicable regulations, the most restrictive of any such provisions will be controlling.	
<input type="checkbox"/>	§4.01. Permitted Uses. NASA has the right under the NASA Lease to approve all uses and tenants in Exploration Park. Subject to such NASA approval, each Parcel and the Improvements constructed thereon may be used for light manufacturing and assembly, office, processing, professional, laboratory, research, development, education and such other uses and activities as are permitted under those laws or ordinances which may be applicable to such Parcel and which are from time to time expressly sanctioned and approved by the Architectural Review Committee. Such uses will be undertaken subject to the terms of this Declaration and the limitations imposed by applicable laws and ordinances and the NASA Lease. The existence of a less stringent requirement under applicable laws and ordinances will not excuse adherence to any stricter requirement under this Declaration.	
<input type="checkbox"/>	§4.02. Prohibited Uses. The NASA Lease prohibits certain uses in Exploration Park including highly hazardous activities; heavy industrial manufacturing; warehousing as a stand-alone use; hotels or other major tourist facilities; and political, social or religious-affiliated organizations. In addition to those uses prohibited by the NASA Lease, the following uses are prohibited on any Parcel: See CCRs.	
<input type="checkbox"/>	§4.03. Variance from Development Standards. Any variance from the general development standards set forth in this Article 4 must be approved in writing by the Architectural Review Committee and must further conform to NASA requirements and any applicable laws and ordinances, now or hereafter existing.	
<input type="checkbox"/>	§4.05. Building Parcel Coverage. No more than 50% of any Parcel may be covered by Buildings. Any portion of a Parcel not covered by Buildings may be covered by horizontal Improvements such as parking areas, loading and service areas and driveways, provided that no more than 85% of a Parcel will, in the aggregate, be covered by Buildings and horizontal Improvements, with the end result that at least 15% of a Parcel will be devoted exclusively to landscaping, including, without limitation, storm water management and grass areas.	
<input type="checkbox"/>	§4.06. Setback Requirements. No Building will be located nearer than 25 feet to any Parcel lot line or 50 feet from any street right-of-way. No parking area will be located nearer than 15 feet to any Parcel lot line or 25 feet from any street right-of-way. The open areas located between property lines and the building or parking area setback lines will be maintained and preserved as green areas and landscaped	

	in accordance with the plans and specifications originally approved in writing by the Architectural Review Committee.	
<input type="checkbox"/>	<p>§4.07. Driveways and Parking. All driveways and parking areas located within a Parcel will be paved in accordance with the specifications approved by the Architectural Review Committee. No parking will be permitted on any driveway or street located within a Parcel, and no Lessee will permit parking related to its Parcel to encroach on the parking for other Parcels or nearby parking areas, except with the express written consent of the Architectural Review Committee and the Lessees of such other areas. Each Lessee will be responsible for constructing the driveways and parking areas on its Parcel and will maintain such areas including, without limitation, keeping such areas clean. All parking areas will be covered with an asphalt or concrete surface, will be striped and will have proper drainage. All parking areas will have parking spaces which have flush and/or raised curbs. All parking areas located on the Parcel with frontage on a street right-of-way will be screened, so as to minimize visibility from such streets. Such screening will consist of earth mounding, landscaping, walls, fencing or other suitable materials approved by the Architectural Review Committee and will provide for opacity and be of a minimum height approved by the Architectural Review Committee. All parking lots shall be designed and constructed to provide access and circulation for KSC fire protection services.</p>	
<input type="checkbox"/>	<p>§4.08. Outside Storage. Outside storage of raw materials, finished products and equipment and the outside storage and disposal of trash and other refuse must be visually screened from all sides; provided, however, that, for so long as there is ongoing and continuous construction on a Parcel, construction debris and waste disposal containers may be maintained or stored on any part of such Parcel, if done in a safe and secure manner and in a manner consistent with that first approved by the Architectural Review Committee. The location and nature of the screening of all outside storage will be subject to the approval of the Architectural Review Committee. Such screening will consist of earth mounding, landscaping, walls, fencing, or other suitable material approved by the Architectural Review Committee and will provide for opacity and be of a minimum height approved by the Architectural Review Committee. In addition, to the extent reasonably practicable in connection with the design and orientation of any Building to be located on a Parcel, any such outside storage area will be located on a side or to the rear of the Building which does not face a public or private street. Notwithstanding anything in this section to the contrary, all vehicle service and maintenance must be performed within an enclosed Building located on the Parcel.</p>	
<input type="checkbox"/>	<p>§4.09. Loading Areas. Front yard loading will not be permitted on a Parcel unless first approved by the Architectural Review Committee. In determining whether to grant such approval, the Architectural Review Committee will take into consideration the compatibility of front loading with the structures and uses both within and in the vicinity of the Parcel, the appropriateness of screening the front loading area by use of closely planted, high-growing plants or other suitable screening, and the extent to which the efficient and economical use of the Parcel and the Buildings located thereon requires multi-sided loading areas by reason of, among other things, the fronting of the Parcel on more than one street. Similarly, the use of shared or cross dock loading areas will be permitted on adjacent Parcels only if first approved by the Architectural Review Committee. Each Parcel will provide for adequate loading facilities sufficient to serve the business to be conducted on the Parcel. Such loading facilities will provide an area sufficient to accommodate loading movement, including, without limitation, turnarounds, entirely off of public streets. All loading areas will be covered with an asphalt or concrete surface and have proper drainage.</p>	
<input type="checkbox"/>	<p>§4.10. Curb Cuts. The location of all curb cuts and any driveway connection serving any Parcel must be approved by the Architectural Review Committee.</p>	
<input type="checkbox"/>	<p>§4.11. Signs. The location, size and construction of any signs in any Parcel will be subject to the prior approval of the Architectural Review Committee. The Architectural Review Committee may promulgate specific sign criteria as part of the</p>	

	<p>specific design guidelines referred to in §3.07 hereof. All wall signs must be mounted flat on the surface of the walls and may not project above the roof line of any Building. No hand-painted, animated or flashing signs will be permitted. Each Parcel may have one free-standing sign located at the primary entrance to the Parcel. The sign must be no closer than ten feet to the entrance drive and must be set back no less than 30 feet from the Parcel boundary line. Design specifications for the monument sign to be located at the primary entrance to the Parcel will be contained in the Design Guidelines. The monument sign design specifications may be changed from time to time with the approval of the Architectural Review Committee. Each Building will be permitted one additional free-standing or fascia type sign at the primary entrance to such Building. In addition to any other requirements specified under applicable law or by the Architectural Review Committee, all such signs will comply with the following general provisions:</p>	
<input type="checkbox"/>	(a) Height. No part of any free-standing sign may exceed an above-grade height of six (6) feet.	
<input type="checkbox"/>	(b) Wall-Mounted Signs. No part of any wall-mounted sign may extend more than twelve inches from the Building on which it is located.	
<input type="checkbox"/>	(c) Movement. No sign will incorporate movement or the illusion of movement. Flashing signs will not be permitted.	
<input type="checkbox"/>	(d) Illumination. Internally illuminated signs will be permitted only with prior written consent of the Architectural Review Committee. The location, design and intensity of any externally illuminated signs will be subject to the prior written consent of the Architectural Review Committee, taking into consideration, among other things, those factors set forth in §4.15.	
<input type="checkbox"/>	(e) Location. No sign may be located within ten feet of the intersection of any street right-of-way line or within 30 feet of the intersection of a street right-of-way and adjacent Parcel boundary line.	
<input type="checkbox"/>	(f) Marketing/Construction Signs. Each Parcel may have one temporary sign for construction and one temporary sign for marketing. The construction sign must be removed once a certificate of occupancy for the Building has been issued. The marketing sign must be removed once the Building is fully leased.	
<input type="checkbox"/>	The information on the construction sign will be limited to the following information: See CCRs	
<input type="checkbox"/>	Any temporary construction or marketing sign permitted above must, in no event, exceed a size of four feet by eight feet and must otherwise comply with the signage requirements set forth in this §4.11.	
<input type="checkbox"/>	(g) Color. No more than four colors (including black and white) will be permitted on any sign. Exceptions may be made by the Architectural Review Committee for company logos, so long as the Lessee of the Parcel obtains the prior written approval of the Architectural Review Committee for such variance. No signs using vacuum-formed plastic lettering or day-glo colors will be permitted on any Parcel.	
<input type="checkbox"/>	(h) Traffic Visibility. No sign will be erected on any Parcel, which could in any manner interfere with vehicular or pedestrian safety.	
<input type="checkbox"/>	<p>§4.12. Maintenance of Parcels. Each Lessee will be responsible for the maintenance of its Parcel and the Improvements located thereon and will keep the exterior of its Building painted and in a sightly condition. All parking areas and driveways will be maintained in good condition and repair. This maintenance obligation will be in addition to each Lessee's maintenance obligations under §5.03 with respect to each portion of a Common Area located within its Parcel. Without limiting the generality of the foregoing: (a) each Lessee will maintain each of its Buildings and all Improvements in good condition and repair and keep the exterior of each Building, as well as all other portions of its Parcel, in an attractive condition; (b) no nuisance will be maintained any Parcel; (c) each Lessee will keep its Parcel free of litter, weeds, trash and debris; (d) all landscaping on the Lessee's Parcel will be maintained in the locations and in at least the quality and quantity originally approved by the Architectural Review Committee; (e) the pavement of all parking</p>	

	<p>areas and driveways within the Lessee's Parcel will be maintained in good condition and repair, free of potholes and will be restriped as needed; and (f) each Parcel and the Improvements thereon will at all times comply with all governmental requirements. To the extent any Lessee fails to fully perform its obligations under this §4.12 within 30 days after such Lessee's receipt of written notice of non-performance from the Association, then the Association will have the right to perform such obligations on behalf of the subject Lessee. Notwithstanding the foregoing, notice shall not be required in the event of an emergency situation. The non-performing Lessee will then be required to reimburse the Association for all costs incurred by the Association in curing such Lessee's non-performance within ten days after such Lessee's receipt of a written demand for the payment thereof from the Association.</p>	
<input type="checkbox"/>	<p>§4.13. Landscaping. Landscaping practices shall maximize native plant species and compatibility with the natural conditions of Merritt Island National Wildlife Refuge. Landscaping will be maintained by the Lessee of each Parcel. Unpaved sections of each Parcel will be maintained in landscaping, including any unpaved portion of the Parcel located within a public or street right-of-way. Except as otherwise expressly approved in writing by the Architectural Review Committee, all areas required under this §4.13 to be maintained by the Lessee in landscaping will be required to be irrigated at the cost of the Lessee of such Parcel. No fence, wall, tree, hedge or shrub-planting will be maintained in a manner which obstructs sight lines for vehicular traffic.</p>	
<input type="checkbox"/>	<p>§4.14. Utility Connections. All utility services located on or adjacent to a Parcel, including, without limitation, any telephone, gas, water, sewer, cable TV or electric lines or connections, will be located underground.</p>	
<input type="checkbox"/>	<p>§4.15. Exterior Lighting. Exterior lighting on a Parcel will be limited to lighting of signs as permitted under this Article 4, security and safety illuminations of adjacent streets, parking areas, loading areas, service areas, access private drives, walkways and building entrances and exterior lighting of overall building surfaces. The location, design, materials and type of any exterior lighting will be subject to the approval of the Architectural Review Committee. Such lighting will not produce any excessive glare or reflection onto any portion of any adjacent public street or Parcel or into the path of any oncoming or passing vehicle. No flashing, animated or intermittent lighting will be visible from the exterior of any Building. All parking lots, loading areas, service areas, pedestrian walkways and security lights, whether wall-mounted or free-standing, must be concealed source fixtures, where the lenses do not project below the opaque section of the fixture. Lighting fixtures for parking areas will be selected from those designated by the Architectural Review Committee and may only be varied with the prior approval from the Architectural Review Committee. All lighting on a Parcel will be coordinated as to intensity to provide for an attractive overall lighting plan and must be approved in writing by the Architectural Review Committee.</p>	
<input type="checkbox"/>	<p>§4.16. Screening of Roof Equipment. The Architectural Review Committee may require that any structure or equipment on the roof of any Building be screened from view from all streets. Such screening will be of a material similar in appearance to the exterior walls of the Building or of other suitable material approved by the Architectural Review Committee.</p>	
<input type="checkbox"/>	<p>§4.17. Storm Water Detention. Each Parcel will provide the necessary means to assure complete drainage within and immediately adjacent to the Parcel and provide adequate storm water control facilities to accomplish such objective.</p>	
<input type="checkbox"/>	<p>§4.18. Architectural Requirements. The materials, color, finishes and texture of the exterior walls of any Building constructed on any Parcel must be approved in writing by the Architectural Review Committee. All Buildings shall be faced with materials which exhibit a durable, permanent quality appearance. Buildings constructed in the Property will be constructed of brick, cast in place concrete, pre-cast concrete, stone, concrete block, glass or other materials approved by the Architectural Review Committee. All trims, rainwater leaders, etc. must be concealed or painted to match the surrounding materials. Use of metal on the</p>	

	exterior buildings may be permitted by variance as permitted by §3.06, only if used in an architecturally sensitive way as determined by the Architectural Review Committee.	
	§4.19. Buffer Areas/Irrigation. Unless otherwise expressly approved in writing by the Architectural Review Committee, each Parcel will have landscaped buffer areas along its boundary lines as follows:	
<input type="checkbox"/>	(a) 25 feet adjacent to the curb of all streets; and	
<input type="checkbox"/>	(b) 15 feet along Parcel lot lines adjacent to other Parcels.	
<input type="checkbox"/>	All of the above buffer areas located within any Parcel will be landscaped and maintained by the Lessee of such Parcel. All such buffer areas which are located adjacent to any of the identified roads or streets (including, without limitation, the portion thereof located within any public right-of-way) will be required to be irrigated at the cost of the Lessee of such Parcel. Parking will not be permitted within these buffer areas, but vehicular access will be permitted to cross the buffers in such locations as are approved by the Architectural Review Committee.	
<input type="checkbox"/>	§4.20. Fencing. Fencing will only be allowed at the Architectural Review Committee's discretion and, even if approved, must in all events be screened with landscape buffers approved by the Architectural Review Committee.	
<input type="checkbox"/>	§4.21. Driveways. All entrance drives to any Parcel will be aligned in such a manner as is approved by the Architectural Review Committee. Any such entrance drives will be no closer than 150 feet from any intersection of streets (measured to the center line of the intersecting streets). Each Parcel will be permitted only one entrance to such Parcel, with any secondary access points to be subject to the prior review and approval of the Architectural Review Committee.	
<input type="checkbox"/>	§4.22. Landscaping of Parking Areas. All parking areas will include landscaped islands at the end of all single, unpaired rows of parking.	
<input type="checkbox"/>	§4.23. Antenna and Towers. No external antenna, dish, tower or similar structure will be erected or maintained on any Parcel or on any Improvement constructed thereon, unless first specifically approved in writing by the Architectural Review Committee.	
<input type="checkbox"/>	§4.24. Sustainable Design Requirements. All construction and operations within Exploration Park shall incorporate, to the greatest extent practicable, measures to conserve energy, water, and other renewable and nonrenewable resources. SEE EUL Rev C.	



Cape Canaveral Spaceport Development Manual

VOLUME 3

CAPE CANAVERAL SPACE FORCE STATION

CHAPTER 1 GENERAL REQUIREMENTS

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SECTION 1 – INTRODUCTION

1.1 Introduction

The intent of this Chapter is to highlight the common requirements associated with the processes and design/construction standards for development of CCS infrastructure and facility projects on land under the responsibility of Space Florida (SF) within the boundaries of Cape Canaveral Space Force Station (CCSFS).

The majority of processes and standards presented in this Chapter are common to all development within the CCSFS property boundary. When CCS is referenced in this Chapter, it shall be interpreted as that portion of the CCS within the boundary of CCSFS only.

The CCSFS is an installation of Space Launch Delta 45. SF has responsibilities at SLC-46, SLC-20, Area 57 processing area, and offices near Gate 1.

There are a wide variety of facilities located within the CCSFS and the uses include office, industrial, processing, operations, storage, and launch facilities. Frequently the construction projects encompass “Areas” or “Complexes” and will have several facilities within the assigned area covered under one project.

SECTION 2 – DESIGN

2.1 Design Standards Introduction

SF seeks to foster an environment that promotes safety and sound engineering practices with innovation and new technologies. It shall be noted that while this Volume 3 of the Development Manual is meant to outline baseline design standards that are to be adhered to, consideration to variances that would support innovation and creativity will be considered on a case-by-case basis.

The initiation of the tenant project includes the development of a scope of work (SOW) based upon the needs of a customer and selection of a design team. The project is further developed by expanding and refining the customer needs based upon value engineering, compliance with local and state regulations, and compliance with the restrictions of the USSF placed upon the property being modified. All designs must comply with Air Force Space Command Manual (AFSPCMAN) 91-710 Volumes 1 through 7. The design must also comply with the CCSFS/YUSFWS light management requirements.

During the design process it is common to use exploratory services such as geotechnical investigation (soil boring) to develop a design to completion. Any design development that requires a change in any existing permit such as a SJRWMD permit or disturbance/alteration of the property will require a permit.

Facility modifications will be governed by the facility in question and any modifications will have to take into account the existing uses as well as the uses of adjacent or nearby facilities. Outside factors affecting the project may include explosive distance radii, line of sight requirements, FAA requirements, or environmental issues. These issues and governing departments will be identified during the AF Form 332 process and may also be identified by the liaison officer during the initial permitting process.

2.2 USSF Design Standards

As a baseline, all designs shall comply with AFSPCMAN 91-710 Volumes 1 through 7, the appropriate volumes of the Department of Defense (DoD) United Facilities Criteria, and the CCSFS/USFWS light management requirements (see Section 3.9). The design must also comply with the requirements within the applicable Lease Agreements for the respective facility at the time of development. Tenant/Contractor should confirm with SF which Lease Agreement(s) apply to each project.

Recognizing the unique requirements of CCSFS current and future tenants, and with the goal of encouraging innovation, variances to the above-mentioned standards will be evaluated on a case-by-case basis. Such variances need to be brought to the attention of SF who will forward the request for variance to the appropriate authority for review and approval. A detailed description of the requested variance, justification for the variance and the proposed alternate code/standard(s) for adherence shall be provided by the Tenant.

2.3 Design of Streets and Roadways

FDOT Manual of Minimum Uniform Standards for Design, Construction and Maintenance for Streets and Highways, latest version, shall govern the design of streets, parking lots, and roadways. These standards can be obtained via the FDOT website: <http://www.dot.state.fl.us/>. Tenant construction of facilities may also include construction of access roads, lighting, or additional right of way improvements pending the approval of SF. Tenants shall discuss the additional construction, abutting the Tenant's, with SF.

2.4 Laws and Regulations

The laws, regulations, and statutes (shown in Table 1) shall apply to all projects where applicable. Please note, additional laws, regulations, and statutes may apply and it is the Tenant/Contractor's responsibility to abide by all applicable requirements.

Table 1: Laws and Regulations

Regulation	Reference	Description	Processing Facility (PF) and Other Facilities / Launch Complex (LC)
Air Force Space Command Manual	91-710	Volumes 1 through 7	X
Florida Statute	255.253	Sustainable Building Rating	X
Protection of Historic Properties	36 CFR Part 800	Protection of Historical Properties	X
Florida Statute	373	Water Resources	X
29 U.S. Code	Chapter 15	Occupational Safety and Health	X
Hazardous Materials	40 CFR Part 302	Designation of Hazardous Substances	X
	40 CFR Part 355	Emergency Planning and Notification	X
	49 CFR Parts 171-180	Hazardous Materials Regulations	X
	Title 40 Part 112	Oil Pollution Prevention	X
10 U.S Code	Section 2692	Storage, Treatment and Disposal of Non-Defense Toxic and Hazardous Materials	
Florida Administrative Code	FAC Chapter 62-150	Hazardous Substance Release Notification	X
	FAC Chapter 62-770	Petroleum Contamination Site Cleanup Criteria	X
Petroleum Storage Tanks	FAC Chapter 62-761	Underground Storage Tank (UST) Systems	X
	FAC Chapter 62-762	Aboveground Storage Tank (AST) Systems	X
Davis Bacon Act*	40 U.S.C. 3141-3148	Local prevailing wages on public works projects for laborers and mechanics	X

***Use Davis Bacon Act wage rates only when applicable.**

2.5 Codes and Standards

The design and construction of all facilities and improvements shall be in compliance with all applicable local, state, and federal laws and regulations, including Chapter 373, Florida Statutes; and in conformance to the latest edition of the Florida Building Code and other design and

construction standards adopted by the State, and in effect prior to the start of design. Some of these requirements may include industry standards from the organizations, and pertinent acronyms, shown in Table 2.

Table 2: Organization Acronym's

ACRONYM	STANDARD DESCRIPTION
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute International
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASSE/SAFE	American Society of Safety Engineers
ASTM	American Society of Testing and Materials
AWWA	American Water Works Association
AWS	American Welding Society
ASDA	Americans With Disabilities Act Accessibility Standards
CFR	Code of Federal Regulation
DOD	Department of Defense
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulations
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FAC	Florida Administrative Code
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
IES	Illuminating Engineering Society of North America
NETA	International Electrical Testing Association
IEC	International Electrotechnical Commission
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
SJRWMD	St. Johns River Water Management District
UL	Underwriters Laboratories
USSF	United States Space Force
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture

2.6 Sustainability

As applicable, SF is committed to conserving energy and natural resources by applying sustainable design practices intended to conserve energy, water, and other renewable and non-renewable resources. Tenants are encouraged to incorporate the adopted State of Florida Sustainability Standards into design and construction of their facilities. The Tenant has the option of selecting one of the rating systems approved for use in FS Section 255.253.

From FS 255.253:

“Sustainable building rating or national model green building code” means a rating system established by the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) rating system, the International Green Construction Code (IGCC), the Green Building Initiative’s Green Globes (GBIGG) rating system, the Florida Green Building Coalition (FGBC) standards, or a nationally recognized, high-performance green building rating system as approved by the department.” The IGCC is not a standard but is intended to be used as a jurisdictional and municipal building code for new construction and major renovations.

2.7 Site Development

2.7.1 Site Access and Parking

There are no established minimum parking requirements. The number of required parking spaces is evaluated on a case-by-case basis and compared to the requirements of other local jurisdictions as a reference. The documentation shall include the number of spaces per square foot required and proposed, handicap spaces required and proposed, bicycle spaces required and proposed, and totals. The number of spaces and parking space dimensions shall be coordinated and decided on with SF and the Owner. The number of required parking spaces is evaluated on a case-by-case basis and compared to the requirements of other local jurisdictions as a reference. Parking lot design shall incorporate fire truck accessibility.

2.7.2 Stormwater Management

SJRWMD regulates construction of drainage systems, stormwater treatment ponds, large uses of water, and other types of projects. Each Tenant shall provide the necessary means to assure complete drainage, water quality treatment, and attenuation within and immediately adjacent to its leased parcel and provide adequate stormwater control facilities to comply with the requirements of the SJRWMD.

2.7.3 Drainage

Any construction activity, with more than 1,000 square feet of new impervious surface, requires a stormwater management report signed and sealed by a Professional Engineer (PE), licensed in the State of Florida.

Gutter spread calculations are required for any new extension of roads and shall include the following minimum requirements:

- A 10-year, 24-hour tail water condition shall be used.
- The rainfall intensity shall be four inches/hour.
- A minimum of one travel lane (12 feet wide) will be required to be maintained in the worse condition.
- The hydraulic grade line shall be six (6) inches below the inlet invert.

2.7.4 Erosion and Sedimentation Control

FDEP is the agency responsible for reviewing, processing, and issuing NPDES permits. SWPPPs shall be designed in accordance with FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities. A monthly report of NPDES inspections shall be submitted to SF.

2.7.5 Fire Hydrants

Use International Organization for Standardization (ISO) method per NFPA. Per NFPA 291, the body of the hydrants shall be red for a private system and must contain a cap color depending on its flowrate. Designers shall coordinate connectivity and fire hydrant's flowrate with USSF requirements.

2.7.6 Hydraulic Analysis and Water Demand

Hydrant flow tests should be requested at the pre-application conference. A hydraulic analysis should be completed for any system requiring a main extension to the potable water system (private or public).

Calculations shall adhere to USSF requirements and water demand requirements within the structures and methodology used for determination of meter size and service lateral size.

2.7.7 Lift Stations

Calculations shall adhere to USSF requirements and include estimated sewer flows, peak factor used, velocities, head loss, pump selection information, pump curve, run time in both minimum and maximum cycles, wet well capacity and size, pumps on levels, pumps off levels, lag times and buoyancy calculations.

2.7.8 Standard Construction Details

During the design preparation phases of projects which require SF permitting/approval or for information purposes, Tenants and Tenant's design teams shall review the industry standards for construction.

2.8 Architecture

2.8.1 Signage

All signage shall be approved USSF/CCSFS. Signage on the exterior of buildings or free-standing signage within the lease area is limited to Tenant company name and logo (commercial signage) except for way finding and code required signage.

Way finding and code required exterior signage shall be approved by USSF/CCSFS including graphics, fonts, and color. Building shall have appropriate building number or street number indicated on front of the building.

The location, size and construction of commercial signs will be subject to the prior approval of SF. Internally illuminated signs must be approved by USSF/CCSFS and the requirements of paragraph 3.8.2 Light Management.

2.8.2 Light Management

The CCSFS is the habitat for several threatened and endangered species and as such, the design must address the effects of the project on the environment including light management. This requires the development of a Light Management Plan (LMP) that is submitted for review and approval by both the USSF and USFWS. The LMP must include the facility operational requirements, lighting used (light fixture types and locations), and after placement, a demonstration of the lighting for final on-site review and approval. Some adjustments to the lights to include aiming or shielding may be required after final placement. The LMP is submitted to USSF 45th SW CES/CEIE with a copy to the USSF liaison officer. The LMP will then be forwarded by CES/CEIE to the USFWS. A typical table of content is as follows:

- 1.0 Introduction
 - 1.1 Purpose
 - 1.2 Objective
- 2.0 Site Description
- 3.0 Operational Guidelines
 - 3.1 Pad and Site Lighting
 - 3.1.1 Pole Lighting
 - 3.1.2 Temporary Guard Shack
 - 3.1.3 MAS Structure Lighting
- 4.0 Compliance Verification
- 5.0 Light Fixture Information
- 6.0 Figures

The review process may require additional information to be submitted for consideration and the final approval will include any conditions required. The Environmental and FWS review/approval cycle may be 2 – 3 months.

2.9 Hazardous Material, Fuel, and Propellant Storage

Storage of hazardous materials, fuel and propellants shall be in accordance with all Federal and State regulations and applicable codes and only if approved by SF. Approval and permitting may also be required by the USSF.

2.10 Explosive Siting and Range Safety

Storage of hazardous materials, fuel and propellants shall be in accordance with all Federal and State regulations and applicable codes and only if approved by SF. Approval and permitting is required by the USSF. All explosive siting plans shall be coordinated with USSF 45th Space Wing Range Safety and will need to be approved by DoD Explosives Safety Board (DDESB). As applicable, explosive siting shall be in accordance with Air Force Manual 91-201 and CFR 14 Chapter III Part 420.

2.11 Utility Locates

All utility services located on or adjacent to any parcel, including, without limitation, any underground telephone, natural gas, high pressure gases, water, sewer, communications, or electric lines or connections, shall be located. No digging or dirt moving shall occur before all utilities have been located and properly staked out.

2.12 Mass Notification System

For safety reasons USSF AHJ is requesting that the building public address system include a Mass Notification System. These are used to quickly alert people to potential threats or emergency situations.

SECTION 3 – PROJECT REVIEW & CONSTRUCTION PROCESSES

3.1 CCSFS Project Overview

Where the USSF is referenced, SF is the point of contact and governing authority. The USSF is included by reference to indicate its involvement in reviews and approvals as may be mandated by agreements between SF and the USSF. If required, those interactions with the USSF will be coordinated by SF.

Where the USSF is referenced, it shall be inclusive of their current Operations and Maintenance contractor (as of the date of publication) which is the Consolidated Launch Operations and Infrastructure Support (CLOIS) Contract. The majority of construction projects will involve coordination with USSF contractors.

3.2 Space Florida Building Department

SF shall serve as the Building Department and is responsible for code compliance on all construction projects where SF has a lease agreement with the USSF. An SF Building Permit must be obtained from the Space Florida Building Department in order to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system or to perform any other construction work on property for which SF is responsible. The Tenant/Contractor shall be responsible for the payment of all permit fees associated with the construction effort.

The Space Florida Building Department consists of:

- SF serving as Building Department responsible for permit and Certificate of Occupancy or Completion.
- SF's Florida Building Code Licensed Agent (FBC Agent) responsible for third party plans review and inspection. SF has agreement(s) with third-party organization(s) to perform building code plan reviews and inspections for vertical construction governed by the Florida Building Code (FBC). The City of Titusville currently provides FBC code reviews, inspections, and recommendations to SF for issuance of Building permits and Certification of Occupancy.
- USSF Authority Having Jurisdiction (USSF AHJ) responsible for life safety and fire protection code compliance. USSF AHJ's design review/approval and inspection of construction shall be required as necessary to support a certification of occupancy or completion. The USSF AHJ may provide written approval that life safety and fire protection inspections may be conducted by a tenant-hired third-party.

3.3 CCSFS Site Development Preliminary Approval

3.3.1 Initial Coordination and Program Introduction

The Figure 1: CCSFS Site Conceptual Development Process, Figure 2: CCSFS Site Design Development Process, Figure 3: CCSFS Construction Phase Process, and Figure 4: Construction Inspection Process, provided in Subsection 3.12 show the general processes for obtaining review and approval for all Tenant projects at CCS. A review of

the process shall take place during the initial meetings with the Tenant to address any exceptions or possible additions to the process based on the specific project. During the initial meetings, an overview of the checklists and the Space Florida Program Document Management System (SFPDMS), through which submittals will be received and processed.

Prior to commencement of the project the Tenant must submit a Program Introduction document (under format of the Universal Documentation System - UDS) to the USSF describing their overall program at a high level. Their program must be accepted onto the Eastern Range via issuance of a UDS Statement of Capability by the USSF. Additionally, the Tenant must make financial arrangements with the USSF through establishment of a Job Order Number (JON) account accompanied by appropriate funding to cover potential USSF direct costs to support the program. Further, the Tenant must negotiate and secure a USSF Commercial Space Operations Support Agreement (CSOSA) detailing the types of support and services to be acquired from the USSF.

3.3.2 Tenant Questionnaire

Prior to commencing the design and construction of an improvement project within CCS, Tenant must first submit a New Tenant Questionnaire and obtain SF/USSF written concurrence to proceed with the planned improvement. The Tenant Questionnaire shall be obtained from SF during their initial/introduction business development meeting.

3.3.3 AF Form 332

During the preliminary design phase, the permitting process begins with AF Form 332 - Base Civil Engineer Work Request (refer to Appendix 3-1A.1). This form shall be prepared by the Tenant and sent to SF for review and submission to the USSF. With SF approval, the Tenant may submit to the USSF and SF in parallel. The AF Form 332 alerts the USSF/CCSFS community of any activity that disturbs the flow of traffic or penetrates the ground. This form identifies the facility, project, financing, and support needed from the USSF consultant performing operations and support for the CCSFS. If any support is needed from CLOIS, Form C-CS-FRM-01 (Refer to Appendix 3-1A.2) should be submitted with the AF Form 332. Even if no financing or work support is needed from the USSF, the AF Form 332 must be prepared indicating "For Coordination Only".

This form is presented along with any supporting documentation to the Work Order Review Board (WORB). The WORB, consisting of representatives from affected departments and organizations, reviews the AF Form 332 and provides disposition. For more complex projects, SF may request representation by the Tenant at this initial WORB review to answer any questions that may come up. The disposition will consist of comments from each affected department and identify any additional documentation required by the WORB to further advance the application for a permit. The additional information requested may be clarification of the submitted documents or additional studies needed. The AF Form 332 should then be resubmitted when all comments have been addressed. When the AF Form 332 is complete, it will result in the WORB issuing an approved AF Form 332 and requiring the submittal of AF Form 103. This form will outline any CCSFS requirements for work identified and will serve as the authority to request locator services and other CCSFS support needed.

If the project warrants emergency/emergent treatment, there is a special process for the submittal and may include the submittal of the AF Form 332 and the AF Form 103 (refer to Appendix 3-1A.3) together. The USSF liaison can provide support to help determine if the project constitutes an emergency and help with the submittal and review process.

3.3.4 AF Form 103

The AF Form 103 – Base Civil Engineering Work Clearance Request (dig permit) identifies the Work Order Number (WON) and is the response to the permit application. The Tenant/Contractor shall prepare this form for SF review and submittal. When filling this form out for further review, it should include the signed AF Form 332. The formal response/approval will include any conditions for the performance of the work. The AF Form 103 will require investigative/locator services for environmental, utilities, communication, and gas services. The requestor (Tenant/Contractor) is responsible for contacting each of these identified services and successfully supporting their site investigation and completing any additional conditions or reports/studies required by the AF Form 103. When the utilities, gas, communication, and environmental departments have been contacted and have signed off on the form, then the form is submitted to SF for signature and submittal to the WORB chairperson to receive final approval for the AF Form 103. When AF Form 103 has been completed and approved, work can begin. The completion and submittal process for this form to include environmental site review and utility locates should expect to take 2 – 4 weeks. With the approved dig request, work may only proceed after the Contractor notifies the Cape Support office (321-853-5211) each morning prior to performing work approved by the permit. Note: Permission to dig will only be granted on non-critical days unless a dig permit waiver request has been approved.

Critical Days: Critical days are defined days which require uninterrupted operations that are critical to a launch schedule. These days are tentatively set in advance but may change as the operations for a launch advance. No digging is permitted during a “critical day”. The Contractor shall actively inquire and keep up to date with “critical days” through communication with the Cape Support office.

Dig Waiver Request: This is a formal request (via email) to allow digging for each project on critical days. It is possible to be working in a remote area that has minimal to no impact to utilities that support a launch operation. If this is the case, a dig waiver request can be submitted which if approved will allow work to proceed on critical days after clearance from Cape Support. This request should include an approved AF Form 332 and AF Form 103, project summary (reason for the project, work schedule/duration, reason for the waiver request), a detailed project description, plans, requesting company and POC, company performing the work and equipment being used, and project location.

3.3.5 AF Form 813 – Request for Environmental Impact Analysis

This form (refer to Appendix 3-1A.4) is required for projects that have a potential environmental impact. This form requests a clarification of the project to narrow the scope of potential environmental issues to allow further evaluation by the USSF Environmental group. This form is a checklist for the requester to use to better define the potential impact of the project to the environment. The USSF will use this form to evaluate the need for further environmental studies.

3.3.6 Right of Entry and Real Property License or Lease Type Agreement

Engineering investigations and construction activities will require a right of entry, license, and/or enhanced use lease with USSF. SF typically has or will enter into such agreements with USSF then sublease or equivalent to Tenant. The Tenant shall provide a boundary survey to define the property and easements associated with the project. The Tenant will be responsible for the payment of the survey.

After construction is completed, a turnover process will have to occur to formally turn over this project or improvement to USSF as outlined in the real property license or lease.

At the end of a lease term when the Tenant vacates the property, the Tenant will prepare an exit Environmental Baseline Survey (EBS). Additional information about the EBS can be found in Volume 2, Chapter 2 of the Development Manual, in Appendix 2-2C - Operations Related Standards, Section 1.4.2.

3.3.7 AF Form 1354 Transfer and Acceptance of DoD Real Property

This form (refer to Appendix 3-1A.5) is used to identify and provide the estimated costs of the improvements to the property. This may be a new facility, permanent significant improvements to an existing facility, or infrastructure improvements. Significant improvements include upgrading building systems such as HVAC, Fire Alarm, and Security Systems or facility improvements such as a new roof, mechanical door or fencing. Include descriptions and photos to better define the improvement. This submission may also include a site visit with the USSF liaison and the USSF Real Property representative. This form officially notifies the USSF of property improvements so they may handle warranties, maintenance, and update their property records to identify any increase in property values. Continued maintenance may be the responsibility of SF, the Tenant, or the USSF depending on the property use agreement. The approval of this form may occur locally by the 45th Space Wing or require approval for executive branches of USSF. The Tenant shall support the preparation of Form 1354 for SF review and submittal.

3.4 Environmental Permitting

Tenant shall obtain all required categorical exclusion, environmental permits, licenses, registrations, and approvals for their site activities. Tenant shall prepare all permit applications and pay all permit application fees directly to the regulatory agency. Before any permits are submitted to the regulatory agency, Tenant shall submit for approval a copy of each permit to SF and USSF. If required by the permit application, the USSF Environmental Department shall sign the permit applications as the landowner or utility system owner. Tenant shall submit courtesy copies of all permits, licenses, registrations, and approvals to SF within five (5) business days after receipt from the regulatory agency. Tenant shall ensure that all operations, activities, equipment, and facilities are in full compliance with all permit conditions.

3.4.1 National Environmental Policy Act

Tenant shall be responsible for preparation of all environmental documentation, including Environmental Assessments (EA) or Environmental Impact Statements (EIS) required by regulatory agencies to support its development and/or operations and for obtaining all

necessary approvals of the same. Preparation of documents shall be coordinated with SF Environmental Health and Safety Program Manager and follow regulatory processes.

3.4.2 Stormwater Management Permitting

The Surface Water and Stormwater Management System within CCS are under the jurisdiction of the St. Johns River Water Management District (SJRWMD). Each Tenant shall provide the necessary means to assure complete drainage within and immediately adjacent to its leased parcel and provide adequate storm water control facilities to accomplish such objective in accordance with the requirements of the SJRWMD. Permits shall be prepared and submitted to SF for coordination and approval by SF and USSF. All permit applications shall be submitted through the USSF Environmental Group who will direct tenants or SF on how the permits shall be submitted to SJRWMD.

Any work adjacent to navigable or tidal waters may come under the jurisdiction of the United States Army Corps of Engineers (USACE). Prior to any activity which would disturb the area in question, advise SF and if directed by SF, the USACE Cocoa Section (321-504-3771) can be contacted to define their jurisdictional limits and any action required.

The step-by-step current process for SJRWMD ERP permitting is as follows:

- 1) Contractor provides a copy of the ERP application, drawings, and supportive documents for 45 CES/CEIE to review
- 2) Contractor starts application process on the SJRWMD E-Permitting website
- 3) Contractor adds SLD 45 to the application as a team member using the email: 45ces.cei.workflow@us.af.mil
- 4) Contractor uploads all the supporting documentation but DOES NOT submit the application.
- 5) CEIE will log in, print out the signature authority for Mr. Patrick Giniewski to sign, and upload the signed copy to E-permit.
- 6) Once this is complete, CEIE will request the contractor submit the application to SJRWMD.

3.4.3 Wetlands Dredge and Fill Permitting

The USACE is responsible for the regulation and enforcement of the Clean Water Act (CWA), Section 404 and permits certain activities of dredging and/or filling of wetlands. Proposed activities are regulated through a permit review process that in late 2020 was overtaken by FDEP. An individual 404 permit is required for potentially significant impacts. Individual permits are reviewed FDEP, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. With advanced notice to SF and USSF, project proponent shall contact the FDEP for permit determinations and requirements.

3.4.4 Stormwater Discharge for Construction Activities Permitting

All construction sites that disturb one acre or greater of land are required to obtain coverage under the Generic Permit for Stormwater Discharge from Large and Small Construction Activities. FDEP 62-621.300(4) (a). Sites one acre or greater must complete a Notice of Intent (NOI) - FDEP form 62- 621.300(4) (b). to comply with FDEP National

Pollutant Discharge Elimination System (NPDES) Phase II Construction Permit. FDEP is the agency responsible for reviewing, processing, and issuing NPDES permits. The NOI and the permit application fee must be submitted to FDEP for issuance of the NPDES Permit. A copy of the NOI and SWPPP must be submitted to the SF prior to construction.

3.4.5 Water and Wastewater Permitting

The water and wastewater permits within CCS are under the jurisdiction of FDEP. Wastewater permits shall be approved by the USSF for discharge to their wastewater treatment plant. Each Tenant shall provide the necessary means to assure proposed water and wastewater systems meet the requirements stated within the applicable permit. Before any permits are submitted to the appropriate agency, Tenant shall submit, for approval, a copy of the permit to SF. All permit applications shall be submitted through the USSF Civil Engineering Group who will direct tenants or SF on how the permits shall be submitted to FDEP.

3.4.6 Air Permitting

USSF holds a facility-wide Federal Clean Air Act (FCAA) Title V Air Operation Permit issued by the FDEP that governs air emissions from dozens of regulated emission sources and hundreds of insignificant emission sources across CCSFS. Tenants will need to comply with the existing facility permit. Tenant shall contact and coordinate with SF and USSF prior to:

- a) The operation, reactivation, or modification of an existing emission source/activity,
- b) The construction of any new air emission source, or
- c) The initiation of an activity producing air emissions.

3.5 Building Permitting

3.5.1 Permit Application and Plans Review Overview

To document compliance with the FBC the Tenant/Contractor (**Applicant**) shall submit a SF Building Permit Application (provided at kickoff meeting) to SF for review. Once the application is approved, and permit fees have been received from the Tenant, drawings shall be submitted for review and approval. The SF Building Department will review drawings and specs for compliance with FBC and applicable USSF design standards.

Applicant shall submit plans, design documents and deliverables at milestones established during the delivery of the project to SF and other regulatory governing agencies. SF Building Department will provide plans review for compliance with these standards and FBC, as well as construction inspection for code compliance. This review and inspection do not relieve the Tenant from the responsibility of performing quality control/quality assurance (QA/QC) reviews and inspections on all design and construction work. Table 1 includes a Summary of Approvals required for construction projects at USSF. Note that additional approvals may be required depending on the scope of the project.

Applicant acknowledges that it is required to comply with the building code requirements identified in the FBC, including the Florida Fire Prevention Code, using the edition that is

most recent to the Commencement Date. Applicant further acknowledges that it is required to comply with such building code requirements regardless of whether the applicable local or state authority asserts jurisdiction over the Improvements on the Property.

The Tenant may submit for a waiver in order to hire an independent third-party FBC Agent in place of the SF FBC Agent. The FBC Agent should be a licensed by the State of Florida and shall comply with the “alternative plans review and inspection process” in Florida Statutes, Chapter 553, Building Construction Standards. The Tenant shall submit sufficient documentation with the waiver for reasons to consider allowing the Tenant to hire their own FBC Agent. If the Tenant hires their own FBC Agent, the SF Building Department will conduct an audit of all of the documentation from the Tenant-Hired FBC Agent. The documentation must include certificates of compliance in accordance with Florida Statutes Section 553.791(11). The audit will require that the Tenant pay fee before a CO or Certificate of Completion (CoC) is issued.

3.5.2 Application Fee

Building Plan Review and Permit Fees payment shall be paid to the FBC Agent prior to the start of plan review and issuance of an SF Building Permit. Furnish to the SF Building and SF Building Department an SF Permit Application, which will be used to calculate the plan review cost and construction permit fee.

3.5.3 Life Safety

USSF AHJ's plans review/approval and inspection of construction shall be required for the determination of life safety code compliance and fire protection code compliance of the site infrastructure and building construction as necessary to support a certification of occupancy. At USSF AHJ's direction, Tenant shall hire a licensed third-party fire protection engineering firm (**Fire Protection Consultant**) to perform plans reviews for code compliance and inspect construction to support the USSF AHJ's issuance of a memorandum (as applicable). The Fire Protection Consultant shall be approved by the USSF AHJ.

USSF's limited design review/approval and inspection of construction shall be required for the determination of life safety code compliance and fire protection code compliance of the site infrastructure and building construction as necessary to support a CO. At USSF's sole discretion, USSF contractors may be used to perform design reviews for code compliance and inspect construction to support the issuance of a CO.

Design documents shall be provided for review and comment at up to three design review intervals (as determined by SF) for any USSF concerns to be identified in a timely manner. All submittals and Fire Protection Consultant reviews/approvals shall be submitted to SF through the SFPDMS to be forwarded to USSF AHJ, as appropriate. Note that additional approvals may be required depending on the scope of the project.

3.5.4 Submittals

The Applicant shall submit all submittals to the SF Building Department through the SFPDMS using the standard transmittal form in Portable Document Format (PDF) format.

SF will provide instructions directly to Tenant for naming documents, workflow, and approval for all submittals. The following items should be submitted as one complete package when applicable:

- a. Complete and dated plans and specifications (including traffic control plans if applicable) of sufficient clarity to indicate the location, nature and extent of the work proposed and with sufficient detail to indicate that the proposed work conforms to the provisions of the FBC, this CCS Development Manual, and other applicable codes, laws, statutes, orders, and regulations. The Tenant shall submit plans in PDF and any hard copies required, for review at the following levels of completion; Schematic/Conceptual Design, Design Development, and Construction Documents as defined by American Institute of Architects (AIA) standards. All plans shall be 22 x 34 inch format. Plans and specifications shall be prepared by an architect or engineer or other design professional licensed in the State of Florida to practice as such and shall bear the seal of the design professional responsible for preparation of the plans and specifications. Submit PDF of construction documents and other hard copies that may be necessary for the pre-construction and pre-application meetings. For building construction projects, provide the following information on the cover sheet of the drawings:
 - i. Project Number
 - ii. Structure ID Number (Provided by USSF if new structure)
 - iii. Tenant contact information name, address and phone number
 - iv. Design firm/consultant name, address, phone number, and license number
 - v. The edition of the codes under which the project is designed
 - vi. Sustainable Rating System
 - vii. Building Code Use and Occupancy Classification
 - viii. Building Code Construction Type
 - ix. Design Occupant Load and Exiting Analysis
 - x. Whether an automatic sprinkler system is provided
 - xi. U-factors of building envelope systems and a statement signed and sealed by the architect of record that the building envelope complies with the Energy Code
 - xii. Tabulation of building components and systems and a statement signed and sealed by the Engineer of Record that all building components and systems comply with the Energy Code.
- b. Completion of the required Space Force forms referenced in Appendix 3-1A and applicable support documentation. A SF Building Permit cannot be issued until all required information has been received and approved.
- c. Applicant is required to submit an AF Form 813 and other information requested by the USSF to SF Environmental Health and Safety Program Manager. The purpose of the AF Form 813 is to identify the environmental regulations that apply to the proposed construction or to the operation of the completed work, structure, or facility. The Tenant must submit to the SF Building Department all applicable documentation required by the USSF or other permitting agencies. A Construction Permit cannot be issued until all required information has been received and approved.

- d. If applicable, the completion of USSF Space Launch Delta 45 Airfield Waiver Description and Risk Assessment and Federal Aviation Administration (FAA) Airspace Study Application Form or Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) shall be submitted. These waivers can be requested from the Skid Strip Manager. Approval from the FAA and USSF is required for projects resulting in airspace obstructions, change affecting the Skid Strip, helicopter landing sites, or for the use of cranes and certain other construction equipment. Before submitting to FAA, all submittals shall be approved by SF and USSF. Permits for construction shall be limited until the required FAA and USSF approvals are obtained. All submittals to the FAA and USSF shall be approved by SF.
- e. Prior to proceeding with the installation of fire protection or fire alarm systems, an electronic set (PDF) and any required hard copies of shop drawings, hydraulic calculations and related submittal data must be submitted to SF, who shall deliver them to Fire Protection Consultant and USSF for review and approval. Tenant is responsible for Fire Protection Consultant plan review and approval.
- f. Any state required permits or presence of state required inspectors shall be coordinated by the Tenant (Elevator Certification). Work related to these systems may not proceed until the related shop drawings and related submittals have been approved by USSF AHJ if applicable.
- g. Tenant shall complete and submit the Design Submittal Content Checklist with each major design submittal.
- h. Tenant shall complete a Construction Management Plan (CMP). All necessary construction related information shall be included within the CMP, shall be completed by the Tenant, and submitted to SF. No construction activities shall begin until SF has approved the Tenant's CMP. A comprehensive CMP shall include, but not be limited to, the following sections:
 - Introduction
 - Construction Utilization Layout (trailers, temporary utilities, tanks, equipment, laydown, MOT, etc.)
 - Health and Safety Plan (includes a Hurricane Plan)
 - Deferred Submittals Anticipated
 - Quality Control Plan – Inspections and QA/QC Testing
 - Contractor Key Personnel Contact Information
 - Project Schedule

3.5.5 Review Period

Upon receipt of the Submittals via the SFPDMS, SF shall respond via the same system within 10 business days; however, larger submittals requiring third party reviews may take longer. Some Submittals will take upwards of a month(s) as they may require USSF (local/headquarters) or other permitting agency approvals.

3.5.6 Permit Issuance

No physical work shall start until an SF Building Permit is issued. Before a permit is issued,

the following will be required:

- FBC Agent and Fire Protection Consultant shall provide letters of recommendation for permit issuance.
- AF Form 332
- AF Form 103
- AF Form 813
- SF Building Department has approved SF Building Permit Application.
- Plans for the proposed project are in compliance with the FBC, this CCS Development Manual, and all other applicable code requirements.

SF shall issue an SF Building Permit in the form of a permit card.

3.6 Pre-Construction Coordination

The Tenant shall contact the SF Building Department for the purpose of scheduling a pre-construction conference. The conference should include the Tenant, the Tenant's Prime Contractor, and the Contractor's major Subcontractors. The Contractor will be briefed on rules, regulations, and procedures to be followed for construction projects at CCS. The Contractor must submit an emergency phone list, any required submittals, applicable Notices of Commencement or environmental permits, and a construction schedule. After posting the SF Building Permit and placing approved construction documents at the project site, the Contractor may begin construction.

3.6.1 Excavation Permits

All excavations, cores, bores, and digging operations associated with construction or design investigations (geotechnical borings, soft digs, etc.) require permission from the USSF. The AF Form 103 shall be completed and sent to SF for review and submission to the USSF for approval.

3.6.2 Trailer Set-Up

Office trailers, storage trailers, storage boxes, etc. shall be tied down in accordance with the SF approved Hurricane Plan. Materials stored at trailer site shall be located within lot limits. Chain link security fences may be erected at the trailer site. Fences shall be approved by USSF.

3.6.3 Removal Work

The Contractor shall not disturb the existing infrastructure beyond that indicated or necessary per contract documents. Temporary shoring and bracing for support of building components to prevent settlement or other movement shall be as required to protect the work and existing facilities. The Contractor shall coordinate with SF and USSF for hauling of material offsite. Typically, USSF does not want Contractors to remove earthwork off federal property/CCSFS limits. All contaminated soils removal or relocation shall be coordinated with USSF and SF.

3.6.4 Utility Outages

During construction activities, it may become necessary to temporarily disconnect/shut-down a utility to complete the facility modification or to add a new system to the USSF utility network. Any utility outage will be coordinated with the SF PM and USSF.

3.6.5 Oversize/Overweight Load Permits

When working with Oversize/Overweight loads, Contractor shall provide advance notification prior to entering property to USSF per direction in 45th Mission Support Group (45 MSG) Operations Instruction (OI 10-101) and copy SF. In addition to necessary Federal Highway Administration (FHWA) permitting, Contractor needs approval from USSF 45 MSG Detachment 1 per OI 10-101 prior to entering the property by contacting the Cape Support office (321-853-5211). Contractor escort vehicle or 45th Security Forces Squadron (45 SFS) vehicles will be required for certain oversize transports and commodities as delineated in OI 10-101. The Oversize/Overweight loads will not be allowed to enter until the USSF Cape Support office provides approval. The maximum allowable weights not needing special permits can be found in the 23 CFR Part 658.17, issued by the FHWA.

3.6.6 Open Burning Instructions

All open burning shall be coordinated during the design phase with USSF. Contractor shall obtain all required permits and comply with all permit requirements prior to beginning any open burning work i.e., hot fire, welding, grinding, controlled burn, etc.

3.7 Construction and Inspection

3.7.1 Inspection Parties

The FBC Agent and Fire Protection Consultant shall perform the required inspections of construction and record the results of these inspections by utilizing the SFPDMS. In addition, the Tenant shall provide SF, utilizing the SFPDMS, with copies of all inspection reports, as well as the disposition of any comments on those reports. SF shall perform independent inspections, as necessary, of Tenant construction projects implemented on the facilities/property for which they are responsible.

The Tenant/Contractor will be required to hire an independent engineering firm to perform building threshold inspection services (Threshold Inspector). The independent engineering firm shall be licensed by the State of Florida and approved by SF.

3.7.2 Inspection Points

An inspection is required by SF Building Department and others as applicable before covering or concealing any electrical, plumbing, utility, mechanical, fire sprinkler, fire alarm or structural systems. Tenants shall coordinate with SF, the inspector and inspection requirements will vary by project. Applicable authority will be identified at the onset of each project.

USSF AHJ will be required to be present for certain life safety inspections including: hydrostatic test for the fire suppression system, fire alarm test, and life safety inspection.

Work may not progress beyond any point for which an inspection is required until the Contractor receives an approved inspection report for the inspected work. Prior to completion of construction, a punch list inspection shall be performed with SF personnel or their representative. All punch list items shall be addressed prior to final completion of construction activities.

3.7.3 Punch Lists

Depending on the complexity of the construction project, SF reserves the rights to issue construction phase(s) dependent punch lists. The punch list shall be documented in electronic format editable by others. At substantial completion of the overall construction project, SF shall issue a final substantial completion punch list. Upon a mutually agreed time frame, between substantial completion and final completion, SF and Tenant shall conduct a pre-final completion inspection at which time a final punch list shall be prepared. All punch list items shall be completed prior to final completion of the project.

3.8 Contract Closeout and Closeout Documentation

3.8.1 As-Built / Record Documents

As-Built / Record Documents (as-constructed) reflecting the final installation after all modifications and changes shall be furnished to the project's dedicated SF Contact at the end of each construction project. Record specifications shall be those used for the actual construction, marked with changes made by addendum, change order, or product substitution. Provide an electronic record drawings and specifications. Record drawings shall be provided in AutoCAD, ARCGIS (shape/.shp file type), and PDF formats. Hard copies of the record drawings and specifications may be required as well. All file transfers shall be submitted to the SFPDMS. If the files are too large, the files shall be written to a flash drive or other SF approved storage devices. All files shall be uncompressed in the file format specified by SF. The flash drive and files contained on the flash drive shall be appropriately labeled. The record drawings shall include, but not be limited to, the following information:

- a) The final location of all alignments, and material type of all underground utilities.
- b) The final location of all structures, buildings, roads, parking areas, and other elements of the project.
- c) The final locations of all heating and air conditioning equipment, ductwork, air devices, piping, or other devices necessary to the operation of the Heating, Ventilation, and Air Conditioning (HVAC) systems.
- d) The final locations of all plumbing equipment, pumps, piping, necessary for the operation of the plumbing systems.
- e) The final locations of all the electrical equipment, devices, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes, panel identification, and any other information necessary to identify and locate the equipment.
- f) All initiating devices such as flow switches/pressure switches for fire protection systems.

- g) Initiating devices, wiring sequence, wiring method, and connections of the components of the protective signaling system as installed. The drawings shall include color codes and terminal identifications.
- h) The final locations of all the communications equipment, devices, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes.
- i) The final locations of all the security equipment, wiring sequences, wiring methods and connections of component systems as installed. The drawings shall include color codes.
- j) All abandoned piping and underground utilities or structures.
- k) Location of any identified, but undisturbed asbestos remaining encapsulated.

All site work requiring as-built survey documentation for record information shall be obtained by a surveyor who is a registered Professional Land Surveyor in the state of Florida.

3.8.2 Operations and Maintenance Manuals and Warranties

For SF projects records transfer shall also include Operations and Maintenance (O&M) manuals for all systems and equipment; copies of all approved construction submittals and change orders; all acceptance test records and construction approvals; all manufacturer and contractor warranties; and any other documents required by the contract documents.

3.8.3 Certificates of Occupancy/Certificates of Completion

Tenant/Contractor shall not occupy, utilize, or operate facilities impacted by the construction without issuance of Certificate of Occupancy (CO) or Certificate of Completion (CoC).

A CO will be issued for the construction of any building or the alteration of an existing building where the alteration changes the occupancy from the existing CO of the building. A CoC will be issued for any construction or alteration of a facility where the occupancy is not changed.

Partial project acceptance or a Temporary Certificate of Occupancy (TCO) may be requested by the Tenant/Contractor for beneficial occupancy and the contractor shall make every effort to accommodate. Depending on punch list items and the condition of the project, SF may issue a TCO to allow beneficial occupancy for the tenant. When the punch list is complete, a final inspection will then determine acceptability for a CO. Both the TCO and the CO shall be issued only after approval of the fire protection systems from the USSF AHJ is received.

Upon acceptance of the work, all the required submittals have been received, all required inspections have been performed, all permits have been closed and the receipt of the required signed and sealed As-Built, Record Documents, and correction or completion of any outstanding items of work as listed in the punch list (if applicable), the SF Building Department shall issue the CO or CoC.

In order to issue a CO or CoC, SF Building Department requires:

- FBC Agent letter of recommendation for CO or Certificate of Completion.
- Fire Protection Consultant letter of compliance stating that the facility complies with all applicable codes and standards prior to requesting AHJ final acceptance testing to support the issuance of the CO.
- USSF AHJ final inspection as applicable to make sure the fire protection and life safety requirements have been met.
- USSF AHJ memorandum or documentation that USSF has witnessed necessary fire protection tests and inspections.

3.9 Safety Reporting – Mishaps and Close Calls

All occupants shall comply with USSF safety and mishap requirements. All safety concerns shall be directed to CCSFS Security (321-853-2121) and Cape Support (321-853-5211).

3.10 Security and Security Badging

USSF shall provide security and emergency response services for CCSFS, and as applicable, shall coordinate law enforcement activities with the Brevard County Sheriff's Office. Security for, entry to, or activities within, individual Tenant facilities shall be the responsibility of the individual Tenants. All vehicles, construction equipment, and personnel entering CCSFS limits are subject to USSF inspections.

All security badges are issued by USSF Badging Office. Badge forms shall be filled out by SF Tenants and returned to SF for processing. SF representative will review, sign-off, and submit the forms to USSF Badging Office. Two forms of valid identification are required for the badging process. Vehicles including trailers will not be permitted to enter CCSFS property without valid registration and proof of insurance. All traffic and roadway closures within the CCSFS shall be approved by USSF Security Office.

3.11 Cape Support

USSF Cape Support Officers shall be contacted for any traffic roadway impacts and lane closures. All Maintenance of Traffic plans and lane closures shall be coordinated through the Cape Support office (321-853-5211 or ccisr@us.af.mil). USSF will invoice SF for support Services. Tenant/Contractor shall coordinate lane closures two weeks in advance of the needed Cape Support Officer support.

3.12 Flow Charts

The flow charts provided in this section show the general process for obtaining review and approval for all Tenant projects at CCS. The flow charts include: Figure 1: CCSFS Site Conceptual Development Process, Figure 2: CCSFS Site Design Development Process, Figure 3: CCSFS Construction Phase Process, and Figure 4: CCSFS Construction Inspection Process. Depending on the specific project and its location, exceptions to the process, primarily with respect to outside reviews, may occur. A review of the process shall take place during the initial meetings with the Tenant to address any exceptions or possible additions to the process based on the specific project.

Figure 1: CCSFS SITE CONCEPTUAL DEVELOPMENT PROCESS

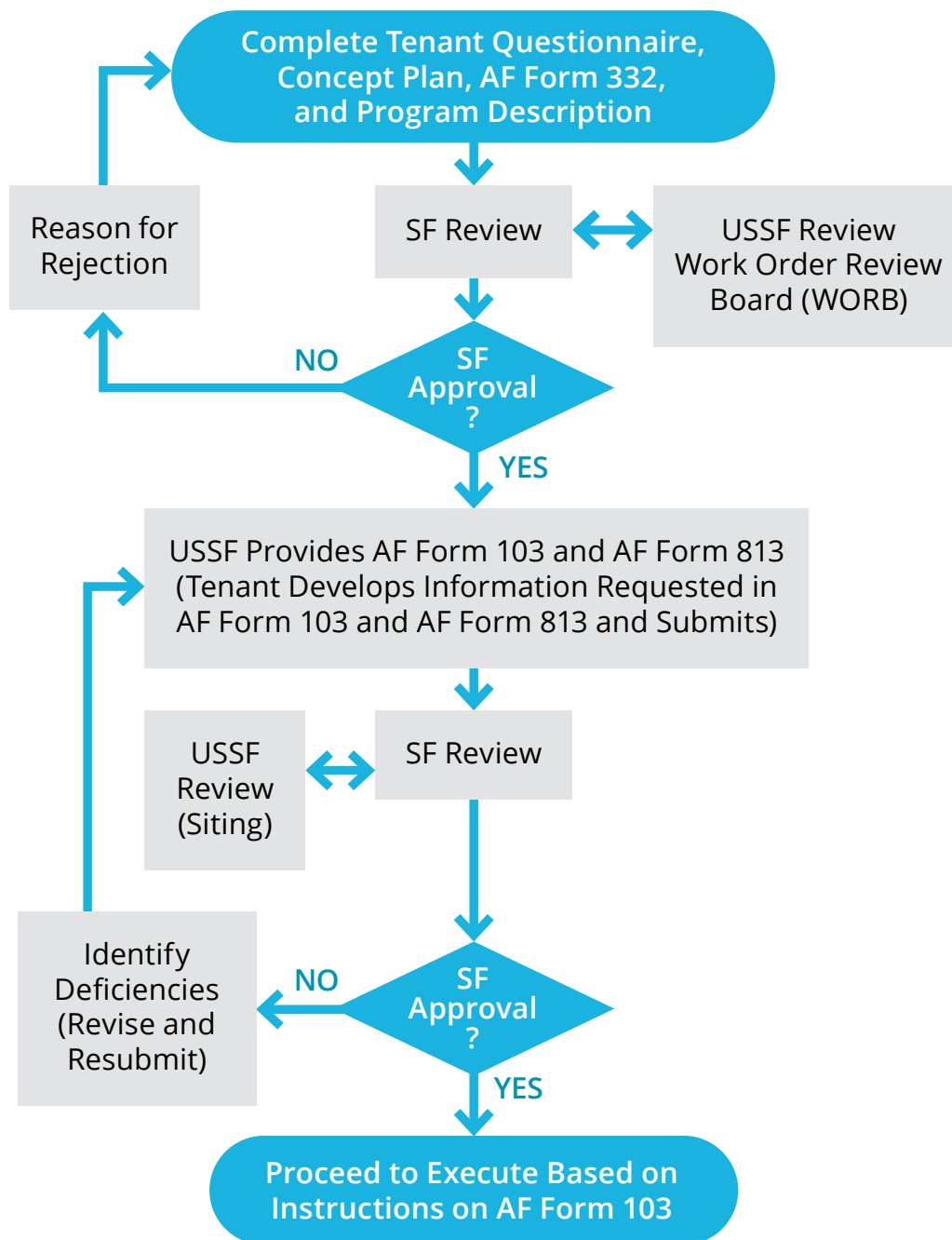
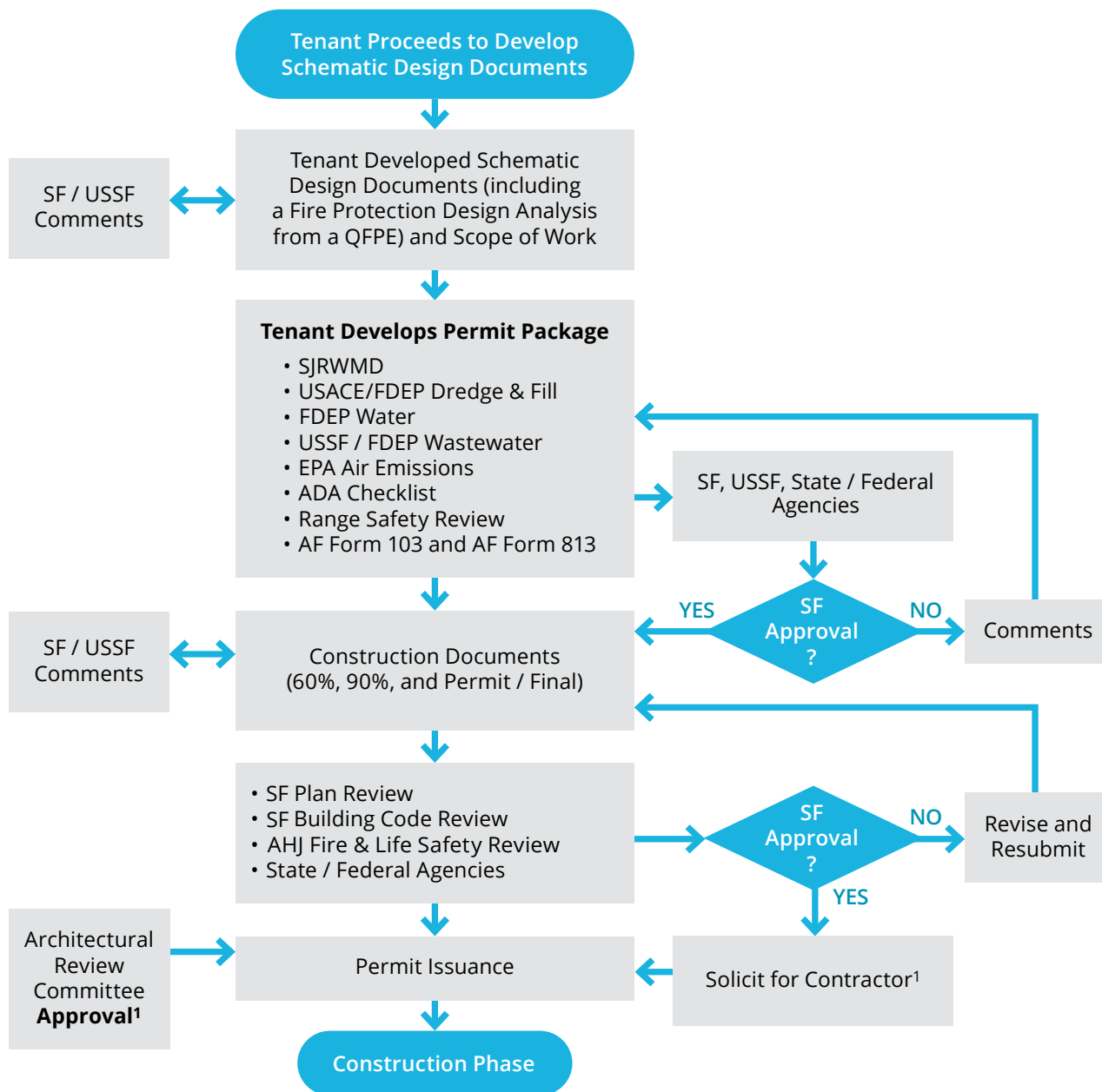
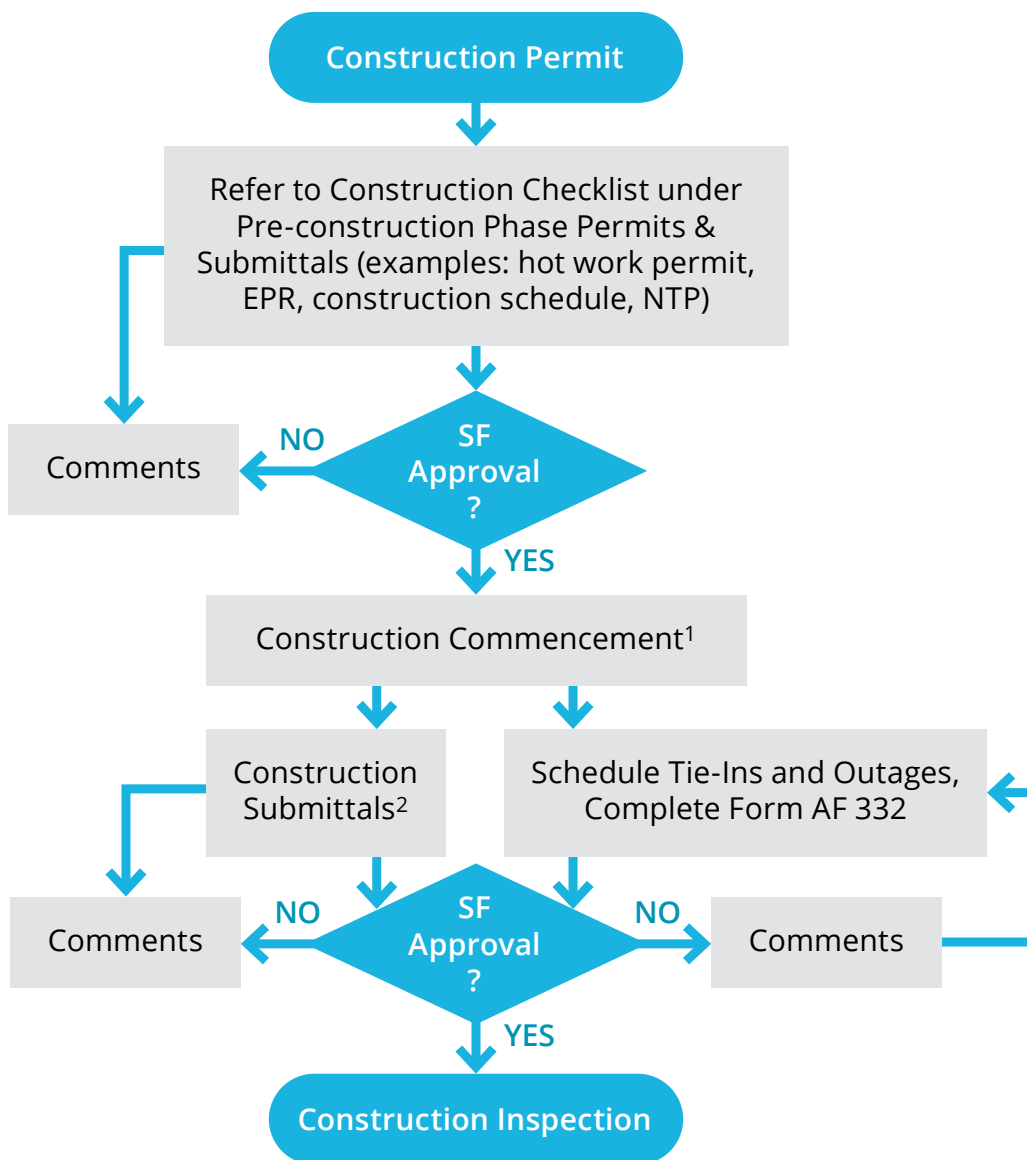


Figure 2: CCSFS SITE DESIGN DEVELOPMENT PROCESS



1. This step can be done anytime in the above process but needs to be done before issuance of a construction permit.

Figure 3: CCSFS CONSTRUCTION PHASE PROCESS



1. Breaking ground cannot commence until all necessary permits are complete.

2. Contractor may begin work associated with approved construction submittals.

Note: Some of these steps may not be necessary depending on the project and Space Florida's discretion.

Figure 4: CCSFS CONSTRUCTION INSPECTION PROCESS



1. To be completed for each work area or phase as necessary.
2. Can be phased with a TCO provided.
3. If the project is a building modification, a Certificate of Completion will be issued in lieu of a CO.

3.13 Design and Construction Checklist

The Design and Construction Checklist is an example checklist that is followed by SF and SF Tenants design/construction projects. Please refer to Appendix 3-1B.

3.14 Submittals Examples

Below are examples of Submittals referenced above Flow Charts and Checklist.

PRECONSTRUCTION SUBMITTALS EXAMPLES (Approver – SF/USSF/Tenant)

1. Design/Construction Drawings and Specifications
2. Contract Frontends Submittals
3. AF Form 332 (Facility Modification)
4. AF Form 813 (Environmental Checklist)
5. AF Form 103 Dig Permit
6. Certification of Insurance and Construction/Performance Bond
7. Environmental Protection Plan
8. Health and Safety Plan
9. Fire System Documentation
10. Construction Schedule
11. Schedule of Values
12. Submittal Register
13. Performance of Work Plan
 - 13.1. Showing Office, Storage, Traffic, Other Appropriate Information
14. Contractor Key Personnel Contact Information/CCSFS Emergency Contact Information
15. Quality Control Plan
16. Stormwater Permit/SWPPP/FDEP
17. Construction Submittals Examples (Approver – SF/USSF/Tenant)
 - a. Equipment/Products
 - b. Site Plans
 - c. HVAC/Controls Drawings
 - d. Fire Protection
 - e. Shop Drawings
 - f. Utility Outages/Connection

CONSTRUCTION SUBMITTALS EXAMPLES

1. Equipment/Submittals
2. Site Plans
3. HVAC/Controls Drawings
4. Fire Protection
5. Shop Drawings
6. Utility Outages/Connection

MANDATORY INSPECTIONS EXAMPLES

1. Environmental Protection Plan Implementation

2. Contract Specifications: Earthwork/Excavation of Unsuitable Material/Concrete/Structural Components and Disposal Locations/Methodology
3. Fire Alarm System and Fire Protection System
4. OSHA Compliance Inspections
5. Quality Hold Point Inspections as Required in Design Documents
6. Substantial Completion for Each Phase
7. Certificate of Occupancy (CO), Certificates of Completions (CoC), Temporary Certificate of Occupancy (TCO)

CONSTRUCTION CLOSEOUT DOCUMENTS EXAMPLES (APPROVER – SF/USSF/Tenant)

1. AF Form 1354 Transfer and Acceptance of Department of Defense Real Property
2. As-Built Documents
3. Record Documents in AutoCAD
4. O&M Manuals
5. Warranties (Transfer to USSF and or SF)
6. Spare Parts
7. Permitting Agency Closeout
8. Release of Liens
9. All Applicable Contractual Deliverables
10. Service Agreements
11. Commissioning Documentation
12. LEED Documentation

3.15 Summary of Approvals

Below is a table of the summary of Approvals required for each department.

Table 3: Summary of Approvals

APPROVALS AND INSPECTIONS	SF	USSF	FDEP	SJRWMD
<u>DESIGN PHASE</u>				
<u>PRELIMINARY APPROVALS</u>				
Tenant Questionnaire	✓	✓		
Concept Plan	✓	✓		
AF Form 332 (Work Order Request)	✓	✓		
AF Form 813 (Environmental Impact Analysis)	✓	✓		
<u>PLANS</u>				
Schematic Design Package (15 and/or 30%)	✓	✓		
Fire Protection Design Analysis	✓	✓		
Design Development Package (60%, 90%)*	✓	✓		
Construction Documents (100%/Bid)*	✓	✓		
<u>PERMITS</u>				
Environmental Resource (Stormwater Management) Permit	✓	✓	✓	✓
Wetlands Dredge and Fill	✓	✓	✓	
Stormwater Discharge NPDES	✓	✓	✓	
Potable Water Construction Permit	✓	✓	✓	
Wastewater Discharge Permit	✓	✓	✓	
Air Emissions Permit	✓		✓	
Construction Building Permit*	✓			
Burn Permit	✓	✓		
Dig Permit (AF Form 103) Design Inv. & Construction	✓	✓		
<u>CONSTRUCTION PHASE</u>				
Brevard County Notice of Commencement	✓			
Environmental Protection Plan	✓			
Fire System Documents*	✓	✓		
Health and Safety Plan	✓			
Stormwater Pollution Prevention Plan (SWPPP)	✓			
Submittals Required by Contract Documents*	✓			
Close-Out Documents*	✓			
Life Safety Plan*	✓	✓		
<u>MANDATORY INSPECTIONS</u>				
Environmental Protection Plan Implementation	✓			
Cast-in-Place Concrete Formwork and Reinforcement Placement*	✓			
Excavation of Unsuitable Material	✓			
Florida Building Code*				
Fire Protection System (Fire Alarm and Suppression)*	✓	✓		

*Coordinated with FBC Agent

APPENDICES

3-1A – FORMS

3-1B – USSF DESIGN AND CONSTRUCTION CHECKLIST

APPENDIX 3-1A – FORMS

1. AF Form 332 Base Civil Engineer Work Request
2. C-CS-FRM-01 CLOIS Support Request
3. AF Form 103 Base Civil Engineering Work Clearance Request (Dig Permit)
4. AF Form 813 Request for Environmental Impact Analysis
5. AF Form 1354 Transfer and Acceptance of Department of Defense Real Property

BASE CIVIL ENGINEER WORK REQUEST				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average .3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project 0704-0188, Washington DC 20503. Please DO NOT RETURN your form to either of these addresses. Send your completed form to HQ AFESC/DEMG.					
SECTION I - TO BE COMPLETED BY REQUESTER					
1. FROM		2. OFFICE SYMBOL	3. DATE OF REQUEST		4. WORK REQUEST NO. (For BCE Use)
5. NAME AND PHONE NO. OF REQUESTER			6. REQUIRED COMPLETION DATE		7. BUILDING, FACILITY, OR STREET ADDRESS WHERE WORK IS TO BE ACCOMPLISHED
8. DESCRIPTION OF WORK TO BE ACCOMPLISHED					
9. BRIEF JUSTIFICATION FOR WORK TO BE ACCOMPLISHED <i>(Not required for maintenance and repair)</i>					
10. DONATED RESOURCES					
<input type="checkbox"/> FUNDS		<input type="checkbox"/> LABOR		<input type="checkbox"/> MATERIAL	
<input type="checkbox"/> CONTRACT BY REQUESTER		<input type="checkbox"/> NONE			
5. NAME OF REQUESTER			12. GRADE OF REQUESTER		13. SIGNATURE OF REQUESTER
14. COORDINATION					
SECTION II – FOR BASE CIVIL ENGINEER USE					
15. WORK ORDER <i>(Place an "X" in the appropriate box.)</i>					
<input type="checkbox"/> IN-SERVICE		<input type="checkbox"/> SELF-HELP		<input type="checkbox"/> CONTRACT	
<input type="checkbox"/> SABER					
16. DIRECT SCHEDULED WORK <i>(Place an "X" in the appropriate box.)</i>					
<input type="checkbox"/> EMERGENCY		<input type="checkbox"/> URGENT		<input type="checkbox"/> ROUTINE	
<input type="checkbox"/> SELF-HELP		<input type="checkbox"/> M/C			
17. SELF-HELP <i>(Place an "X" in the appropriate box.)</i>					
<input type="checkbox"/> BRIEFING REQUIRED			<input type="checkbox"/> ADEQUATE COORDINATION		<input type="checkbox"/> INSPECTION REQUIRED
SECTION III – COMPLETE ONLY IF WORK IS TO BE ACCOMPLISHED BY WORK ORDER					
18. WORK CLASS		19. PRIORITY		20. ESTIMATED HOURS	
21. ESTIMATED FUNDED COST		22. ESTIMATED TOTAL COST			
<input type="checkbox"/> 23. THERE IS NO NEED FOR AN ENVIRONMENTAL ASSESSMENT (AFR 19-2)			<input type="checkbox"/> 24. A WRITTEN ASSESSMENT IS BEING/HAS BEEN PROCESSED		<input type="checkbox"/> 25. APPROVED
<input type="checkbox"/> 26. DISAPPROVED					
27. REMARKS					
SECTION IV – APPROVING AUTHORITY					
28. NAME AND GRADE <i>(Please Type or Print)</i>			29. SIGNATURE		30. DATE

CLOIS SUPPORT REQUEST									
PHONE: 853-5211 / FAX: 853-4123 / EMAIL: ccisr@us.af.mil									
Customer shall complete all applicable areas shaded blue and submit via email to ccisr@us.af.mil for processing by the Cape Support Office.									
CSO CARD NO.	WORK ORDER NO.	ORD SUPPORT NO.	CUSTOMER NO.	TASK ORDER NO.	JON	REPORTED BY	DATE	TIME	
AUTHORIZED REQUESTOR:		TELEPHONE NO.	CELL NO.	FAX NO.	ORGANIZATION		EMAIL ADDRESS		
BUILDING NAME / FACILITY NUMBER			START DATE	START TIME	PROJECT/MISSION	DATE / TIME	NAME / ORGANIZATION		
REQUIREMENT(S) OF REQUEST NOTE: For munitions issue, include the following at a minimum: Nomenclature, NSN, Quantity, CAT Code, Issue Type For non-munitions issue, include the following at a minimum: Part Number, Lot Number, Serial Number or the Kit Number.									
Contract number: (Will be provided when complete). Request CLIOS services to perform: LOCATION of Support: Specifics if any: POC									
						POINTS OF CONTACT			NAME OF INDIVIDUAL IF NOT THE REQUESTER, AUTHORIZED BY LETTER TO RECEIVE ORDNANCE:
						N/A			

BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST (See Instructions on Reverse)						DATE PREPARED	
1. Clearance is requested to proceed with work at _____ on Work Order No. _____, Contract No _____, involving excavation or utility disturbance per attached sketch. This area <input type="checkbox"/> has <input type="checkbox"/> has not been staked or clearly marked.							
2. TYPE OF FACILITY/WORK INVOLVED-							
<input type="checkbox"/> A. PAVEMENTS		<input type="checkbox"/> D. FIRE DETECTION & PROTECTION SYSTEMS			<input type="checkbox"/> G. AIRCRAFT OR VEHICULAR TRAFFIC FLOW		
<input type="checkbox"/> B. DRAINAGE SYSTEMS		<input type="checkbox"/> E. UTILITY		<input type="checkbox"/> OVERHEAD	<input type="checkbox"/> UNDERGROUND		<input type="checkbox"/> H. SECURITY
<input type="checkbox"/> C. RAILROAD TRACKS		<input type="checkbox"/> F. COMM		<input type="checkbox"/> OVERHEAD	<input type="checkbox"/> UNDERGROUND	<input type="checkbox"/> I. OTHER Umbilical Tower Foundation	
3. DATE CLEARANCE REQUIRED				4. DATE OF CLEARANCE			
5. SIGNATURE OF REQUESTING OFFICIAL				6. TELEPHONE NO.		7. ORGANIZATION	
ORGANIZATION		REMARKS (Use Reverse for additional comments)				REVIEWER'S NAME AND INITIALS	
8. B A S E C I V I L E N G I N E E R I N G	<input type="checkbox"/> A. ELECTRICAL DISTRIBUTION						
	<input type="checkbox"/> B. STEAM DISTRIBUTION						
	<input type="checkbox"/> C. WATER DISTRIBUTION						
	<input type="checkbox"/> D. POL DISTRIBUTION						
	<input type="checkbox"/> E. SEWER DISTRIBUTION						
	<input type="checkbox"/> F. ENVIRONMENTAL						
	<input type="checkbox"/> G. PAVEMENTS/GROUNDS						
	<input type="checkbox"/> H. FIRE PROTECTION						
	<input type="checkbox"/> I. ZONE IRP						
<input type="checkbox"/> J. MASTER PLANING							
9. SECURITY POLICE							
10. SAFETY							
11. COMMUNICATIONS							
12. BASE OPERATIONS							
13. CABLE TV							
14. COMMERCIAL UTILITY COMPANY							
<input type="checkbox"/> TELEPHONE							
<input type="checkbox"/> GAS							
<input type="checkbox"/> ELECTRIC							
15. OTHER (Specify) _____							
16. REQUESTED CLEARANCE <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED							
17. TYPED NAME AND SIGNATURE OF APPROVING OFFICER (Chief of Operations Flight or Chief of Engineering Flight)						17. DATE SIGNED	
AF FORM 103, AUG 94 (EF-V1) (PerFORM PRO) PREVIOUS EDITIONS ARE OBSOLETE.							
INSTRUCTIONS							
The BCE work clearance request is used for any work (contract or in-house) that may disrupt aircraft or vehicular traffic flow, base utility services, protection provided by fire and intrusion alarm system, or routine activities of the installation. This form is used to coordinate the required work with key base activities and keep customer inconvenience to a minimum. It is also used to identify potentially hazardous work conditions in an attempt to prevent accidents. The work clearance request is processed just prior to the start of work. If delays are encountered and the conditions at the job site change (or may have changed) this work clearance must be reprocessed.							

18. REMARKS. (This section must describe specific precautionary measure to be taken before and during work accomplishment. Specific comments concerning the approved method of excavation, hand or powered equipment, should be included.)

WORK ORDER NUMBER: _____

HAND DIG ONLY: YES NO LOCATOR'S INITIALS: _____

Sean O'Brien

OPERATIONAL RESTRICTIONS:

COMM. LOCATES: _____

Customer must coordinate with CSR Phone 853-5044

COMM. LOCATOR'S OPERATIONAL RESTRICTIONS:

Notify IOMS Locator for remarking of utilities if required.

SEAN O'BRIEN

IOMS LOCATOR SERVICES

321-476-4357 (OFFICE)

321-749-4828 (CELL)

321-853-5211 (CAPE SUPPORT)

CRITICAL DAY NOTICE Contractor SHALL contact Cape Support, 321-853-5211, each day prior to commencing any digging or excavation work. Work Order/Dig Permit number will be required for permission to proceed.

Maintain original or legible of this form AF103 at the excavation site. Contractors not maintaining an original or legible copy risk work stoppage until the original or a copy can be located.

* If at anytime locate marks are not READILY VISIBLE and digging is occurring SUSPENSION OF EXCAVATION may result at the installation commanders directions.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROPONENT INFORMATION

1. TO (Environmental Planning Function)	2. FROM (Proponent organization and functional address symbol)	2a. TELEPHONE NO.
3. TITLE OF PROPOSED ACTION		
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date)		
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.)		
6. PROPONENT APPROVAL (Name and Grade)	6a. SIGNATURE	6b. DATE

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)

	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. WATER RESOURCES (Quality, quantity, source, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, installation Restoration Program, seismicity, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. OTHER (Potential impacts not addressed above.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. <input type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR <input type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.
18. REMARKS
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade)
19a. SIGNATURE
19b. DATE

TRANSFER AND ACCEPTANCE OF DoD REAL PROPERTY												Form Approved OMB No. 0704-0188			
PAGE												OF		PAGES	
The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Washington Headquarters Services, Executive Services Directorate, Information Management Division, 1155 Defense Pentagon, Washington, DC 20301-1155 (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.															
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.															
1. FROM (Organization Name)				2. DATE PREPARED (YYYYMMDD)		3. PROJECT/JOB NUMBER		4. SERIAL NUMBER		8. TRANSACTION DETAILS					
5. TO (Organization - Installation Code and Name)				6. RPSUID/SITENAME/ INSTCODE/INSTNAME		7. CONTRACT NUMBER(S)		7a. PLACED-IN-SERVICE DATE (YYYYMMDD)		a. METHOD (X all that apply)		b. WHEN/EVENT (X one)			
										<input type="checkbox"/> ACQUISITION BY CONSTRUCTION <input type="checkbox"/> TRANSFER BETWEEN SERVICES <input type="checkbox"/> CAPITAL IMPROVEMENT <input type="checkbox"/> INVENTORY ADJUSTMENT		<input checked="" type="checkbox"/> TOTAL ASSET PLACED-IN-SERVICE <input type="checkbox"/> PARTIAL ASSET PLACED-IN-SERVICE			
										c. TYPE (X one)					
										<input type="checkbox"/> DRAFT <input checked="" type="checkbox"/> FINAL <input type="checkbox"/> INTERIM					
9. ITEM NO.	10a. FACILITY NO.	10b. RPUID	11. CATEGORY CODE	12. CATCODE DESCRIPTION	13. TYPE CODE	AREA		OTHER		18. COST	19. FUND SOURCE	20. FUND ORG	21. INTER-EST CODE	22. ITEM REMARKS	
14. PRIMARY UM	15. PRIMARY UM QUANTITY	16. SECONDARY UM	17. SECONDARY UM QUANTITY												
23. STATEMENT OF COMPLETION. The facilities listed hereon are in accordance with maps, drawings, and specifications and change orders approved by the authorized representative of the using agency except for the deficiencies listed on the reverse side.										24.a. ACCEPTED BY (Typed Name and Signature)				b. DATE SIGNED (YYYYMMDD)	
a. TRANSFERRED BY (Typed Name and Signature)						b. DATE SIGNED (YYYYMMDD)		c. TITLE (DPW/RPAO)				25. PROPERTY VOUCHER NUMBER			
c. TITLE (Area Engr./Base Engr./DPW/Construction Agent)															

26. CONSTRUCTION DEFICIENCIES (Attach blank sheet for continuations)

27. PROJECT REMARKS (Attach blank sheet for continuations)

INSTRUCTIONS

GENERAL. This form has been designed and issued for use in connection with the transfer of military real property between the military departments and to or from other government agencies. It supersedes ENG Forms 290 and 290B (formerly used by the Army and Air Force) and NAVDOCKS Form 2317 (formerly used by the Navy).

Existing instructions issued by the military departments relative to the preparation of DD Form 1354 are applicable to this revised form to the extent that the various items and columns on the superseded forms have been retained. The military departments may promulgate additional instructions, as appropriate.

For detailed instructions on how to fill out this form, please refer to Unified Facilities Criteria (UFC) 1-300-08, dated 16 April 2009 or later.

SPECIFIC DATA ITEMS.

1. From. Name of the transferring agency.

2. Date Prepared. Date of actual preparation. Enter all dates in YYYYMMDD format (Example: March 31, 2010 = 20100331).

3. Project/Job Number. Project number on a DD Form 1391 or Individual Job Order Number.

4. Serial Number. Sequential serial number assigned by the preparing organization (e.g., 2010-0001).

5. To. Name and address of the receiving installation, activity, and Service of the Real Property Accountable Officer (RPAO).

6. RPSUID/SITENAME/INSTCODE/INSTNAME. Real Property Site Unique Identifier and Site Name or Installation Code and Installation Name where the constructed facility is located.

7. Contract Number(s). Contract number(s) for this project.

7a. Placed-In-Service Date. RPA Placed In Service Date. This is the date the asset is actually placed-in-service.

8. Transaction Details.

- Method of Transaction. Mark (X) as many boxes as apply.
- When/Event. When or event causing preparation of DD Form 1354. X only one box.
- Type. Draft, interim, or final DD Form 1354. X only one box.

9. Item Number. Use a separate item number for each facility, no item number for additional usages.

10a. Facility Number. Assigned in accordance with the Installation/Base Master Numbering Plan.

10b. RPUID. Real Property Unique Identifier - Identified in Real Property Inventory.

11. Category Code. The category code describes the facility usage.

12. Catcode Description. The category code name which describes the facility usage.

13. Type Code. Construction Type Code - Type of construction: P for Permanent; S for Semi-permanent; T for Temporary.

14. Primary Unit Of Measure. Area unit of measure; use the unit of measure associated with the category code selected in 11.

15. Primary Unit of Measure Quantity. The total area for the measure identified in Item 14. Use negative numbers for demolition.

16. Secondary Unit of Measure. Unit of Measure 2 is the capacity or other measurement unit (e.g., LF, MB, EA, etc.).

17. Secondary Unit of Measure Quantity. The total capacity/other for the measure identified in Item 16.

18. Cost. Cost for each facility; for capital improvements to existing facilities, show amount of increase only. If there is no increase for the capital improvement, enter N/A.

19. Fund Source. Enter the Fund Source Code for this item.

20. Funding Organization. Enter the code for the organization responsible for acquiring this facility.

21. Interest Code. RPA Interest Type Code. Enter the code that reflects government interest or ownership in the facility.

22. Item Remarks. Remarks pertaining only to the item number identified in Item 9; show cost sharing.

23. Statement of Completion. Typed name, signature, title, and date of signature by the responsible transferring individual or agent.

24. Accepted By. Typed name, signature, title, and date of signature by the RPAO or accepting official.

25. Property Voucher Number. Next sequential number assigned by the RPAO in voucher register.

26. Construction Deficiencies. List construction deficiencies in project during contractor turnover inspection.

27. Project Remarks. Project level remarks and continuation of blocks.

APPENDIX 3-1B – CCSFS DESIGN & CONSTRUCTION CHECKLIST

PROJECT NAME:				Status Key	
PERMIT: S000.0				Complete or N/A	
PHASE: Pre-Construction, Construction, Post-Construction				Submitted, Review Process in Progress	
STATUS DATE:				Has not been submitted yet	
PRE-APPLICATION MEETING:					
Type	Item #		Status	Notes	
		Permit Issued Date:			
Design Phase Permits & Approvals					
KSC/USSF	1	Tenant Sublease	Required		
	2	Tenant/Development Concurrence on Federal Property (NASA/USSF)	Required		
	3	Sustainability Standards (Examples: LEED, FGBC, NASA Form 1509, 1510)	Required		
	4	Environmental Documents (NASA Checklist 21-608/AF 813 Request for Environmental Impact Analysis)	Required		
	5	KSC Site Plan Approval / AF Form 332 Base Civil Engineering Work Request	Required		
Env. Regulatory	6	St. Johns River Water Management District Environmental Resource Permit	Required		
	7	USACE Dredge and Fill Permit	Required		
	8	FDEP Water / Wastewater Construction Permit			
SF Auth	9	Architectural Review Committee (ARC) / Sustainability (<i>not applicable at CCSFS</i>)	Required		
	10	Florida Building Code Concurrence (typically 30 days per review)	Required		
	11	KSC/CCAFS Life Safety & AHJ Concurrence (typically 30 days per review)	Required		
	12	Space Florida Approved Drawings (allow 30 Calendar days per review)	Required	For Space Florida to issue a permit, Items 1-12 must be complete if applicable. A pre-construction meeting must also take place prior to issuance of permit and start of work.	
	Design Drawing Submittals				
	13	Concept	Required		
	14	Final (100%) Drawings Signed & Sealed	Required		
Pre-Construction Phase Permits & Submittals					
Permits	15	KSC Excavation Permit or CCSFS Form AF 103 Dig Permit (and include AF Form 332)	Required		
	16	Burn Permit/USFWS			
	17	Department of Navy/Naval Ordnance Test Unit (NOTU) (<i>not applicable at KSC</i>)			
	18	USAF 45th Airfield Construction Waiver (<i>not applicable at KSC</i>)			
	19	FAA 7460 Obstruction Notice of Actual Construction or Alteration	Required		
Env. Regulatory	20	Environmental Documents (KSC Record of Environmental Consideration (REC) and other documents: LOM, EA, FONSI, EIS, etc./AF813 Request for Environmental Impact Analysis	Required		
	21	FDEP NPDES NOI	Required		
	22	Notice of Commencement to applicable agencies including: FDEP Water, FDEP Wastewater, SJRWMD, & USACE	Required		

PROJECT NAME:				Status Key	
PERMIT: S000.0				Complete or N/A	
PHASE: Pre-Construction, Construction, Post-Construction				Submitted, Review Process in Progress	
STATUS DATE:				Has not been submitted yet	
PRE-APPLICATION MEETING:					
Legal	23	Insurance	Required		
	24	Payment & Performance Bonds (Requires SF to complete Notice of Commencement to be filed by the Contractor at Brevard Clerk of Courts)	Required		
Work Plan	25	Work Plan - Items A-F can be combined into one package if desired.	Required		
	A	Construction Utilization Layout (trailers, temp utilities, tanks, equipment, laydown, MOT...)	Required		
	B	Health and Safety Plan	Required		
	C	Hurricane Preparedness Plan			
	D	Deferred Submittals Anticipated	Required		
	E	Quality Control Plan	Required		
	F	Contractor Key Personnel Contact Information	Required		
	G	Construction Schedule	Required		
SF Auth	26	Pre-construction meeting with SF and any approving agencies	Required		
	27	Space Florida Notice to Proceed (NTP)	Required		
Construction Phase Inspections & Approvals					
SF Auth	28	Space Florida Building Department Stamped Plan Set (kept at job site)	Required		
	29	Fire Protection Plan, including Life Safety	Required		
	30	Lighting Plan	Required		
	31	Material Testing and Reporting Documents	Required		
	32	Additional Construction Submittals TBD:	Required		
Final Construction Documents and Approvals					
SF Auth	33	Final Certification of Material	Required		
	34	Final As-Built Plans / Signed and Sealed	Required		
	35	Sustainability Certification or rating verification	Required		
	36	Florida Building Code CO Recommendation	Required	FBC Final Inspection required and Letter of Recommendation for CO.	
	37	NASA/CCSFS Life Safety & Fire Protection CO	Required	AHJ or approved 3rd Party Final Inspection required and CO for Life Safety and Fire Protection only.	
	38	SF Final CO	Required	Space Florida Building Department Final Inspection and acceptable completion of Items 32 and 33.	



Cape Canaveral Spaceport Development Manual

VOLUME 3

CAPE CANAVERAL SPACE FORCE STATION

CHAPTER 2 SPACE LAUNCH COMPLEXES

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SECTION 1 – SPACE LAUNCH COMPLEX 20

1.1 Introduction

Space Launch Complex (SLC) 20 is an existing inactive small satellite launch complex site which is currently being redeveloped into a multi-pad, multi-user complex. The initial planning for modifications includes the improvement of space launch infrastructure facilities to meet Florida's commercial space transportation industry needs. This site consists of land situated beside the Atlantic Ocean between active complexes LC 37 to the north and SLC 36 to the south.

This complex is being developed to specifically add new orbital launch capacity through the refurbishment of an existing launch vehicle horizontal processing facility and launch control center, and the construction and activation of one or more state-of-the-art small satellite launch vehicle launch pads. Additional improvements will include new propellant servicing facilities, electrical improvements, and communications capabilities.

The current Master Plan provides for two launch pads and has completed the following documentation: Description of Proposed Action and Alternatives (DOPAA), Environmental Assessment (EA), Environmental Baseline Survey (EBS), Biological Assessment (BA), Explosive Site Plan (ESP), Noise Analysis (NA), and Cultural Resources Assessment.

1.2 SLC 20 Design Criteria

This section to be added in the future

SECTION 2 – SPACE LAUNCH COMPLEX 46

2.1 Introduction

SLC 46 is an existing active medium launch complex site which is currently being upgraded to accommodate repeated launches. SLC-46 is leased by SF from the USSF. This complex is the eastern-most launch complex on CCSFS and sits to the southeast of SLC 36. The facility has recently been used for the USSF Operationally Responsive Space 5 Mission in August 2017 - launch of the Minotaur and in July 2019, the NASA Ascent Abort 2 Mission to demonstrate the function of the abort system for the Orion third stage – also using a Minotaur booster. In 2022, the complex was used for two Astra liquid propellant launches. The launches were supported by mobile equipment and tanks. The complex is a shared facility with the Navy. The Navy has operations on the south side of the complex while the pad area and supporting facilities to the north, are independent of those Naval operations.

Facilities include an updated communications facility for the checkout of the launch vehicle, Mobile Access Structure (MAS) with moveable access platforms, a Lightning Protection System (LPS), and launch mount with flame trench. All power, communications, and other utilities to support a solid booster are currently in place and operational.

SLC 46 has an Interface Control Document (ICD) which has been prepared to provide an overview of the pad identifying the pad amenities and capabilities. This provides a comprehensive description of the complex and identifies, in detail, the systems at the complex available to support a launch and the capabilities within CCSFS for launch support activities. This document also identifies the capacities and dimensioning needed to evaluate and match the physical characteristics with those of the proposed program vehicle. The ICD also provides an in-depth description of the SLC 46 systems to include manuals and procedures for their operation. Prospective tenants may request a copy of this ICD from SF.



USSF Operationally Responsive Space 5 Mission August 2017



NASA Ascent Abort 2 Mission July 2019



Astra Rocket at SLC-46

2.2 SLC 46 Design Criteria

This section to be added in the future



Cape Canaveral Spaceport Development Manual

VOLUME 3

CAPE CANAVERAL SPACE FORCE STATION

CHAPTER 3 PROCESSING AND OTHER FACILITIES

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1.1 Introduction 2

1.2 Area 57 Design Criteria 2

SECTION 1 – AREA 57

1.1 Introduction

Area 57 is a secure area consisting of three main buildings used for processing and storage of flight hardware. This area is physically isolated and has been used for the processing and storage of flight hardware.

1.1.1. Main Processing Facility Building 45607

This facility has been upgraded and is currently being used to process solid rocket motors. The facility was upgraded with HVAC, Fire Alarm, Communications, Electrical, Grounding, and Security Systems. Additionally, to accommodate the current use, new foundations were constructed to allow the current user to install a rail-set specific for their processing needs and an existing overhead crane has been upgraded to facilitate hardware handling. An adjacent flight hardware storage area was also upgraded to complete the facility modifications.

1.1.2. Storage Building 50801 and 50803

These facilities have both been used for handling and storage of solid rocket motors. They are both equipped with overhead cranes and a static discharge flooring system. Except for intermittent use for motor transporter parking, inert item storage, and hurricane protection storage, they have been dormant since 2016 and are currently being modified to bring their life support systems up to date. Additional modifications are planned to allow occupancy and use like their original intent.

1.2 Area 57 Design Criteria

Section to be added in the future

SPACE FLORIDA



Cape Canaveral Spaceport Development Manual

VOLUME 4

DESIGN CRITERIA

FUTURE ADDITION

SPACE FLORIDA



Cape Canaveral Spaceport Development Manual

VOLUME 5

SPACE FLORIDA PROJECTS

CHAPTER 1 GENERAL REQUIREMENTS

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SECTION 1 – GENERAL REQUIREMENTS

1.1 Project Process Overview

The following overview describes in general the process used for design and construction of projects funded directly by Space Florida (SF). It also provides information pertaining to design consultants for SF Projects and their services.

1.1.1 Project Types

Facilities funded, designed, developed, or constructed by SF shall be referred to as SF Projects. All other construction projects shall be referred to as Tenant Projects (TP). All SF Projects shall be in accordance with SF requirements and shall be subject to the Consultant's Competitive Negotiations Act (CCNA) (Florida Statute (FS) 287.055).

The contract/delivery method for SF projects will be determined on a case by case basis which may include:

- ❖ Design-Bid-Build (DBB)
 - a. B101 Standard Form of Agreement Between Owner and Architect
 - b. A201 General Conditions of the Contract for Construction
 - c. Division 00 Specifications: Procurements and Contracting Requirements
 - d. Division 01 Specifications: General Requirements
 - e. Division 02 thru 49: Technical Requirements
 - f. A101 Standard Form of Agreement Between Owner and Contractor where the Basis of Payment is a Stipulated Sum
- ❖ DBB with Construction Management (DBB with CM)
 - a. B133 Standard Form of Agreement Between Owner and Architect, Construction Manager as Advisor
 - b. C132 Standard Form of Agreement Between Owner and Construction Manager as Advisor
 - c. A232 General Conditions of the Contract for Construction, Construction Manager as Advisor
 - d. Division 00 Specifications: Procurements and Contracting Requirements
 - e. Division 01 Specifications: General Requirements
 - f. Division 02 thru 49: Technical Requirements
 - g. A132 Standard Form of Agreement Between Owner and Contractor, Construction Manager as Advisor
- ❖ Design-Build (DB)
 - a. Scope of Work and Owner's Criteria
 - b. Division 1 Specifications: General Requirements
 - c. A141 Standard Form of Agreement Between Owner and Design-Builder
- ❖ Design-Build-Operate-Maintain (DBOM)
- ❖ Build-Operate-Transfer (BOT)
- ❖ Integrated Project Delivery (IPD)
- ❖ Public Private Partnership (P3)

1.1.2 Commissioning Policy and Procedures

Reference is made to the SF Commissioning Policy and Procedures (CPP), which requires commissioning of all SF construction projects, including development, maintenance and renovation, having a construction budget greater than \$500,000 or SF building construction projects, including new construction and modifications, having a construction budget greater than \$50,000. For SF construction projects subject to the CPP, the SF Building Official shall not issue a construction permit until the Commissioning Authority has approved the Commissioning Plan. The SF Building Official shall not issue a certificate of occupancy/use until all pre-occupancy commissioning activities identified in the Commissioning Plan have been successfully completed.

1.1.3 Selection of Consultant(s)

SF Projects shall be in accordance with State of Florida procurement requirements and Florida Statute 287.055 Consultants Competitive Negotiations Act. Proposals are solicited for professional services through advertisements. A “short list” of candidates is selected after a careful review of the Statements of Qualifications (SOQ) that are submitted. These “short listed” firms are usually asked to make a presentation to a selection committee, which will make the recommendation for final selection.

1.1.4 Consultant Contract

After completion of the selection process, the first-rated consultant(s) enter into contract negotiations with SF representatives. If negotiations with the first-rated firm(s) are unsuccessful, negotiations may be terminated, and the SF representatives may begin negotiations with the next highest rated firm(s). Once an agreement is successfully negotiated, the final contract will be approved by SF and a notice to proceed with design will be issued.

1.1.5 Project Initiation

At the beginning of every design project, a pre-design conference will be scheduled to be attended by the Project Manager (PM), Contract Administrator (CA), other SF representatives and pertinent members of the design team. During this meeting, discussion will include the program for the design, the project budget and the project schedule. A point of contact (SF Contact) will also be designated for the duration of the project.

1.1.6 Design Milestones

Design review submittals are required at the Schematic, Design Development (DD), and Construction Document (CD) levels of completion. Specific information on the requirements and level of detail required for each of these submittals is described in Section 1.4.

1.1.7 Project Review

Normally, two weeks should be allowed for SF staff review of each submittal. However, additional time may be required under certain circumstances, particularly if there are interfaces with other projects, or if outside agency approvals are necessary.

1.1.8 Review Comments

The design consultant must respond to all review comments. Copies of these responses shall be turned in to the PM with the next submittal. Review comments noted directly on the submitted drawings do not require written responses, but the consultant may be asked to return the previously reviewed plans temporarily to verify responses to specific review comments.

1.1.9 Consultant Participation During Bid Phase

In general, the following process is usually followed in the selection of contractors. Construction bids are solicited through general advertisements. A pre-bid conference is conducted prior to the opening of the bids to discuss the scope of the work and answer questions from bidders. The design consultant is expected to conduct or participate in this conference to provide answers to pertinent questions and to assist in preparing any resulting contract addenda. At the advertised time, the bids that have been received will be opened and read aloud. The consultant may be asked to assist in analyzing the bids to determine the responsive low bidder. A notice to proceed with construction will be issued after SF approval of the final construction contract.

1.1.10 Consultant Participation During Construction Process

Prior to the start of construction, a pre-construction conference is held to review contract requirements, operational and site restrictions, notification procedures and required inspections. Depending upon contract scope requirements, the consultant may be responsible for assisting in the review of shop drawings, submittals, change orders and other documents and may be required to attend periodic or regular construction progress meetings. On some projects, partnering sessions may be conducted. SF representatives, the consultant, the contractor and/or the Construction Manager and the major sub-contractors will be included in the partnering sessions.

1.1.11 Consultant Participation at Completion of Construction

Depending upon contract requirements, the consultant generally participates in a final project “walk-through” with SF and the contractor at the completion of construction and is usually responsible for reviewing the contractor’s certified as-built drawings and specifications submittal and for preparing the final record drawings.

1.2 Software Requirements and Project Design Delivery

Production and maintenance of project documentation shall comply with the SF Development Standards. The final deliverables shall consist of the construction Contract Documents which shall be complete and shall set forth in detail all work required for the architectural, civil, structural, mechanical, plumbing, electrical, fire protection and fire detection, communication, security and utility service systems, including transportation interfaces, site work, and all necessary bidding information.

1.3 Design Calculations

Most design projects require that various engineering calculations be performed and/or design criteria/material cut sheets be assembled that provide the basis for information on the construction plans and specifications. These values and calculations shall be assembled by the design consultant in a “Basis of Design Manual” for each project. These documentation requirements will vary for each specific design discipline.

1.4 Required Submittals

During the planning and design stages of project development, certain submittals are required from the design consultant in bound form for review and approval. The submittals described below should be considered as the minimum. Intermediate reviews may be required, only if the scope of the project has been changed or if an earlier review found the plans and specifications unacceptable, either as a whole or in part. The required stage of completion of the plans and specifications shall be as hereinafter outlined.

1.4.1 Schematic Design Phase (early-review)

For all SF projects the schematic plans and specifications shall include:

- a) A boundary survey and/or site topographic survey shall be made on the ground of the proposed building or construction site. All points shall be tied to the existing Survey Coordinate System. Ground survey verification of existing utility alignments and flow lines may be required.
- b) All existing buildings, facilities, contours, roadways, utilities, or signs in the immediate area of the project site or relevant to the proposed work should be shown on a preliminary site plan.
- c) Layouts of the proposed roadways, access drives, parking areas, site utilities and building locations should be shown.

1.4.2 Schematic Plans and Specifications for Airfield Projects

- a) All existing facilities, runways, taxiways, taxi lanes, aprons, ground support equipment areas, emergency roads, buildings and structures, contours, underground utilities, or signs in the immediate area of the project site or relevant to the proposed work should be shown.
- b) All existing Navigational Aids (NAVAIDS), duct banks, guidance signs, lighting fixtures, electrical ducts, vaults, handholds, and circuit locations should be shown and identified.
- c) Layouts of proposed paving, drainage, and electrical improvements.
- d) Limits and dimensions of all object free areas, safety areas, exclusion zones, NAVAIDS, critical areas, and FAR part 77 airspace surfaces that affect project site.
- e) Locations of proposed buildings, signs, NAVAIDS, Security fences, and other site structures.

1.4.3 Schematic Plans and Specifications for Buildings

- a) Building code summary on cover sheet showing governing codes and requirements for building and site.

- b) Site plan showing building footprint, vehicle access / parking and landscaping.
- c) Floor plans and roof plan.
- d) Building elevations.
- e) Schedule of materials to be used.
- f) Building Design Data - The building program and any special studies which will affect the project design.
- g) Tower Line-of-Sight Studies (if required).
- h) Service entrances, trash locations.
- i) Design live loads.

1.4.4 Schematic Plans and Specifications for HVAC

- a) Mechanical rooms.
- b) Location of all chases required for air conditioning systems.
- c) Location of all air handling and refrigeration equipment.
- d) Narrative description of the proposed systems including a schematic diagram of air flow through the various system components (the general scheme outlined in the narrative must be previously discussed with the designated SF Contact and agreed to at the Pre-design Conference).

1.4.5 Schematic Plans and Specifications for Plumbing

- a) A brochure defining all plumbing fixtures.
- b) Narrative description of plumbing systems proposed, including source of exterior services.
- c) Location of janitorial closets.

1.4.6 Schematic Plans and Specifications for Electrical

- a) Electrical rooms.
- b) Narrative description of the proposed systems including a schematic diagram of the distribution system (the general scheme outlined in the narrative must be previously discussed with the designated SF Contact and agreed to at the Pre-Design Conference).
- c) Preliminary lighting layout showing general types of illumination to be used such as fluorescent, high-intensity discharge lamp, or others.
- d) Tabulation of lighting levels to be used for the design of the lighting system.
- e) A sample lighting calculation for a typical room or area (exterior lighting projects).

1.4.7 Schematic Plans and Specifications for Fire Protection

- a) Fire vehicle access.
- b) Narrative description of fire protection systems proposed, including source of exterior fire protection services such as water mains.
- c) Schematic fire protection drawings with identification of all sprinkled areas and areas protected by other automatic suppression systems.
- d) Drawings shall be drawn to a scale of 1/8"=1'-0".

1.4.8 Schematic Plans and Specifications for Communications

- a) Communication rooms.
- b) Narrative description of the proposed systems including a schematic diagram of the communication system (the general scheme outlined in the narrative must be previously discussed with the designated SF Contact and agreed to at the Pre-design Conference).

1.4.9 Schematic Plans and Specifications for Security

- a) Site security.
- b) Closed Circuit TV (CCTV)/monitor and equipment rooms.
- c) Narrative description of the proposed systems including a schematic diagram of the security system (the general scheme outlined in the narrative must be previously discussed with the designated SF Contact and agreed to at the Pre-design Conference).

1.4.10 Number of Submittals

Submit the number of sets of schematic plans required by the designer's contract to the SF Contact for review and approval before proceeding to Design Development stage.

1.4.11 Design Development Phase (mid-review)

For all SF projects the DD plans and specifications shall include all information in previous submittals plus all annotated comments from previous submittals and shall indicate:

- a) Proposed landscaping, exterior signing, exterior lighting, fencing or other site elements.
- b) Preliminary horizontal and vertical alignments for all roadways, drainage systems, and applicable exterior utilities tied into the coordinate system.
- c) Preliminary paving and parking layouts with horizontal and vertical ties to site survey and representative cross-sections.
- d) Preliminary Cost Estimates and Construction Schedule.
- e) Perspective Rendering - May be required if the project has visual impact on the Cape Canaveral Spaceport (CCS) development as a whole.
- f) Design data and analysis.
- g) Soil tests data and analysis.
- h) Outline Specifications.

1.4.12 Design Development Plans and Specifications for Airfield Projects

- a) Horizontal and vertical layouts for all proposed airfield paving, emergency roads, and drainage features.
- b) Layouts for proposed airfield electrical circuits, NAVAIDS, and underground utilities.
- c) Typical sections for each type of paving, including surface drainage.
- d) Site access points and haul routes.
- e) Typical details for all paving, jointing, sealing, drainage, electrical, utilities, etc.

1.4.13 Design Development Plans and Specifications for Buildings

- a) Floor plans.
- b) Framing plans.
- c) Ceiling plans.
- d) Roof plans.
- e) Sections and elevations.
- f) Details of typical conditions.

1.4.14 Design Development Plans and Specifications for HVAC

- a) Mechanical rooms with all equipment and required connecting ductwork drawn to scale (this requirement is mandatory to establish the space needs for mechanical equipment).
- b) Routing of major piping systems when space is a consideration; and ductwork for remainder of project in one-line form to indicate the breakdown of proposed zones.
- c) Report on design criteria and system loads.
- d) Specifications shall be in the form of an outline covering all Heating Ventilation & Air Conditioning (HVAC) equipment and materials to be used in the project.

1.4.15 Design Development Plans and Specifications for Plumbing

- a) All plumbing fixtures including those for disabled persons drawn to scale.
- b) Roof drains and route of storm drains to storm sewer.
- c) Sump pump and sewage ejector locations.
- d) One typical riser diagram for each type of system.
- e) Report on design criteria and system loads.
- f) Specifications shall be in the form of an outline covering all plumbing equipment and materials to be used in the project.

1.4.16 Design Development Plans and Specifications for Electrical

- a) Electrical rooms with all equipment drawn to scale (this requirement is mandatory to establish the space needs for electrical equipment).
- b) Routing of feeder and service conduit systems when space is a consideration.
- c) A one-line diagram of distribution system shall indicate approximate equipment and service size.
- d) Lighting layout for projects, including exterior systems, with tabulated loads.
- e) A brochure showing cut sheets on all lighting fixtures (and poles) proposed for project. Submit five (5) sets of DD electrical systems plans for review and approval before proceeding to final working drawings (Contract Bid Documents).
- f) Specifications shall be in the form of an outline covering all electrical equipment and materials to be used in the project.

1.4.17 Design Development Plans and Specifications for Fire Protection

- a) Fire protection plans shall indicate all underground water mains and their sizes.
- b) Fire hydrant locations.
- c) Proposed water supply connections to sprinkler systems.
- d) Control valve locations.
- e) Fire alarm panel locations.
- f) Smoke control/removal systems layout.

- g) Underground valve meter pit.
- h) Standpipe locations.
- i) Specifications shall be in the form of an outline covering all fire protection items, equipment and materials including manufacturers and model numbers to be used in the project (this shall include smoke/heat detectors and pressure, flow, and tamper switches).

1.4.18 Design Development Plans and Specifications for Communications

- a) Communication rooms with all equipment drawn to scale (this requirement is mandatory to establish the space needs for equipment).
- b) One-line diagram of communication system shall indicate intercom, speakers, equipment, terminal boards and cabinets.
- c) Specifications shall be in the form of an outline covering all communication equipment and materials to be used in the project.

1.4.19 Design Development Plans and Specifications for Security

- a) CCTV/monitor and equipment rooms with all equipment drawn to scale (this requirement is to establish the space needs for equipment). Provide adequate working clearance for monitors and operator console.
- b) One-line diagram of security system shall indicate control panels, sensors, cameras, monitors, telephone interface, and any other system devices critical to operation.
- c) Specifications shall be in the form of an outline covering all security equipment and materials to be used in the project.

1.4.20 Number of Submittals

Submit the number of sets of DD plans required by the designer's contract, to the SF Contact for review and approval before proceeding to CD stage.

1.4.21 Construction Document Phase (Final Review)

For all SF projects the CD plans and specifications shall include all information in previous submittals plus all annotated comments from previous submittals and shall include:

- a) Complete drawings with all plan, profile, detail, section, schedule, calculation and miscellaneous sheets included.
- b) Specifications complete in final typed form.
- c) Final Construction schedule.
- d) Final cost estimate.
- e) Storm water pollution prevention plan.

1.4.22 Construction Document Plans and Specifications for Airfield Projects

- a) All proposed paving and facilities.
- b) Proposed grading and surface contours.
- c) Final profiles and flow lines for all drainage systems.
- d) All required sections and details.

1.4.23 Architectural Construction Document Plans and Specifications

- a) Building code summary on cover sheet showing governing codes and requirements for building and site.
- b) Index, Symbols, Abbreviations, Key Plan Notes.
- c) Demolition, Site Plan, Temp Work.
- d) Site plan showing building footprint, vehicle access / parking and landscaping.
- e) Building elevations.
- f) Building Program Design Data.
- g) Design live loads.
- h) Material Schedule, Door Schedule, Key Drawing.
- i) Sections, Exterior Elevations.
- j) Detailed Floor Plans.
- k) Interior Elevations.
- l) Reflected Ceiling Plans.
- m) Vertical Circulation, Stairs, Elevators, Escalators.
- n) Exterior Details.
- o) Interior Details.

1.4.24 Structural Construction Document Plans and Specifications

- a) Index, Symbols, Abbreviations, Key Plan, Notes, Loading Criteria.
- b) Demolition Site Work.
- c) Foundation Plans and Details, Foundation Design Criteria.
- d) Framing Plans and Details.
- e) Elevations.
- f) Details.
- g) Schedules.
- h) Special Design.

1.4.25 Construction Document Plans and Specifications for HVAC

- a) All air conditioning systems drawn to scale, including all ductwork in two-lines with all fittings to scale.
- b) Sections through mechanical rooms to adequately describe the construction requirements.
- c) Schedule of all major items of equipment drawn on the plan sheets to indicate performance characteristics.
- d) All piping systems complete with necessary sections to clarify routing.
- e) Applicable details, including those included in the Design Criteria modified to suit project.
- f) Flow diagrams for each piping system except drains.
- g) A copy of the HVAC load calculations shall be furnished for future reference. Calculations shall clearly indicate all zoning requirements, etc.
- h) The type and contents of the Test and Balance Reports to be furnished shall coincide with the work scope of the system being designed.

1.4.26 Construction Document Plans and Specifications for Plumbing

- a) All plumbing fixtures shown and identified by a number.

- b) Riser diagrams in isometric form for all plumbing risers in the building.
- c) Flow diagrams for all pressure systems including hot and cold water, gas, oxygen, air vacuum, etc.
- d) Details such as lavatory connection, pump connection, hot water generator, water softener, sewer manholes, backflow prevention, water header, etc.
- e) Schedule all major equipment on drawings.
- f) Plumbing fixtures may be scheduled but must also be described in detail in the specifications.

1.4.27 Construction Document Plans and Specifications for Electrical

- a) All electrical systems drawn to scale including light fixtures, distribution equipment and other miscellaneous system components.
- b) Schedule of all light fixtures, switchboards and motor control centers.
- c) Schedule of all panel boards which include connected loads and demand loads.
- d) One-line diagram of electrical distribution system including all equipment, feeder, service ratings and available symmetrical three-phase fault current at each device.
- e) Applicable standard details from these guidelines modified to suit project.
- f) One-line diagrams for each system.
- g) Include all information in previous submittals plus annotated comments from last submission review.

1.4.28 Construction Document Plans and Specifications for Fire Protection

- a) All fire risers shown and identified by a number.
- b) Flow diagrams for fire protection pressure systems.
- c) Details such as fire hose cabinets, fire hydrants, fire pumps, fire department connections, backflow prevention, water header, connections, cathodic protection and riser insulation, etc.
- d) Schedule all major equipment on drawings; fire sprinkler drawings will include all piping sizes and locations, drawn to scale of no less than 1/8 inch equals one foot.

1.4.29 Construction Document Plans and Specifications for Communications

- a) All communication system equipment, cabinets, boards drawn to scale, telephone outlets, intercom stations, repeater stations, etc.; one-line diagram of communication systems.
- b) Applicable standard details from these guidelines modified to suit project.

1.4.30 Construction Document Plans and Specifications for Security

- a) All security system control and monitoring equipment drawn to scale, sensor locations and types.
- b) Applicable standard details from these guidelines modified to suit project.
- c) Security devices.
- d) Security signage.
- e) Individual zone location and designation, with all alarm device locations, including the security alarm and data panel, annunciators, and any other devices necessary for the operation of the system.

1.4.31 Number of Submittals

Submit the number of sets of Contract Bid Documents required by the design consultant's contract, for review and approval before printing for distribution to bidders.

The documents at this point should be ready to be signed and sealed pending approval by the designated SF Contact. Once these documents are approved, signed and sealed, they can be provided to contractors for bidding purposes.

1.5 Specification Format

Specifications shall be in accordance with the latest Construction Specification Institute (CSI) division standards. For all airfield construction projects, contract documents shall be prepared in accordance with the latest edition of FAA Advisory Circular 150/5370-10 Standards for Specifying Construction of Airports. Division 0, including Notice to Bidders, Instructions to Bidders, Proposal Forms, Bid Schedule Forms, Bond Forms, General and Special Provisions of the contract documents shall be prepared based on guidance and direction from the SF Building Official.

1.6 Coordination of Design

Every effort shall be made to coordinate the design between disciplines.

1.6.1 HVAC

The final HVAC drawings at a minimum shall be checked for the following:

- a) Electrical lighting fixtures shall be checked for conflict with air diffusers, ceiling grilles, sprinkler heads, ceiling type speakers, and other ceiling mounted devices.
- b) Ductwork shall be checked for clearance between ceiling construction and underside of beams, recessed lighting fixtures and other interferences where space is limited.
- c) Large mechanical system piping shall be coordinated with building structure to assure clearances and accessibility for maintenance. Piping and electrical switchgear locations are to be coordinated.
- d) Coordinate requirements for louvers, equipment supports and other devices serving mechanical systems, but furnished under the general construction section of the project.
- e) Coordinate special types of or Board furnished equipment for correct rough-in requirements.
- f) Plans and specifications shall be checked for conflicts.
- g) Plans shall be coordinated for size and location of all chases.

1.6.2 Plumbing

The final Plumbing drawings at a minimum shall be checked for the following:

- a) Piping shall be coordinated with building construction, beams, etc., to assure clearances and accessibility for maintenance. Piping and electrical switchgear

- locations are to be coordinated.
- b) Piping shall be checked for clearance between ceiling construction and underside of beams, recessed lighting fixtures and other interferences where space is limited.
- c) Piping, ductwork, electrical conduits, etc. shall be checked for interferences that would prevent proper installation of each system.
- d) Coordinate special types of equipment for correct rough-in requirements.
- e) Plans shall be coordinated for size and location of all chases.

1.6.3 Electrical

The final Electrical drawings at a minimum shall be checked for the following:

- a) Electrical lighting fixtures shall be checked for conflict with air diffusers, ceiling grilles, sprinkler heads, ceiling type speakers, etc.
- b) Large electrical system conduit and pull boxes shall be coordinated with building construction, beams, etc., to assure clearances and accessibility. Piping and electrical switchgear locations are to be coordinated.
- c) Plans and specifications shall be checked for conflicts.
- d) Plans shall be coordinated for size and location of all chases.

1.6.4 Fire Protection

The final Fire Protection drawings at a minimum shall be checked for the following:

- a) Piping shall be coordinated with building construction, beams, etc., to assure clearances and accessibility for maintenance. Piping and electrical switchgear locations are to be coordinated.
- b) Routing of sprinkler piping shall have minimum turns to avoid building construction, etc.
- c) No areas are to be left without fire protection/detection, such as wedges in terminals and utility closets when one project is subdivided into several phases.

1.6.5 Communications

The final Communications drawings, shall at a minimum, be checked for the following:

- a) Ceiling type speakers shall be checked for conflict with light fixtures, air diffusers, ceiling grilles, sprinkler heads, etc.
- b) Large communication system conduit and pull boxes shall be coordinated with building construction, beams, etc., to assure clearances and accessibility.

1.6.6 Security

The final Security drawings at a minimum shall be checked for the following:

- a) Security system components and types and locations shall be coordinated through the SF Contact to properly interface with existing system.
- b) Coordinate design to allow for uninterrupted operation of existing security systems. Security must be maintained during construction.
- c) Large security system conduit and pull boxes shall be coordinated with building

construction, beams, etc., to assure clearances and accessibility.

1.6.7 Exterior Utilities

The final Exterior Utility drawings at a minimum shall be checked for the following:

- a) Electrical lighting poles, manholes, handholds and underground conduit shall be coordinated with existing utility locations as well as installation of other new utilities.
- b) Plans and specifications shall be checked for conflicts.

1.7 Project Solicitation

Proposals shall be solicited in accordance with Florida Bidding Statutes. SF will coordinate and be responsible for the contracting arrangements.

1.8 Sale and Issuance of Contract Documents to Contractors

Beginning on Tuesday after the first Sunday advertisement, bid packages will be available to bidders from a local reproduction company. The design consultant should confirm this procedure with the designated SF Contact.

1.9 Pre-Bid Conference

SF will conduct a Pre-Bid conference for the bidders. Under the guidance of SF's CA, the design consultant will brief the bidders on the overall scope of the project, answer questions from bidders and arrange for and conduct a site tour.

1.10 Addenda

If questions come up during the Pre-Bid Conference or if there are clarifications required, the design consultant will provide answers to the designated SF Contact and or the SF CA responsible for the procurement. SF is responsible for issuing all Addenda.

1.11 Bid Opening

SF will conduct the bid opening at the designated location in the bid documents. After the bid opening, SF will perform a bid analysis. Upon completion of the bid analysis a recommendation to award the contract to the lowest responsible bidder will be issued for approval.

1.12 Pre-Construction

Upon approval of the project, the applicant, the design agents, and the contractor shall meet with SF appointed representatives for a pre-construction conference. At such time, principal aspects

of coordination will be established: project schedule, coordination, and inspections, as well as any other items of a timely nature to the project.

1.13 Site Clean-up

The design consultant should specify in the CDs that the contractor will be responsible for maintaining an orderly and accommodative environment of the construction area and shall, prior to conclusion of the work, remove all rubble, debris, and surplus material occasioned from the immediate site. In addition, the contractor shall similarly render and restore all off-site areas disturbed during the construction of the facility.

SECTION 2 – CONSTRUCTION SUPPORT SERVICES

To be added in the future and/or to be coordinated between SF Tenants and SF