Seattle-Tacoma International Airport Tenant Improvement Design and Construction Process Manual

Final Draft Pending Legal Review

15 February 2018

INTRODUCTION

Design and Construction of a tenant project at Seattle-Tacoma International Airport (Airport) is a collaborative process between the tenant, the tenant's design team (Design Team), the tenant's contractor, and the Port of Seattle (Port), which operates the Airport. All projects located on Airport property are subject to the Port of Seattle's requirements and depending on location may also be subject to the City of SeaTac's requirements.

The Port has developed several documents that further explain the tenant design and construction process and the requirements that tenants must meet. These documents are:

- Tenant Improvement Design and Construction Process Manual (Process Manual) – This Manual describes the requirements and process to be followed for the tenant design and construction at the Airport.
- Rules for Airport Construction (RAC) – This document describes the rules that apply to all design and construction projects at the Airport, not just tenant projects. It serves as a guide for Contractors to better understand the environment they will be working in.
- Port Tenant Improvement Construction General Requirements – This document comprises the Port Master Specification Sections referenced in the Process Manual and the RAC. These specification sections have been tailored to tenant projects.

Tenants, design teams, and tenant contractors are to use these three documents for implementation of tenant projects. In addition to these three documents, there are many technical standards and guidelines that apply to all projects at the Airport. These documents and the Port Standards and Guidelines are available on the Port of Seattle website: http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx

If the reader does not have access to the internet, the assigned Port Project Manager can provide information on a CD or other electronic media.

The Port is implementing electronic systems for the design, permitting, and construction process. Tenants, tenant designers, tenant vendors, and tenant contractors shall use the platform(s) that the Port implements.

The figure on the next page summarizes the Port Tenant Improvement Design and Construction Process.

For questions or concerns about this document, contact Lisa Mach at mach.l@portseattle.org or Alan Olson at olson.a@portseattle.org.

Figure 1

Tenant Improvement Design and Construction Process

Note: Depending on the scope and complexity of the project, some of the following steps may be simplified or not required.

1. CONCEPT APPROVAL

a. Initiation of Tenant Projects – Contact Business or Property Manager
b. Port Project Manager Assigned
c. ADR Concept Review

Concept approval focuses on communication with the Business or Property Manager about the project.

2. PRE-DESIGN

a. Assemble The Design Team
b. Pre-Design Meeting
c. Existing Conditions- Site and Utility Surveys
d. Port of Seattle Standards, Guidelines, Specifications
e. Authorities Having Jurisdiction

Pre-Design focuses on gathering information prior to designing to apprise the tenant and their design team about Port Requirements and existing conditions.

3. DESIGN

a. Port Technical Design Review Objectives
b. Port Technical Design Review Process
   i. Design Reviews
   ii. Applications for Connection
   iii. Technical Review Committees
   iv. Environmental Review
c. Required Design Information

Design focuses on technical integration of the new design with Port systems. The Project must complete this technical design review process prior to submitting for Building and other Permits.

4. PERMITTING

a. Airport Building Department
b. Other Permits

Permitting focuses on obtaining all required permits for the project as outlined by County, State and National codes.

5. PRE-CONSTRUCTION

a. Pre-Construction Submittals
b. Pre-Construction Meeting

Pre-construction focuses on documentation and training that must be completed prior to starting construction.

6. CONSTRUCTION

a. Resolution No. 3725 Policy Directive for Construction Labor for Projects on Port Property
b. Construction Management
c. Construction Logistics

Construction focuses on requirements and limitations for contractors at Seattle-Tacoma International Airport.

7. COMPLETION AND CLOSE-OUT

a. Punch List / Final Inspections / Demobilization
b. Close-out Documentation
c. Certificate of Occupancy

Completion and Close-out focuses on final inspections, occupancy, and required close-out documentation for the project.

CONTENTS

Figure(s)

ACRONYMS AND ABBREVIATIONS

ABD	Airport Building Department
ADR	Airport Dining and Retail
A/E	Architect/Engineer
AMA	Airport Movement Area
AOA	Airport Operations Area
ARC	Architectural Review Committee
AV	Aviation
CAD	Computer Aided Design (also CADD)
CIP	Capital Improvement Project
COPS	Application for Certification of Port Standards
DCS	Document Control Specialist
DDC	Direct Digital Control
ILA	Interlocal Agreement
F & I	Facilities and Infrastructure
FAA	Federal Aviation Administration
HVAC	Heating Ventilations and Air Conditioning
LOB	Line of Business
MUST	Mechanical Utilities System Team
NTP	Notice to Proceed
PCS	Port Construction Services
PEST	Proactive Electrical Systems Team
PM	Project Manager
Port	Port of Seattle
RAC	Rules for Airport Construction
RE	Resident Engineer
RMM	Regulated Material Management
START	SeaTac Telecommunications Architecture Review Team
STIA	Seattle-Tacoma International Airport

1. CONCEPT APPROVAL

A. Initiation of Tenant Projects

New or existing tenants of Seattle-Tacoma International Airport (Airport) who wish to modify or expand their existing facilities must first contact their assigned Aviation Properties Manager or Airport Dining and Retail (ADR) Business Manager and submit to them a concept of what they would like to modify, change, or add to their lease space. The tenant's concept may range from a statement of scope intent to a completely illustrated design. Provide as much information as possible about the scope of the proposed work for the concept review.

The sponsoring Aviation Properties Manager or ADR Business Manager will coordinate with Port stakeholders to review the project concept. The Port stakeholders will provide a "qualified" concept approval that may be subject to specific limitations or include a request for more detailed information. Changes or additions to the project scope after it has been granted initial concept approval may require that the project go through a second concept review period.

The Tenant will work with the Aviation Properties Manager or the ADR Business Manager to either negotiate or amend their lease agreement. Once the tenant has obtained conceptual approval and all lease agreement issues are in progress, a Port of Seattle (Port) Project Manager (PM) will be assigned to support and assist the Tenant through the design and construction process.

The approval of the concept for a project does not authorize the Tenant to proceed with construction until specific pre-construction requirements have been met. These pre-construction requirements vary depending upon the location and scope of the project. The assigned Port PM will confirm the applicable pre-construction requirements. The Port PM will issue a construction Notice to Proceed (NTP) only after all necessary pre-construction reviews and approvals for the project have been completed. Please see Design, Permitting, and Pre-construction sections of this document for specific requirements.

B. ADR Concept Review

Airport Dining and Retail Projects generally fall into three types: New build-outs (tenant has a new lease); renovations (tenant modifying existing an existing lease space), and mid-term refurbishments (as required in the lease agreement). The concept review requirements are similar to those described above, but generally require more extensive documentation. Reference the Dining and Retail Design Guidelines Section 7 for detailed requirements. (http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx)

Types of documentation that may be required include the following:

- Rendering of the Storefront (two perspectives)
- Floor Plan
- Reflected Ceiling Plan
- Elevations
- Material Sample Boards and Schedules

2. PRE-DESIGN

The Design Team is strongly encouraged to look over activities in every phase of this manual prior to beginning the design. It is the responsibility of the Design Team to ensure that every aspect of the process has been addressed adequately as outlined within this document. Forethought and planning are imperative prior to the actual design to reduce costs, remain on schedule and avoid surprises.

A. Assemble The Design and Construction Team

1) Design Team

All construction drawings and documents must be signed and stamped by an architect and/or engineer licensed in the State of Washington, with minor exceptions. Electrical and mechanical designs must be stamped and signed by an engineer licensed in the state of Washington in their appropriate discipline. Mechanical, Electrical, or Plumbing drawings stamped by an architect are not acceptable.

Language in the design contract must include compliance with Port Standards, Guidelines, Rules and Regulations including preparation of as-built AutoCAD Record drawings.

The Port has a list of architects/engineers/designers and contractors that have attended training on performing projects at the Airport. The list may be found at this location: Insert link. Tenant is allowed to use any licensed designer. The Port makes no guarantee as to the ability of the firms to perform work.

2) Construction Team

All contractors who perform work or who advertise for or submit bids in Washington State must be registered with the Department of Labor & Industries (L&I), post a bond and carry general liability insurance coverage. For additional information please see: Washington State Contractor Licensing. The contractor will not be issued a building permit if they are not licensed in the State of Washington and the City of SeaTac. For additional information regarding how to obtain a City of Seatac Business License see: City of SeaTac Licensing http://www.ci.seatac.wa.us/government/city-departments/finance-systems/business-licensing

Tenants are encouraged to select construction contractors as early as possible as security badging, keying, and pre-construction submittals take several weeks to accomplish.

3) Contractual Modality for Tenant Projects

The primary contractual relationship is between the Tenant and its consultant Designer. The Port's PM represents the relevant Port departments in the role of Owner's representative.

The contractual relationships and decision flow in the Tenant Improvement Design and Construction process is outlined as follows:

- The Tenant addresses business issues with Aviation Properties or Business Development such as provision of utilities and lease amendments.
- The Tenant hires a consultant for design. Tenant's Design Consultant then contacts the assigned Port PM, who will clarify how best to implement the tenant's project after review of proposed scope of work.

- The Tenant is required to design and construct the Project in conformance with all applicable Port Standards, Guidelines, Rules, and Regulations, including preparation of as-built AutoCAD drawings.
- Authority of the Port PM is as the representative of the Port as Landlord. The Port PM will actively assist the Tenant in expediting the Project. There is no contractual relationship between the Tenant's design consultant and the Port PM.
- The Port PM is the point of interaction between the Tenant and other Port entities, including other tenants, and is involved in every stage of the project. The Port PM will coordinate design reviews by the various stakeholders and facilitate resolution of design or other issues. The Port PM will provide all Port project technical decisions.
- Prior to construction, the Tenant submits the Construction Documents to the Port PM for Port review and acceptance as conforming to Port Standards, Guidelines, Rules, and Regulations. The Port PM provides the final review for Compliance of Port Standards and Regulations (COPS). Submittal for and Issuance of a Building Permit is contingent on the Port PM's approval.
- The Construction Contract is between the Tenant and their Contractor. The Tenant is responsible for satisfying all Permit issues. The Airport Building Department issues a permit to the tenant with the Port of Seattle listed as the Landlord.

4) Airport Security and Badge Process

The Airport Credential Center is responsible for issuing identification badges and keys for restricted and public areas, ramp insurance/permits and assigning access into restricted areas. Please go to the Airport Credential website for more detailed information: http://www.portseattle.org/Employee-Services/ID-Badges/Pages/default.aspx.

More detailed requirements are found in the Port's Tenant Improvement Construction General Requirements Section 01 14 13 Airport Identification Access Security.

B. Pre-Design Meeting

The Port PM will set up an initial meeting with the Tenant representatives to review project scope; Port design and construction requirements; Port Standards, Guidelines, Rules and Regulations; project schedule; roles and responsibilities; project specific information and requirements; and project close-out requirements. The Port PM will provide the Design Team all applicable documents indicated in the Pre-Design checklist and discuss with the Design Team potential challenges for the project.

Required Attendees:

- Port PM
- Tenant or Tenant Representative (if not tenant)
- Tenant Design Team (Architect and Engineers)
- Other stakeholders as needed

Agenda Items:

- Project Scope
- Pre-Design Checklist (See Appendix A for copy of the checklist)
  - identify which activities apply to this project
  - Port Standards, Guidelines, Rules, and Regulations
  - Site Survey and Record Drawings

  - Design Review Process and Design Requirements
  - Keys, Badging, FAA coordination
  - Permitting
  - Pre-Construction Submittals
  - Construction
  - Close-out
- Schedule
- Roles and Responsibilities

C. Existing Conditions

1) Base Drawings and Archive Drawings

The Port maintains Base Drawings or AutoCAD backgrounds of the passenger terminal building. The Port PM will provide the Base Building Drawings to the Design Team at the Pre-Design Meeting, if the project location is known. Base Drawings for areas outside the passenger terminal building may be available. Coordinate with the Port PM for access.

The Port maintains an archive of drawings from past projects at the airport. The Port PM will assist the Design Team with obtaining archived drawings, if they are available. The Design Team is responsible to research the archive, and identify which archived drawings are relevant.

For the base building background drawings, other base drawings, and the archive drawings the Port does not guarantee accuracy. All drawings and existing features are subject to field verification by the Design Team.

To provide archive information for future projects, tenants are required to provide as-built drawings at the completion of their projects. See Section 7 for project close-out requirements.

2) Existing Site Conditions Surveys

As noted above the accuracy of Port archive documents is not guaranteed. It is very important that the Design Team verify conditions in the field. The Port PM will assist the Design Team with arranging all existing site condition surveys, and coordinate with appropriate Port Maintenance (Maint), Port Facilities and Infrastructure (F&I), and Port Construction Services (PCS) Regulated Materials to familiarize the Design Team with the location and how the design will be integrated into the existing building systems. To allow the Port PM time to coordinate with Port staff, the Design Team shall provide at least two weeks' notice for the site survey. Tenant Architects and Engineers MUST participate in the site survey. Design Team is responsible to provide all tools and equipment required to access and perform the site survey.

NOTE: Design Team personnel will need ID /Access security badges. Allow sufficient time, approximately 3-4 weeks, to complete this process. In case the Design Team surveyor requires access to specific locations to verify conditions before that time, the Port PM may be able to arrange for surveyors to be escorted up to three times.

3) Regulated Material Management (RMM / Asbestos) Surveys

The Airport has areas of Asbestos and other regulated materials and requires a Regulated Materials survey of every new project's location. The Port is responsible for conducting regulated material abatement in Port owned facilities. When the boundaries of the project are known, and no later than 60% design, the Port PM will

request Port Construction Services (PCS) to conduct a Regulated Materials Survey of the affected tenant space.

The Port PM will forward the survey report to the Design Team for inclusion in the General Conditions portion of the drawings. If regulated material removal is required, the tenant's construction schedule shall account for any additional time.

See Section V of the Rules for Airport Construction for more detailed information about regulated materials at the Airport.

NOTE: The Regulated Material Survey is approximately a two-week process. Abatement design and removal schedule (if required) will be provided by PCS based on the complexity of the site condition.

4) Utility Capacity Determination

a) Air and Water Survey (Pre-Design TAB Report)

To evaluate how the tenant project will affect the Airport Heating, Ventilation and Air Conditioning (HVAC) systems and to determine if sufficient capacity is available, a survey of the existing airflow and tempered water flow in the area to be impacted by the tenant is required to be commissioned by the Tenant. Prior to design, the Design Team is required to hire a pre-qualified Test and Balance agency to perform pre- design readings of the existing mechanical systems that will serve the tenant space(s).

Pre-qualified firms are listed in the Mechanical Systems Standards Section 200593 Testing and Balancing. The Design Team may hire other firms, but they must be pre-approved by Port F&I and meet the qualification requirements.

The pre-design report shall be submitted with the Application for Connection to Mechanical Systems and it is the Design Team's responsibility to utilize this data as the basis of design for their HVAC system.

b) Electrical Main Panel – 7 Day and 30 Day Load Readings

The Port requires electrical meter readings of Tenant and Port panels impacted by the proposed Tenant project. These meter readings are also a permit requirement by Washington State Labor and Industries (L&I).

Meter readings provide a measure of the current amperage demand on a panel in thirty-minute increments and help determine whether enough ampacity is available to accommodate the project. Seven (7)-day meter readings are usually adequate for added loads that are less than 5% of the total rated amperage of the panel. Any greater loads will require a 30-day meter reading.

Copies of the reading's summary sheet shall be submitted with each Application for Connection to Electrical Systems.

Tenant or Design Team is responsible to hire a licensed electrician to perform the panel readings.

c) Solid Waste

The Port requires estimates of the square footage and space utilization types, along with any information that would be relevant to solid waste systems capacity (e.g., a restaurant specializing in bottled beverages), to review waste system capacity and scheduling requirements.

d) Natural Gas

The Port requires estimates of the amounts of natural gas, including total amounts and peak demand, that will be required by tenants, to determine how to establish adequate delivery capacity to the new spaces.

e) Water, Sewer, and Surface Water

The Port requires estimates of the amounts of water, including total amounts and peak demand, that will be required by tenants, to determine how to establish adequate delivery capacity to the new spaces.

f) Broadband Television

The Port requires knowledge of the number and location of television outlets to be required, to determine how to establish adequate delivery capacity to the new spaces.

D. Port of Seattle Standards Web Page

To ensure seamless integration of the new systems, Design Teams must prepare designs conforming to Port Standards and Guidelines. Current versions of Port Standards, Guidelines, Applications for Connection, Tenant Improvement Construction General Requirements, Construction Safety Manual, Rules for Airport Construction, and other relevant documents can be found on the Port's website: http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx

Lists of the Port Standards, Guidelines, Rules and Regulations are provided below:

1) Port Standards

Architecture Standards
Standards for architectural design, materials and finishes selection at the Airport (12Mb PDF)

CAD Standards (38 Mb)

Casework Standards
Standards for casework design and material selection at the Airport (23.7Mb)

Communications Systems Standards
Standards for communication system design and equipment selection at the Airport. Includes appendices for tenant guidelines and communications labeling standards. (5.3Mb)

Electrical System Standards
Standards for electrical system design and equipment selection at the Airport (5.7Mb)

Industrial Waste and Storm Drainage Systems Standards
Standards for design and equipment selection for industrial waste and storm drain systems at the Airport (1Mb)

Landscape Standards
Standards for landscape design, installation, equipment selection and plant selection

at the Airport. (3.6Mb)

Low Impact Development Guideline
This Low Impact Development (LID) Guideline provides guidance for assessing the requirements, applicability, and technical feasibility of implementing LID at Seattle-Tacoma International Airport (STIA). (18.4Mb)

Mechanical Systems Standards
Standards for mechanical system design and material selection at Sea-Tac Airport (19Mb)

Radio Frequency Standards
Standards for radio frequency system design and equipment selection at the Airport

Rental Car Facility (RCF) Tenant Design and Construction Standards (12Mb)
Design and construction standards for tenants of the consolidated rental car facility. These Standards are supplemental to existing Design Standards for the unique features of the rental car facility.

Restroom Design Standards
Standards for architectural design of public restrooms at the Airport. Plumbing fixtures and fittings are included in the Mechanical Systems Standards.

Signage Standards
Standards for signage design, layout configuration, graphics, symbols, installation and material selection at the Airport (31Mb)

Stormwater Management Manual
Standards for design of stormwater management. (43 MB)

Water and Sanitary Sewer Systems Standards
Standards for domestic water and sanitary sewer system design, installation, and material selection at Sea-Tac Airport (1.8Mb)

2) Master Specifications

Port Master Guide Specifications for technical sections can be found at:
http://www.portseattle.org/Business/Contracting-Opportunities/Pages/contr_reference.aspx
(Please review the document location with the Port PM since links sometimes change)

The project design team shall use the Port master specifications, **edited to suit the project** and to comply with Port standards. While some of the standards are written in specification format, they contain information that is specifically geared to the designer and should not be included in contract documents. It is preferred that the specifications be provided in track changes to facilitate more efficient reviews.

3) Design Guidelines

Design Guidelines
Describes the comprehensive vision for design criteria at the Airport (3.2Mb)

Dining and Retail Design Guidelines
Guidelines for concessions design and material selection at the Airport (18 Mb)

Landscape Design Guidelines
Guidelines for landscape design and installations at the Airport (7.4Mb)

Port of Seattle Health & Safety Manual
Guide to contract safety requirements and the Port of Seattle Fire Department as it relates to construction

Section 01 35 29 - Safety Management
Tenant document bidding requirements, contract forms and conditions of the contact (210 KB)

Interlocal Agreement City of SeaTac
Describes Port and City of SeaTac requirements.

4) Applications for Connection to Utilities

Communications Systems
Application to connect to all communications infrastructure including broadband television other than radio frequency (excludes tenant-owned infrastructure in tenant-leased spaces that are not connected to Port-owned infrastructure or routed through Port-owned spaces).

Electrical Systems
Application for connections, load additions, or modifications to the airport electrical distribution, lighting, or emergency power systems, including new uses of outlets, e.g., vending machines. Download instructions.

Industrial Waste Systems
Application for connections, load additions or modifications to the Industrial Wastewater System at the Airport. Download Industrial Waste Systems instructions

Mechanical Systems
Application for connections, load additions or modifications to airport mechanical systems including heating/ventilation/air conditioning (HVAC), chilled water, hot water and condenser water systems. Download Mechanical Systems instructions

Natural Gas System
Application for connections, load additions (MBH, CFH), or modifications to the Airport gas distribution system. Download Natural Gas System instructions

Radio Frequency Systems

Sanitary Waste Systems
Application for connections, load additions or modifications to the Airport sanitary waste system. Download Sanitary Waste Systems instructions

Storm Drain Systems
Application for connections, load additions, or modifications to the Airport storm

drainage system. Download Storm Drain Systems instructions

Water Systems
Application for connections, load additions, or modifications to the Airport water distribution system including irrigation, domestic water and fire suppression. Download Water Systems instructions
Read Water System Connection Procedure Requirements here.

5) Rules and Regulations

Tenant Design and Construction Process Manual

This manual is an electronic copy of the resources necessary for designing and constructing tenant improvement projects at the Seattle-Tacoma International Airport. Download the PDF.

Construction Safety Manual

Download the PDF

Rules for Airport Construction

Provides necessary information to successfully execute and complete construction at Seattle-Tacoma International Airport as well as the various Port stakeholders interfacing with contractors during a project. Download the PDF

Tenant Improvement Construction General Requirements

Compendium of procedures, rules, regulations and standards to be followed for all Port and tenant construction projects Seattle-Tacoma International Airport. Download the PDF.

Rules and Regulations

Tariffs

6) Port CAD Standards

All drawings shall comply with Port CAD Standards . This is to enable the Tenant's project CAD Record Drawings to be entered into the Port's Engineering Document Management System. The Design Team should start with backgrounds from the Port's base drawings for all exterior site planning, interior floor plates, and utilities work. These base drawings will be furnished by the Port where available.

Orientation for the Port CAD Standards will be provided to the Design Team by Port Staff to help ensure that the Tenant's documents are compliant with the Port CAD Standards. Drawings submittals will be reviewed for compliance during Port design review.

All projects requiring a permit or altering infrastructure require CAD drawings.

Projects that do not require CAD drawings are:

- Temporary facilities (up to 6 months).
- Non-system related architectural work (counters, casework and finishes, etc.).
- Project related signage (temporary construction).
- Glass replacement (exterior windows and interior relites), carpet, and replacement in kind Painting and lighting refits.

E. Authorities Having Jurisdiction

There are a variety of Federal, State, and Local government entities that have jurisdiction over design and construction projects at the Airport. The assigned Port PM will assist the

tenant with determining which government entities have jurisdiction. The Interlocal Agreement (ILA) http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx between the City of SeaTac and the Port provides guidance on which agency has jurisdiction for Life Safety Codes. In general, the Port of Seattle Fire Department (POS FD) and the Airport Building Department (ABD) have jurisdiction in the airport activity area, defined in the ILA.

In addition to building permits, electrical, escalator, elevator, boiler permits are administered by Washington Labor and Industries, Health Permits for food handling facilities are administered by King County, and Liquor Licenses are administered by the Washington Liquor and Cannabis Control Board. The Federal Aviation Administration, coordinated through the Port, provides approval for obstacles or features that could impact aircraft operations. The Transportation Security Administration (TSA), coordinated through the Port, provides approval for changes to airport security.

See the Rules for Airport Construction (RAC) http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx for specific requirements for design and construction from the ABD, Port FD, and Port AV/Environmental. See Section 4 of this manual for the permitting process.

3. DESIGN

This section focuses on the Port design review process and issues that tenants and their design teams must take into account in their design. All projects must comply with Port Standards, Guidelines, Rules, and Regulations, and are reviewed by the Port prior to submittal to the Airport Building Department, City of SeaTac, or other permitting agencies. The Port review culminates with the completion of Application for Certification of Port Standards (COPS). This allows the tenant to submit for required permits.

A. Port Technical Review Objectives

The goal of the Port Technical Design Review is to ensure seamless integration of tenant improvements with Port systems, maintainability and compliance with Port Standards, Guidelines, Rules and Regulations. The Port Reviewers have a vested interest in the continuous operation of airport facilities with minimal impacts to the traveling public.

Specific objectives include:

- Allocation of utilities and energy conservation
- Compliance with Port Standards, Guidelines, Rules, and Regulations to ensure tenant's systems compatible with Port systems, includes both infrastructure and aesthetics
- Compliance with environmental requirements
- Maintainability of existing systems/elements and those which will become Port responsibility
- Minimization of construction impacts to operations
- Fulfillment of approved design intent (concept)

1) Application for Certification of Port Standards (COPS)

All Tenant projects must comply with Port Design Standards and Guidelines. The Port review process confirms, but does not guarantee, compliance with Port Standards and Guidelines.

The design and systems review process cycles described in this section will be repeated until all design issues have been resolved and all applicable Applications for Utility Connection Forms have been approved.

The COPS must be completed prior to submittal for Permit.

B. Port Technical Design Review Process

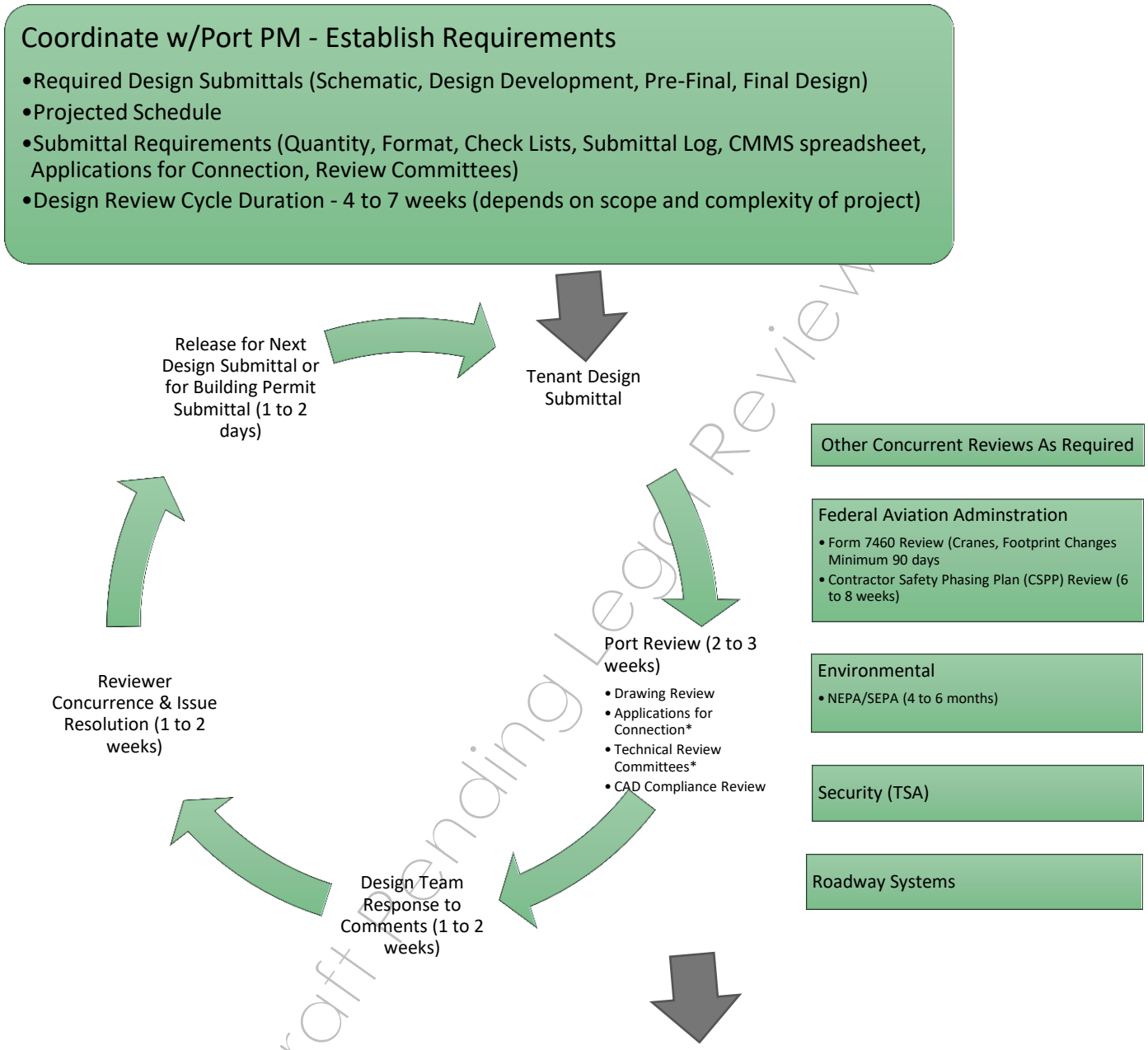
There are generally three phases to the technical design review process and these are illustrated in Figure 2:

Phase 1: Coordination with the Port PM to establish submittal requirements and schedule

Phase 2: Design Reviews

Phase 3: Certification of Compliance with Port Standards and Release for Permitting

Figure 2: Port Technical Design Review Process



*Only required until approved or if significant project changes after approval
**Or other permitting authority if different from Airport Building Department

1) Coordinate with Port PM and Establish Requirements

The Port PM is the single point of contact for all communications between the Port Stakeholders and the Design Team during the technical design review process.

a) Design Submittals

The Port PM will review the scope and complexity of the project, in consultation with the Port Stakeholders and the Design Team, and determine the number of reviews appropriate for the project. Possible reviews include schematic design, design development, pre-final construction documents, and final construction documents. Small projects typically require only one review at final construction documents while larger projects may require two to four reviews. Other reasons that could drive more reviews include tenant reimbursement agreements, complex interaction with Port systems, and Port maintenance of the final product. During the review process if design documents are incomplete or otherwise poor quality additional reviews may be required to verify that the design meets Port Guidelines and Standards.

Determination of required applications for connection and presentation to technical committees will be made.

Other concurrent review requirements, such as FAA, environmental, security, or others will be established.

b) Submittal Requirements

Design submittal documentation varies by project and can include design drawings (CAD and searchable pdf), specifications (searchable pdf), checklists, construction submittal log, applications for connection, calculations, equipment cut-sheets, and other documents. The Port is performing most design reviews electronically, but still requires some half-size hard copies of the drawings for meetings or special reviews. Typically 5 to 7 hard copies are required.

c) Schedule

The Tenant, Design Team, and Port PM will establish a projected schedule for design, permitting, pre-construction, construction, and close-out for the project.

2) Design Reviews

The review cycle is the same for each design submittal. Port reviews and comments on the documents. The Design Team responds to the comments. The responses are reviewed and any issues are resolved. The Design Team is released to submit the next submittal or released to submit for building permit if one is required.

The Port review includes four aspects:

- Review of the documents and preparation of written comments
- Review and approval of Applications for Connection – See section 3.B.3 for additional information
- Technical Review Committees – See section 3.B.4 for additional information
- CAD compliance review

In parallel with the Port review cycle other reviews that may be required will be coordinated.

The design review cycle varies from 4 to 7 weeks to complete an entire cycle, but the Design Team receives comments in 2 to 3 weeks. The Design Team may continue design throughout the cycle.

3) Applications for Connection

As noted in the design review objectives, the Port is allocating existing utilities. The application for connection provides detailed information about the tenant utility requirements, and allows the Port to determine if capacity is available, and find a resolution if capacity is not available. Application for connection forms are available for Communications Systems, Electrical Systems, Industrial Wastewater Systems, Mechanical Systems, Natural Gas System, Radio Frequency Systems (including WiFi), Sanitary Waste Systems, Storm Drain Systems and Water Systems. The forms along with instructions are on the Port website. http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx

Coordinate with the Port PM to determine which applications are required and when they should be submitted. The applications will be prepared by the appropriate Design Team member and provided to the Port PM with the design submittal. It is the designer's responsibility to complete the application for connection and provide all required information. Incomplete applications will be returned to the designer.

An application for connection is also required for temporary needs during construction such as electrical and water.

Once an application is approved it is not necessary to resubmit with each design submittal, unless there is a significant change in the utility requirement.

4) Technical Review Committees (ARC, PEST, MUST, START, WISE, FARM, WAVE)

The following technical utility systems teams may receive progress presentations during each design phase. Attendance at technical review committee meetings is determined by consultation between the Port PM and committee chair.

ARC	Architectural Review Committee
PEST	Proactive Electrical Systems Team
MUST	Mechanical Utilities System Team
START	SeaTac Telecommunications Architecture Review Team
WISE	Water, IWS, Storm and Sanitary Sewer Team
FARM	Facility Asset Review Meeting
WAVE	Wayfinding and Visual Environment Team

These groups facilitate resolution of Design Team questions, issues and discuss the Application for Connection to Utility Forms.

Meeting Scheduling:

- Each Committee meets twice per month on specific days
- Typical time slot is 30 minutes. Additional time may be requested
- Limited slots are available for each meeting. Advise the Port PM as soon as possible to obtain a preferred day/time

Meeting Attendance and Content:

- Appropriate members of the Design Team attend the meeting for their respective discipline, present their design, and answer questions
- If Design Team members are from outside the Seattle area and cannot attend in person, they may join via conference call
- Bring 4 to 6 11 x 17 hard copies of the most current design for reference during the meeting

5) Environmental Program Review

Observing Environmental regulations is a serious business at the Airport. Depending on project scope and location, the Port PM will instruct the Design Team to provide documents for the Aviation Environmental Programs staff (AV/ENV). Program staff will ensure that the project has received adequate review under the National and State Environmental Policy Act (NEPA/SEPA) and the Endangered Species Act (ESA), and will also ensure that the project complies with all applicable environmental permits and regulations. See the Port's Tenant Improvement Construction General Requirements, Section 01 35 43-Environmental Regulatory Requirements.

The environmental permit that most Tenant projects need to comply with is the NPDES permit issued to the Airport by the Washington State Department of Ecology. This permit controls water quality impacts from construction and operation of facilities at the Airport and contains very specific measures required for compliance. The Design Team may be required to:

- Provide additional data or resources
- Arrange for additional environmental consulting as needed
- Provide budget for Port Staff to prepare and publish SEPA documents
- Ensure that known permitting requirements are incorporated into the project schedule and budget

Develop and submit a Stormwater Site Plan for review and approval.

(NPDES is National Pollutant Discharge Elimination System)

C. Required Design Information

This section provides information on design requirements for projects at the Airport. Some of these requirements are addressed in more detail in the Port Standards and Guidelines. This section also highlights issues that are frequently missed by design teams.

1) Commissioning

The Airport Building Department (ABD) requires commissioning of all projects. Some projects may require an independent commissioning agent, confer with the Port PM to confirm.

The Design Team shall confer with the Port PM, F&I and Maint to determine which Port commissioning activity checklists are to be included in project technical specifications and the necessity of including a specialty contractor for balancing and controls (Siemens) support.

Utility meters are required to be calibrated and commissioned.

Reference Port Tenant Improvement Construction General Requirements Section 01 91 00.13 Commissioning Activities for additional information.

2) Utility Meters

All Tenant new construction or remodeling projects requiring connection to Port power, water (hot and cold), natural gas or any other utility require a tenant supplied meter. The meter(s) must be connected to the Direct Digital Control (DDC) or Power Monitoring system by the second week after Notice to Proceed (NTP). Once the Tenant contractor installs, calibrates and commissions the meter(s), they shall request an inspection.

Request for inspection shall be coordinated through the Port Construction Inspector (Port Inspector). Failure to obtain inspection and approval of any meter, new or existing, will result in immediate stop work and power shutdown without prior notice.

For specification and purchasing information on Port approved meters, contact the Port PM or visit the Port public web site http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx for Design Standards for Utility Meters.

All water connections require a back-flow preventer and all gas meters require a seismic valve and may require a pressure reducer.

3) Reservation of Electrical Breakers

To reserve space for placement of electrical breakers in Port electrical panels and secure service for the project, the Tenant's electrical designer shall contact the Port PM and provide the panel(s), circuit(s) and physical location(s) and request a breaker reservation.

Once the desired breaker(s) is identified, a Port electrician will place a reservation sticker on the breaker and fill out the reservation form. The completed form will be provided to Port F&I who will record the information in a database. The Port PM will assist the Design Team with any questions or clarifications.

4) Equipment Identification Numbers

All equipment connected to Port Systems is required to have a Port identification number. Equipment connected to Port systems that is being removed must also be labeled with a Port identification number. Coordinate with Port PM to obtain existing and new identification numbers.

5) Coordination with the Direct Digital Control System

The Port has a sole source agreement to specify Siemens Building Technologies Division for the HVAC building automation system (BAS) also known as direct digital control system (DDC). Coordinate with Port PM for Siemens contact information. See the Port Mechanical Systems Standard 200920 for more detailed information.

- All water and natural gas meters must be connected to the DDC system.
- All equipment, including terminal units, kitchen hoods and exhaust fans, must be controlled by the DDC system.
- Tenant contractor must engage Siemens to make changes to the DDC system, including providing AutoCad files of mechanical sheets with architectural backgrounds and XREF files during construction for use in the DDC graphics.
- Prior to demolition of walls and ceilings, Siemens must be under contract and perform site work to protect
- t the DDC system.

6) Data/Communications and Wi-Fi

The Port provides a backbone system for Data/Communications. Each tenant will have a Port Demarcation box located within their space. All backbone cabling and demarcation installations shall be Systimax Certified. See the Port Communications Standards http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx for more detailed information.

Until new systems are in place broadband television is handled separately. Coordinate specific requirements with the Port PM.

Wi-Fi system signals are not allowed outside the tenant space or to interfere with existing Port systems. An application for radio frequency is required for installation. Please see the Port Radio Frequency Standards http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx for more detailed information.

7) Laydown Areas

If stored in areas other than a tenant's leased area, the tenant must coordinate laydown storage with the Port and identify the storage location on the tenant's construction drawings. Laydown area and equipment shall be identified with project and contact information.

Use of off-site Port laydown areas must comply with Tenant Improvement Construction General Requirements section 01 50 00G.

Contractor employee parking is available south of the airport for a fee. Tenant coordinates with their Business Manager or Property Manager for access and pays the fees.

8) FAA Project Proposal Summary and Cranes

Refer to the Rules for Airport Construction http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx Section II Design Approvals for detailed in formation.

9) Tenant Improvement Construction General Requirements

All construction work at the Airport is subject to the Rules for Airport Construction and Port Tenant Improvement Construction General Requirements. Review with the Port PM to confirm the sections that will apply to the specific tenant project. These requirements will be attached in their entirety to the Tenant project documents and reviewed at the pre-construction meeting. This document is available at: Tenant Construction and Design Reference Documents.

10) Door Hardware and Keying

Door/room numbers are assigned by the Port. Request door/room numbers as early as possible. Coordinate with the Port PM.

The Design Team shall comply with the requirements found within the Port Architectural Standards for door and key hardware. The Tenant's contractor is required to provide "BEST" brand lock Co. figure-8, seven pin construction cores which will be keyed by the Port lock shop. Upon completion of the Tenant project, the Port Lock Shop will exchange the construction cores with final lock cores and keys.

All new doors installed at the airport must be free of asbestos and labeled as such. The material used in door construction must be verified through manufacturer's documentation, material safety data sheets (MSDS) or sampling. All new tenant doors

must be labeled so that the door can be tracked in the Port Maintenance O&M Asbestos Database.

The Port PM will work with the Tenant in coordinating keying, either using existing key numbering series or new series of numbers. The Tenant must complete a key request for the quantity of keys desired and submit it directly to the Port Credential Center.

If the Tenant requires other than the Port core system, the Port Credential Center will provide and install outside the Tenant space a lock box to house the Tenant's entry key. The lock box is provided for Life Safety access by the Port/Fire Dept. only. Cost of the lock box and installation is paid by the Tenant.

If the tenant requires a key for the solid waste compactors, the tenant shall contact the Port Utilities department.

11) Construction Documentation and Training

As discussed in the objectives above, the Port is concerned about items that will interface with Port systems, and/or become the responsibility of the Port to maintain. This section addresses the types of construction submittals the Port wants to review, the construction submittal log, Operations & Maintenance data, and other issues. The tenant contract documents shall clearly address contractor responsibilities for construction submittals, Operations and Maintenance Data requirements, Computerized Maintenance Management System Data requirements, Training requirements, and other construction documentation requirements.

a) Construction Submittals

Based on the complexity of the Tenant's project, the Port PM and the Design Team will analyze potential equipment and systems that will require Port technical reviews. The following criteria apply:

- Systems equipment that will be serviced/maintained by the Port; i.e. heating, ventilation and air conditioning equipment (HVAC)
- Systems equipment that will become the property of the Port
- Equipment or tenant operations that will or could impact existing Port systems in and adjacent to the tenant space
- Equipment/material used for distribution of electrical power or wireless data transmission
- Special point loads of high power use; i.e. baggage x-ray, plasma screens, e v chargers
- All tenant utility meters for power, water, gas, etc
- Roofing, building envelope, waterproofing

Typical construction and deferred submittals include the following:

- Fire suppression systems
- Fire alarm controls and electronics
- HVAC equipment
- Pre & post construction balance reports (air & hydraulics)
- Cable or utility routing (through non-tenant space)
- Baggage handling systems (inbound and outbound)

- Shop drawings indicating equipment layouts, plumbing and duct work
- Kitchen equipment submittals and layout drawings
- Controls equipment and layout drawings
- J-line lighting upgrades (Airlines)
- 400 Hz electrical point loads
- Antenna relocations and transmittal upgrades
- Roofing, building envelope
- Waterproofing
- Final reports, redlines, CMMS

The Design Team will incorporate construction and deferred submittal requirements into the project's construction documents.

NOTE: Submittals that the design team wishes to designate as Deferred Submittals must be approved in advance by the ABD.

b) Construction Submittal Log

The Design Team shall prepare and include a construction submittal log using the Port submittal log template with the 90% design submittal. The Port PM will provide the form.

The Port will review the log for completeness and indicate which construction submittals that it will want to see during construction. See Section 6.B.1) of this manual for how construction submittals will be processed.

The Design Team shall include the construction submittal log with the contract bid documents.

c) Requests for Information (RFI)

Copies of Requests for information (RFI) will be submitted to the Port PM when information is required from the Port to answer an RFI. A copy of ALL RFIs will be provided to the Port PM monthly.

d) Operations and Maintenance Information

The Port requires fully text searchable, indexed Adobe pdf Operations and Maintenance (O&M) data for equipment, fixtures and systems that will become Port responsibility to maintain. Although the Port does not maintain tenant's ceilings, for other than gypsum wall board, furnish product data for replacement in the event of a leak of Port overhead systems.

Requirements for the maintenance information shall be identified in the project technical specifications. Detailed information on type and format of data is provided in the Port Tenant Improvement Construction General Requirements Section 01 78 23.13 Operations and Maintenance Data.

e) Computerized Maintenance Management System Data Form

For equipment, including utility meters, that will become Port responsibility to maintain and for maintained equipment removed to facilitate new construction, the Design Team and contractor shall complete a Computerized Maintenance Management System (CMMS) Data Form. The Design Team shall include the CMMS Form with the 90% Design Submittal. The Design Team shall include the CMMS data form with the contract bid documents. The Port PM will provide the

Design Team with the form. See the Port Tenant Improvement Construction General Requirements Section 01 78 23.13 and 01 78 23.13a for additional information.

f) Training

The Design Team will indicate requirements for operational and service training, as directed by the Port PM, for any equipment that may impact Port Systems or become the responsibility of the Port to Maintain. See the Port Tenant Improvement Construction General Requirements, Section 01 79 00 Training for additional information.

4. PERMITTING

With the assigned Port PM, review the City of SeaTac/Port of Seattle Interlocal Agreement http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx to confirm the agency(ies) having permitting authority and applicable ILA Development Standards for the specific project location.

After the Port has confirmed compliance with Port Standards (COPS), the tenant may prepare their building permit submittal and submit for building permit. The Port PM will assist with the Airport Building Department permit review process, FAA, and TSA processes. The tenant will work directly with other authorities having jurisdiction such as City of SeaTac, Washington State Labor and Industries, King County, and others.

A. Airport Building Department

The Rules for Airport Construction Section III Airport Building Department and Section IV Fire Department provide specific code requirements and other related information.

- The ABD issues General Building, Mechanical and Plumbing Permits.
- The ABD assesses and determines if a Building and/or Electrical Permit are required. If no Permit is required due to the simple nature of Tenant Project, the ABD will provide the Compliance of Port Standards (COPS) Certificate to the Port PM to review the Certificate for compliance. This will allow the Tenant to proceed with Proposed Project.
- The Design Team shall contact the Port PM for a copy of the current ABD permit application.
- Copies of the permit plans shall be forwarded to the Port PM prior to executing any work. Requirements are as follows:
  - Two (2) sets half-size (drawings)
  - Two (2) set full-size (24"x36" drawings) and specifications. All pages of the construction documents (Architectural, Civil, Structural, Mechanical, Plumbing, etc.) shall bear the seal and stamp of the responsible professional, at a minimum, in either a digital format or a reproduction of an original handwritten identification/validation.
  - Four (4) sets of specifications
  - One (1) set of calculations (such as structural, mechanical, etc) and soils report (if applicable)
  - One (1) Permit Application Building Construction, including general contractor and subcontractor information if available – will be required to issue the permit.
  - One (1) Permit Application Mechanical & Plumbing (if required), including general contractor and subcontractor information if available – will be required to issue the permit.
  - Payment for Plan Review (check made to the Port of Seattle) – ABD will not begin review without payment.
  - Payment for Permit Fee (check made to the Port of Seattle) – may be included with plan review check. Will be required to issue the permit.
  - One (1) completed Statement of Special Inspections (SOSI) / Contractors Statement of Responsibility (CSOR), including signatures, if required

- One (1) electronic copy (CD or thumb-drive) of the design drawings, specifications, and all the above documents. CAD and searchable pdf.

If the project is being permitted by the City of SeaTac, the tenant shall notify the Port PM of submittal and provide the two half-size sets of drawings, specifications, and electronic copy to the Port PM.

Once the submittal package is accepted as complete, the ABD initial review process will be completed within 10 working days. When the review is completed, a list of comments will be provided denoting conditions that need to be addressed and resolved. Plans cannot be stamped or APPROVED, nor can the permit be issued, before all items are resolved and the plans and supporting documents are revised as needed, fees are paid when applicable, and business licenses are obtained from the City of SeaTac, where necessary.

B. Electrical Permit

Electrical Permits are issued by the Washington State Department of Labor & Industries (L&I).

http://www.lni.wa.gov/TradesLicensing/Electrical/FeePermInsp/

If City of SeaTac is the building permit authority then they provide the electrical permit instead of L&I.

C. Food Facilities Permit

Food handling facilities require specific plan review and approval by King County Public Health Services, Food Protection Program.

Please visit King County Health Department's website for complete information on obtaining a food service permit:
www.kingcounty.gov/healthservices/health/ehs/foodsafety/FoodBusiness

D. Airport Security Plan Changes

In Accordance with the Airport Security Plan (ASP), the Port is required to notify and obtain approval from the Transportation Security Administration (TSA) for any changes to the secured and/or Airport Operations Area (AOA) perimeter; including changes to perimeter walls inside the bagwell, concourse, roofs, or fences on the AOA; access into these areas via doors, gates, or holes in the wall, or changes affecting the TSA screening process or exit lanes. All changes must be submitted to TSA within 45 days of the effective date and they have 30 days to review and approve/disapprove these changes.

The Airport is subject to civil penalty by the TSA for failure to notify or obtain approval of these changes. The Airport Rules and Regulations include construction and alteration violations for not following proper procedures.

E. Liquor License

Liquor Licenses are administered by the Washington State Liquor and Cannabis Board.
https://lcb.wa.gov/

F. Other Permits

Vertical Transportation (L&I) – See Washington State Department of Labor and Industries website for details: http://www.lni.wa.gov/tradeslicensing/

Boiler Permit (L&I) – See Washington State Department of Labor and Industries website for details: http://www.lni.wa.gov/tradeslicensing/

Federal Aviation Administration – See Rules for Airport Construction Section II Design Approvals

Environmental – See Rules for Airport Construction Section VI Environmental

Water and Sewer Districts – See City of SeaTac Utilities Element for map of water and sewer districts: www.ci.seatac.wa.us/Home/ShowDocument?id=10739

5. PRE-CONSTRUCTION

No construction work will start at the Airport without receiving notice to proceed (NTP) from the Port. The Port PM will issue a Notice to Proceed (NTP) only after all necessary pre-construction reviews and approvals, including a pre-construction meeting, for the project have been completed.

These pre-construction requirements vary depending upon the location and scope of the project. The Port PM will confirm which of these conditions apply to each particular project.

The tenant's lease requires them to comply with all Port of Seattle procedures and processes pertaining to construction and other tenant improvements within or outside their lease footprint. Failure by the tenant or their contractor to comply with these requirements constitutes a serious violation of their lease with the Port of Seattle.

Unapproved construction or other tenant improvement work completed by the tenant or their contractor prior to receiving the required pre-construction approvals and Notice to Proceed from the Port PM is in violation of the tenant's lease.

Any such work is subject to immediate removal and the affected areas will be returned to their original condition solely at the tenant's own expense.

A. Pre-Construction Submittals

Pre-construction requirements apply to the general contractor and all other contractors or vendors. If a tenant chooses to hire vendors or other contractor's to complete construction work, who are not covered by the general contractor's liability insurance and safety plan those contractors or vendors performing construction must provide all the same pre-construction submittals and receive a notice to proceed letter.

1) Notice to Proceed Requirements

Prior to issuance of the official letter for Notice to Proceed (NTP) from the Port PM, the Tenant Contractor and Design Team are responsible for submitting the items found here and in the Port's Tenant Improvement Construction General Requirements, Section 01 32 19-Preconstruction Submittals. The Port PM will review the requirements with the Design Team and contractor. These requirements include, but are not limited to:

Minimum Requirements:

- Contractor Liability Insurance, showing the Port of Seattle as an additional insured. See Section 5.A.2) Contractor Liability Insurance for specific requirements if not addressed in the tenant's lease
- Construction Safety Plan per Tenant Improvement Construction General Requirements Section 01 35 29 Tenant Safety Management, Site Specific Safety Plan and Job Hazard Analysis approved by Safety Department. See Section 5.A.3) Contractor's Safety Plan for requirements
- Certification that at least one crew member is OSHA 10 Hour and First Aid/CPR trained
- General Contractor and Subcontractor contact information, including 24 hour emergency contacts. Emergency contacts will be posted on exterior of construction barricade
- Contractor's construction schedule. See Section 5.A.4 Contractor Scheduling / Phasing Plan Requirements for requirements.

- Pre-Construction Meeting held. See Section 5.B Pre-Construction Meeting for additional information.

Additional requirements depending on project scope, location, and complexity are found below. Verify requirements with the Port PM:

- Building Permit and Registered Design Professional Statement of Special Inspection / Contractor's Written Statement of Responsibility (SOSI/CSOR) if required
- Copies of any permits or other regulatory or public agency approvals required within the contract documents
- Environmental Submittals and Pollution Prevention Plan per Tenant Improvements Construction General Requirement Section 01 57 23 Pollution Prevention, Planning, and Execution, if required for the work
- Temporary Power Plan (application for connection is required) per Tenant Improvement Construction General Requirements Section 01 50 00 Temporary Facilities and Controls if required for the work.
- Copy of the executed contractual agreement between the Tenant and the Contractor, for Airport Dining and Retail Projects
- List of long lead items (items requiring more than four weeks to obtain), for Airport Dining and Retail Projects
- Construction Submittal Log

2) Contractual Liability Insurance

Contractors and tenants are required to carry a minimum of:

$2 million general commercial liability insurance

$10 million for large construction projects and higher-risk projects

$1 million for automobile liability insurance

$5 million for automobiles operated in the non-movement AOA

$10 million for automobiles operated on the aircraft movement AOA

Contractors and tenants are to include the Port as an "additional insured" by endorsement on their policies while working on Port property.

Port PM will review contractual liability insurance with the tenant, who in turn will require their contractor(s) to carry liability insurance that meets Port requirements.

Contractors are required to provide a certificate of insurance, in accordance to the paragraph above and present it to the Port PM as a prerequisite to commencing construction. They must also provide proof of workers compensation coverage for their employees.

3) Construction Safety

Reference the Port of Seattle Construction Safety Manual (insert link) for detailed safety requirements.

a) Contractor's Safety Plan

The contractor must submit a site specific safety plan according to Port's Tenant Improvement Construction General Requirements, Section 01 35 29 Tenant Safety

Management. The safety plan must include protection of the workers, adjacent tenants, and the traveling public.

Along with the site specific safety plan, contractors must provide an outline of their scope of work in a Site Specific Safety Plan Worksheet found in Port Tenant Improvement Construction General Requirements, Section 01 35 29, Appendix A.

If the contractor does not have their own safety plan, a template "Sample Accident Prevention Program - Construction" can be obtained from Washington Department of Labor & Industries at: http://www.lni.wa.gov/Safety/Basics/Programs/Accident/default.htm

Acceptance of the Site Specific Safety plan (including a Job Hazard Analysis and other supporting documentation) is a condition that must be met prior to Notice to Proceed (NTP) and commencement of work. The Tenant Contractor is required to designate an onsite representative with responsibility to stop work and remedy unsafe working conditions. Tenants are required to make this procedure known to all bidding contractors.

b) Safety Orientation and Training

All Contractor, Consultant, Design Team and Vendor personnel (including subcontractors and subconsultants) working on construction sites on Port of Seattle property are required to attend the Port Construction Safety Orientation prior to working on-site. The Safety Orientation is held Monday, Wednesday and Friday at 7:00 am to 8:30 am. Obtain directions to the training from the Port PM.

c) Construction Safety Coordination

Operational Safety on Airport Operations Area (AOA):

- All Contractors, subcontractors, vendors, and consultants associated with the project shall comply with the Port Tenant Improvement Construction General Requirements, Section 01 35 13.13 Operational Safety on Airports During Construction
- Port Engineering Safety Inspectors conduct regular inspections

The Port Fire Department oversees terminal safety, including site access, fire extinguishers, and determination of dangerous situations.

Contractors are required to coordinate all hot work (flame or spark producing activities) with the Port Fire Department.

4) Contractor Scheduling / Phasing Plan Requirements

Prior to the start of work, the contractor shall submit, for the Port PM's acceptance, a detailed progress schedule for proposed methods and sequence of work, including estimated dates for starting and finishing each stage of construction. Project schedules should be used as a plan to facilitate the work and to permit maximum protection of the public. The contractor will be required to follow the progress schedule unless otherwise approved by the Port PM. All changes will be communicated to the Port PM and Port Inspector.

The progress schedule shall consist of a bar chart indicating time factors for all significant design, manufacturing and installation activities, to include:

- A bar chart
- Work activities,
- Estimated time of each activity

- Sequence of work in sufficient detail to accurately evaluate progress at any time during performance of the contract
- Start and completion dates for each item of work.

The contractor shall submit schedule updates, for the duration of the work. Frequency of the updates shall be determined with the Port PM and Port Inspector at the Pre-construction Meeting.

5) Badging and Access

Remember to schedule and obtain all necessary badging and airport driving privileges for the general contractor and subcontractor staff, as well as access and keys. See Section 2.A.4) for more detailed information.

B. Pre-Construction Meeting

All tenant projects require a pre-construction meeting. The preconstruction meeting sets the stage for a successful project and allows the entire project team to meet each other, define lines of authority and communication, review key project administrative procedures, review the proposed schedule and discuss the project. This meeting will be scheduled by the Port PM or Port Inspector. The request for a pre-construction meeting must be made at least ten (10) working days before the date of the meeting.

No work may commence without a pre-construction meeting. However, at the discretion of the Port PM or Port Inspector, pre-installation conferences may be waived for minor projects when the responsible contractor has demonstrated a working knowledge and past compliance with the Rules for Airport Construction.

All Tenant construction projects require Port inspection for compliance with the project plans and specifications, building permits, Fire and Life Safety and compliance with the Port Standards and Guidelines. Representatives from Port departments are invited to the pre-construction meeting.

The following is a list of typical attendees and agenda items.

Attendees:

- Port Project Manager, Port Inspector, Port critical stakeholders.
- Tenant's representative
- Designer and professional consultants for mechanical, electrical, civil, and structural disciplines, as applicable. (if not local may participate by telephone)
- Contractor's Project Manager and Superintendent
- Major Subcontractors, as appropriate
- Major Suppliers, as appropriate

Agenda Items:

- Introductions
- Regulations, Permits
- Security & Badging Requirements
- Contractor On-Site Management
- Safety Management and Orientation
- Regulated Material Management

- Haul Routes, Accessibility, Laydown, Contractor Parking
- Schedule
- Quality Control/Quality Assurance
- Temporary Facilities and Utility Shutdowns (water hoses need back-flow preventer and an application for connection is required for temporary power and water) and other construction related utility impacts requiring Port Maint support
- Demolition warning. Contract with Siemens for site work before any ceiling or wall demolition to prevent damage to the Direct Digital Control (DDC) system.
- Deferred Submittals
- Construction Submittals
- Requests for Information
- Substitutions
- Redlines
- Correspondence & Communications
- Contractor Reports
- Project Meetings

6. CONSTRUCTION

Once the project moves from Preconstruction to Construction, there is shift of duties and responsibilities from the Port Project Management Group (PMG) to the Port Construction Management (CM) Group. The assigned Port Resident Engineer (RE) and Port Inspector become actively involved in the day to day activities of the project.

See the Rules for Airport Construction for Construction Requirements http://www.portseattle.org/Business/Construction-Projects/Airport-Tenants/Pages/default.aspx. The Construction Management section addresses construction management, construction logistics, and typical issues with compliance with Airport Standards. The Airport Operations, Traffic/Landside Operations, Security and Environmental Sections all address various aspects of construction and design. The ABD, Port Fire Department, and Environmental sections address construction requirements as well. See the Port's Tenant Improvement Construction General Requirements for detailed specifications for tenant projects.

This Tenant Improvement Design and Construction Manual describes processes that are specific to Tenant construction projects.

A. Resolution No. 3725 Policy Directive for Construction Labor for Projects on Port Property

Resolution No. 3725 A Resolution of the Port of Seattle Commission establishing a Policy Directive for practices for construction labor for projects located on Port property was established in 2016. Link to the resolution: http://www.portseattle.org/About/Commission/Commission-Resolutions/Resolutions/Resolution%20No.%203725,%20as%20amended.pdf

Tenant projects are addressed in Resolution Section II for tenant-administered construction contracts paid for entirely or in part by the Port through tenant reimbursement or other means, and Section III for construction contracts performed on Port property at the full cost of tenant. Please see the resolution for detailed requirements.

B. Construction Management

This section describes processes that are unique to Tenant construction projects. Construction requirements that are common to Tenant and Port Capital projects are addressed in the Rules for Airport Construction.

1) Shop Drawings, Construction Drawings, Product Data, and Sample

At the work site, the contractor shall maintain copies of all approved construction drawings, specifications, addenda, Requests for Information (RFI's), change orders and change directives, red-lines, approved shop drawings, product data and samples including the Port-approved materials sample board, if established for the project.

The Tenant shall ensure that its contractor prepares, reviews, certifies, and submits to the Port PM with reasonable promptness and in such sequence so as to cause no delay in the work, any requested shop drawings, construction drawings, product data and samples, equipment and material submittals.

Work may not commence until submittals of shop drawings, construction drawings, product data, or material submittals have been reviewed and accepted by the Port and approved by the Design Team. The contractor is responsible to build per the approved construction contract documents unless approvals are received from the Design Team and the Port.

2) Construction Submittals and Deferred Submittals

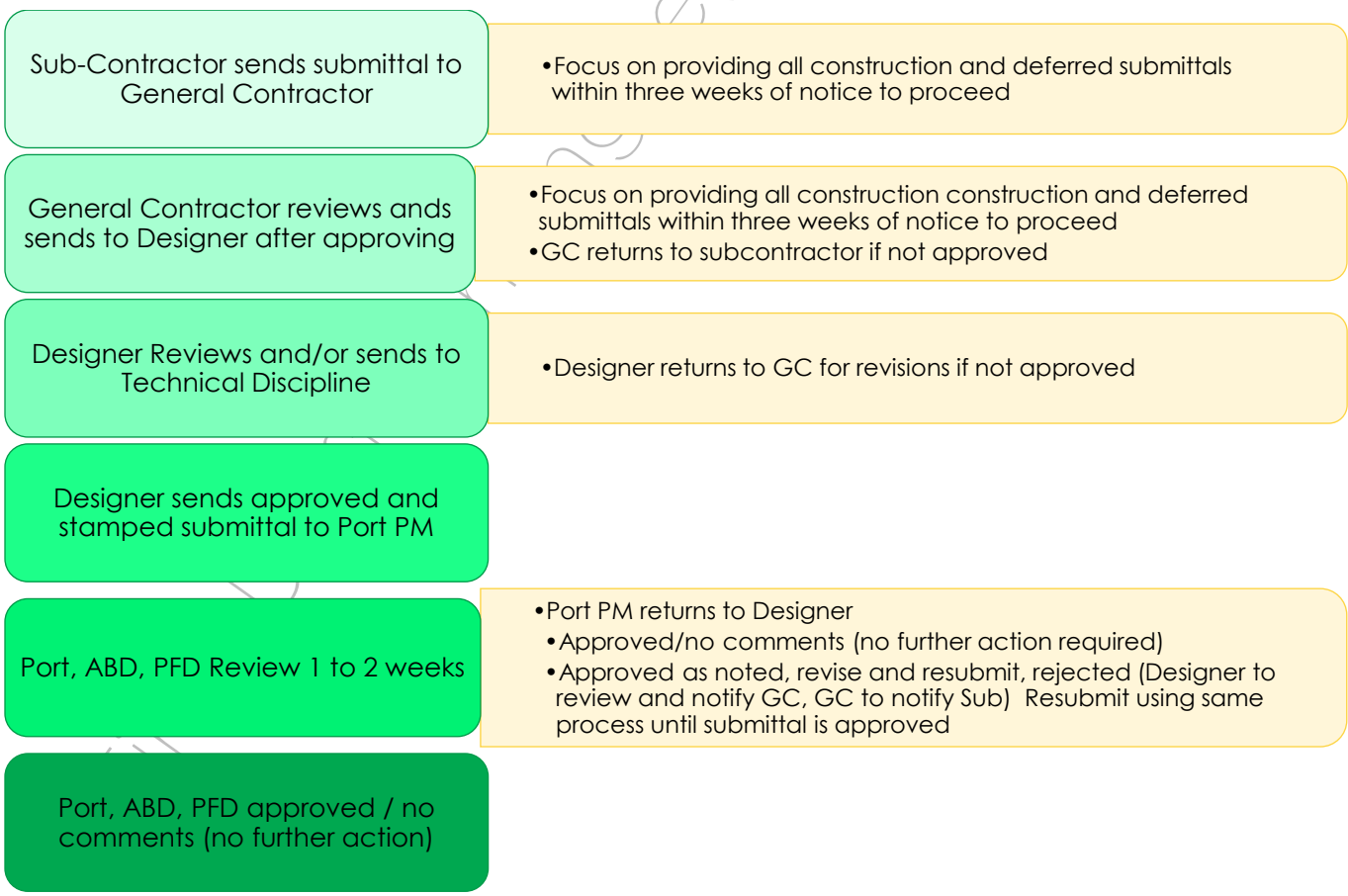
The construction submittal log was incorporated into the project's construction documents. The Contractor shall review the submittal log and note any additional items or changes to the submittal log and provide to the Port PM. Typical construction submittals are described in Section 3.C.11)a Construction Documentation. The Port will indicate which submittals it must see for review and approval.

The Tenant, Port PM and Port stakeholders will pre-determine the most expeditious turnaround time for Port reviews. A typical turnaround time for Port submittal reviews is 1-2 weeks. The Design Team will review and approve the contractor's submittal data prior to forwarding the data to the Port PM. Contractor shall provide sufficient submittal data/information to allow the Port Technical reviewer(s) to determine that the proposed equipment, material or process meet the project specifications and Port's approval.

Generally the process for construction submittals is the following. See Figure 3 for graphic:

- Contractor submits to Design Team for review and approval (if agreed to in advance, contractor may submit to Port PM concurrently)
- Design Team submits to Port PM
- Port PM returns documents to Design Team who returns to the Contractor

Figure 3 Port Construction and Deferred Submittal Review Process



3) Substitution of Materials and Equipment

The tenant or its contractor may ask for substitution of specified material, equipment or furnishings with equal or equivalent items based on the following:

- The specified material/item is not available.
- The item will have an unreasonable delivery time due to no fault of the contractor.
- The approved contract documents allow the use of equal or equivalent products.
- The substitutions comply with Port Standards.

All proposed modifications to the accepted documents for the work must be submitted to the Port PM and Port Inspector for review. No change order or other contract modification, which materially changes the scope of the improvements, shall be executed without prior approval of the Port Inspector.

The contractor will provide ABD (and/or L&I) Inspector with an updated copy of the drawings and specifications reflecting all such alterations or deletions.

4) Requests for Information

Copies of Requests for information (RFI) will be submitted to the Port PM when information is required from the Port to answer an RFI. A copy of all RFIs will be provided to the Port PM monthly.

- Information required to provide an RFI response
- Design Team RFI form, Design Team should suggest a response if able
- Clear statement of question
- Supporting documentation

Process for RFIs needing Port response

- Design Team sends RFI to Port PM
- Port PM forwards to appropriate Port staff
- Port PM returns RFI to Design Team
- Design Team responds to contractor

C. Construction Logistics

1) Temporary Construction Barricades

The type of construction barricade required depends on location of the work and interface with the public. Design Team will coordinate with the Port PM for more detailed information.

Construction barricades must meet the requirements of the Port's Tenant Improvement Construction General Requirements Section 01 50 00 Temporary Facilities and Controls. Construction barricade positions will be approved by the Port prior to installation, and must be indicated on the drawings. The Design Team is responsible to provide the necessary specifications in their construction documents so that the Contractor can provide compliant barricades.

If the Port provides a construction barricade, the tenant contractor is responsible for repairs and patching after the barricade is removed.

Public facing barricades must provide the following elements:

- Wayfinding, Traveler alerts, "What's Happening", and L&I/safety signage

Coordinate with the Port PM for signage requirements.

Any deviation from the Port standard must be submitted and approved by Port Aviation Operations.

7. COMPLETION AND CLOSE-OUT

Completion and close-out of the project requires close coordination with the Port Inspector, Port PM, and other stakeholders. The completion process starts with interim inspections and concludes with final inspections and close-out documentation. Accurate close-out documentation is essential to the Port. This section describes the punch list processes, final inspections, demobilization, and close-out documentation.

Please note:

- Any open items from the punch-list inspections must be addressed by the contractor to the Port's satisfaction before the work is accepted and the final Certificate of Occupancy is issued.
- Design Team must submit final Project as-built CAD record drawings to the Port PM for review and approval no later than 60 days after the work has been completed.

A. Punch List / Final Inspections / Demobilization

1) Punch List / Deficiency List

- Interim Inspections and Punch List
  - Prior to wall and ceiling closures and other times, the Port Inspector will schedule Port technical staff to review construction for compliance with Port Standards and Guidelines.
  - The interim inspections will start the Port Punch List. Subsequent inspections will add items to the same Punch List.
- When construction completion has been determined and prior to the final inspection for Building Code compliance, the Port Inspector and/or Port PM shall conduct a walk through with Port stakeholders and Tenant stakeholders to identify any deviations from the project's construction documents and compile a Deficiency List. The Port Inspector or Port PM will transmit the List to the Design Team and Contractor.

NOTE: A punch list inspection shall not be requested or granted if the work is incomplete. The Contractor shall notify the Port Inspector with a request to schedule the inspection no less than five (5) working days prior to the completion of work.

Once the punch list of deficient items is generated, the contractor has 60 days, or other duration specified in tenant's lease to resolve all items on the list in accordance with the tenant's lease requirements. When punch list items are complete, the Contractor will notify the Port Inspector who will conduct a Final Inspection to confirm completion of remaining punch list items.

2) Final Building Permit Inspections

The Contractor is responsible for obtaining all temporary and permanent Certificates of Occupancy and inspections required by the Airport Building Department, Port Fire Department, Labor & Industries, and others, and for submitting a copy of the signed off inspection card to the Port Inspector and Port PM.

3) Compliance Tests

The intent of Compliance tests is to functionally test equipment and systems to verify operation in accordance with design. This process verifies the equipment is ready to energize and operate. Examples include back flow preventer test, type 1 hood test, test

and balance on the HVAC systems and water sanitization test. It is critical that the utilities, equipment and systems in a tenant project fit seamlessly into the Airport's utilities and systems. All compliance tests are to be submitted to the Port Inspector and Port PM for distribution to Port F&I and Maintenance.

4) Commissioning

The Contractor shall comply with the Port Tenant Improvement Construction General Requirements, Section 01 91 00.13-Commissioning Activities. It is important utilities, equipment, and systems in a project fit seamlessly into the Airport's utilities and systems. The contractor shall conduct a commissioning effort utilizing checklists provided in the project specifications prior to receiving a Certificate of Occupancy. The intent of these checklists is to functionally test equipment and verify operation in accordance with the contract documents. The contractor shall notify the Port PM and Port Inspector at least 2 weeks prior to commencement of any commissioning activity for coordination with Port Maintenance and Port F&I personnel.

As a result of the Commissioning effort, a Close-out Report will be provided by the Tenant and forwarded to the Port PM for distribution to Port Stakeholders.

5) Notice of Construction Completion (ADR Projects Only)

When Temporary Certification of Occupancy has been received, the Port PM and Port Inspector will review the space to confirm that construction is complete. The Port PM will issue a notice of construction completion. Notice of construction completion is not permission to stock and train or to begin revenue operations. The Port Business Manager will issue the notice to open letter, which allows the Tenant to begin operations such as stocking and training and open to the public.

6) Final Cleaning

The contractor shall comply with the Port Tenant Improvement Construction General Requirements, Section 01 74 00 Cleaning. The Contractor shall include all project work areas including laydown spaces and logistics yard if applicable.

7) Demobilization

The contractor shall demobilize and restore the project site, logistics storage and project work areas.

8) Badges and Keys

Contractor and subcontractors shall return all badges and keys to the Credential Office after demobilization from secure areas. Fines are assessed by the Credential Office for outstanding badges and keys.

B. Close-out Documents

1) As-built CAD Record Drawings

The contractor shall record all changes to the contract drawings by making adequate and proper entries on a continuous basis as red lines when any changes occur. Accuracy of records shall be such that future searches for information regarding the as-built condition of the work may be reliable. Contractor shall comply with Port Tenant Improvement Construction General Requirements Section 01 78 29 As-built Record Documents. Upon completion of the work, the contractor or tenant shall transfer the recorded data from the "red lines" to the as-built CAD Record Drawings. This includes updated panel schedules for all electrical panels where circuits have been modified by

the Project. See the Electrical Standards for the required format. Mechanical plan CAD record drawings with architectural background and x-ref files are to be supplied to Siemens for DDC graphic updates, either directly or to Port F&I via the Port PM.

As-Built CAD Record Drawings shall comply with Port CAD standards and be submitted in AutoCAD and PDF format to the Port PM for review by the Port CAD Standards Review Technician . Coordinate with the Port PM for the number of electronic and hard copies of the As-built Redlines and the As-built CAD Record Drawings. Typically one or two hardcopies are required.

2) Final Construction Submittals, Operations and Maintenance (O&M) Data, CMMS, and Warranties

Tenant Contractor to submit final constructional submittals such as redlines, commissioning reports, compliance testing reports, and others as required in the contract documents.

Tenant shall provide O & M data and completed CMMS form on any equipment that will be serviced, maintained or become property of the Port. Operation and maintenance (O&M) data, completed CMMS Form and warranties shall be submitted to the Port PM. The Contractor shall comply with the Tenant Improvement Construction General Requirements, Section 01 78 23.13 Aviation Operations and Maintenance Data.

3) Training

Provide operational and service training, as directed by the Port PM, for any equipment that may impact Port Systems or become the responsibility of the Port to Maintain. The Contractor shall comply with the Port Tenant Improvement Construction General Requirements, Section 01 79 00-Training.

4) Airport Dining and Retail Project Reports

a) Lien Releases

Airport Dining and Retail Tenants have a requirement in their lease to submit contractor lien releases. Tenant shall forward lien releases to Port PM within 30 days after Temporary Certificate Occupancy has been granted, including notarized copies of lien releases for any contract exceeding $ 2,500.

b) Certified Statement of Total Construction Cost

Provide a certified statement (subject to verification, audit and approval by the Port) specifying the total construction cost (including architectural, engineering and permitting costs) in such detail as reasonably necessary to ascertain the costs of all leasehold improvements, furniture, fixtures and equipment constructed or installed by Concessionaire in the Premises.

c) Certification Constructed in Compliance with Port Standards

Provide a certification that the improvements have been constructed in accordance with the approved drawings and specifications and in strict compliance with all Legal Requirements and the Port Standards.

5) Resolution 3725 Requirements

Provide any closing documentation required by Resolution 3725.

C. Certificate of Occupancy

The ABD will not issue final Certificates of Occupancy for Tenant Projects until it has verified that the Port is in receipt of the required as-built CAD Record Drawings. Once all required final inspections, including fire life/safety systems, are complete and operational, ABD can issue a Final Certificate of Occupancy. This will allow the Tenant's designer/contractor sufficient time to provide the Port with complete as-built CAD Record Drawings.

The ABD inspector has the sole responsibility for issuance of the Certificate of Occupancy (CO) and will not issue the CO until there are no code violations and all required inspections are complete.