

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

Provide a paragraph on the general scope of the Contract. Include any and all phasing requirements here.

1.02 LOCATION

A. The work area is located [on, at, within] _____, of [Seattle-Tacoma International Airport, 17801 International Boulevard, City of SeaTac, WA 98168 or Seaport Location].

1.03 PROJECT LOGISTICS

These paragraphs AND Section 01 50 00, Temporary Facilities and Controls, must be coordinated with the specific conditions of the project regarding on or off-site office/laydown areas, parking, utilities supply, etc.

These paragraphs and Section 01 50 00 of the Master Specs, are written for a typical on-site airport construction project and not one where off-site facilities are required or provided by the Port.

A. The Contractor shall have access to the construction site by [water/air] [city street]. Contractor shall conduct all business through [gate] [ramp] [terminal gate] [_____].

B. The access may change during the construction of the Contract work and Contractor shall comply with the changes or if notified by the Engineer.

C. Hours of Work/Closures:

1. Standard Project Work Hours

These hours should not be changed unless there is a very good reason identified during Division 1 development, as a result of operational concerns. RE must confirm work hour deviations with the CM, prior to making modifications to the standard project work hours.

a) Standard Day Shift Work Hours: 0700 – 1530 (7:00AM until 3:30PM), Monday through Friday. The Contractor shall limit activities so there is no

disruption to Airport Operations. The Contractor must comply with noise, dust and other work restrictions. Refer to specification section 01 50 00.

- b) Standard Night Shift Work Hours: 2030 – 0500 (8:30PM – 5:00AM), Sunday night through Friday morning. All of the work that is considered disruptive to airport operations shall be performed on night shift. This includes but is not limited to all work throughout tenant offices, conduit routes over and around the baggage systems, equipment and furniture moves and deliveries, and any disruptive work that does not conform to noise, dust and other work restrictions as described in specification section 01 50 00.

2. Holiday Closures

Remove holidays that have already occurred.

(1) 2017: Nov 23, 24 and Dec 22, 25

(2) 2018: Jan 1, Jan 15, Feb 19, May 28, July 4, Sept 3, Nov 22, 23 and Dec 24,25

- 3. Work outside of the standard work shift hours, as defined in this specification section, can be requested and may be granted by the Engineer. No work outside of the standard work hours, as defined in this section, shall be allowed without written approval by the Engineer

4. Other:

1.04 PROJECT PHASING OR SEQUENCING REQUIREMENTS

- A. The Contractor shall coordinate the progress of its Work with the established requirements for completion and phasing described as follows:

If possible, include specific information for the project including start and finish constraints not otherwise identified as a milestone, early completion of Partially Completed Work (G-08.06) or sequencing required with other projects. Milestones should be described with LDs, if applicable. See CM if more clarification is needed.

1.05 WORK PERFORMED UNDER SEPARATE CONTRACTS

- A. The Port has the following separate contracts with construction work adjacent to or passing through the project limits for this Contract and will cooperate with the Contractor per Document 00 70 00.

If possible, include specific information on the other known or anticipated Contracts, including schedules, Contract numbers, scope of work, etc.

1.06 WORK BY OTHERS ON THIS PROJECT

- A. The Contractor shall coordinate and cooperate with other Contractors, Port forces, and others (i.e. public utilities) performing work on this project and shall not impact its and others' Work.

Include specific information on the other Contracts, including schedules, Contract numbers, scope of work, etc.

- 1. The following described work is to be accomplished by others:

- a.
- b.
- c.
- d.

1.07 PORT OF SEATTLE FURNISHED MATERIAL

A. The Port will furnish the Contractor with the following material:

Modify as required to describe Scope of Work to be performed by Contractor versus the Port.

- 1.
- 2.
- 3.

- a. The above material is located at . The Contractor shall accept the material at the above location and be responsible for all moving, handling, storage, or transportation costs and coordination required to incorporate the material into the project.
- b. Upon receiving the Port-furnished items, Contractor shall examine and promptly report to Port the conditions of the material received, including deficiencies, if any. After receiving and taking possession of Port-furnished material, the Contractor shall be responsible for the material until installed, tested, and accepted by the Port.

1.08 PREORDERED MATERIALS

A. Port Ordered Materials Assigned to the Contractor

- 1. The following [equipment] [materials] [supplies] [has] [have] been preordered for this Project:
- 2. Purchase Order No. for the sum of [\$] has been issued to for as specified herein. This amount [should] be included in the Bid Proposal since the responsibility for payment and implementation of this Purchase Order [will] be assigned to the successful bidder upon Execution of the Contract.
- 3. A copy of the Purchase Order(s) is attached showing probable delivery dates, conditions of sale, FOB location, carriers, etc.
- 4. Upon Execution of the Contract, the Owner shall advise the vendor(s) mentioned above that the Purchase Order(s) [has/have] been assigned to the Contractor and [is/are] now a part of the Contract.
- 5. The Contractor shall accept the material and be responsible for all moving, handling, storage, freight claims, or transportation costs, and coordination required to incorporate the material into the project. Upon receipt of the items, Contractor shall examine and promptly report to Port the conditions of the material received, including deficiencies, if any. After receiving and

taking possession of the material, the Contractor shall be responsible for the material until installed, tested, and accepted by the Port.

B. Port Ordered Materials Not Assigned to the Contractor

1. The following [equipment] [materials] [supplies] [has] [have] been preordered for this Project:
2. Purchase Order No. [] for the sum of [] [\$] has been issued to [] for [] as specified herein. This amount [should] [should not] be included in the Proposal since the responsibility for payment and implementation of this Purchase Order [will not] be assigned to the successful bidder upon Execution of the Contract.
3. A copy of the Purchase Order(s) is attached showing probable delivery dates, conditions of sale, FOB location, carriers, etc.
4. The [equipment] [materials] [supplies] [is] [are] located [where]. The Contractor shall accept the material and be responsible for all moving, handling, storage, freight claims, or transportation costs, and coordination required to incorporate the material into the project. Upon receipt of the items, Contractor shall examine and promptly report to Port the conditions of the material received, including deficiencies, if any. After receiving and taking possession of the material, the Contractor shall be responsible for the material until installed, tested, and accepted by the Port.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

READ THIS FIRST – USE ONLY IF A PLA IS IN PLACE FOR YOUR PROJECT

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PART 1 GENERAL

1.01

- A. The Work of this Contract is subject to the attached Project Labor Agreement (PLA) entered into between the Port of Seattle and the Seattle King County Building and Construction Trades Council and Northwest Construction Alliance. This specification is intended to highlight some of the important documentation and other requirements necessary for the Contractor’s compliance and implementation of the PLA to ensure that the Contractor includes appropriate personnel and other costs in its bid or proposal related to the implementation of the PLA on this project. However, this is not an all-inclusive list of the Contractor’s obligations or the Port’s rights and remedies relating to the PLA. In the event of any irreconcilable inconsistency or conflict between this specification and the PLA, the PLA will govern.
- B. Among other requirements set forth in the Contract Documents and the PLA:
- The PLA is binding on the Contractor and sub-contractors of all tiers.
 - The Contractor shall include in any sub-contract a requirement that the sub-contractors of all tiers become signatory and bound to the PLA with respect to the sub-contracted work.
 - The Contractor will also be required to have sub-contractors of all tiers execute a Letter of Assent prior to sub-contractors performing any work on the Project.
 - The Contractor and sub-contractors of all tiers shall be bound by any changes, amendments or revisions to the PLA during the course of their contract.
 - All costs of complying with the PLA and the Port’s implementation of the PLA, including labor, wages and benefits, equipment, and materials that are incurred during the Contract Time period associated

with the terms and conditions of the Contract will be at the Contractor's expense.

1.02 REFERENCES

- A. The attached PLA.

1.03 DEFINITIONS

- A. Construction Labor Group/Construction Labor Staff

The Port's designated group responsible for day-to-day management of the Port of Seattle's Construction Labor Program. It is comprised of the Manager, and Construction Labor Specialists, who manage the PLA documentation and conducts jobsite inspections to verify Contractor compliance with identified corrective actions.

1.04 SUBMITTALS

- A. As part of the Contractor's compliance with the PLA, Contractor and sub-contractors of all tiers must submit the following documentation in accordance with Section 01 33 00-Submittals.

1. Letter of Assent / Proposed Trade Assignment

A signed Letter of Assent that binds the contractor to the terms and conditions of the PLA and a Proposed Trade Assignment to make proposed jurisdictional trade assignments, broken down by craft and classification. Both documents must be submitted as one and must be approved prior to the start of any Work. A Pre-Job Jurisdictional hearing will then be scheduled by the Contractor for their sub-contractors of all tiers after Port approval.

2. Final Trade Assignment

After the Pre-Job Jurisdictional hearing, Contractor must provide for a seven-day waiting period to allow unions to formally submit claims to any proposed work. On the eighth day or any time thereafter, but prior to the start of Work, the Contractor and sub-contractors of all tiers must then review all supporting written documentation submitted by the competing Union(s) (if any), and will then submit to the Port their final assignment of which craft will perform each scope of work.

3. New Employee Report/Ongoing Weekly Employee Report

Initial report required prior to the start of Work that identifies the names of employees that will be working on site and a weekly report thereafter if there are any changes to the initial crew.

4. Waiver Request (if applicable)

Document used if a subcontractor of any tier has attended a Port Pre-Job Jurisdictional hearing in the past. This document allows the sub-contractor of any tier that has attended a Port Pre-Job Jurisdictional hearing in the past to skip the jurisdictional hearing.

The Port of Seattle will determine if a Request for Waiver is appropriate for each sub-contractor of all tiers.

1.05 CONTRACTOR RESPONSIBILITIES

A. GENERAL OBLIGATIONS. Among other obligations arising out of the PLA:

1. Contractor shall attend a monthly Labor Management Committee meeting scheduled by the Port's Construction Labor staff to discuss and resolve relevant issues related to the PLA. (Generally held the 2nd Wednesday of every month at 8:00AM at the Port Water Tower location)
2. Contractor and sub-contractors of all tiers shall attend a PLA Pre Job Jurisdictional hearing (if a Request for Waiver is not applicable – determined by the Port) to review PLA-required documentation and discuss specific provisions in the PLA including the Substance Abuse Program. (Generally held every Tuesday at Teamster Hall: 14675 Interurban Ave S, Tukwila, WA 98168). The Contractor will be required to schedule these meetings after Port approval of PLA documentation.
3. The Contractor and sub-contractors of all tiers shall attend a pre-construction PLA training session to review all documentation and examine specific provisions in the PLA. The Contractor will schedule these pre-construction PLA meetings with the Port's Construction Labor staff on an as-needed basis at a mutually acceptable time and date prior to the submittal of any PLA paperwork.

B. CONTRACTOR PLA REPRESENTATIVE

1. The Contractor and sub-contractors of all tiers are responsible for complying with the PLA.
2. Contractor shall designate a representative to coordinate all PLA administrative tasks including, but not limited to:
 - a) Review of sub-contractor PLA documentation;
 - b) PLA field compliance and drug testing related issues; and
 - c) Liaising with Port's Construction Labor staff regarding PLA-related matters.

1.06 PORT OF SEATTLE'S NON-EXCLUSIVE RIGHTS

A. WORK SITE

1. The Port shall have the right to require the removal from the work site of any person who is deemed “ineligible” following a positive drug testing result as determined by the Medical Review Officer.
2. The Port shall have the right to escort Union Business Agents to the jobsite to meet with union members.
3. The Port shall have the right to require the removal or stop the work of any sub-contractor of any tier that is not in compliance with the PLA and to require that they remain off the job until compliance is obtained.

B. INSPECTIONS/INVESTIGATIONS

1. The Port may, in any reasonable manner, observe and interview the workers to ensure compliance with the PLA.
2. The Port may, in any reasonable manner, observe or participate in any investigation conducted by the Contractor or anyone performing work for, on behalf of, or under the Contractor that could result in a PLA violation.
3. The Port may, in any reasonable manner, observe or participate in any compliance or grievance investigation conducted by the Contractor or anyone performing work for, on behalf of or under the Contractor. The Port may also, at its sole discretion, and in any reasonable manner, undertake its own investigation.
 - a) The objective of field compliance site visits is to consistently and effectively observe the Contractor’s and sub-contractors’ (of all tiers) adherence to the PLA.
4. Violation
 - a) A violation is considered to be those infractions that are out of compliance with the PLA.
 - b) The Port’s **Construction Labor Group** shall work with the Contractor to ensure the correction of any violations that occur with any work being performed by the Contractor and/or sub-contractors of all tiers.

C. CORRECTIVE ACTIONS/STOP-WORK

1. The Port shall have the right to require the Contractor to address PLA compliance issues, including taking corrective action when PLA violations are observed (i.e., lack of sanitary toilet facilities, out of compliance with core-to-union ratios, failure to adhere to hours of work and overtime provisions, etc.).
2. No work shall be performed by the Contractor or sub-contractor of any tier until the Letter of Assent and Final Trade Assignment documentation is approved by the Port.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the project].

End of Document

APPENDIX A:

The PLA Forms that will be utilized during pre-construction and construction are the following:

Letter of Assent and Proposed Trade Assignment

Final Trade Assignment

New Employee Report

Waiver Request

The actual forms can be found and shall be submitted through CMS, the Port of Seattle's documentation system.

SAMPLE

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

The undersigned, as a Contractor(s) or Subcontractor(s) on the U Project, for and in consideration of the award of a Contract to perform work on said Project, and in further consideration of the mutual promises made in the Project Labor Agreement (PLA), a copy of which was received and is acknowledged, hereby:

- (1) On behalf of itself and all its employees, accepts and agrees to be bound by the terms and conditions of the Project Labor Agreement, together with any and all amendments and supplements now existing or which are later made thereto, and understands that any act of non-compliance with all such terms and conditions, including but not limited to; evidence of compliance with the pre-employment controlled substance testing, will subject the non-complying Contractor or employee(s) to being prohibited from the Project Site until full compliance is obtained.
- (2) Certifies that it has no commitments or agreements which would preclude its full compliance with the terms and conditions of said Project Labor Agreement.
- (3) Agrees to secure from any Contractor(s) (as defined in said Project Labor Agreement) which is or becomes a Subcontractor(s) (of any tier), a duly executed Letter of Assent in form identical to this document prior to commencement of any work.

Date: Choose Date	Company Name: Enter Company Name Here
Prime/General Contractor: <input type="checkbox"/>	Name and Title: Enter Name and Title Here
Subcontractor: <input type="checkbox"/>	Business Address: Enter Business Address Here
<input type="checkbox"/> Tier 1: Subcontractor to Name	Telephone Number: Enter Number Here
<input type="checkbox"/> Tier 2: Subcontractor to Name	Choose a Type
<input type="checkbox"/> Tier 3: Subcontractor to Name	
<input type="checkbox"/> Tier 4: Subcontractor to Name	

U
(Typed Name May Substitute for Signature)

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

COMPANY NAME: Enter Name Here

BID AMOUNT: Enter Amount Here

PURPOSE: To make proposed jurisdictional trade assignments, broken down by craft and classification, as well as to discuss details and answer questions relating to the project scope of work, safety, and job requirements.

MEETING PLACE: Seattle-King County Building and Construction Trades Council
14675 Interurban Avenue South, Small Auditorium
Teamsters Building

Tukwila, WA 98168
206-441-0550 - Office
206-443-5649 - Fax

DO NOT FILL BELOW THIS LINE

MEETING DATE: _____

MEETING TIME: _____

UNION RESPONSE DATE: _____

CONTRACTOR RESPONSE DATE: _____

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03

Project Name:
General/Prime Contractor:

1. DETAILED SCOPE OF WORK (work you are contracted to perform in detail / please list any pre-fabrication work in the state of Washington):

Enter Scope Here

2. ESTIMATED WORK SCHEDULE:

Approximate Start Date: Enter Date Here

Approximate Completion Date: Enter Date Here

3. ADDRESSES:

Job Location: Enter Location Here

Enter Location Here

Enter Location Here

Company's Local Mailing Address: Enter Address Here

Enter Address Here

Enter Address Here

4. SMALL BUSINESS:

Are you a registered SCS (Small Business)? Yes No

If yes, are you registered in Washington State? Yes No

5. PREVAILING WAGE:

Intent to Pay Prevailing Wage Number: Enter Number Here

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

6. CONTRACTOR PERSONNEL:

Personnel	Name	Office Phone #	Cell Phone #	Email Address
-----------	------	----------------	--------------	---------------

Project Manager:	Enter Name	Enter #	Enter #	Enter Email
-------------------------	------------	---------	---------	-------------

Person Completing Paperwork:	Enter Name	Enter #	Enter #	Enter Email
-------------------------------------	------------	---------	---------	-------------

Superintendent:	Enter Name	Enter #	Enter #	Enter Email
------------------------	------------	---------	---------	-------------

Safety Rep:	Enter Name	Enter #	Enter #	Enter Email
--------------------	------------	---------	---------	-------------

Drug Test Result Coordinator:	Enter Name	Enter #	Enter #	Enter Email
--------------------------------------	------------	---------	---------	-------------

7. DISPATCH (all workers, including core employees, must be dispatched from a union hall):

Referral procedures will be in accordance with the provisions contained within the Project Labor Agreement. The referral procedures are to be posted in the hiring halls in order to be in full compliance with the law.

8. CURRENT UNION AGREEMENTS COVERING ALL ANTICIPATED WORKERS:

If NO Union agreement, state 'NONE' and complete section #9
 Enter Agreements Here

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

9. OPEN-SHOP CORE WORKER LIST:

Open Shop Contractors without a collective bargaining agreement with Unions signatory to the Port of Seattle Project Labor Agreement (PLA) may employ a maximum of five (5) of their own core workers, with possible exceptions that must be discussed with Union Representatives. A core worker is an employee that meets all the following: (PLA Article 16 Section 5)

- Any license required by state or federal law for the project work to be performed
- Worked on the (sub)contractor payroll at least 1,000 hours within the craft classification during the prior three (3) years
- Been on (sub)contractors active payroll for at least 60 of 180 calendar days prior to (sub)contractor award
- Have the ability to perform the work safely

The Contractor may elect to hire its first core employee to be a Foreman. After the Contractor hires the first core employee; the Union will refer to such Contractor, one Journeyman employee from the Hiring Hall Out-of-Work list for the affected trade or craft, then refer one of such Contractors core employees as a Journeyman, and shall alternate one core employee and one employee from the Out-of-Work list until such contractors crew requirements are met or until such contractor has hired five (5) core employees, whichever occurs first. Thereafter, all additional employees in the affected trade or craft shall be hired exclusively from the Hiring Hall.

Core workers must place their names with the respective Union Hall dispatch prior to work

Employee Name	Classification/Trade	Hire Date	Has worker been on payroll 1,000 hours in the last 3 years?	Has worker been on active payroll 60 out of the last 180 calendar days?
Enter Name.	Enter Here	Enter Here	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Enter Name.	Enter Here	Enter Here	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Enter Name.	Enter Here	Enter Here	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Enter Name.	Enter Here	Enter Here	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>
Enter Name.	Enter Here	Enter Here	YES <input type="checkbox"/> NO <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>

Your signature verifies the information above is accurate. If information is a knowing misrepresentation of facts, (sub) contractor could be subject to breach and/or removal from the project.

U
 (Typed Name May Substitute for Signature)

Telephone: Enter Here
 Email: Enter Here

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

10. CRAFT DEMAND: (Only fill in area(s) that apply)

<u>CRAFT</u>	<u>PEAK</u>	<u>AVERAGE</u>
Asbestos Workers	Enter # Here	Enter # Here
Boilermakers	Enter # Here	Enter # Here
Brick/Stone/Marble/Tile Setters/Terrazzo	Enter # Here	Enter # Here
Carpet/Floor Covering/Soft Tile	Enter # Here	Enter # Here
Carpenters	Enter # Here	Enter # Here
Cement Masons	Enter # Here	Enter # Here
Drywall Hanger/Metal Stud Framers	Enter # Here	Enter # Here
Drywall Finisher/Taper	Enter # Here	Enter # Here
Electrical Workers (Inside Wiremen)	Enter # Here	Enter # Here
Electrical Workers (Outside Line)	Enter # Here	Enter # Here
Elevator Constructors	Enter # Here	Enter # Here
Fire Protection	Enter # Here	Enter # Here
Glaziers	Enter # Here	Enter # Here
Heat & Frost Insulators	Enter # Here	Enter # Here
Ironworkers (Structural/Rebar)	Enter # Here	Enter # Here
Ironworkers (Ornamental/Architectural)	Enter # Here	Enter # Here
Laborers	Enter # Here	Enter # Here
Millwrights	Enter # Here	Enter # Here
Operating Engineers	Enter # Here	Enter # Here
Painters	Enter # Here	Enter # Here
Pile Drivers	Enter # Here	Enter # Here
Pipefitters	Enter # Here	Enter # Here
Plumbers	Enter # Here	Enter # Here
Plasterers	Enter # Here	Enter # Here
Roofers	Enter # Here	Enter # Here
Sheet Metal Workers	Enter # Here	Enter # Here
Sign & Display	Enter # Here	Enter # Here
Sprinkler Fitters	Enter # Here	Enter # Here
Teamsters	Enter # Here	Enter # Here
Other:	Enter # Here	Enter # Here

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

II. OPERATIONAL INFORMATION:

Number of Shifts: Enter Number of Shifts

1st Shift Schedule: Start of Shift AM PM to End of Shift AM PM

2nd Shift Schedule: Start of Shift AM PM to End of Shift AM PM

3rd Shift Schedule: Start of Shift AM PM to End of Shift AM PM

Pay Day: Choose a Day

12. PROPOSED TRADE ASSIGNMENTS:

Please detail Proposed Trade Assignments by each specific craft and include scope(s) of work for each craft. If more space is required, please attach additional sheets.

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

13. UTILIZATION OF EQUIPMENT / TOOLS:

List in detail proposed equipment, tools, and craft assignment. If additional space is needed, attach sheet(s) to this document.

<u>EQUIPMENT</u>	<u>CRAFT</u>	<u>TOOLS</u>	<u>CRAFT</u>
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here
Enter Equipment Here	Enter Craft Here	Enter Tools Here	Enter Craft Here

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

14. SUBCONTRACTORS:

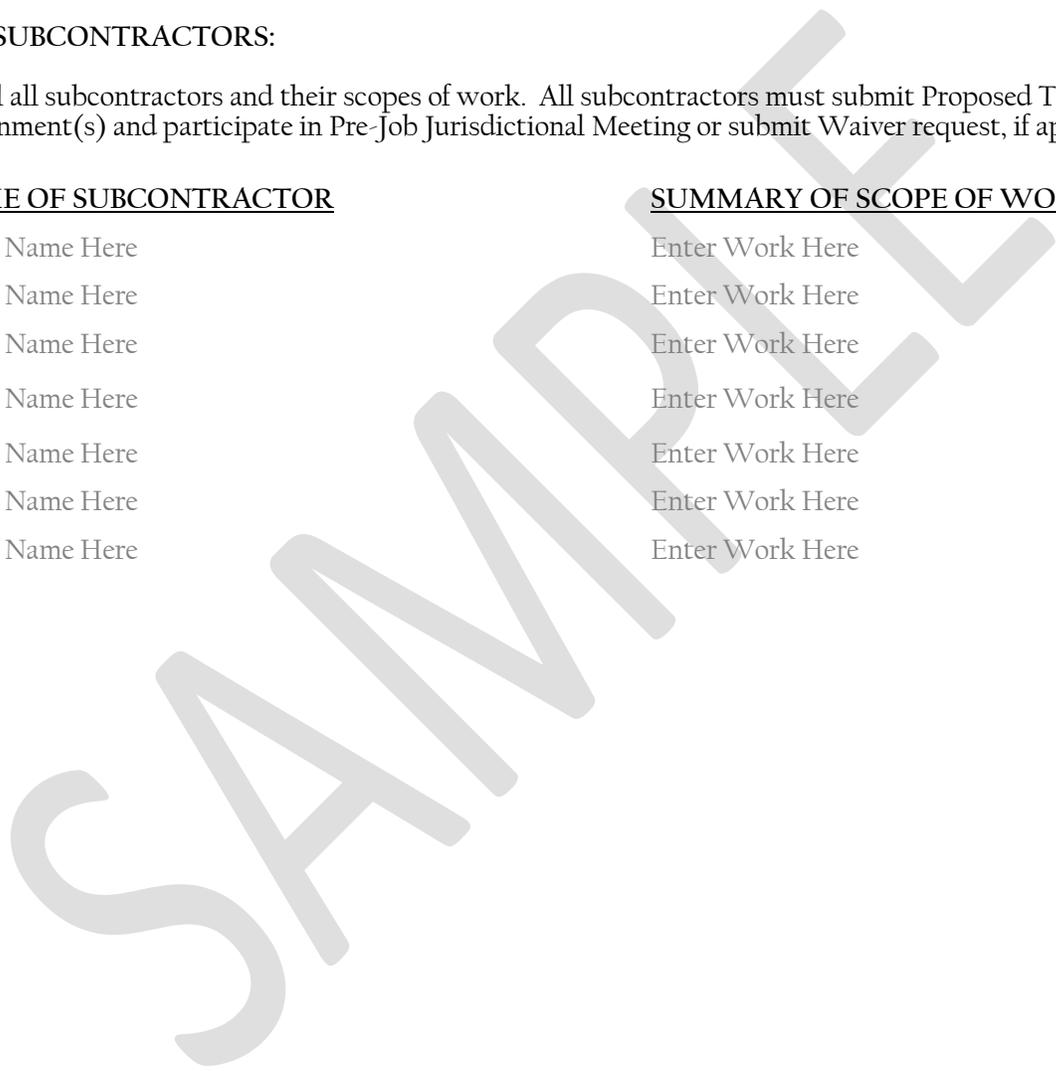
Detail all subcontractors and their scopes of work. All subcontractors must submit Proposed Trade Assignment(s) and participate in Pre-Job Jurisdictional Meeting or submit Waiver request, if applicable.

NAME OF SUBCONTRACTOR

SUMMARY OF SCOPE OF WORK

Enter Name Here

Enter Work Here



SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03

Project Name:
 General/Prime Contractor:

INSTRUCTIONS FOR FILING APPRENTICE UTILIZATION PLAN:

The Apprentice Utilization Plan (AUP) is to be completed by the Bidder / Contractor. The Plan must include total project labor hours projected including those that will be performed by Prime and all Subcontractors. The Plan will be reviewed during the Seattle-King County Building Trades Pre-Job Jurisdictional Conference or through the approved Waiver process.

DEFINITIONS:

TRADE/CRAFT	The given Trade or Craft expected to be utilized by the Bidder/Contractor or its Sub-contractors throughout the duration of the project.
TOTAL LABOR HOURS	The estimated total number of Labor hours required in each Trade or Craft on the Project.
NUMBER OF APPRENTICES	The estimated total number of apprentices enrolled in each state-approved Trade or Craft on the project.
APPRENTICESHIP HOURS	The estimated total number of hours to be worked by apprentices in each Craft or Trade that is required for the project.
APPRENTICE PERCENTAGE	For each Craft or Trade, apprentice hours divided by labor hours, multiplied by one hundred (100), rounded to two (2) decimal places. For example: If apprentice hours equal 80 for a craft or trade and labor hours equal 520 for the same craft or trade, apprentice percentage for that craft or trade is $(80/520) \times 100 = 15.38$ percent (%).
PREFERRED ENTRY	Apprentices hired from Pre-Apprenticeship Program (Seattle Vocation Institute Pre-Apprenticeship Construction Training Program-SVI PACT) Apprenticeship and Non-Traditional Employment Program for Woman (ANEW), PACE.
JOURNEY LEVEL LABOR HOURS	List the estimated number of labor hours to be performed by all journey level workers in full hour increments. The estimate should include the labor hours of all workers subject to prevailing wage requirements as defined in WAC 296-127-015.

SAMPLE
PORT OF SEATTLE
PROPOSED TRADE ASSIGNMENT
MC-03
Project Name:
General/Prime Contractor:

APPRENTICESHIP:

APPRENTICESHIP UTILIZATION PLAN (AUP)

Goals:

Apprenticeship – 15% per craft, 15% of total apprentice training hours for minorities, 10% of total apprentice training hours for women.

Preferred Entry - 1 of every 5 apprentices from Pre-Apprenticeship programs, i.e. SVI, PACT, ANEW, Helmets to Hard Hats. The Unions agree to coordinate with designated pre-apprenticeship organizations.

Are you an eligible Training Provider? Yes No

If no, are you eligible to become a Training Provider? Yes No

Trade/Craft Description (utilized on entire project)	Total Labor Hours	Preferred Entry	Pre-Entry Hours	Number of Apprentices	Apprentice Hours	Total Apprentice Hours
TOTALS						

Provide a description below of how the Contractor plans to ensure that the Apprenticeship hiring goals for Pre-Entry and minorities / women working on the project will be met:

Enter Description Here

SAMPLE
PORT OF SEATTLE
FINAL TRADE ASSIGNMENT

MC-03
Project Name:
General/Prime Contractor:

<p>Date: Choose Date</p> <p>Prime/General Contractor: <input type="checkbox"/></p> <p>Subcontractor: <input type="checkbox"/></p> <p><input type="checkbox"/> Tier 1: Subcontractor to Name</p> <p><input type="checkbox"/> Tier 2: Subcontractor to Name</p> <p><input type="checkbox"/> Tier 3: Subcontractor to Name</p> <p><input type="checkbox"/> Tier 4: Subcontractor to Name</p>	<p>Company Name: Enter Company Name Here</p> <p>Name and Title: Enter Name and Title Here</p> <p>Business Address: Enter Business Address Here</p> <p>Telephone Number: Enter Number Here Choose a Type</p>
---	---

In accordance to Article 8, Jurisdictional Disputes, Section 1(a) of the Port of Seattle Project Labor Agreement and the Substance Abuse Policy Procedures, I have read and reviewed all supporting written documentation submitted by the competing Unions on the work described below. Following the aforementioned provisions and procedures, I have indicated next to each task my Final Trade Assignment.

Unions not in agreement with these Final Trade Assignments may avail themselves of the jurisdictional resolution process found in the Project Labor Agreement, Article 8, Jurisdictional Disputes, and Section 2. This provision allows for competing Unions to pursue their claims through the “Plan” without disrupting the work of the affected Contractor.

The following is the Final Trade Assignment for each task:

1. Description of contested work or task (if any): If none, please indicate “None”:
Add Description Here
2. List contested work and corresponding union(s). If none, please indicate “None”
 - a. Enter Information Here
 - b. Enter Information Here
 - c. Enter Information Here
3. List union(s), trade(s), and local(s) to which work will be assigned:
Enter Information Here

This report must be submitted **the DAY BEFORE** construction begins and **updated whenever there is a change in crew makeup**. Send completed form to and direct all questions to the General Contractor.

SAMPLE
PORT OF SEATTLE
NEW EMPLOYEE REPORT

MC-03

Project Name:

General/Prime Contractor:

<p>Date Submitted: Choose Date</p> <p>Work Start Date: Choose Date</p> <p>Work Completion Date: Choose Date</p> <p>Prime/General Contractor: <input type="checkbox"/></p> <p>Subcontractor: <input type="checkbox"/></p> <p><input type="checkbox"/> Tier 1: Subcontractor to:</p> <p><input type="checkbox"/> Tier 2: Subcontractor to:</p> <p><input type="checkbox"/> Tier 3: Subcontractor to:</p> <p><input type="checkbox"/> Tier 4: Subcontractor to:</p>	<p>Company Name: Enter Company Name Here</p> <p>Name and Title: Enter Name and Title Here</p> <p>Business Address: Enter Business Address Here</p> <p>Telephone Number: Enter Number Here Choose a Type</p>
<p><input type="checkbox"/> Check Box if there is a change in workforce crew. For new worker(s): add name(s) to report; For worker(s) no longer on jobsite: cross name(s) off list, using single line [strikethrough].</p>	

Please use formats illustrated in the shaded SAMPLE LINES BELOW

Last 4 SSN	Name Last, First	On-Job-Site Start Date(s)	Trade	Classification	Core/Union	Local
5555	Doe, John	4/25/2020	Glazier	Journey Worker	Core	188
1254	Doe, Jane	5/31/2015	Laborer	Apprentice	Union	440
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here
Enter Here	Enter Name Here	Choose Date	Enter Here	Choose Class	Choose Here	Enter Here

SAMPLE
PORT OF SEATTLE
CONTRACTOR REQUEST FOR WAIVER
PLA PRE-JOB JURISDICTIONAL CONFERENCE
MC-03

Project Name:
 General/Prime Contractor:

To request a waiver from attending this conference, please complete this form and submit it with a signed Letter of Assent and Proposed Trade Assignment form to your General Contractor. Work cannot commence until waiver is approved by the Seattle-King County Building & Construction Trades Council and other Signatory Unions and the Final Trade Assignment has been submitted.

Date: Choose Date Prime/General Contractor: <input type="checkbox"/> Subcontractor: <input type="checkbox"/> <input type="checkbox"/> Tier 1: Subcontractor to Name <input type="checkbox"/> Tier 2: Subcontractor to Name <input type="checkbox"/> Tier 3: Subcontractor to Name <input type="checkbox"/> Tier 4: Subcontractor to Name	Company Name: Enter Company Name Here Name and Title: Enter Name and Title Here Business Address: Enter Business Address Here Telephone Number: Enter Number Here Choose a Type
--	---

Describe (in detail) the Scope of Work to be performed: Enter Description Here

Specify Proposed Trade Assignment(s) and list Craft Union(s) and Local(s) #: Enter List Here

Please list other project(s) performed under any Port of Seattle PLA. List and describe any jurisdictional, dispatch, grievance, substance abuse, and/or PLA compliance disputes:

CONTRACT#	DISPUTE DESCRIPTION
MC-03Enter Number	Enter Description Here
MC-03Enter Number	Enter Description Here
MC-03Enter Number	Enter Description Here

The contractor listed above requests a waiver of the Pre-Job Jurisdictional Conference attendance requirement contained within the Port of Seattle Project Labor Agreement. The contractor recognizes and agrees that the Seattle - King County Building & Construction Trades Council and other Signatory Unions retain their rights as stipulated in the Port of Seattle PLA to deny this Waiver request, and to challenge any proposed trade assignment. A general contractor cannot waive attendance nor can a subcontractor working for the first time under this PLA.

Approver: Type Name Here
 (Typed Name May Substitute for Signature)

Date: Click here to enter a date

<input type="checkbox"/>	SKCBT	APPROVED <input type="checkbox"/>
		DENIED <input type="checkbox"/>
<input type="checkbox"/>	CARPENTERS	APPROVED <input type="checkbox"/>
		DENIED <input type="checkbox"/>

PART 1 GENERAL

1.01 REQUIREMENTS

- A. Work related to this section is in accordance with current Department of Homeland Security / Transportation Security Administration (DHS / TSA) regulations.
- B. Failure to comply with TSA rules and the Airport Security Plan may result in up to an \$11,000 fine from the TSA. Fines assessed by the TSA against a Contractor, a Contractor's employee, Supplier or a Subcontractor will be paid by the Contractor. See the following: 1) Title 49; and 2) <http://www.portseattle.org/Employee-Services/ID-Badges/Documents/idsecurityhandbook.pdf>.
- C. Additional information and forms associated with badging, custom bond seals and security access and key requests can be found here:
<http://www.portseattle.org/Employee-Services/ID-badges/Pages/default.aspx>

1.02 SECURITY REQUIREMENTS

- A. Identification/Access Badges:
 - 1. All Contractor personnel working in restricted areas (including Air Operations Area (AOA), Secured, Security Identification Display Areas (SIDA) and Sterile areas) on this project shall have Port of Seattle airport-issued identification/access badges in accordance with Title 49, Code of Federal Regulations (CFR), Part 1540/1542 and the Airport Security Plan.
 - 2. All or a portion of this Contract requires work to be performed within an area of the Airport controlled for security reasons. That area is defined as the area within the Air Operations Area security fence, and all other restricted areas indicated on applicable drawings, or as posted on the Airport premises ("restricted/secured area"), or otherwise defined under Airport Security Plan (ASP). No Contractor personnel are allowed to work in these restricted areas without a valid identification/access badge.
 - 3. Badges must be worn on the outermost garment above waist height in order to gain access to and remain in restricted areas.
- B. Security Identification Display Area (SIDA) Training:
 - 1. All individuals requiring unescorted access to restricted areas (excluding sterile areas) will be required to attend Security Identification Display Area (SIDA) training in accordance with the Airport Security Plan (ASP) and Title 49, CFR, Part 1542.213 (b). This training must be completed prior to the issuance of an approved ID/access badge allowing unescorted access.
 - 2. At a minimum, this training shall consist of a forty minute session discussing airport security procedures. The training session shall be conducted by the Port's Airport Operations SIDA/AOA Training Center. You may pre-register for classes online at <http://www.portseattle.org/Employee-Services/Security-and-Driver-Training/Pages/default.aspx>.
 - 3. Required Training
 - a. Initial Training - All Port SIDA badge applicants (either RESTRICTED AREA BADGES or DRIVING BADGES) must successfully complete SIDA training, and if applicable, any required driving training.

- b. Recurrent Training – it is a requirement that all persons renewing Port of Seattle badges successfully complete SIDA training and, if applicable, any required driving training prior to receiving renewed badges
- 4. Recurrent Training Requirements:
 - a. SIDA and AOA/Driving Training are required every two (2) years and must be completed prior to badge renewal.
 - b. If an applicant is authorized to drive on the AMA, known as Air Movement Areas, recurrent training is required annually.

1.03 ISSUANCE OF IDENTIFICATION BADGES

- A. New Company Setup (One time):
 - 1. Companies initiating badges with the Port of Seattle for the first time, must complete a New Company setup package (available online or in the Credential Center). A onetime fee of \$200 per company will be billed on the first statement.
 - 2. The Contractor must complete the New Company Setup Application found on the website provided in 1.01 C which is necessary to join the Port of Seattle Identification Program. Each company must make an appointment with the Credential Center and have two representatives present at the time of the company setup. Both representatives must complete the badge process and complete the Authorized Signer Training Class. Upon completion of the Authorized Signer Training Class all authorized signers must have a Signature Capture Card on file with the Credential Center. This Signature Capture Card must be signed by the individuals designated by the company as an authorizing signatory; e.g., a chief executive officer, owner, senior manager, etc. Authorized Signature Cards must be renewed every two (2) years. To meet current Transportation Security Administration (TSA) regulations, any Authorized Signatory must hold a current SIDA badge to show proof of clearing all required background checks by the Port of Seattle. All Authorized Signers must attend, at minimum, SIDA training and additional training required by TSA for Authorized Signers. This includes all required recurrent training.
 - a. Contractors shall have the Engineer co-sign and enter the Contract end dates on Contractor new company agreements before they are submitted to the Credential Office.
 - 3. The Contractor shall designate one primary and one secondary point of contact (POC) for all matters pertaining to the badges and keys issued to the Contractor for their company. The Contractor shall provide contact phone numbers where at least one of these POCs can be reached 24 hours a day, seven days a week.
 - 4. New Company Setups apply to the Contractor and its Suppliers and Subcontractors.
 - 5. Companies will be notified by the Credential Center when the company representatives have been cleared and ID badges are available for pickup.

- a. The two company representatives must have completed and received their ID badges prior to submittal of badge applications by Contractor employees, Suppliers or Subcontractors.
 - b. Ideally, Contractors will submit employee applications all at one time.
- B. Obtaining an ID Badge (each applicant):
1. Submit a properly completed Identification/Access badge application, Disqualifying Crimes Statement and Privacy Act Notice for each employee requiring access to restricted areas.
 2. The Contractor shall fill out the “Company” portion of each Identification/Access badge application form for each employee requiring access after the employee has completed their section.
 3. Each applicant requiring access shall fill out the “Applicant” section of the Identification Badge/Access application form. The form shall be signed by the employee.
 4. The Company authorized signer shall review the applicant section for accuracy prior to signing and submitting the application to the Credential Center.
 5. Applicants must go to the Credential Center with their completed badge application, badge fees (if applicable), and two forms of identification. One must be government issued PROOF OF CITIZENSHIP. For a list of acceptable documentation, please refer to:
<http://www.portseattle.org/Employee-Services/ID-badges/Pages/default.aspx>
 6. When applications are completed and required documentation has been supplied, the applicant will be fingerprinted in accordance with Title 49, Code of Federal Regulations (CFR), Part 1542.209. Each applicant will also be submitted for a Security Threat Assessment.
 7. Companies will be notified by the Credential Center when their employees have been cleared. They may then return to the Credential Center to pick up their ID badges.
- C. Miscellaneous Badge Information
1. Nonrefundable badge fees are described on the following link:
<http://www.portseattle.org/Employee-Services/ID-Badges/Pages/default.aspx>
 - a. Badge fees are subject to annual adjustments. Companies will receive notification of any changes.
 2. See Article 1.07 for details pertaining to working in a U.S. Customs and Border Protection restricted or secured areas. Additional time will be required to develop and process credential documents for these areas.
 3. Permanent identification/access badges are valid for two years or the term of the Contract, whichever is shorter. At project completion, Contractors must return the badges to the Credential Center or reapply for a new identification/access badge if performing additional work at the Airport.

- a. The Contractor is responsible for tracking and ensuring the surrender of all badges issued for purposes of the Work to its employees, Suppliers or Subcontractors.
- 4. Approval of an Identification/Access Badge Application may be withheld in the event the criminal history records check is found to be unsatisfactory or the applicant is unable to pass any other applicable TSA background checks.
- 5. Appointments must be scheduled for New Company Setups, issuance of new badges, renewal of badges, and training. The Credential Center is closed weekends and holidays. Special scheduling arrangements may be made if necessary. Hours are subject to change. Each applicant may make their own appointment online at:

<https://app.timetrade.com/tc/login.do?url=portseattle.ca>
- D. All work and expenses required to obtain identification/access badges or for other activities required in this section shall be borne by the Contractor as part of the Contract.

1.04 RULES AND REGULATIONS REGARDING IDENTIFICATION BADGES

- A. Identification/access badges provide access to a default list of security access points. See Appendix 1.
- B. Any employee found in a restricted area without an airport-issued identification/access badge will be issued a citation and escorted from that location and not be allowed to return until wearing a proper identification/access badge.
- C. Employees shall be allowed access to the restricted areas only as necessary to travel to and from the construction/job site. Any employee found in any portion of the restricted areas other than the construction/job site or the area to and from the construction/job site will immediately have the employee's identification/access badge confiscated and will no longer be permitted to work at the Airport in a restricted area.
- D. All vehicles will be inspected as they enter the Airfield Operations Area at the airfield access gates.
- E. Employees and their personal items (e.g., backpacks, lunch boxes, and tool boxes) will be inspected as they enter the restricted areas of the Airport. This inspection will either occur:
 - 1. At the airfield access gates and vehicles enter the Airfield Operations Area
 - 2. At the Contractor Parking Lot as employees board the Contractor provided shuttle (refer to Section 01 50 00 – Temporary Facilities and Controls).
- F. All identification/access badges issued by the Port of Seattle are the property of the Port of Seattle and must be immediately returned under the following conditions:
 - 1. Upon expiration;
 - 2. Upon separation of employment (for any reason);
 - 3. When job function no longer requires a Port of Seattle airport-issued identification/access badge;

4. Upon demand by the Port of Seattle.
 5. If convicted of, or found not guilty by reason of insanity of one of the crimes listed in Title 49, CFR, Part 1542.209 (d). A complete list is on the back of the Fingerprint Application.
- G. The Contractor shall immediately notify the Port of personnel, Suppliers or Subcontractors whose work is terminated or completed and shall ensure badges are returned within 30 days of notification.
1. Notifications shall be in writing to the Credential Center and copied to the RE as a submittal in accordance with Section 01 33 00 Submittals.
 2. The Contractor will be charged \$250.00 per non-returned badge.
 3. If badges are not returned at Project Completion, the Credential Center will issue an invoice to the Contractor. Non-payment will result in the standard Port collections process.
- H. Escorting:
1. Any individual with a Port ID authorized access to a particular door/gate, may escort any individual(s) with an airport approved ID but without access to that particular door/gate; e.g., a badge with a lower access level or an escort badge. **THE ESCORT MUST REMAIN WITH THE INDIVIDUAL(S) BEING ESCORTED AT ALL TIMES WHILE IN RESTRICTED AREAS.**
 - a. Escorts shall be limited to five (5) individuals, or less, depending on the circumstances to ensure positive control is maintained at all times.
 - b. A non-badged person can be escorted a maximum of five (5) times in a calendar year, starting the day of the first escort.
 - (1) A longer period must be approved by Airport Security Coordinator and coordinated through the Engineer and Aviation Security.
 2. Proper escort of another vehicle **CANNOT** be accomplished with the escort riding in the **SAME** vehicle as the individual being escorted. The escort must be in a separate vehicle from the individual being escorted and both must meet the requirements as stated in Division 1, Section 01 35 13.13 - Operational Safety on Airports during construction.
 - a. **Vehicle Signs:** Vehicles must have signs of commercial design with lettering at least 2" in height on **BOTH** sides of the vehicle. Magnetic signs are acceptable. The company name on the driver's badge **MUST** match the company name on the vehicle.
- I. All badges that are lost, stolen, or otherwise unaccounted for must be immediately reported to the Credential Center at (206) 787-6859 or POS Alarm Response at (206) 787-4022. Any misuse of or willful failure to return a Port of Seattle airport-issued identification/access badge is subject to criminal prosecution. A fee of \$250.00 will be charged for a lost or otherwise unaccounted for badge. The fee may be waived if documentation is received and verified from a law enforcement agency specifically indicating the badge was stolen. The Contractor must apply for a replacement identification badge for the employee as provided in Article 1.03; paragraph B, this Section of these specifications. Unsecured Doors: Contractors

and their employees will be held accountable for doors located within their work sites that provide direct or indirect access to restricted or secured areas of the airport by unauthorized individuals. Doors that provide such access must NOT under ANY circumstances be left open and unattended. Individuals who have been issued Port of Seattle airport-issued identification are required to challenge any individual attempting unauthorized access to restricted areas.

- J. Contractors requiring access through vehicle gates not normally staffed must make arrangements for access through the Aeronautical Duty Manager, (206) 787-5229, who will make arrangements for either Access Controller or Senior Access Controller support.

1.05 FAILURE TO COMPLY

- A. Compliance with these regulations and TSA directives will be monitored by the Airport Security Coordinator, other Airport Security personnel or other regulatory agencies. Failure on the part of the Contractor to comply may result in fines or other monetary considerations levied against the Port. In the event an action or absence of action, by the Contractor with regard to the TSA directive leads to any damages against the Port, the Contractor shall be liable for, and reimburse the Port for, all costs involved.

1.06 SPECIAL REQUIREMENTS FOR WORK IN AIRPORT TERMINAL

- A. Pre-construction meetings with Security
 - 1. The Contractor must schedule a preconstruction meeting with the Engineer and the Security Construction Support Specialist, a week prior to performing the initial erection of any barricades in the terminal to confirm layout and identify the type of keys required on the barricade. Any special situation that may affect the security of the airport shall be identified and discussed in the meeting.
 - 2. As soon as a new barricade installation is completed the Contractor shall schedule a site inspection of the enclosure with the Security Construction Support Specialist to obtain approval to proceed with the construction work at the site.
 - 3. Prior to performing any work that modifies an existing security wall such as the removal of a window in the terminal or a penetration through a security wall shall require that a preconstruction meeting be scheduled with Security a week in advance of the work. Contractor shall describe the work plan to the Engineer and Security. The Port will schedule a Security Construction Support Specialist to be on site when the work is performed. No work shall proceed without first having this meeting.
- B. Barricaded sites must be locked except for the delivery of materials, equipment and personnel to the job site. There are two standard locks used in construction barricades:
 - 1. High Profile (High Security Risk) Areas: PG-2 padlock installed on construction doors daisy chained with a unique lock for Contractor use. Self-closing man-doors shall be keyed with a PG-2 core. First responders must be able to have access to the jobsite at all times.
 - 2. Low Profile (Low Security Risk) Areas: AP-2 padlock installed on construction doors daisy chained with a unique lock for Contractor use.

Self-closing man-doors shall be keyed with an AP-2 core. First responders must be able to have access to the jobsite at all times.

- C. Barricade Door and Window Security
 - 1. Contractor and its employees will be held accountable for doors /windows located within their work sites that provide direct or indirect access to restricted or secured areas of the Airport by unauthorized individuals.
 - 2. Doors that provide such access must NOT under ANY circumstances be left open and unattended. Individuals who have been issued Port of Seattle identification badges are required to challenge any individual attempting unauthorized access to restricted areas. If at any time during a construction project a door or window is not secured or there is a security breach, a Port provided AV Operations Construction Support Specialists will staff the duration of the work.
 - 3. A walk through of the work to be conducted and completed needs to be reviewed by a Senior Access Controller to ensure the construction site is secured.
 - 4. If a violation is found, the work site will immediately be shut down until an appropriate security plan is approved. Penalties and fines will be incurred by the Contractor.
- D. Leaving Prohibited Items Unattended in a Secured Area
 - 1. When tools or equipment are in a secured sterile area (SIDA), control of them must be maintained 100% of the time.
 - a. The area shall be secured with a lock. If there is a possibility that someone may gain unauthorized access, take any TSA prohibited items with you.
 - b. The first offense cited by Security results in confiscation of identification badge for three (3) days, \$200.00 fine, and a retake of SIDA training. Penalties increase after the first offense, as defined by the Seattle Tacoma International Airport Schedule of Rules and Regulations.

1.07 SPECIAL REQUIREMENTS, WORK IN U.S. CUSTOMS AND BORDER PROTECTION (CBP)

- A. Work conducted within areas controlled by the U.S. Customs and Border Protection (CBP) in the South Satellite, will require special clearance and an identification seal issued by the U.S. Customs and Border Protection. In addition, unless granted otherwise, the CBP will require that a bond be provided by the Contractor as security for all work conducted within the controlled area. Work for this project [will be OR will not be] conducted within controlled areas. See Appendix 2 for more details related to CBP areas in the South Satellite.

If Custom Seals are required for the project, the user shall select either Paragraph B or C, otherwise remove them.

Typically the Port requires Contractor's to supply their own bonding for Custom Seals which is described in Paragraph B, thus remove Paragraph C and its subparagraphs.

Paragraph C is ONLY utilized when the RE works with the CM and PM to get necessary approval from the Assistant Director of Engineering or Director of PMG to have Contractors covered under the Port's Bond. See Guidelines and POS approval letter in SharePoint. [Link - Custom Seal Coverage under Port Bond Guidelines](#)

1. Contractors shall have the Engineer co-sign and enter the Contract end dates on badge applications before they are submitted to the Credential Office.
- B. It shall be the Contractor's responsibility to coordinate with the CBP and provide an airport security bond in the amount of minimum \$10,000, as required. All costs for securing special clearance via identification seals and the associated bonding shall be at the Contractor's expense. No separate or extra payment of any kind will be made to the Contractor for satisfying these requirements.
 1. The Contractor is advised:
 - a. Seattle specific information on Customs bonds can be obtained by contacting the Cargo Security Officer, CBP Trade Office at (206) 553-1581 referencing CBP Form 301. For more information on bonds visit:
https://help.cbp.gov/app/answers/detail/a_id/208/~/_bonds---how-to-obtain-a-customs-bond
 - b. The Contractor shall initiate the bonding process upon notification of Intent to Award as all bond applications are processed at the national level and may take several weeks for approval and issuance of bonds.
 - c. It is ideal to complete the customs seal application 2 weeks prior to completing the SIDA training in order to have the badge issued with the seal.
 - d. The Contractor may choose to acquire a bond that extends beyond the Contract time. The Port of Seattle issues identification seals specific to the project. It is the Contractor's responsibility to coordinate issuance of the seal specific to the Contract duration and properly notify CBP of any changes in status of issued badges (see 107.B.2.b).
 2. The Contractor is responsible to ensure all their suppliers and subcontractors have special clearance identifications seals including inclusion under the Contractor's bond or have their suppliers and subcontractors secure their own bonds.

- a. If a special clearance Customs seal is required, an applicant must submit Customs Seal documents with their SIDA badge application.
 - (1) Customs Seal documents include:
 - (a) Application for CBP security seal
 - (b) Letter from employer on company letterhead verifying employment status
 - (c) Application for Identification Card
 - (2) Once submitted, the clearance time for a Customs seal is approximately 14 days.
 - (3) Submit renewal requests for Customs seals at least 14 days prior to the expiration date and prior to the renewal appointment.
- b. The Contractor is responsible to comply with the Federal Custom Seals program's employer responsibilities including but not limited to the following:
 - (1) Immediately informing CBP of a change in status of badges with a special clearance and identification seal as required by federal regulation. Without limitation, this includes separation of employment, badge expiration, lost badge, or when the job functions for an individual, Supplier or Subcontractor are complete. Copies of any written notifications required to be provided to U.S. Customs and Border Protection shall be copied to the Engineer as a submittal in accordance with Section 01 33 00- Submittals.
 - (2) Providing quarterly reports with a current list of employees with approved customs seal access and a separate list with all additions and deletions within the last quarter. The list should be provided to the Custom Seal Office during the first month of each quarter and copied to the Engineer as a submittal in accordance with Section 01 33 00 – Submittals.
 - (a) Each list should identify the employee name, Port issued badge number at upper right corner of the badge and the badge expiration date.

For a full list of employer responsibilities see [19CFR122.181-188](#).

- 3. The Contractor is responsible for all fines assessed by U.S. Customs and Border Protection that arise from Contractor's activities or failure to comply with applicable regulations, whether assessed against the Contractor or the Port in the first instance. The Port shall have the right to issue a change order reducing the Contract Sum by the amount of any fines or other penalties not promptly paid by the Contractor. If fines are not paid at Project Completion, the Port will issue an invoice. Non-payment will result in the standard Port collections process.

OR

- C. The Contractor, their suppliers and subcontractors will work under the Port's Customs Bond to complete the Work. The Contractor, their suppliers and subcontractors are responsible to coordinate with the CBP to secure special clearance (customs seal). All costs for securing special clearance via identification seals to get them shall be at the Contractor's expense. No separate or extra payment of any kind will be made to the Contractor for satisfying these requirements.
 - a. If a special clearance Customs seal is required, an applicant must submit Customs Seal documents with their SIDA badge application.
 - (1) Customs Seal documents include:
 - (a) Application for CBP security seal
 - (b) Letter from employer on company letterhead verifying employment status
 - (c) Application for Identification Card
 - (2) Once submitted, the clearance time for a Customs seal is approximately 14 days.
 - (3) Submit renewal requests for Customs seals at least 14 days prior to the expiration date and prior to the renewal appointment.
 - b. The Contractor will work with the Engineer to obtain a letter confirming the use of the Port's Bond for Contractor's employees, subcontractors and suppliers.
- 2. The Contractor is responsible for all fines assessed by the CBP that arise from Contractor's activities or failure to comply with applicable regulations, whether assessed against the Contractor or the Port in the first instance. The Port shall have the right to issue a change order reducing the Contract Sum by the amount of any fines or other penalties not promptly paid by the Contractor. If fines are not paid at project closeout, the Port will issue an invoice. Non-payment will result in the standard Port collections process.

1.08 AIRPORT SECURITY KEYS

- A. Contractors that require keys to perform work at the project site shall complete a key application form attached to a CAP requesting key(s) a reason for the request. All costs for obtaining airport security key(s) shall be at the Contractor's expense, including Lock Shop costs incurred for making keys.
 - 1. The Contractor is responsible for keys provided to its Suppliers and Subcontractors for purposes of the Work identified in the Contract.
- B. Security keys are tracked via computer and tied to the employee's identification badge number. Security keys cannot be requested in multiples (no more than one per person). Keys are only issued to the person making the request. An identification/access badge is required prior to issuance.
- C. The Contractor is responsible for tracking and ensuring the surrender of all keys issued for purposes of the Work to its employees, Suppliers or Subcontractors

- D. Upon completion of the Contract, separation of employment or when job function no longer requires use of keys, the Contractor shall ensure they are returned within 14 calendar days of notification.
 - 1. Notifications shall be in writing to the Credential Center and submitted in accordance with Section 01 33 00 Submittals.
 - 2. No separate or extra payment of any kind will be made to the Contractor for satisfying this requirement.
 - 3. The Contractor is responsible for tracking and returning all keys issued for the project. The Contractor will be charged \$100.00 per non-returned key plus the cost of Airport rekeying if needed. Cost to be determined by overall impact.
 - 4. If keys are not returned at Project Completion, the Credential Center will issue an invoice for the fines net 30 days. Non-payment will result in the standard Port collections process.

1.09 ACCESS AUTHORIZATION

- A. See Section 01 14 13c, Appendix 2 for additional information.
- B. Companies must submit an ID Badge Control Authorization Request Form attached to a CAP to gain or delete access to controlled entry points. An exact description of the point to include location and door number is required.

1.10 RETURN OF BADGES AND KEYS AND FINES ASSOCIATED WITH THE PROJECT

- A. The Contractor is responsible for the return of all badges and keys issued for the project, including those issued to its employees, Suppliers or Subcontractors.
- B. All badges, keys and special clearances issued under the requirements of this Section, for this project, must be returned.
- C. Unpaid fines assessed by the Port against a Contractor, its employee, Supplier or Subcontractor will be invoiced to the Contractor for payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

APPENDIX 1: BADGE ISSUANCE CONTRACTOR ACCESS

1. DEFAULT CONTRACTOR ACCESS LIST AND MAPS

The attached list of access points (doors, elevators, AOA perimeter gates) and correlating maps show the access provided when receiving a badge for Work on construction projects.

No.	Type	Access Point ID	Alternate Description	AP (1) Sheet #	Map Reference
1	CONTRACTOR ONLY	A-3176-B		3	Main Terminal – Bag/Ramp Level
2	CONTRACTOR ONLY	A-3312-B		3	Main Terminal – Bag/Ramp Level
3	CONTRACTOR ONLY	A-3482-B		3	Main Terminal – Bag/Ramp Level
4	CONTRACTOR ONLY	A-3505-B		3	Main Terminal – Bag/Ramp Level
5	CONTRACTOR ONLY	A-5038-C		2	Main Terminal – Concourse Level
6	CONTRACTOR ONLY	A-5108-C		2	Main Terminal – Concourse Level
7	CONTRACTOR ONLY	A-5139-C		2	Main Terminal – Concourse Level
8	CONTRACTOR ONLY	A-5159-C		2	Main Terminal – Concourse Level
9	CONTRACTOR ONLY	A-5171-C		2	Main Terminal – Concourse Level
10	CONTRACTOR ONLY	A-5186-C		2	Main Terminal – Concourse Level
11	CONTRACTOR ONLY	A-5201-C		2	Main Terminal – Concourse Level
12	CONTRACTOR ONLY	A-5220-C		2	Main Terminal – Concourse Level
13	CONTRACTOR ONLY	A-5221-C		2	Main Terminal – Concourse Level
14	CONTRACTOR ONLY	A-5300-C		2	Main Terminal – Concourse Level
15	CONTRACTOR ONLY	A-5311-C ST16			TBD
16	CONTRACTOR ONLY	A-5317-C		2	Main Terminal – Concourse Level
17	CONTRACTOR ONLY	A-5400-C		2	Main Terminal – Concourse Level
18	CONTRACTOR ONLY	A-5419-C		2	Main Terminal – Concourse Level
19	CONTRACTOR ONLY	A-5429-C		2	Main Terminal – Concourse Level
20	CONTRACTOR ONLY	A-5443-C		2	Main Terminal – Concourse Level
21	CONTRACTOR ONLY	A-5446-C	A-5446-C ST13	2	Main Terminal – Concourse Level
22	CONTRACTOR ONLY	A-5482-C		2	Main Terminal – Concourse Level
23	CONTRACTOR ONLY	A-5492-C		2	Main Terminal – Concourse Level
24	CONTRACTOR ONLY	A-6255-M		1	Main Terminal – Mezzanine Level
25	CONTRACTOR ONLY	A-6355-M		1	Main Terminal – Mezzanine Level
26	CONTRACTOR ONLY	A-6375-M		1	Main Terminal – Mezzanine Level
27	CONTRACTOR ONLY	A-7121-IP			TBD
28	CONTRACTOR ONLY	A1-5020-C	A01-5020-C	2	Main Terminal – Concourse Level
29	CONTRACTOR ONLY	A2-5040-C	A02-5040-C	2	Main Terminal – Concourse Level
30	CONTRACTOR ONLY	A3-5110-C	A03-5110-C	2	Main Terminal – Concourse Level
31	CONTRACTOR ONLY	A4-5141-C	A04-5141-C	2	Main Terminal – Concourse Level
32	CONTRACTOR ONLY	A5-5160-C	A05-5160-C	2	Main Terminal – Concourse Level
33	CONTRACTOR ONLY	A6-5200-C	A06-5200-C	2	Main Terminal – Concourse Level
34	CONTRACTOR ONLY	A7-5210-C	A07-5210-C	2	Main Terminal – Concourse Level
35	CONTRACTOR ONLY	A8-5230-C	A08-5230-C	2	Main Terminal – Concourse Level

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 14 13a – Airport Personnel Identification/Access Control

No.	Type	Access Point ID	Alternate Description	AP (1) Sheet #	Map Reference
36	CONTRACTOR ONLY	A9-5310-C	A09-5310-C	2	Main Terminal – Concourse Level
37	CONTRACTOR ONLY	A10-5420-C		2	Main Terminal – Concourse Level
38	CONTRACTOR ONLY	A11-5430-C		2	Main Terminal – Concourse Level
39	CONTRACTOR ONLY	A12-5480-C		2	Main Terminal – Concourse Level
40	CONTRACTOR ONLY	A13-5485-C		2	Main Terminal – Concourse Level
41	CONTRACTOR ONLY	A14-5490-C		2	Main Terminal – Concourse Level
42	CONTRACTOR ONLY	B-5052-C	B-5052-C EE	2	Main Terminal – Concourse Level
43	CONTRACTOR ONLY	B-5055-C		2	Main Terminal – Concourse Level
44	CONTRACTOR ONLY	B-5090-C		2	Main Terminal – Concourse Level
45	CONTRACTOR ONLY	B1-5037-C		2	Main Terminal – Concourse Level
46	CONTRACTOR ONLY	B10-5252-C	B10-5250-C	2	Main Terminal – Concourse Level
47	CONTRACTOR ONLY	B11-5234-C		2	Main Terminal – Concourse Level
48	CONTRACTOR ONLY	B12-5270-C		2	Main Terminal – Concourse Level
49	CONTRACTOR ONLY	B14-5274-C		2	Main Terminal – Concourse Level
50	CONTRACTOR ONLY	B15-5238-C		2	Main Terminal – Concourse Level
51	CONTRACTOR ONLY	B3-5080-C		2	Main Terminal – Concourse Level
52	CONTRACTOR ONLY	B-5115-C	B4-5114-C	2	Main Terminal – Concourse Level
53	CONTRACTOR ONLY	B-5125-C	B4-5125-C	2	Main Terminal – Concourse Level
54	CONTRACTOR ONLY	B5-5132-C		2	Main Terminal – Concourse Level
55	CONTRACTOR ONLY	B5-5132A-C	B5A-5132-C HANDI	2	Main Terminal – Mezzanine Level
56	CONTRACTOR ONLY	B7-5159-C		2	Main Terminal – Concourse Level
57	CONTRACTOR ONLY	B9-5197-C		2	Main Terminal – Concourse Level
58	CONTRACTOR ONLY	C-3157A-R		3	Main Terminal – Bag/Ramp Level
59	CONTRACTOR ONLY	C-3195B-R		3	Main Terminal – Bag Level
60	CONTRACTOR ONLY	C-3198-R		3	Main Terminal – Bag/Ramp Level
61	CONTRACTOR ONLY	C-5136-C	C1-5036-C	2	Main Terminal – Concourse Level
62	CONTRACTOR ONLY	C10-5140-C		2	Main Terminal – Concourse Level
63	CONTRACTOR ONLY	C10A-5159-C		2	Main Terminal – Concourse Level
64	CONTRACTOR ONLY	C10B-5160-C		2	Main Terminal – Concourse Level
65	CONTRACTOR ONLY	C11-5200-C		2	Main Terminal – Concourse Level
66	CONTRACTOR ONLY	C12-5162-C		2	Main Terminal – Concourse Level
67	CONTRACTOR ONLY	C14A-5174-C		2	Main Terminal – Concourse Level
68	CONTRACTOR ONLY	C15-5210-C		2	Main Terminal – Concourse Level
69	CONTRACTOR ONLY	C17-5212-C		2	Main Terminal – Concourse Level
70	CONTRACTOR ONLY	C18-5220-C		2	Main Terminal – Concourse Level
71	CONTRACTOR ONLY	C6-5074-C		2	Main Terminal – Concourse Level
72	CONTRACTOR ONLY	C8/C10-5080-C		2	Main Terminal – Concourse Level
73	CONTRACTOR ONLY	D-3002/3003-R		3	Main Terminal – Bag/Ramp Level
74	CONTRACTOR ONLY	D-5100-C		2	Main Terminal – Concourse Level
75	CONTRACTOR ONLY	D11-5138-C		2	Main Terminal – Concourse Level
76	CONTRACTOR ONLY	D4-5080-C		2	Main Terminal – Concourse Level
77	CONTRACTOR ONLY	D4-5182-C	D4-5082-C	2	Main Terminal – Concourse Level
78	CONTRACTOR ONLY	D6-5110-C		2	Main Terminal – Concourse Level
79	CONTRACTOR ONLY	ELEV 3 CAB 3rd FLOOR - P2000		3	Main Terminal – Bag/Ramp Level

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 14 13a – Airport Personnel Identification/Access Control

No.	Type	Access Point ID	Alternate Description	AP (1) Sheet #	Map Reference
80	CONTRACTOR ONLY	ELEV 3F CAB - P2000		3	Main Terminal – Bag/Ramp Level
81	CONTRACTOR ONLY	ELEVATOR 3F	ELEV 3F CALL BAGGAGE - P2000	3	Main Terminal – Bag/Ramp Level
82	CONTRACTOR ONLY	ELEVATOR 3F	ELEV 3F CALL BAGWELL - P2000	3	Main Terminal – Bag/Ramp Level
83	CONTRACTOR ONLY	ELEV 3F CALL CONVEYOR T - P2000		3	Main Terminal – Bag/Ramp Level
84	CONTRACTOR ONLY	ELEV 3F CALL LOAD DOCK - P2000		3	Main Terminal – Bag/Ramp Level
85	CONTRACTOR ONLY	ELEV 4F CAB 3rd FLOOR - P2000		3	Main Terminal – Bag/Ramp Level
86	CONTRACTOR ONLY	ELEV 4F CAB 4th FLOOR - P2000		2	Main Terminal – Concourse Level
87	CONTRACTOR ONLY	ELEVATOR 4F	ELEV 4F CAB RAMP - P2000	3	Main Terminal – Bag/Ramp Level
88	CONTRACTOR ONLY	ELEV 4F GROUND LEVEL - P2000		3	Main Terminal – Bag/Ramp Level
89	CONTRACTOR ONLY	ELEV B-1 CAB - P2000		2	Main Terminal – Concourse Level
90	CONTRACTOR ONLY	ELEV B-1 RAMP - P2000		3	Main Terminal – Bag/Ramp Level
91	CONTRACTOR ONLY	ELEV C-1 CAB - P2000		2	Main Terminal – Concourse Level
92	CONTRACTOR ONLY	ELEVATOR C1	ELEV C-1 CALL Ramp - P2000	3	Main Terminal – Bag/Ramp Level
93	CONTRACTOR ONLY	ELEV D-1 CAB - P2000		3	Main Terminal – Bag/Ramp Level
94	CONTRACTOR ONLY	ELEV D-1 CAB - P2000 TG		3	Main Terminal – Bag/Ramp Level
95	CONTRACTOR ONLY	ELEVATOR D1	ELEV D-1 RAMP Level - P2000	3	Main Terminal – Bag/Ramp Level
96	CONTRACTOR ONLY	ELEV N SAT A CAB		4	North Satellite – Concourse Level
97	CONTRACTOR ONLY	ELEV N SAT A CAB - P2000			TBD
98	CONTRACTOR ONLY	ELEV N SAT B CAB		4	North Satellite – Concourse Level
99	CONTRACTOR ONLY	ELEV N SAT B CAB - P2000		5	Main Terminal – Bag/Ramp Level
100	CONTRACTOR ONLY	ELEV S SAT B CAB - P2000		6	South Satellite – Concourse Level
101	CONTRACTOR ONLY	ELEV S SAT C CAB - P2000		6	South Satellite – Concourse Level
102	CONTRACTOR ONLY	ELEV S SAT C CAB RESTRC - P2000		6	South Satellite – Penthouse Level
103	CONTRACTOR ONLY	ELEVATOR SSB	ELEV SSB CALL RAMP - P2000	6	South Satellite – Concourse Level
104	CONTRACTOR ONLY	ELEV SSC CALL CONC - P2000		6	South Satellite – Concourse Level
105	CONTRACTOR ONLY	ELEV SSC CALL INT COR - P2000		7	South Satellite – FIS Level
106	CONTRACTOR ONLY	ELEV SSC CALL MEZZ - P2000		8	South Satellite – Mezzanine Level
107	CONTRACTOR ONLY	GATE E-100 EGRESS - P2000		10	Security Gate Access Map
108	CONTRACTOR ONLY	GATE E-100 INGRESS - P2000		10	Security Gate Access Map
109	CONTRACTOR ONLY	GATE E-100 VERIFICATION - P2000		10	Security Gate Access Map
110	CONTRACTOR ONLY	GATE E-45 EGRESS - P2000		10	Security Gate Access Map
111	CONTRACTOR ONLY	GATE E-45 INGRESS - P2000		10	Security Gate Access Map
112	CONTRACTOR ONLY	GATE S-15 CONC LEVEL - P2000		6	South Satellite – Concourse Level
113	CONTRACTOR ONLY	GATE S-16 A/B CONC LEVEL - P2000		6	South Satellite – Concourse Level
114	CONTRACTOR ONLY	LOAD DOCK N. DOOR - P2000			TBD

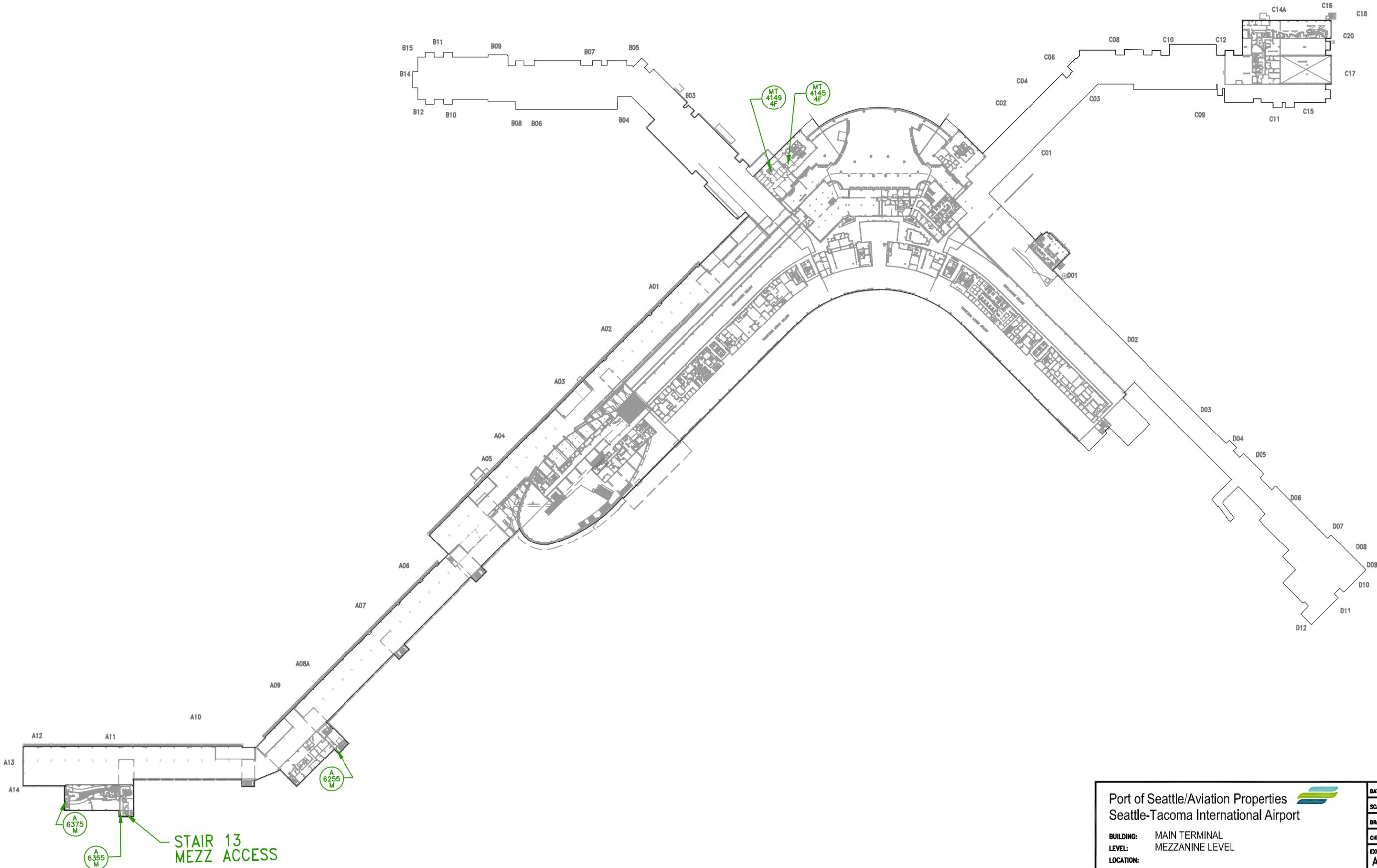
DIVISION 1 - GENERAL REQUIREMENTS
Section 01 14 13a – Airport Personnel Identification/Access Control

No.	Type	Access Point ID	Alternate Description	AP (1) Sheet #	Map Reference
115	CONTRACTOR ONLY	MT-2132-BT		3	Main Terminal – Basement Level
116	CONTRACTOR ONLY	MT-2135-BT		3	Main Terminal – Basement Level
117	CONTRACTOR ONLY	MT-2149-BT		3	Main Terminal – Basement Level
118	CONTRACTOR ONLY	MT-2158-BT		3	Main Terminal – Basement Level
119	CONTRACTOR ONLY	MT-3130-R		3	Main Terminal – Bag/Ramp Level
120	CONTRACTOR ONLY	MT-3133-R		3	Main Terminal – Bag/Ramp Level
121	CONTRACTOR ONLY	MT-3148-R		3	Main Terminal – Bag/Ramp Level
122	CONTRACTOR ONLY	MT-3159-R		3	Main Terminal – Bag/Ramp Level
123	CONTRACTOR ONLY	MT-3446-B		3	Main Terminal – Bag/Ramp Level
124	CONTRACTOR ONLY	MT-3457-B		3	Main Terminal – Bag/Ramp Level
125	CONTRACTOR ONLY	MT-4145-4F		1	Main Terminal – Penthouse Level
126	CONTRACTOR ONLY	MT-4149-4F		1	Main Terminal – Penthouse Level
127	CONTRACTOR ONLY	MT-5128A-T		2	Main Terminal – Concourse Level
128	CONTRACTOR ONLY	MT-5128B-T		2	Main Terminal – Concourse Level
129	CONTRACTOR ONLY	MT-5128C-T		2	Main Terminal – Concourse Level
130	CONTRACTOR ONLY	MT-5139A-T		2	Main Terminal – Concourse Level
131	CONTRACTOR ONLY	MT-5139B-T		2	Main Terminal – Concourse Level
132	CONTRACTOR ONLY	MT-5139C-T		2	Main Terminal – Concourse Level
133	CONTRACTOR ONLY	N-3061-R		5	North Satellite – Bag/Ramp Level
134	CONTRACTOR ONLY	N-3076-R		5	North Satellite – Bag/Ramp Level
135	CONTRACTOR ONLY	N. SAT RAMP ELEV NSA - P2000			TBD
136	CONTRACTOR ONLY	N1-5120-C		4	North Satellite – Concourse
137	CONTRACTOR ONLY	N10-5133-C		4	North Satellite – Concourse
138	CONTRACTOR ONLY	N12-5151-C		4	North Satellite – Concourse
139	CONTRACTOR ONLY	N13-5156-C		4	North Satellite – Concourse
140	CONTRACTOR ONLY	N15-5136-C		4	North Satellite – Concourse
141	CONTRACTOR ONLY	N2-5100-C		4	North Satellite – Concourse
142	CONTRACTOR ONLY	N3-5080-C		4	North Satellite – Concourse
143	CONTRACTOR ONLY	N6-5095-C		4	North Satellite – Concourse
144	CONTRACTOR ONLY	N8-5105-C		4	North Satellite – Concourse
145	CONTRACTOR ONLY	N9-5123-C		4	North Satellite – Concourse
146	CONTRACTOR ONLY	S-1061-TR		9	South Satellite – STS Level
147	CONTRACTOR ONLY	S-1101-TR		9	South Satellite – STS Level
148	CONTRACTOR ONLY	S-1103-TR		9	South Satellite – STS Level
149	CONTRACTOR ONLY	S-1118C-TR		9	South Satellite – STS Level
150	CONTRACTOR ONLY	S-16a/b Exit from Jetway		6	South Satellite – Concourse Level
151	CONTRACTOR ONLY	S-2061-M		7	South Satellite – FIS Level
152	CONTRACTOR ONLY	S-2118-M		7	South Satellite – FIS Level
153	CONTRACTOR ONLY	S-2139-M		7	South Satellite – FIS Level
154	CONTRACTOR ONLY	S-3041-R		8	South Satellite – Ramp Level
155	CONTRACTOR ONLY	S-3069-R		8	South Satellite – Ramp Level
156	CONTRACTOR ONLY	S-3069A-R		8	South Satellite – Ramp Level
157	CONTRACTOR ONLY	S-3094-R		8	South Satellite – Ramp Level

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 14 13a – Airport Personnel Identification/Access Control

No.	Type	Access Point ID	Alternate Description	AP (1) Sheet #	Map Reference
158	CONTRACTOR ONLY	S-3094A-R		8	South Satellite – Ramp Level
159	CONTRACTOR ONLY	S-3096-R		8	South Satellite – Ramp Level
160	CONTRACTOR ONLY	S-3118-R		8	South Satellite – Ramp Level
161	CONTRACTOR ONLY	S-3118A-R		8	South Satellite – Ramp Level
162	CONTRACTOR ONLY	S-3147-R		8	South Satellite – Ramp Level
163	CONTRACTOR ONLY	S-3147A-R RAMP		8	South Satellite – Ramp Level
164	CONTRACTOR ONLY	S. SAT LADDER TO CONVEYOR			TBD
165	CONTRACTOR ONLY	S1-5033-C	S01-5033-C	6	South Satellite – Concourse Level
166	CONTRACTOR ONLY	S1-5034-C	S01-5034-C EMR EX	6	South Satellite – Concourse Level
167	CONTRACTOR ONLY	S2-5028-C	S02-5028-C	6	South Satellite – Concourse Level
168	CONTRACTOR ONLY	S2-5018-C	S03-5018-C	6	South Satellite – Concourse Level
169	CONTRACTOR ONLY	S04-5004-C		6	South Satellite – Concourse Level
170	CONTRACTOR ONLY	S05-5003-C		6	South Satellite – Concourse Level
171	CONTRACTOR ONLY	S06-5002-C		6	South Satellite – Concourse Level
172	CONTRACTOR ONLY	S07-5006-C		6	South Satellite – Concourse Level
173	CONTRACTOR ONLY	S08-5004-C		6	South Satellite – Concourse Level
174	CONTRACTOR ONLY	S09-5014-C		6	South Satellite – Concourse Level
175	CONTRACTOR ONLY	S09-5016-C		6	South Satellite – Concourse Level
176	CONTRACTOR ONLY	S09-5031-C			TBD
177	CONTRACTOR ONLY	S-5034-C	S10-5034-C	6	South Satellite – Concourse Level
178	CONTRACTOR ONLY	S-5036-C	S10-5036-C	6	South Satellite – Concourse Level
179	CONTRACTOR ONLY	S11-5043-C		6	South Satellite – Concourse Level
180	CONTRACTOR ONLY	S12-5046-C		6	South Satellite – Concourse Level
181	CONTRACTOR ONLY	S16C/D-5035-C	S16-5035-C GATE C/D	6	South Satellite – Concourse Level
182	CONTRACTOR ONLY	S16A-5041-C		6	South Satellite – Concourse Level
183	CONTRACTOR ONLY	SAS TCK ROLL UP 1			TBD
184	CONTRACTOR ONLY	STEP - Elevator G Cab Baggage		3	Main Terminal – Bag/Ramp Level
185	CONTRACTOR ONLY	STEP - Elevator G Cab Ticketing		2	Main Terminal – Concourse Level
186	CONTRACTOR ONLY	STEP - Elevator M Cab		3	Main Terminal – Concourse Level
187	CONTRACTOR ONLY	STEP - Elevator M Cab Ticketing		2	Main Terminal – Concourse Level
188	CONTRACTOR ONLY	STEP - Elevator N Cab		2	Main Terminal – Concourse Level
189	CONTRACTOR ONLY	STEP - Elevator N Cab Baggage		2	Main Terminal – Concourse Level
190	CONTRACTOR ONLY	STEP - Elevator N Cab Ticketing		2	Main Terminal – Concourse Level
191	CONTRACTOR ONLY	STEP - Stairwell 13 Access Mezz		1	Main Terminal – Mezzanine Level

Contractor Access Mezzanine Level



STAIR 13
MEZZ ACCESS

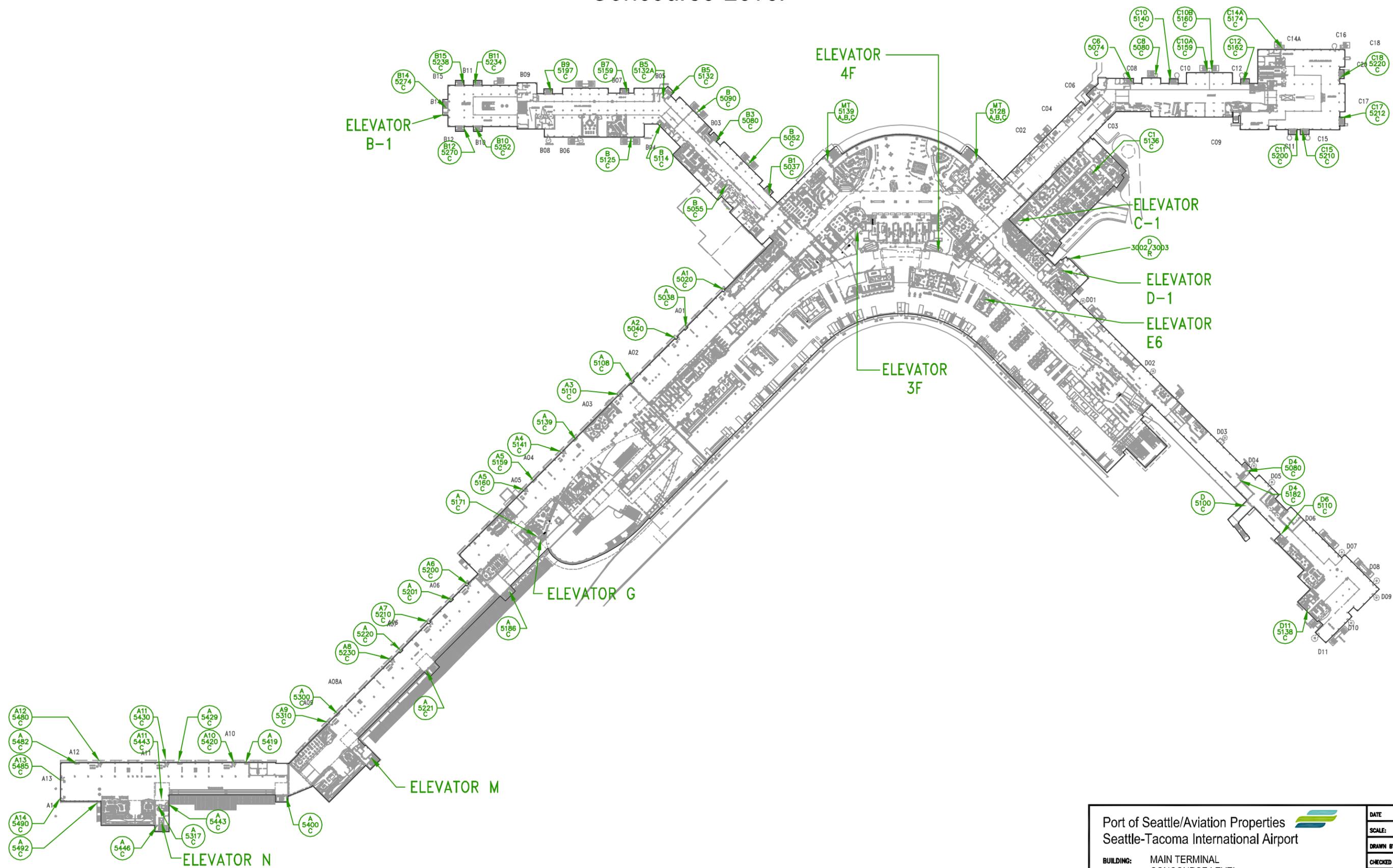
Port of Seattle/Aviation Properties
Seattle-Tacoma International Airport

BUILDING: MAIN TERMINAL
LEVEL: MEZZANINE LEVEL
LOCATION:

DATE:
SCALE:
DRAWN BY:
CHECKED BY:
EXHIBIT NO. AP(1) 1 OF 10

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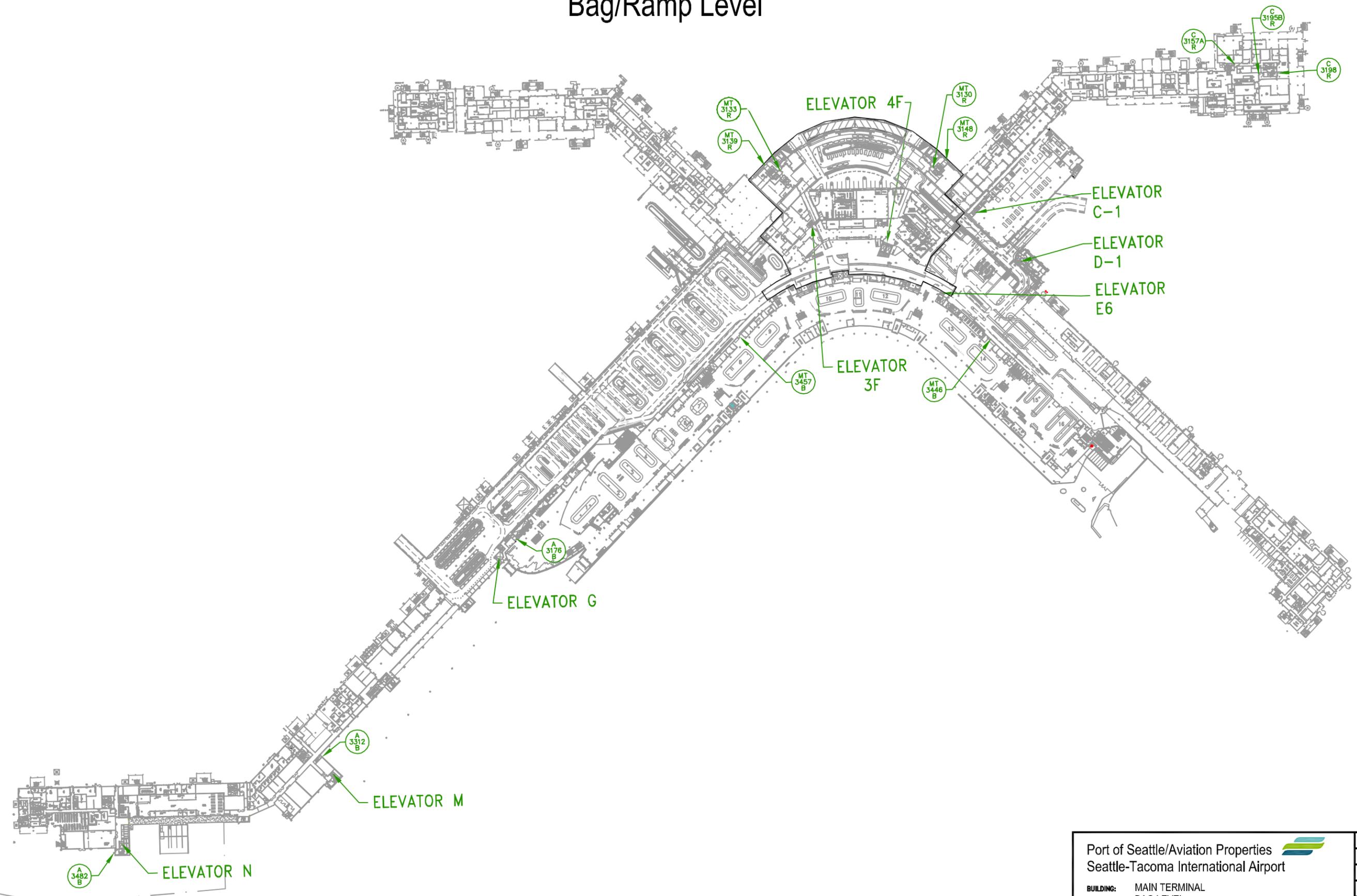
Contractor Access Concourse Level



Port of Seattle/Aviation Properties Seattle-Tacoma International Airport		DATE: SCALE: DRAWN BY: CHECKED BY: EXHIBIT NO.
BUILDING: MAIN TERMINAL LEVEL: CONCOURSE LEVEL LOCATION:	AP(1) 2 OF 10	

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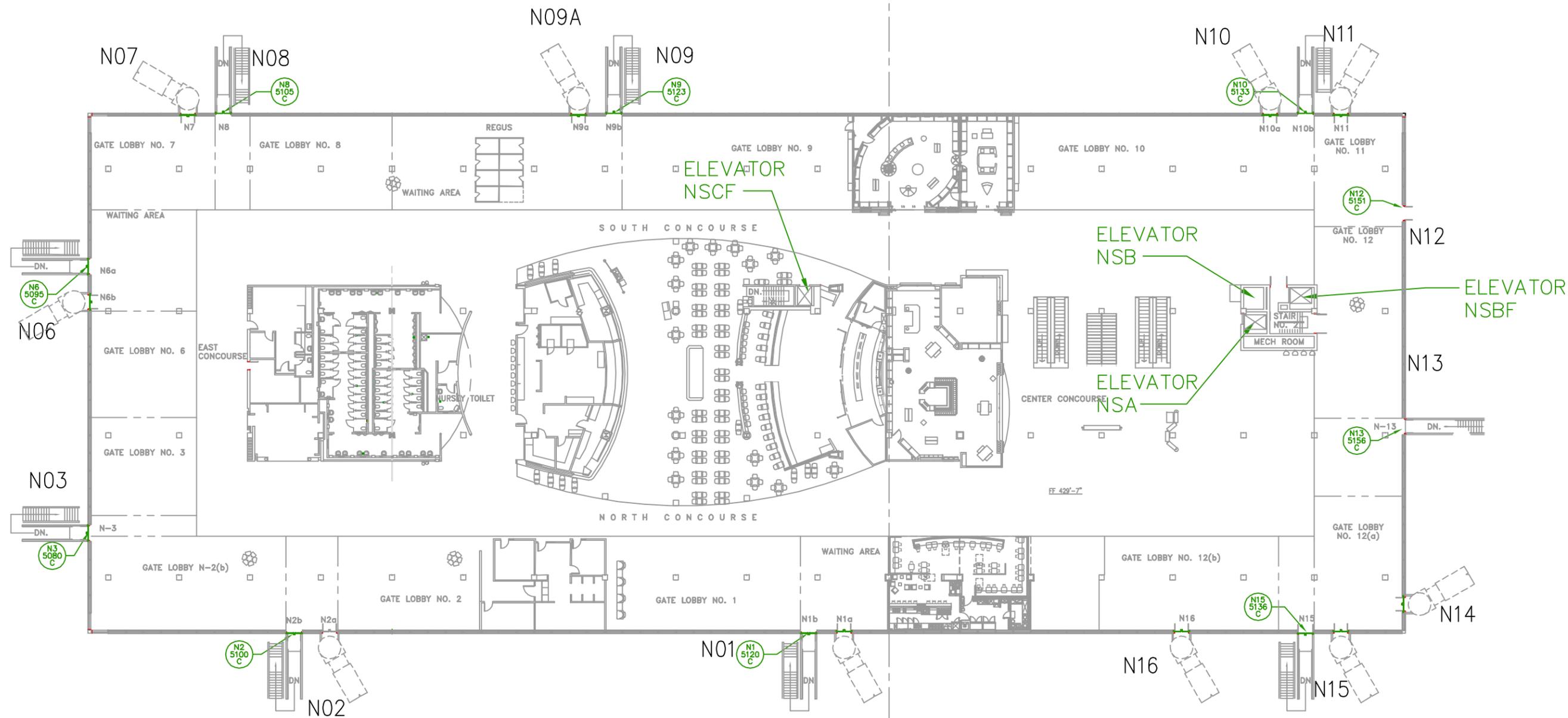
Contractor Access Bag/Ramp Level



Port of Seattle/Aviation Properties  Seattle-Tacoma International Airport		DATE: SCALE: DRAWN BY: CHECKED BY: EXHIBIT NO. AP(1) 3 OF 10
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LEVEL:	BAG LEVEL	
LOCATION:		

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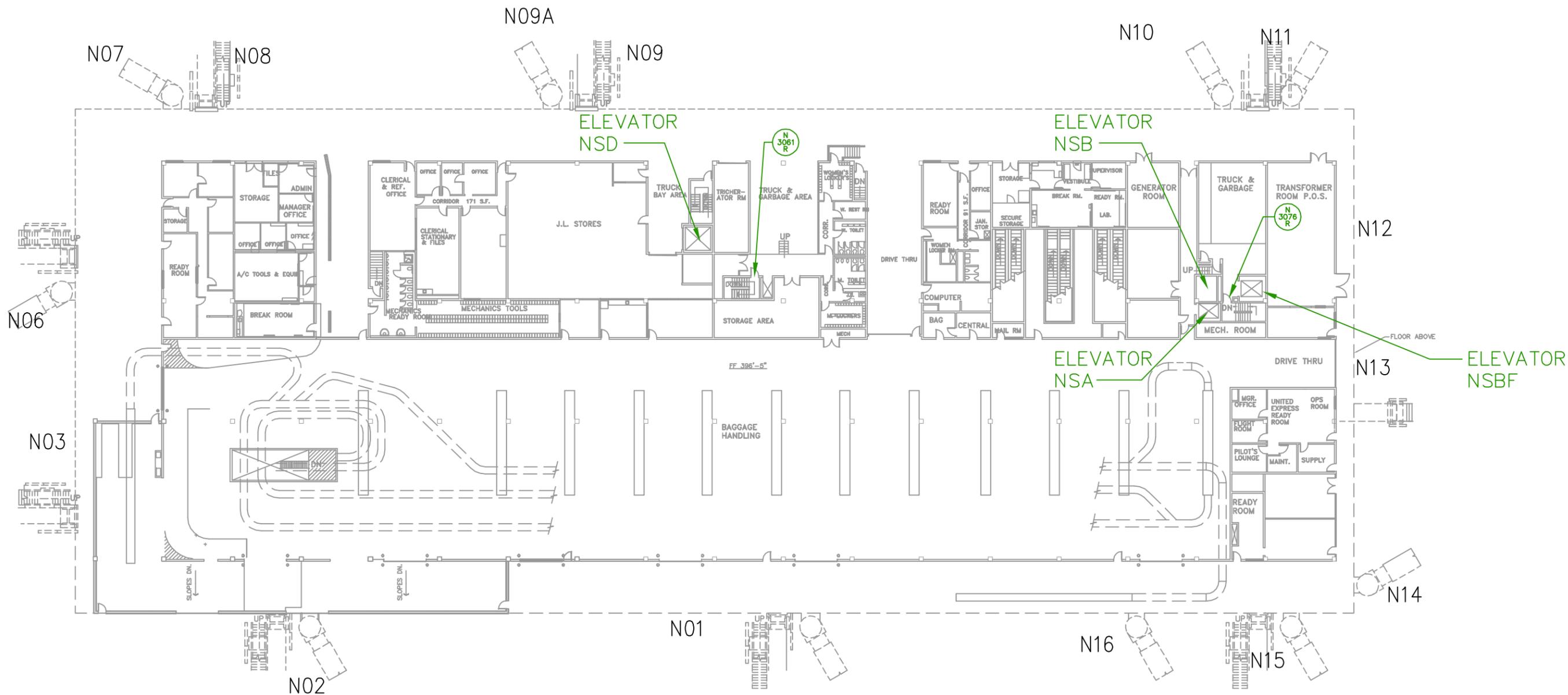
Contractor Access North Satellite Concourse Level



Port of Seattle/Aviation Properties Seattle-Tacoma International Airport		DATE:
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LEVEL: CONCOURSE		DRAWN BY:
LOCATION:		CHECKED BY:
		EXHIBIT NO. AP(1) 4 OF 10

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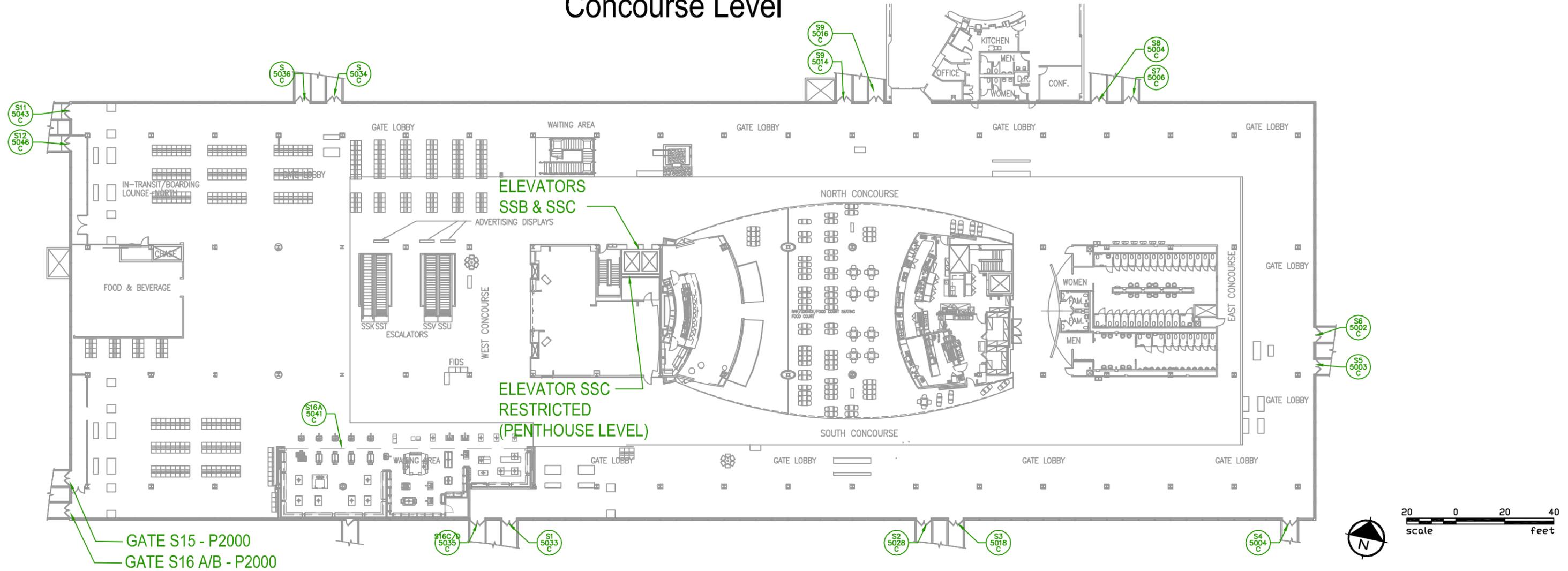
Contractor Access North Satellite Ramp Level



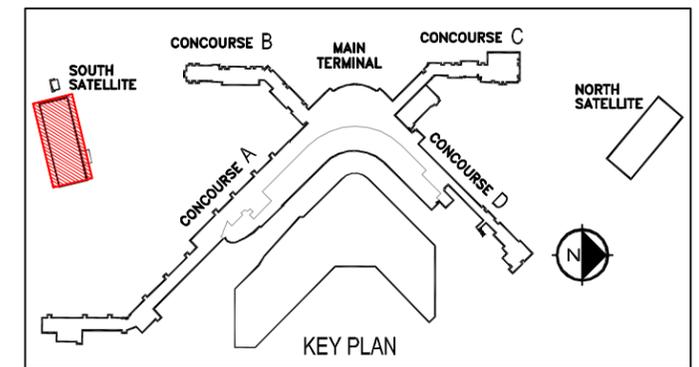
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LEVEL: RAMP		DRAWN BY:
LOCATION:		CHECKED BY:
		EXHIBIT NO. AP(1) 5 OF 10

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Contractor Access South Satellite Concourse Level



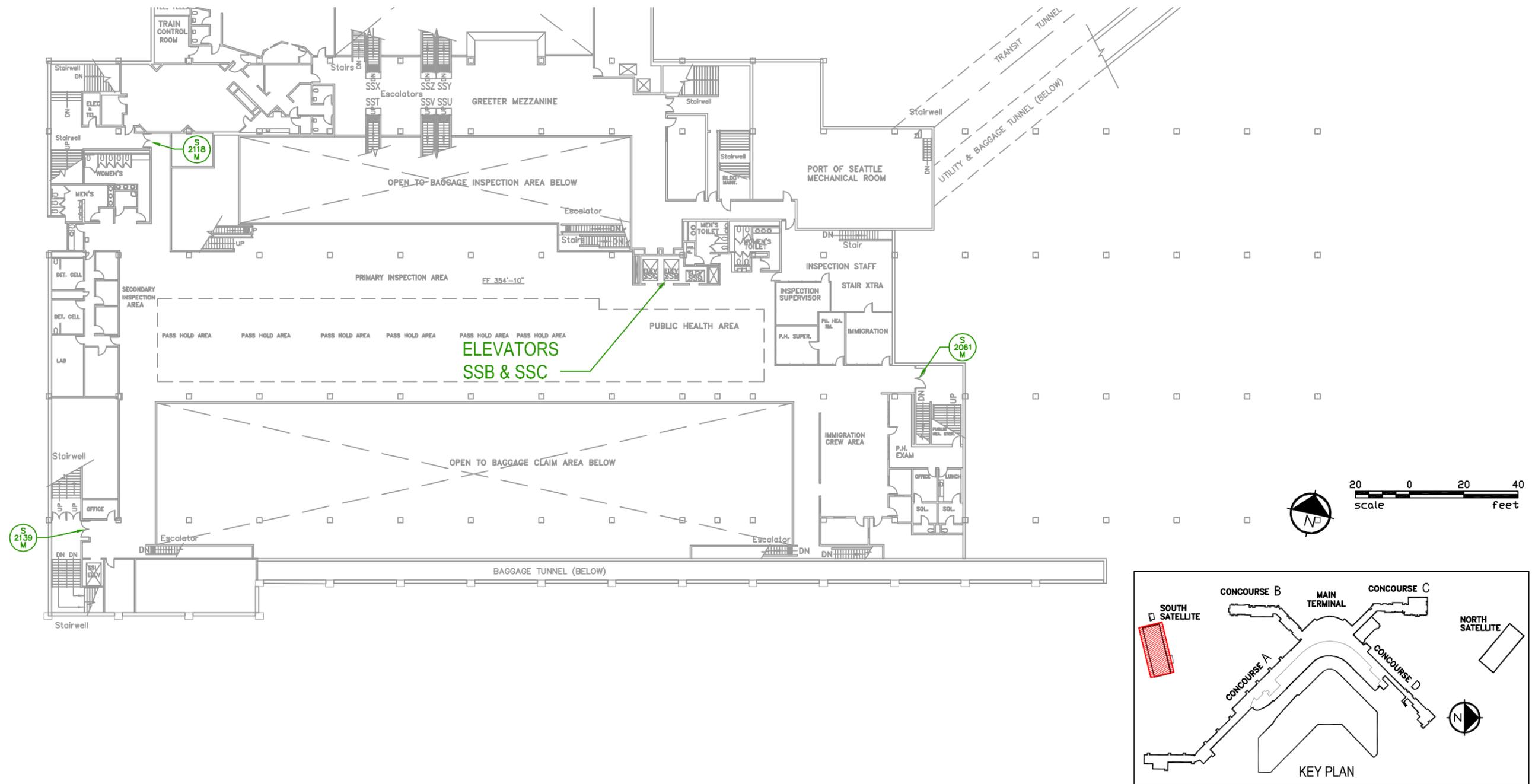
GATE S15 - P2000
GATE S16 A/B - P2000



Port of Seattle/Aviation Properties Seattle-Tacoma International Airport		DATE:
BUILDING: SOUTH SATELLITE		SCALE:
LEVEL: CONCOURSE		DRAWN BY:
LOCATION:		CHECKED BY:
		EXHIBIT NO. AP(1) 6 OF 10

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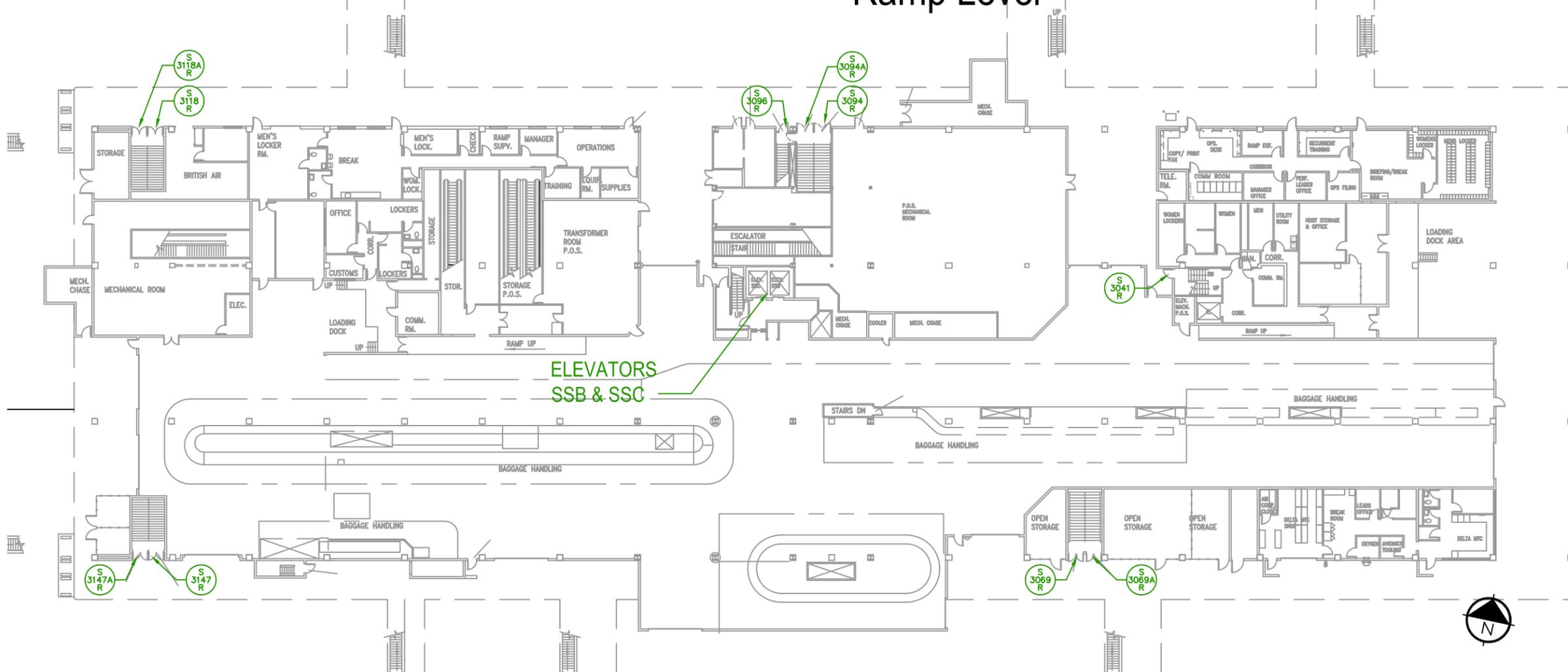
Contractor Access South Satellite FIS Level



Port of Seattle/Aviation Properties		DATE:
Seattle-Tacoma International Airport		SCALE:
BUILDING:	SOUTH SATELLITE	DRAWN BY:
LEVEL:	FIS	CHECKED BY:
LOCATION:		EXHIBIT NO.
		AP(1) 7 OF 10

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Contractor Access South Satellite Ramp Level



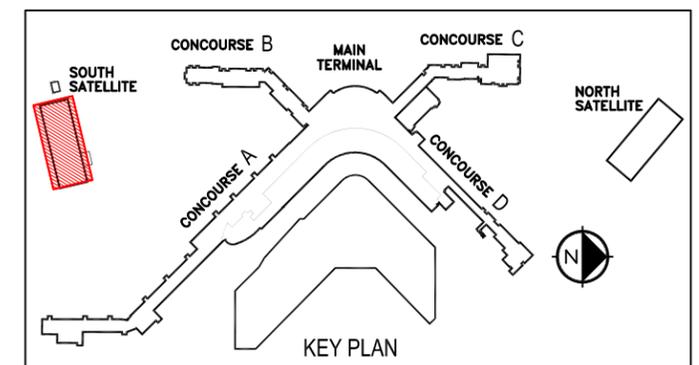
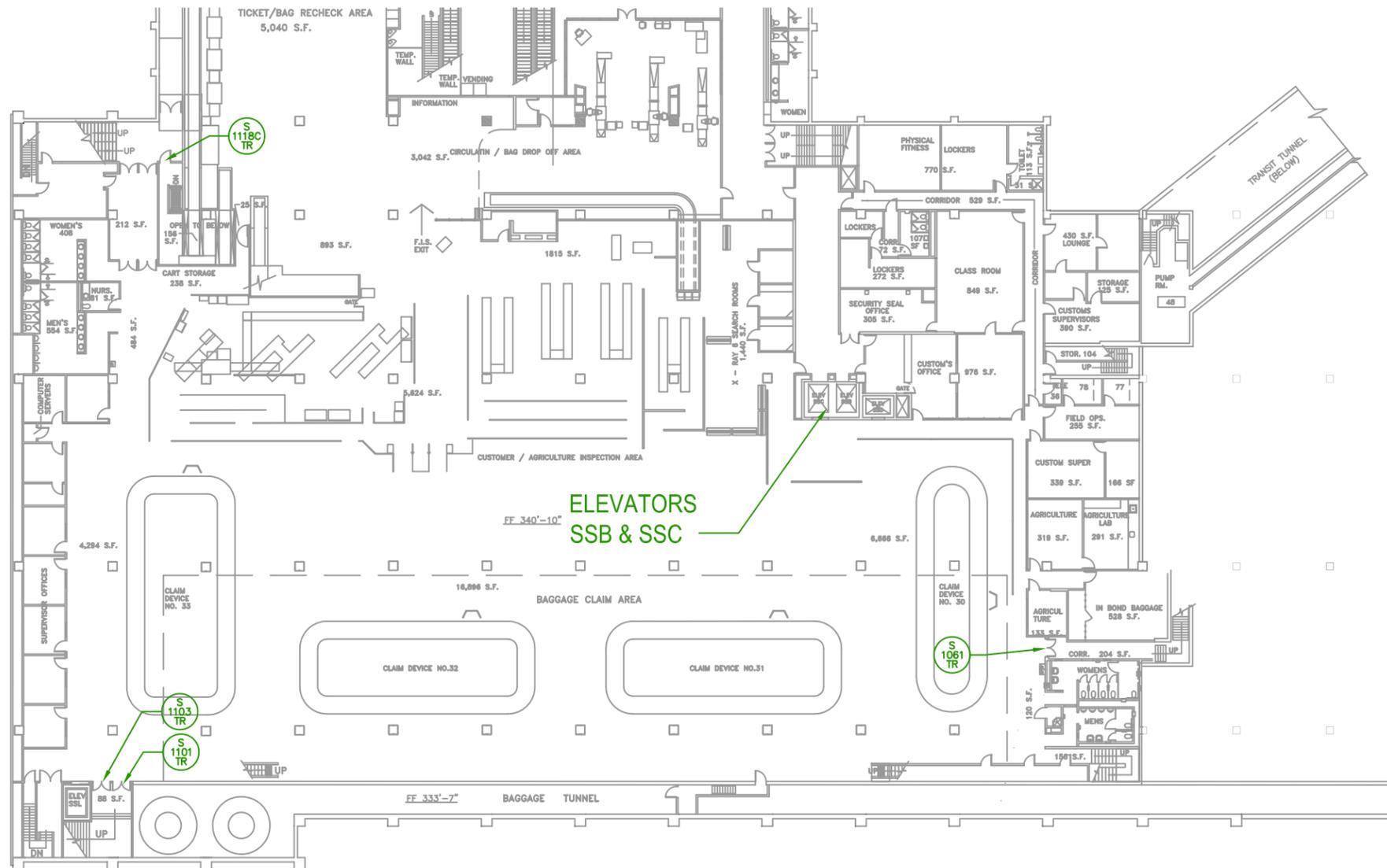
Port of Seattle/Aviation Properties
Seattle-Tacoma International Airport

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LEVEL: RAMP
LOCATION:

DATE
SCALE:
DRAWN BY:
CHECKED BY:
EXHIBIT NO. AP(1) 8 OF 10

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Contractor Access South Satellite STS Level



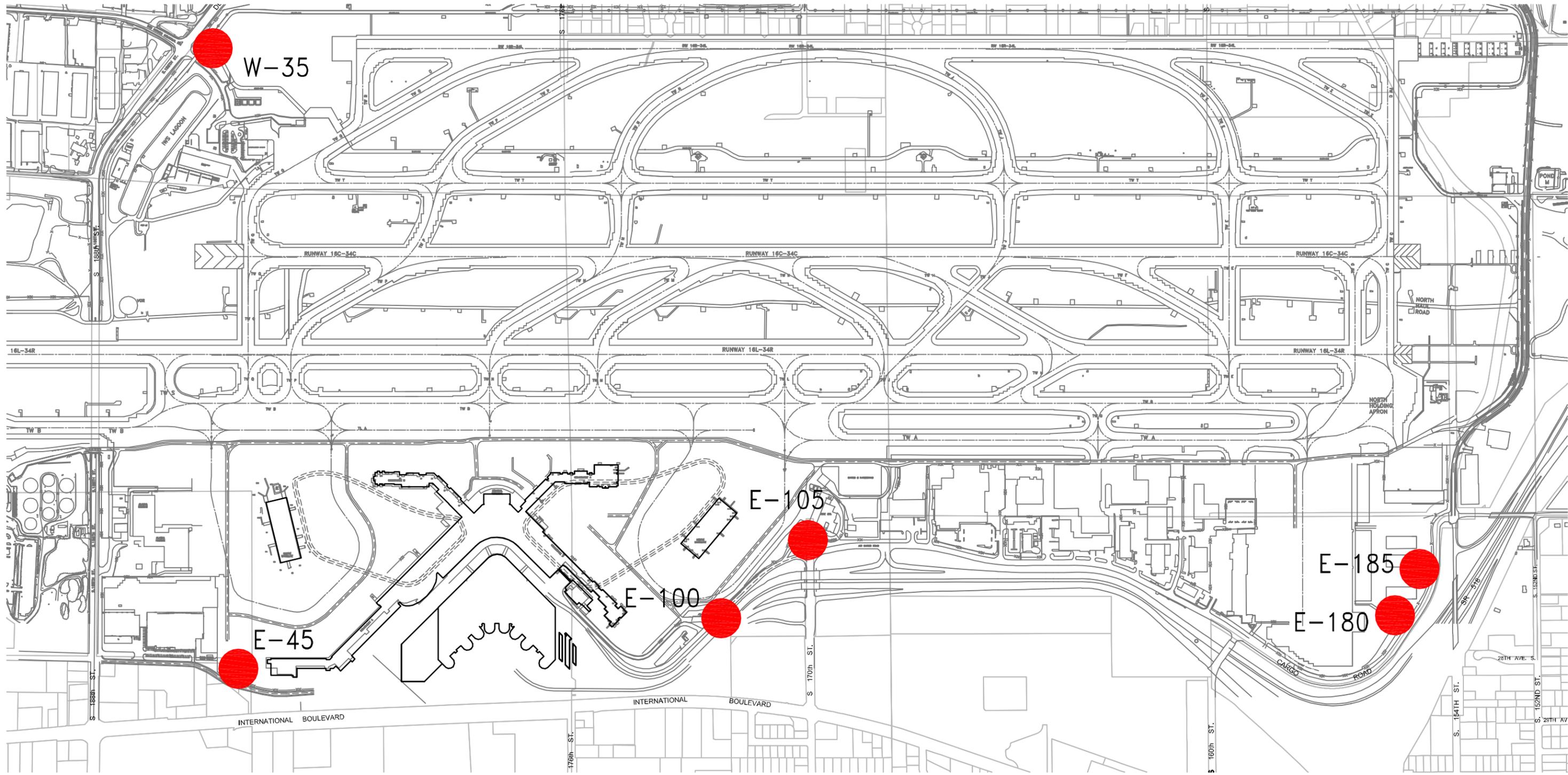
Port of Seattle/Aviation Properties
Seattle-Tacoma International Airport

BUILDING: SOUTH SATELLITE
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LOCATION:

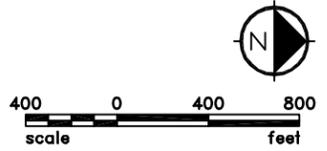
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CHECKED BY:
EXHIBIT NO. AP(1) 9 OF 10

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Security Gates



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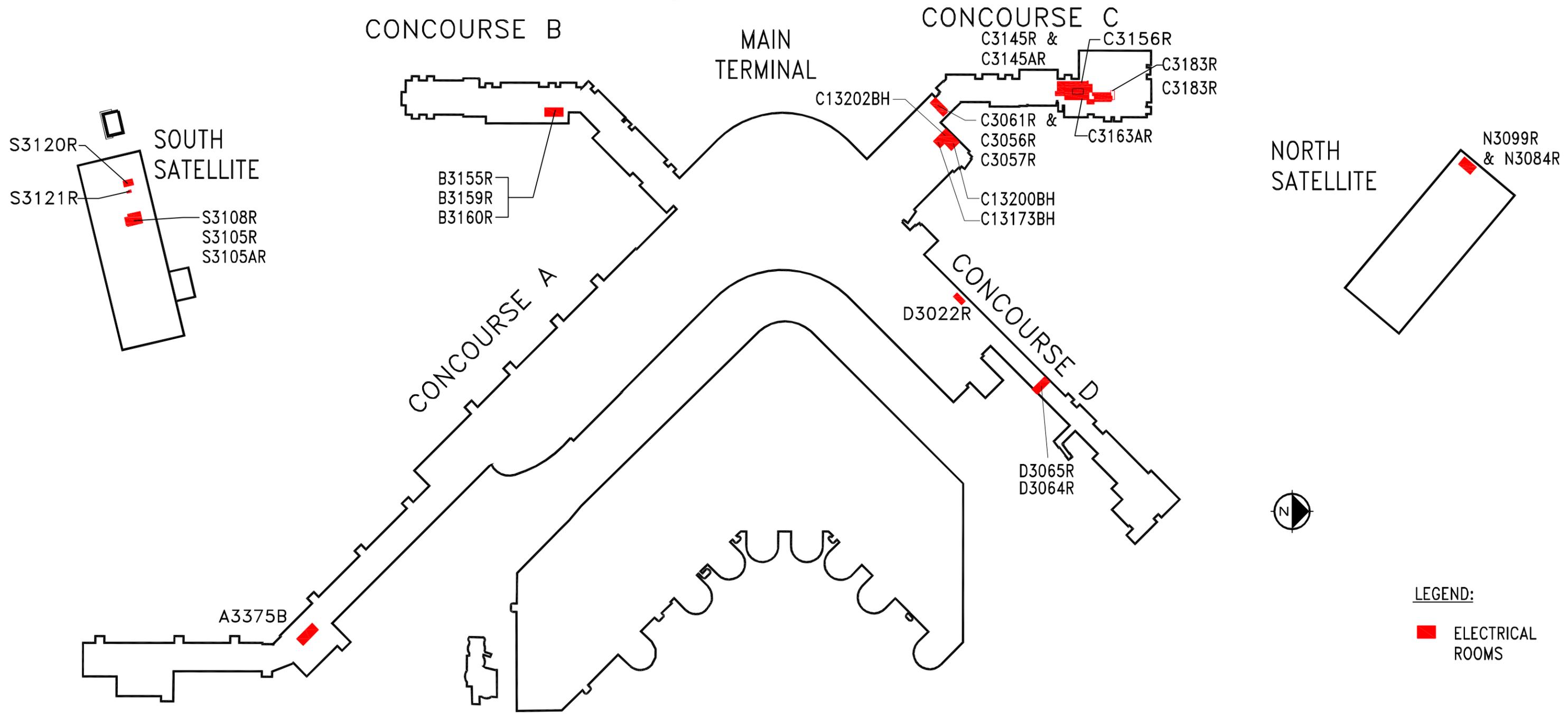


Port of Seattle/Aviation Properties
Seattle-Tacoma International Airport

BUILDING:
LEVEL:
LOCATION: SECURITY GATES

DATE:
SCALE:
DRAWN BY:
CHECKED BY:
EXHIBIT NO. AP(1) 10 OF 10

Sea-Tac International Airport Main Terminal & Satellites Bag Level

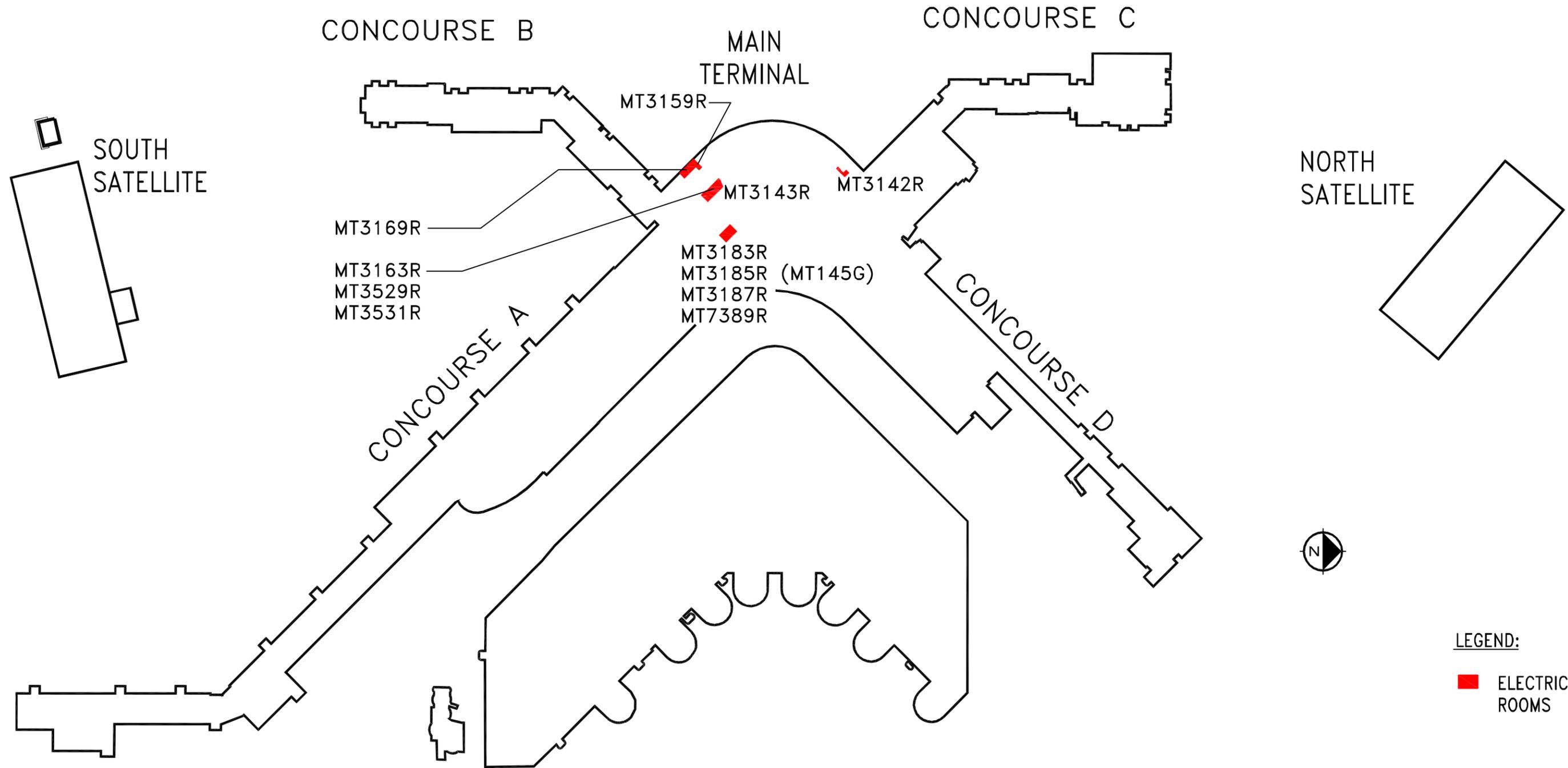


LEGEND:
■ ELECTRICAL ROOMS

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Port of Seattle/Aviation Properties		DATE:
Seattle-Tacoma International Airport		SCALE:
BUILDING: MAIN TERMINAL	DRAWN BY:	
LEVEL:	CHECKED BY:	
LOCATION:	EXHIBIT NO.:	

Sea-Tac International Airport Main Terminal & Satellites Bridge Level

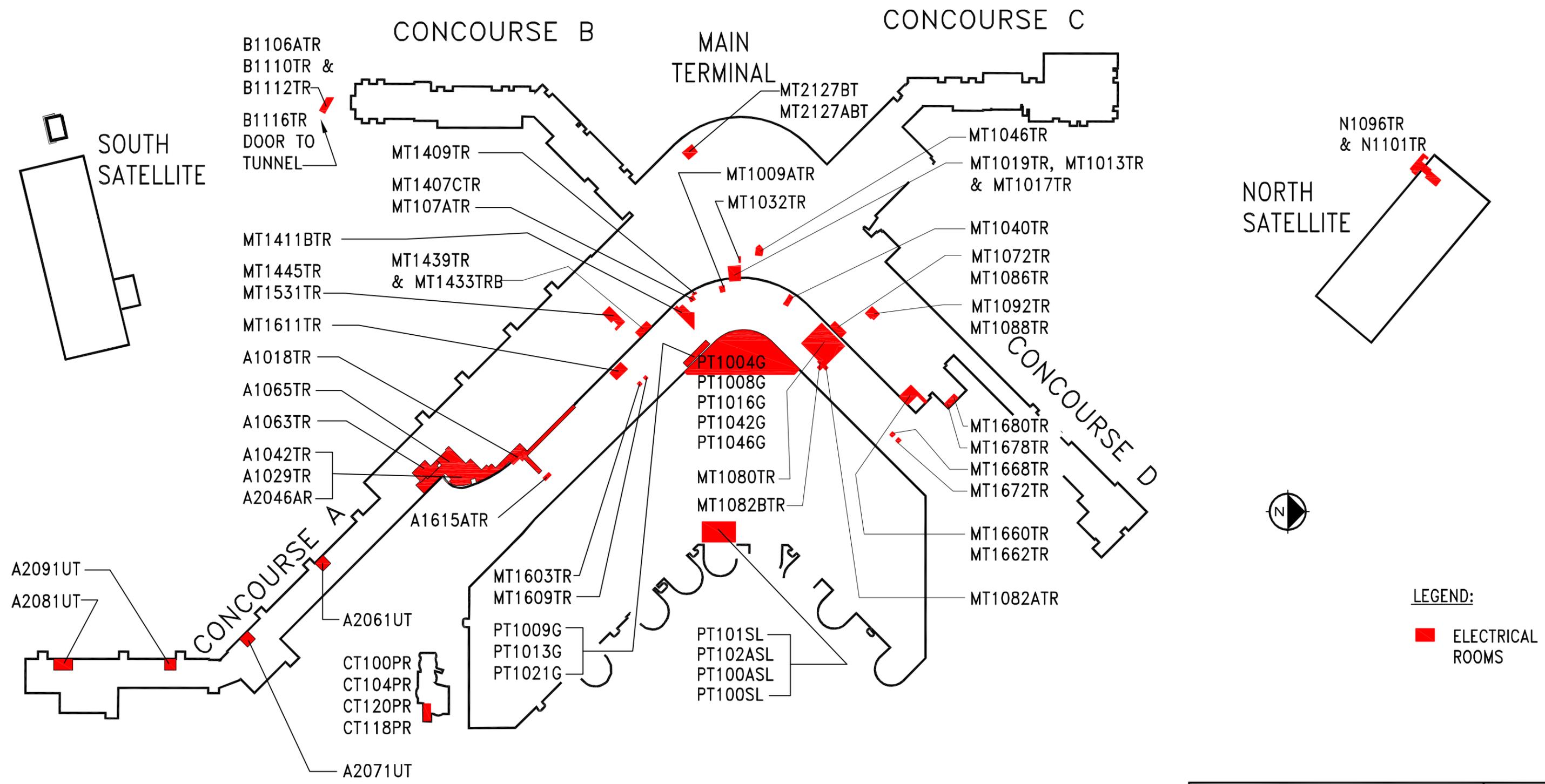


LEGEND:
■ ELECTRICAL ROOMS

Port of Seattle/Aviation Properties Seattle-Tacoma International Airport	DATE:
BUILDING: MAIN TERMINAL	SCALE:
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Sea-Tac International Airport Main Terminal & Satellites STS Level



LEGEND:
■ ELECTRICAL ROOMS

Port of Seattle/Aviation Properties Seattle-Tacoma International Airport	DATE: SCALE: DRAWN BY: CHECKED BY: EXHIBIT NO.
BUILDING: LEVEL: LOCATION:	

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APPENDIX 2: Project Specific Access Requirements

1. WORK IN U.S. CUSTOMS AREA

Anyone working inside the Federal Inspection Services (FIS includes Passport Control, Baggage Claim, the International Corridor, recheck area and Custom Border Protection (CBP) offices) must have a CBP Seal on an airport-issued SIDA badge or a CBP visitor badge and be under escort by a badged employee with a CBP Seal. All visitors, tours, media or high-level guests must be coordinated and pre-approved by CBP before entering the Customs Hall. Work for this project [will be OR will not be] conducted within these areas.

- A. Anyone working in other areas of the South Satellite are not required to have a CBP seal provided:
 - 1. They do not enter the footprint of an aircraft that is operating an international arrival (reverting to domestic status after cabin cleared by CBP's agriculture inspector AND all passengers and deadload have completely left the gate area.)
 - 2. They do not enter jetways of aircraft as described above.
 - 3. They do not enter the International/Sterile Corridor and associated escalators at any time.
 - 4. They stay completely clear of unloading of international arriving bags (from containers or carts) from aircraft to baggage belts leading down into Customs.
- B. Persons entering the vicinity of international operations are subject to challenge or search by CBP at any time; persons without a CBP Seal may be interviewed or asked to leave the area until international operations have completed.

2. CONTRACTOR ACCESS PLAN (CAP)

- A. Preliminary Contractor Access Plan [is included as attached OR is not included] for this project.

NOTE: If the project documents have a Contractor Access Plan include the following.

The attached Preliminary CAP with associated maps was developed during design and identifies a comprehensive list of supplemental key and access points, approver signatory authority, training requirements; custom seal requirements; and x-ray/escort requirements for the Work.

- B. The Contractor is required to submit a Final Contractor Access Plan as part of their submittals as identified in Section 01 32 19, Preconstruction Submittals.
 - 1. The Contractor is responsible to coordinate a site walk with the Engineer to review and confirm the plan. The submittal shall identify any additional access points (doors, gates, elevators or exterior penetrations for mobilizing materials) the Contractor identifies for the project.
 - a. The Contractor can request additional access for consideration, but it may not be granted.

- C. The Final Contractor Access Plan submittal shall be reviewed and approved by the appropriate Port stakeholders prior to the Contractor, its employees, Suppliers or Subcontractors submitting any requests for keys.

NOTE: If the project documents do not have a Contractor Access Plan include the following.

Upon Award, the Contractor will coordinate with the Engineer to review and confirm the default access list is sufficient for completing Work within the facility. If not, the contractor can submit a request for additional access utilizing the Contractor Access Plan, as part of the Preconstruction Submittal Process.

- B. The submittal shall identify any additional access points (doors, gates, elevators or exterior penetrations for mobilizing materials) the Contractor identifies for the project.
 - 1. The Contractor can request additional access for consideration, but it may not be granted.
- C. The Final Contractor Access Plan submittal shall be reviewed and approved by the appropriate Port stakeholders prior to the Contractor, its employees, Suppliers or Subcontractors submitting any requests for keys.

Appendix X: Contractor Access Plan

Preliminary

Final

Item #	Location of Access Point	Access Point ID Description	Keyed or Treated?	Approving Department	Approval Date	Additional Training?	Training Provided By	Comments
1	Concourse A	A-3226-B	Treated	Security	04/18/2011	N/A	N/A	STEP Concourse to South GT Lot
2	Concourse A	A-1015-TR	Treated	AV Maintenance	04/18/2011	N/A	N/A	STEP – C4 Penthouse Stair Vestibule
3	Concourse A	STEP Elevator C/D	Treated	AOB Property Manager	04/18/2011	N/A	N/A	STEP AOB Elevators & Mezzanine
4	AOA	Gate E-105	Treated	Security	Not Approved	Yes	ID Access	AOA Driver Training / 1 Hour Class
5	Service Tunnel	MT-1042-TR	Treated	Security	04/11/2011	N/A	N/A	South Service Tunnel
6	Central Terminal	A-9999-C	Keyed	AV Maintenance	04/11/2011	Yes	AV MAINT - Electrical	H5 Key / High Voltage Training / 2 Hour Class
7	Concourse A	A-3505-B	Treated	N/A	N/A	N/A	N/A	GML Arrivals Hall entry to bagwell
8	Concourse B	B-5505-C	Treated	N/A	N/A	N/A	N/A	Access to Concourse B ramp level hallway
9	Hudson News	Concourse A	Keyed	Business Development	04/20/2011	N/A	N/A	Adjacent to Gate A5
10								
11								
12								
13								
14								
15								
16								
17								
18								

MC- /WP #

DO NOT CHANGE OR MODIFY WITHOUT SEAPORT SECURITY CONCURRENCE

PART 1 GENERAL

1.01 RELATED WORK DESCRIBED ELSEWHERE

- A. The provisions and intent of the Contract, including the General Conditions, Supplementary Conditions and General Requirements, apply to this work as if specified in this section. Work related to this section is in accordance with current Department of Homeland Security (DHS) and U.S. Coast Guard regulations.

1.02 SECURITY REQUIREMENTS

- A. Identification/Access Badges:
 - 1. All Contractor personnel working in secure and restricted areas (as defined in Title 33, Code of Federal Regulations (CFR) Parts 104, 105 and 106) on this project shall have valid Department of Homeland Security issued Transportation Worker Identification Credential (TWIC) in accordance with Title 33, CFR, Part 101.514.
 - 2. A portion of this Contract requires work to be performed within an area of the Seaport controlled for security reasons. That area is defined as the area within a Coast Guard Regulated facility subject to the provisions of the Maritime Transportation Security Act (MTSA) of 2002 and Title 33 CFR, Part 105, delineated by security fence, and all other restricted areas indicated on applicable drawings, or as posted on the Seaport premises ("restricted/secured area"), or otherwise defined under each Terminal Facility Security Plan. No Contractor personnel are allowed to work in these restricted areas without a valid TWIC.
- B. Restricted Area Training:
 - 1. All individuals requiring unescorted access to restricted areas will be required to provide documentation that they have successfully completed basic security awareness training as required in 33 CFR 105.215. This training must be completed prior to allowing unescorted access to restricted areas of Port of Seattle marine terminals subject to 33 CFR 105.

1.03 ISSUANCE OF IDENTIFICATION BADGES

- A. In order to obtain a TWIC, the Contractor must apply for a TWIC card through the TWIC program as administered by the Transportation Security Administration (TSA). Information on this program can be found on the internet at <http://www.tsa.gov/twic>.
- B. All work and expenses required to obtain a TWIC or for other activities required in this section shall be borne by the Contractor as part of the Contract.

1.04 RULES AND REGULATIONS REGARDING IDENTIFICATION BADGES

- A. TWIC cards must be worn at all times on the outermost garment above waist height in order to gain access to and remain in restricted areas.

- B. Any employee found in a restricted area without a valid TWIC will be escorted from that location and not be allowed to return until wearing a proper TWIC. This will be reported to the National Response Center as a security breach.
- C. Employees shall be allowed access to the restricted areas only as necessary to travel to and from the construction/job site. Any employee found in any portion of the restricted areas other than the construction/job site or the area to and from the construction/job site will no longer be permitted to work at the Seaport in a restricted area.
- D. Escorting:
 - 1. Escorts must comply with the requirements of 33 CFR 101 and 105, and be authorized by the Facility Security Officer, or designee, of the facility where escorting is to be performed.
 - 2. Only those individuals with a valid TWIC authorized access to a particular door/gate, may escort no more than five (5) individual(s) in direct line of sight at all times. Those persons being escorted must possess a valid form of identification that must, at a minimum meet the following requirements:
 - a. Be laminated or otherwise secure against tampering;
 - b. Contain the individual's full name (full first and last names, middle initial is acceptable);
 - c. Contain a photo that accurately depicts that individual's current facial appearance; and
 - d. Bear the name of the issuing authority.
 - e. The issuing authority must be:
 - (1) A government authority or an organization authorized to act on behalf of a government authority.
 - 3. THE ESCORT MUST REMAIN WITH THE INDIVIDUAL(S) BEING ESCORTED AT ALL TIMES WHILE IN RESTRICTED AREAS.
- E. Lost or Stolen TWIC.
 - 1. All TWIC's that are lost, stolen, or otherwise unaccounted for must be immediately reported to the Transportation Security Agency TWIC help desk 1-866-DHS-TWIC.
 - 2. After the applicant reports the card as lost, stolen, or damaged, the help desk will contact the card production facility to trigger production of a replacement TWIC. The replacement credential will be sent to the enrollment center designated by the applicant for pick up.
 - 3. TSA will add the lost, stolen, or damaged credential to the list of revoked cards to decrease the chance that the credential could be used by an unauthorized person to gain unescorted access. This list of revoked cards (the 'hotlist') will be available on the TWIC portal to appropriate individuals within the maritime community (Vessel Security Officer, Facility Security Officer, Coast Guard Captain of the Port) in order to monitor access to secure areas. Once the replacement TWIC arrives at the enrollment center, the applicant will pick up and pay the card replacement fee. The replacement card will have the same expiration date as the original.

- F. Unsecured Doors/Gates: Contractors and their employees will be held accountable for doors and gates located within their work sites that provide direct or indirect access to restricted or secured areas of the Port by unauthorized individuals. Doors and gates that provide such access must NOT, under ANY circumstances, be left open and unattended. Individuals who have been issued TWIC cards are required to challenge any individual attempting unauthorized access to restricted areas and report all violations to the terminal security staff immediately.
- G. Contractors requiring access through vehicle gates not normally staffed must make arrangements for access through the Facility Security Officer or designated security staff on the marine terminal.

1.05 FAILURE TO COMPLY

- A. Compliance with these regulations and TSA directives will be monitored by the Seaport Security Coordinator, other Port personnel or other regulatory agencies. Failure on the part of the Contractor to comply may result in fines or other monetary considerations levied against the Port. In the event an action or absence of action, by the Contractor with regard to the TSA directive leads to any damages against the Port, the Contractor shall be liable for, and reimburse the Port for, all costs involved.

1.06 SPECIAL REQUIREMENTS, WORK IN U.S. CUSTOMS AREA

- A. Work conducted inside areas controlled by the U.S. Customs Service in maritime terminals of the Port, may require special clearance and identification issued by the Customs Service. In addition, the Customs Service may require that a bond be provided by the Contractor, as security for all work conducted within their area.
- B. It shall be the Contractor's responsibility to coordinate with the U.S. Customs Service, secure necessary clearance from them, and provide bonds as required. All costs for securing U.S. Customs identification and clearance, and the providing of their required bonding, shall be at the Contractor's expense. No separate or extra payment of any kind will be made to the Contractor for satisfying these requirements.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project]

End of Section

READ THIS FIRST

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PART 1 GENERAL

1.01 DESCRIPTION

- A. This section identifies the requirements for identifying and measuring work and applying for contract payments.

1.02 REQUIRED SUBMITTALS

- A. Preconstruction Submittals:
 - 1. Submittals shall be made in accordance with the requirements of Section 01 32 19 - Preconstruction Submittals and as specified herein.
 - 2. As part of the Preconstruction Submittal, submit a Schedule of Values, which is a complete cost breakdown of all lump sum bid items, whether for the entire Contract or lump sum bid items, showing the value assigned to each part of the Work (activity), including allowance for overhead and profit. Upon acceptance of the Schedule of Values by the Engineer, it shall be used as a basis for all lump sum progress payments.
 - a. The cost of each activity shall be a portion of the lump sum price as it relates to each activity. The cost shall include labor, material, overhead and fee. Normally, cost for order/delivery activities will not be allowed. The cost of material and equipment shall be associated with the installation of such material and equipment unless otherwise required by the Engineer. The total cost of all activities shall equal the lump sum bid price for the bid item or total Contract as applicable.
 - b. On material where the Contractor anticipates requesting payment in advance of installation, it shall be identified as a separate line item in the Schedule of Values.
 - 3. As a Preconstruction Submittal , submit the force account labor and equipment rates:
 - a. Submit for the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be

performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead or profit. Rates shall be submitted for straight time, overtime and double time. Once the rates have been reviewed and accepted, they will become the basis for pricing labor in Change Order Work. Contractor shall provide proof of all labor rate costs as required by the Engineer including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment Security Department. If labor rates change during the course of the project the Contractor may submit new rates for acceptance.

- b. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown in the current Rental Rate Blue Book as modified by AGC\WSDOT Equipment Rental Agreement as stated in the General Conditions. In the event a specific piece of equipment does not appear or is applicable to the Rental Rate Blue Book as modified by the AGC\WSDOT Rental Rate Agreement specified rate, a rate shall be developed based on the terms of the Rental Rate Blue Book criteria. Once these rates are reviewed and accepted, they shall be used as the basis for pricing Change Order work.
- c. No change orders will be processed for the Contractor or subcontractor until the respective labor and equipment rates have been submitted and accepted.

B. Applications for Payment:

- 1. For each application for payment the Contractor shall submit the following:
 - a. Completed "Application and Certificate for Payment" on form as required by Division 1 or as established by the Engineer.
 - b. Schedule and narrative update as required by the applicable schedule section of the Project Manual.
 - c. Certification that as-built drawings are current per Section 01 77 00 - Project Closeout.
 - d. Certification of Payment to subcontractors and suppliers. Also, the Contractor shall submit, with each application for progress payment, a completed form titled "Monthly Amounts Paid to All Subcontractor Participants." The Prime Contractor is to include all of its Subcontractors on this form.
 - e. "Application and Certificate of Payment" shall be submitted on the date specified General Conditions.

C. Final Application for Payment:

1. Refer to Section 01 77 00 - Project Closeout and the General Conditions, for other requirements. For application for payment, the Contractor shall submit the following:
 - a. Completed "Application and Certificate for Payment" on form as required in Division 1 or as established by the Engineer showing the Work 100% complete.

1.03 PREPARATION OF APPLICATIONS FOR PAYMENT

- A. All required information on the forms shall be legible.
- B. Execute certification of signature of authorized officer.
- C. Identify percentage complete for each item on the accepted Schedule of Values.
- D. List each authorized Change Order, listing Change Order number and dollar amount as for an original item of Work.
- E. A letter certifying payment to subcontractors as required by the General Conditions.

1.04 PAYMENT FOR STORED MATERIAL

- A. Payment for stored items will be in accordance with –the General Conditions.
- B. Proof of Need. With payment request for stored material, submit a copy of purchase order and payment voucher clearly identifying the material, specification reference, Contract number, and price. The following additional documentation may be included:
 1. Notarized certification of payment from supplier.
 2. Copy of canceled check to supplier.
 3. Lien release from supplier.
- C. Stored material items may be included in monthly application for payment only after drawings and data submittals, if any are required, have been completed per Contract Documents.
- D. Verification of price and payment: the Contractor shall demonstrate that the costs of materials have been paid and will establish the Port's title to such materials or equipment or otherwise protect the Port's interest including applicable insurance and transportation for those items stored off-site.
- E. Partial payment for materials and equipment in advance of installation shall not constitute acceptance thereof and will not relieve Contractor of full responsibility for condition and subsequent acceptance by the Port. Faulty materials discovered will be rejected even through partial payment may have been made.

1.05 SUBSTANTIATING DATA

- A. When the Port requires substantiating information, submit data within seven (7) days of request justifying line item amounts in question.

1.06 UNIT PRICES

- A. Any unit prices listed in the Bid Form are complete including labor, plant, equipment, products, fees, and any incidental charges; and including allowance for

overhead and profit. Unit prices are not for work required by the Drawings and Specifications that are stated as lump sums in the Base Bid.

1.07 MEASUREMENTS STANDARDS

- A. Measurement and payment descriptions for each item listed in the Bid Form are as set forth throughout the applicable sections of the Contract Documents and as noted herein.
 - 1. All bid items of work acceptably completed under the Contract will be measured by the Engineer according to United States standard measure.
 - 2. Measurements will be made as hereinafter provided unless otherwise provided for by their individual measurement specifications.
 - 3. The method of measurement and computations to be used in determination of quantities of material furnished or of Work performed under the Contract will be those methods generally recognized as conforming to accepted engineering practice and will be carried to the proper significant figures or fractions of units for each item to conform to the usual practice of the Port Engineering Department.
 - 4. Items of Work for which payment is made by a "Lump Sum" will be measured as a complete unit. Partial payment, if made, will be made according to (the completed percentage of the Lump Sum unit as determined by the Engineer) (the completed percentage of the various components of the lump sum item detailed in a Schedule of Values).
- B. Weighing Equipment:
 - 1. Scales for the weighing of natural, manufactured or processed construction materials obtained from natural deposits, stockpiles or bunkers, which are required to be proportioned or measured and paid for by weight, shall be furnished, erected and maintained by the Contractor, or be certified, permanently installed commercial scales.
 - 2. In the event the Contractor elects to furnish, erect and maintain weighing equipment at the site, such equipment shall meet the requirements and conditions set forth in State of Washington Standard Specifications for Road, Bridge and Municipal Construction, current edition.
- C. Measurement of Quantities:
 - 1. Unless otherwise specified, measurements will be made horizontally or vertically. In determining the area for items bid on a square yard basis, the measurements will be on the neat dimension indicated on the drawings or as altered by the Engineer.
 - 2. Structures will be measured according to neat lines indicated on the drawings or as altered by the Engineer to fit field conditions.
 - 3. All items which are measured by the linear foot, such as sewers, water mains, pipe culverts, gutters, under-drains, etc., will be measured parallel to the base or foundation upon which such structures are placed, unless otherwise noted on the drawings or specifications. Drainage system pipes, including but not limited to storm drain, sewer or IWS, are measured to the inside face of the manhole or catch basin. Pressurized pipes, including but not limited to water mains, are measured to the point of connection.

4. In computing volumes of excavation and embankment, the method used will be average end-area method, or as stated in the appropriate sections of the specifications.
5. The term “gage,” when used in connection with the measurement of plates, means the U.S. Standard Gage, except that when reference is made to measurement of galvanized sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing, the term “gage” or thickness means that specified in AASHTO M 36, M 167, M 196, M 197 or M 219. Corrugated siding or roofing or coated material gage shall refer to material measurement before coating or covering.
6. When the term “gage” refers to the measurement of wire, it means the wire gage specified in AASHTO M 32.
7. The term “ton” means the short ton consisting of 2,000 pounds avoirdupois. All materials that are measured or proportioned by weight shall be weighed in accordance with the standards set forth in this section. Trucks used to haul material being measured by weight, shall be weighed empty and each truck shall bear a plainly legible identification mark.
8. Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. When required by the Engineer, the loads shall be leveled when the vehicles arrive at the point of delivery to facilitate measurement.
9. When a complete structure or structural unit or piece of equipment is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.
10. When standard manufactured items are specified, such as railroad rail, ties, fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions, not including bolts or other connectors. Unit Prices bid should include allowances for any bolts and connectors. Unless more stringently controlled by tolerance in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
11. No measurement will be made for work performed or materials placed outside of lines indicated on the plans or established by the Engineer; materials wasted, used or disposed of in a manner not called for under the Contract; material rejected after it has been placed, by reason of the failure of the Contractor to conform to the provisions of the Contract; hauling and disposing of rejected materials; material remaining on hand after completion of the work; or other Work or material payment for which is contrary to the provisions of the Contract.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

READ THIS FIRST

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Only use this section if there are Alternate Bid Items.

PART 1 GENERAL

1.01 SCOPE OF SECTION

- A. This section identifies each alternate by number and describes the basic changes to be incorporated into the Work, if and when that Alternate is made a part of the Work by Contract.
- B. Alternates may be awarded or rejected at the discretion of the Engineer.
- C. Related requirements in other parts of the Contract Documents include:
 - 1. Method of quotation of the cost of each Alternate and the basis of the Port’s acceptance of the Alternates is indicated on the Bid Form, Document 00 41 00 and within this section.
 - 2. Incorporation of Alternates into the Work is identified by the Port.
- D. Referenced sections of specifications stipulate pertinent requirements for products and methods to achieve the work specified for each Alternate.
- E. The work of each Alternate includes the requirement to coordinate pertinent related work and includes modifications, adjustments and revisions to other parts of the work necessitated by adding, deleting or the changes brought about by Alternate work.

1.02 DESCRIPTION OF ALTERNATES

Provide description of each alternate in this section.

SAMPLE BELOW

- A. Alternate No. 1 - Pan Am Hanger
 - 1. Demolition and Removal: Remove existing dirt, debris and blisters.
 - 2. New Roofing: Clean and prepare substrate. Install two-ply cold process asphalt roofing system with granules, and associated details.

B. Alternate No. 2 - Main Terminal Observation Decks

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

Measurement and payment will be described for each alternate.

4.01 GENERAL

A.

End of Section

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PART 1 GENERAL

1.01 SUMMARY

- A. This Section describes product options available to the Contractor, plus procedures for securing acceptance of proposed substitutions during construction in coordination with the requirements set forth in the General Conditions.

1.02 SUBSTITUTION REQUIREMENTS

- A. If the Contractor wishes to furnish or use substitute materials, equipment, or processes in connection with this Contract, the Contractor shall make a written application to the Engineer for consideration of the substitute, together with a certification by the Contractor that the proposed substitute will adequately perform the functions called for in the project design, is of similar and equal substance to the equipment, material, or process named, is suited to the same use, complies with all codes, laws, or regulations affecting the Work and is capable of performing the same function as the materials, equipment, or process named in the Contract Documents. Substitutions shall be provided at no additional cost or time impact to the project. The Contractor is responsible to coordinate all associated Work that may be affected by the substitution. The application shall also state whether or not acceptance of the substitute will require a change in the Contract Documents to adapt the design to the substitute and whether or not the use of the substitute is subject to payment of any license fee or royalty by the Contractor.
- B. All variations of the proposed substitute from the materials, equipment, or process named in the specifications shall be identified in the Contractor’s application, including variations between maintenance, repair and replacement service entities.
- C. Should any proposed product substitution require any re-design Work by the Design Consultant or the Design Consultant’s consultants to accommodate the substitute product, costs for such re-design Work shall be the responsibility of the Contractor.

1.03 SUBMITTALS

- A. Substitution submittal procedure:

1. All substitution submittals shall be accompanied with the attached Substitution Request Form completely filled out. Limit each request form to one proposed substitution.
2. Submit complete sets of substitution request forms and supporting data as required by Section 01 33 00 - Submittals.
3. Clearly indicate with red arrows on the supporting data the proposed substitution and accessories.

1.04 EVALUATION AND REVIEW

- A. The evaluation and acceptance or rejection of the proposed substitute shall not be grounds for an increase in the Contract Time or the Contract Sum.
- B. The Engineer may require that the Contractor furnish, at no additional expense to the Port, additional data concerning the proposed substitute. The Engineer will be allowed a reasonable time within which to evaluate the proposed substitute. The Engineer will be the sole judge of the acceptability of the proposed substitute.

1.05 TIME

- A. The Contractor shall allow forty-five (45) days for review and evaluation of requests for substitutions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

Section 01 25 00 Substitution Request Form

TO:

PROJECT NAME:

We hereby submit for consideration, the following product instead of the specified item for the above project:

Section	Paragraph	Specified Item
---------	-----------	----------------

Proposed Substitution:

Attach complete dimensional information, engineering calculations, and technical data including laboratory tests, if applicable.

Include complete information on changes to Drawings or specifications which proposed substitution will require for its proper installation.

Submit with request all necessary samples and substantiating data to provide equal quality, performance, and appearance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance. Differences in quality of materials and construction shall be indicated.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. The proposed substitution will have no affect on applicable codes.
6. The manufacturer's guarantee or warranties of proposed product is equivalent to; or exceeds that of the specified product.

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 25 00 - Substitutions

List of names and location of three similar projects on which product was used, date of installation, and Architect's name and phone number.

CERTIFICATION OF EQUAL
PERFORMANCE AND
ASSUMPTION OF LIABILITY
FOR EQUAL PERFORMANCE:

UNDERSIGNED ATTESTS THAT
FUNCTION AND QUALITY ARE
EQUAL TO OR SUPERIOR TO
SPECIFIED ITEMS

Submitted By:

Signature

Title

Above signature must be by person having authority to legally bind his firm to the above terms.

Firm

Address

City / State

Zip

Telephone

Date

FOR USE BY THE ENGINEER:

Accepted: _____

Accepted as Noted: _____

Not Accepted: _____

Rec'd Too Late: _____

By: _____

Date: _____

Remarks: _____

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any "Notes" boxes such as this one--you should remove these "Notes" sections as you go. Also, do a search for all bracket characters " [] " as they are used to show you areas containing options or project specific details (you can use Microsoft Word's Find feature {Ctrl-F} to jump to an open bracket " [" character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document's built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style "Numbered Material" and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the "Numbered Material" format.

PART 1 GENERAL

1.01 SUMMARY

- A. Provide project organization information indicating Contractor's project personnel and contact information, and their experience records for acceptance.

1.02 QUALIFICATIONS

NOTE TO CONSTRUCTION MANAGER: Specify additional position qualifications as required by specific project.

- A. Contract project personnel shall have the following qualifications:
 - 1. Project Manager - at least 10 years of experience in managing building projects of equal or greater in size and type as this Project.
 - 2. Project Engineer - at least 5 years of experience in managing building projects of equal or greater in size and type as this Project.
 - 3. Superintendent - at least 10 years of supervisory experience in building projects of equal or greater in size and type as this Project.
- B. The following Contract project personnel shall be submitted separately and have the following qualifications:
 - 1. Contractor's Scheduling Manager, qualifications per Section 01 32 16.13- Network Analysis Schedule
 - 2. Contractor's LEED Coordinator, resume per Section 01 35 00 – LEED Requirements
 - 3. Contractor's CMS Personnel, contact names and phone numbers per Section 01 78 39- Contract Management System
 - 4. Contractors Quality Control Personnel, qualifications and organizational chart per Section 01 45 16.13 or 01 45 16.13b Contractor's Quality Control Program.

5. Section 01 45 29 Material Laboratory Testing.
6. Contractor's Haul Route and Personnel including Supervisors, per Section 01 55 16 Haul Routes
7. Contractor's Traffic Control Management Personnel, including Traffic Control Supervisors, per Section 01 55 26 – Traffic Control
8. Pollution Prevention Plan Inspector, qualifications and Contract information per Section 01 57 23, Pollution Prevention Planning and Execution
9. Contractor's Erosion Sediment Control Lead, qualifications and certificate per Section 01 57 13 – Temporary Erosion and Sediment Control Planning and Execution
10. Chitosan-Enhanced Sand Filtration System Technician qualifications and certificate per Section 01 57 13 – Temporary Erosion and Sediment Control Planning and Execution

1.03 REQUIRED SUBMITTALS

- A. Submit as part of Preconstruction Submittals a project organization diagram and qualifications and resumes for your project management team, outlining areas of responsibility and authority. Submit the qualifications for individuals that are proposed for each of the positions indicated below. [Each position shall have a different person submitted.] As a minimum, include on your project team the following personnel:

Specify as required on specific project. Full time or Part time;

1. General Manager: The Contractor's employee authorized to resolve disputes per the General Conditions.
 2. [Managing Officer: The individual authorized to make contract commitments--if other than the Project Manager]
 3. [Project Manager: The full-time, on-site manager for the project]
 4. [Project Engineer: Full-time, on-site]
 5. [Superintendent: Full-time, on-site, superintendent]
 6. [Project Scheduler: Responsible for preparation and maintenance of the Schedule]
 7. [Administrator of your Quality Control program]
- B. Keep organization diagram current.
- C. Resubmit qualifications for acceptance by the Engineer whenever above personnel change.
- D. The Port reserves the right to accept or reject the Contractor's proposed personnel.
- E. Contractor personnel shall not be replaced without prior written notice to and acceptance by the Port. Resubmit evidence that the proposed personnel successfully meet the qualifications.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

READ THIS FIRST

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Contractor shall perform the following Project Coordination Requirements:
 - 1. Coordinate the Work of all Subcontractors with the Work of the Contractor
 - a. Distribute information and coordinate necessary action of subcontractors and suppliers in response to information and direction provided by the Port (i.e., Requests for Information, Requests for Proposal, executed Change Orders, etc.)
 - b. For temporary utilities
 - c. Among the work of the trades specified in technical specification sections.
 - d. Ensure that notification to and inspections by permitting agencies are completed in a timely manner
 - 2. Coordinate the schedules of all subcontractors to:
 - a. Verify timely deliveries of products for installation by other trades
 - b. Verify that labor and materials are adequate to maintain schedules
 - c. Manage the schedule in sequence for all subcontractors
 - 3. Contractor’s Daily Construction Report (Form CM03)
 - a. Daily construction reports utilizing Form CM 03 will be submitted to the Engineer [daily/weekly]. Along with the other information shown on this form, a summary of all schedule activities worked on each day is required. Divide the activities worked on by trade and employer. Identify activities by activity number per the accepted schedule. Identify activities that are behind schedule. State the cause and amount of the delay and propose what action is necessary to bring the activity back on schedule. If multiple daily shifts are used, submit a report for each shift. See Appendix A.

- b. Include required information for all subcontractors at any tier working on the Contract in addition to Prime Contractor.
4. Conduct conferences among all subcontractors, and other concerned parties, as necessary to:
 - a. Maintain coordination and schedules
 - b. Resolve matters in dispute
 - c. Coordinate utility outages
5. Participate in Project meetings:
 - a. As required by these specifications
 - b. Report progress of the work
 - c. Recommend needed changes in schedules
 - d. Transmit minutes of meetings to all other trades, as appropriate
6. Temporary Utilities Required During Construction:
 - a. Coordinate submittals, installation, operation and maintenance, to verify compliance with Project requirements and with Contract Documents, see Section 01 50 00 – Temporary Facilities and Controls
 - b. Verify adequacy of service at required locations
7. All Required Submittals: Prior to submittal, in accordance with Section 01 33 00 - Submittals, review for compliance with Contract Documents. The Contractor shall review and coordinate all subcontractor submittals of any tier. All submittals must be submitted by the Contractor, and not by others
8. Coordination Drawings:
 - a. Prepare, as required to ensure coordination of work of, or affected by, mechanical and electrical work, or to resolve conflicts
 - b. Submit to the Engineer for review
 - c. Reproduce and distribute accepted copies to all concerned parties
9. Observe required testing; maintain a record of tests as required by the Quality Control section of these specifications
10. Verify that subcontractors maintain accurate record documents
11. Substitutions:
 - a. Review proposals and requests:
 - (1) Check for compliance with Contract Documents
 - (2) Verify compatibility with work and equipment of other trades
 - b. Submit to the Engineer for acceptance in accordance with Section 01 25 00 - Substitutions
12. Observe the work for compliance with requirements of Contract Documents
 - a. Maintain list of observed deficiencies and discrepancies

13. Promptly report and correct deficiencies or discrepancies [in accordance with Section 01 45 16.13a Contractor's Quality Control; and Section 01 45 29 Independent Testing and Inspection Services].
14. Assemble documentation for handling of disputes involving mechanical, electrical or other trades
15. Utility and Equipment Operations:
 - a. Check to ensure that utilities and specified connections are complete and that equipment is in operable condition
 - b. Coordinate the acceptance of new and remodeled equipment through the Engineer after Contractor functional testing is completed.
16. Punchlist Inspection:
 - a. Prior to inspection, check that equipment is clean, repainted as required, tested and operational and that the Contractor's punch list is prepared and delivered to the Engineer
 - b. Assist Engineer; prepare consolidated list of items to be completed or corrected after inspection
17. Assemble As-built Record Document information and ensure that completed record documents are submitted to the Engineer in accordance with Section 01 78 29 – As-Built Project Record Documents.

Include 18 through 20 only if they are a part of the project

18. Labor Management and Coordination: Work on this project is subject to the Project Labor Agreement (PLA) requirements. The Port's Labor Relations Group manages the participation in the Project Labor Agreement on Port's behalf. The Contractor shall be responsible to assist the Port's Labor Relations Group to ensure PLA participation and compliance for its own labor, and for all of the Subcontractors on the Project. The Contractor shall also be expected to promote, manage and ensure the labor harmony on the project:
 - a. The Contractor shall assist the Port's Labor Relations Group to track participation and compliance with all PLA requirements, in order to ensure that no work is performed by any entity prior to satisfying the PLA requirements and procedures, including but not limited to attendance of pre-job conferences, proposal and approval of trade assignments, new employee reporting, submission and approval of waivers, and participation in the substance abuse program.
19. Art Program: Cooperate and coordinate with project Art Program; coordinate and schedule all work activities with the project artists and their designated representatives as necessary to ensure smooth and orderly transition of work, timely placement of items and materials, complete cooperation between parties and proper execution of the work.
20. Airport, Airline & Concessions Operations: Airport, Airline and Concessions operations will continue in and around the Project. Activities

that must be treated as priority and will require special coordination include, but may not be limited to:[modify for project: examples follow]

- a. Airline operations and traveling public.
- b. Concessions operations.
- c. Tenant and Concession construction work.
- d. Baggage handling operations, including baggage conveyance systems, tug & cart operations and general activities of baggage handling personnel.

1.02 PROJECT SCHEDULE

- A. The Schedule shall be prepared as required by Section [01 32 16.13 – Network Analysis Schedules] [01 32 16 - Bar Chart Schedule] and designate areas of activity of the Contractor and subcontractors for the various items of work for the Project. The Schedule shall be prepared, submitted for review, and accepted by the Engineer as specified in these Contract Documents.
- B. Contractor shall:
 1. Maintain Schedule throughout construction period; record changes in responsibilities due to:
 - a. Accepted modifications to Contract
 - b. Accepted substitutions
 - c. Changes to work responsibility
 2. Reproduce and distribute revised Schedule promptly after each change to:
 - a. Affected subcontractors
 - b. Engineer

1.03 EXCAVATION COORDINATION

- A. Call Before You Dig. Washington State law, RCW 19.122.010 requires anyone planning to excavate, to know what is below the ground surface before they dig. Any entity, including but not limited to the Contractor or any subcontractor conducting excavation operations on Port projects shall comply with the law which at a minimum requires the following actions.
 1. Before excavating 12" or deeper on Port projects, the Contractor shall call the Washington Utility Notification Center's One Call System at 811 or 1-800-424-5555 to provide notice two days before the scheduled start of earthwork. On busy days (M-W) hold time can be very lengthy. Entering your locate request online, via ITIC, eliminates the hold time. To learn more about ITIC visit www.callbeforeyoudig.org.
 2. Utility locating is provided by Port of Seattle Engineering Survey and requires the submission of Port Form 811 via an email to posutility@portseattle.org (see Appendix B).
 - a. Form submission requires the 811 ticket number obtained from the One Call system notification.

3. If a project's excavation operations are completed within 45 days of notification, only one call and form needs to be made for each project, however, certain projects may have different requirements which will be discussed at the pre-construction meeting. Projects with longer-term excavation operations require a call every 45 days of the last notification.

1.04 REQUESTED INFORMATION

- A. Requests for Information (RFI): In the event there is a question regarding intent of the documents by the Contractor, or any subcontractors, the Contractor shall submit a written RFI to the Engineer. There will be no additional compensation to the Contractor for the preparation of a RFI. All costs are considered incidental to the scope of work in question.
- B. Contractor may submit an RFI to the Engineer to clarify or confirm minor discrepancies, conflicts, errors or omissions in the Contract Documents.
 1. See Appendix C, for the RFI form used for this project.
- C. Each RFI shall bear the Contract name and work order number; date of submission to the Engineer; requested response date; name and position of the person submitting request; pertinent drawing and detail number; grid location and building level; specification section number; or other references as appropriate.
- D. Prepare a separate RFI for each item or issue.
- E. The Port will provide a response to the RFI within 14 days, typically. It is understood that some RFI's may require shorter response durations. If the Contractor requires a shorter response duration it must be clearly noted on the RFI. The Engineer will make a reasonable attempt to accommodate the Contractor's request.
- F. RFI's shall be submitted by the Contractor to the Engineer utilizing the CMS RFI Workflow.
- G. Any response to an RFI issued by the Engineer does not constitute a change to the Contract or a commitment to extend or to pay. If the Contractor believes the response received to be an additional cost or impact to the prosecution of the Project the Contractor must follow the requirements of the Contract listed in Article G-05 Changes and G-09 Claims.

1.05 COMMUNICATION REQUIREMENTS AND COORDINATION FORMS

- A. Interested parties at the Airport have a general understanding of the project and as detailed in the Contract Documents. However, day-to-day project activity that may impact their operations is not known. The Contractor shall establish and maintain a system for communications with the Airport stakeholders and other interested parties through the Engineer.
- B. The Contractor shall provide the following specific schedule and work plan information directly to the Engineer for distribution to the appropriate parties:
 1. If any construction activity affects usable spaces or creates an operational impact, a Construction Advisory Form (CAF) will be required See Appendix D. The Contractor shall coordinate this with the Engineer.
 - a. The Contractor shall submit the form two weeks prior to commencement of work at the respective locations, unless noted

otherwise. The most stringent notification requirements apply. The Construction Advisory Form shall be based on the three-week look ahead schedule (or interval schedule) submitted each week to the Engineer at the weekly construction progress meeting.

- b. All CAFs are subject to operational requirements and shall be coordinated with the Engineer and other Port department to mitigate impacts to Port operations.
- 2. A statement of planned disruptions and revised access routes for the next thirty (30) days as a result of acceptance of the monthly progress schedule by the Engineer.
- 3. "News Flash" updates immediately upon occurrence of events causing planned disruptions to continue longer than originally scheduled, or if an unplanned disruption occurs."
- C. All communications about the project, including press releases, posting to public websites, social media or shared publications, must be approved through the Port's Public Affairs department, via the Engineer. The Contractor shall direct all media inquiries to the Port.
- D. The Contractor shall not publish any project information, including those referenced above, without first obtaining permission from the Port's Public Affairs department, via the Engineer. This includes communications that take place after Physical Completion is issued.

1.06 UTILITY DEACTIVATION AND REACTIVATION PLANS AND SHUTDOWNS

- A. The Contractor shall submit a shutdown plan to the Engineer for review (see Appendix E: Shutdown Request Form). The plan shall outline the proposed procedure to deactivate and reactivate utility services, lines and equipment required to be disrupted, disassembled, cut into, or modified during the course of the work.
- B. All shutdowns are subject to operational requirements and shall be coordinated with the Engineer and other Port departments to mitigate impacts to Port Operations.
- C. Plan Content: The plan shall include but not be limited to:
 - 1. Shutdown and restart schedules.
 - 2. Sequences required to deactivate, depressurize, and reactivate the utility service lines and equipment.
 - 3. Detailed description of proof positive verification or tests to assure that utility service line and equipment are properly deactivated before proceeding with the work.
 - 4. Methods of: discharging residual fluids from lines and equipment; value sequencing; electrical load shedding for deactivating and reactivating service lines, equipment and the system reactivation procedure.
 - 5. Incorporation of the specific deactivation and reactivation requirements of the relevant technical specifications.
 - 6. Compliance with safety standards.

7. Coordination required with the Port or utility owners.
- D. It is the Contractor's responsibility to fully understand and verify the condition of any utility service lines, and equipment at all times directly prior to and during the course of the work. The Contractor shall be responsible for all damages resulting from its actions. For Airport Projects: The Port will provide an electronic version of the most current panel schedules from time to time throughout the project. The Contractor shall request these via email to the Engineer.

1.07 POWDER-ACTUATED FASTENER TOOLS

- A. On projects that may require powder-actuated fasteners to be used, the Contractor is required to pay special attention with respect to personnel qualifications, proper notifications, and control of the material.
- B. Personnel Qualifications:
 1. Only a qualified operator shall be allowed to handle and operate the powder-actuated tools. A qualified operator is a person that meets the requirements of WAC 296-155-36321 (1) and (2), and who is in possession of a qualified operator card signed both by the operator and the authorized instructor.
 2. Qualified operators shall have their operator card in their possession at all times while operating the equipment.
- C. Operation:
 1. The qualified operator must be competent in all aspect of tool usage, handling, storage, maintenance, and inspections, as required by the Port of Seattle safety manual, and all applicable WAC rules and regulations.
- D. Permit Requirements:
 1. If a construction activity on the project requires the use of powder-actuated fasteners, the Contractor shall seek project pre-approval for the use of the powder-actuated tool before starting such work. The Contractor shall complete and submit the Port of Seattle Fire Department Powder Actuated Fasteners Permit at least 21 calendar days prior to the commencement of work. The Contractor shall use the permit form located at the end of this specification section (Appendix F). The Engineer will route the permit form to the Fire Department, the Airport Security Department, and Construction Safety for approval. Upon approval, the Engineer will route a copy of the signed permit back to the Contractor.
 - a. A Pre-Installation Meeting, specifically for the use of Powder-Actuated Tools, is required prior to submitting the permit.
- E. Notification Requirements
 1. Once an approved permit for use of Powder-Actuated Tools for the project has been obtained, notifications are required for each scheduled finite duration of use. The Contractor shall complete and submit the Construction Advisory Form (CAF) in accordance with paragraph 1.05 B. of this Specification Section and include a copy of the approved permit. The CAF

shall cover a defined work activity that utilizes the Powder Actuated Tools. As a minimum, the CAF shall contain the following information:

- a. The name and contact information for the qualified operator who will be in custody of the tool at all times while on the Port of Seattle property.
 - b. Description of the work; type of surface to be penetrated and the material/item to be fastened.
 - c. A copy of the Qualified Operator's Card issued and signed by both the authorized instructor and the operator.
 - d. The location(s) where the tool is to be used.
 - e. Date(s) and time(s) of operation.
 - f. The amount of powder loads to be kept on site during work shifts. Please note that the Port of Seattle Fire Department permit limits the number/amount of powder loads. The maximum amount allowable is regulated by the International Fire Code.
 - g. The type of tool used; direct or indirect acting, and whether it is classified as low velocity (≤ 328 ft/s), or medium velocity ($328 < v \leq 492$ ft/s).
 - h. The method of storage and safekeeping.
 - i. Note: No high velocity powder-actuated tools will be permitted for use on Port of Seattle property.
2. The Engineer will distribute the CAF to the Port of Seattle Operations, who will in turn notify the tenants/stakeholders, Port of Seattle Security, Police and Fire Departments.
- F. Control of the powder-actuated tools and powder loads:
1. The powder-actuated tools and powder loads must never be left unattended.
 2. When not in use, the powder-actuated tools and powder loads must be locked in a tamper proof container, labeled according to the requirements of WAC 296-155-36307, and must be accounted for at all times.
 3. Overnight/off shift storage of the powder-actuated tools and powder loads on site is not permitted.
 4. The number of tools and powder loads shall never exceed the amount authorized by the Port of Seattle Security and Fire Departments.
 5. Misfired loads must be neutralized and promptly removed from Port of Seattle property.
 6. If any powder-actuated tools or powder loads are lost or stolen, the Contractor must immediately notify the Port of Seattle Police, and the Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

POS-811 FORM

**POS CALL BEFORE YOU DIG / 811
ENGINEERING/SURVEY
RCW 19.122.010 DIG LAW**

IF YOU ARE DIGGING 12" OR DEEPER

PROCEDURE:

1. Call 811 or 1-800-424-5555
2. Fill out POS-811 FORM then send to:
posutility@portseattle.org

REQUESTED BY: _____

OFFICE PHONE: _____

811 TICKET # _____

PROJECT NUMBER: _____

PROJECT NAME: _____

IF YOU ARE NOT DIGGING

PROCEDURE:

1. Fill out POS-811 FORM then send to:
posutility@portseattle.org

TODAYS DATE: _____

DATE SERVICE REQUIRED: _____

Attach map to email if needed

**DESCRIPTION /
SUMMARY OF WORK:**

“NOTICE” Two business days before commencing any excavation the excavator shall call 811 or 1-800-424-5555 to provide notice of their scheduled start of excavation. On busy days (M-W) hold time can be very lengthy. Entering your locate request online, via ITIC, eliminates the hold time. To learn more about ITIC visit www.callbeforeyoudig.org.

CONTACTS:

<u>Garry Ensley</u> Manager of Survey and Mapping 206-787-5670	<u>Jeff Dixon</u> Utility Locating Tech 206-708-5089	<u>Adam Dreller</u> Mapping Manager 206-787-7771	<u>Braden Monson</u> Survey Crew Manager 206-787-5846
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Request For Information

Project Name
MC-##### / WP#

General			
RFI No.:	####	RFI Rev:	#
Date:	MM/DD/YYYY	Contractor:	Prime Contractor Company
Spec. or Drawing Ref.:			
Subject:			
Point of Contact:			
Trend Number:			
Request			
Please Reply By:	MM/DD/YYYY	Priority:	
Discipline:		Author:	
Final Response			
Date:	MM/DD/YYYY	Signed:	
Attachment			

Seattle-Tacoma International Airport

CONSTRUCTION ADVISORY

CAF#

Where

Affected Businesses

Start Date

End Date

Work Hours

Description of Work

Who to Contact with Questions:

Port of Seattle, Inspector: Cell #

Port of Seattle, Resident Engineer: Cell #

Name of Contractor, Superintendent: Cell #

Port of Seattle, Airport Operations: (206)

Project name

Project #



**SAMPLE DOCUMENT ONLY – PLEASE USE THE FOLLOWING LINK TO DOWNLOAD
CURRENT FORM:**

<http://compass.portseattle.org/aviation/AVM/Documents/AVM%20Information/AVM%20Forms/Airport%20Facilities%20Systems%20Utility%20Shutdown%20Request.docx>

SAMPLE



Name: _____ Project/SDR#: _____ Fund: _____ Subclass: _____ Activity: _____

Airport Facilities - Systems & Utility Shutdown Request

72 Hour notice required for system shutdown – after final signature

96 Hour notice required for DOMESTIC water shutdown – after final signature

WEEKEND REQUESTS MUST BE APPROVED NO LATER THAN 12:30PM WEDNESDAY

Date of Request:	Date of Shutdown: Start Time: _____ End Time: _____
Outages Coordinator: Phone No.:	RE/PM: Phone No.:
Contractor Contact During Shutdown:	Phone No.:
Inspector Contact During Shutdown:	Phone No.:
Contractor performing work:	Duration of Shutdown:
Reason for Shutdown:	
Buildings & Area Affected: <i>(DRAWING OF AFFECTED AREA REQUIRED WITH FORM)</i>	

UTILITY EQUIPMENT LIST: Must be filled out prior to shut down; each affected craft shall initial for approval.

<input type="checkbox"/> Aircraft Fueling FD/Swissport	<input type="checkbox"/> Elevators - Escalators	<input type="checkbox"/> IWTP lift stations - OE
<input type="checkbox"/> Ceiling tile removal - CARPENTERS	<input type="checkbox"/> Fire pumps – OE & FD	<input type="checkbox"/> Roadways - Parking
<input type="checkbox"/> Chilled water - OE	<input type="checkbox"/> Fire system – OE & FD	<input type="checkbox"/> Sanitary lift stations – OE
<input type="checkbox"/> Conveyors	<input type="checkbox"/> Hot water heating - OE	<input type="checkbox"/> Sanitary Waste / Grease Lines - OE
<input type="checkbox"/> Domestic water - OE	<input type="checkbox"/> HVAC system – OE	<input type="checkbox"/> Security
<input type="checkbox"/> Electrical systems - ELEC	<input type="checkbox"/> ICT Department	<input type="checkbox"/> Storm lift stations - OE
<input type="checkbox"/> ET Electronics / Security	<input type="checkbox"/> Irrigation - FCRW	<input type="checkbox"/> STS systems

APPROVALS

Maintenance Craft: (must be 1st contact prior to manager's signature): _____	
1 Maintenance Manager: _____	Other: _____
2 Maintenance Manager: _____	Other: _____
Utility Manager: _____	Security: _____
Fire Prevention: _____	Airport Operations: _____
Landside: _____	ICT Department: _____

MUST BE FILLED OUT PRIOR TO SHUTDOWN

Tenants requiring notification:	Notified:	By: (initials)	Tenant Representative Notified:

FOR DEPARTMENT USE ONLY:

Comments:

PLEASE RETURN A COPY OF THE COMPLETED SIGNATURE FORM TO ALL SIGNEES.

List of Appropriate Systems Contacts (Manager Contacts are in **BOLD font**)

IF ANY SHUTDOWN REQUIRES REMOVAL OF CEILING TILE THERE MUST BE A CONFIRMATION OF ACM STATUS THROUGH POS RMM PRIOR TO REMOVAL. IN ADDITION, METAL CEILING TILE REMOVALS AND REINSTALLATIONS MUST BE COORDINATED THROUGH THE POS CARPENTER SHOP AND SCHEDULED 7 DAYS IN ADVANCE

Utility Manager

Greg Whiting **787-5117** **787-4361 fax**
Darin Benofsky **787-7884** **787-4361 fax**

Fire Systems & Fire Pumps

Jeff Nelson (FD) 427-5730 cell 431-4908 fax
Adam Griffin (FD) 787-4390 431-4908 fax
Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax
Eric Schaefer **491-6298 cell** **787-7221 fax**

Chilled Water & Hot Water Heating

Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax

Domestic Water

Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax
Eric Schaefer **491-6298 cell** **787-7221 fax**

HVAC Systems

Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax

Sanitary & Storm Lift Station

Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax

IWTP Lift Station

Dan Hytry (OE) **787-7231** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**
James Jackson (OE) 390-7451 cell 787-4938 fax
Tracy Jonassen (OE) 735-9840 cell 787-4938 fax
Jared Goodspeed(OE) 787-7839 787-4938 fax

Irrigation

Eric Schaefer **491-6298 cell** **787-7221 fax**
Jeff Martens 787-4059 787-4361 fax

Conveyors

Ryan Pazaruski **787-7590** **787-4361 fax**
Erik Knowles (OE) **787-4906** **787-4361 fax**

Howard Hartness 787-5932 433-7208 fax
Phil Allan 787-5895 433-7208 fax
Scott Uglum 787-4006 433-7208 fax
Ron Rice CC before performing work 787-6651

Ceiling Removals

RMM Hotline 953-7419
Carpenter Shop 787-5909

Passenger Loading Bridges

Jim Witzman 787-5018 787-4361 fax
Erik Knowles (OE) 787-4906 787-4361 fax
Valerie Johnson 787-4802 787-4361 fax
Brett Baird 787-7670 433-7208 fax
Phil Allan 787-5895 433-7208 fax

Elevators/Escalators

Jim Witzman 787-5018 787-4361 fax
Erik Knowles (OE) 787-4906 787-4361 fax
Valerie Johnson 787-4802 787-4361 fax
Cory Winchell 425-213-6603

Electrical Systems

Darin Benofsky 787-7884 787-4361 fax
Allen Tygesen 787-7930 787-4361 fax
Teri Grosvenor 787-4909 787-4361 fax
Gary Richer 787-4065 787-4361 fax
Steve Lewis 787-5673 431-4075 fax
Kristel Manney 787-5878 431-4075 fax
Cal Nelson 787-5882 431-4075 fax

ET SYSTEMS

Teri Grosvenor 787-4909 787-4361 fax
Allen Tygesen 787-7930 787-4361 fax
Chris Evans–ACS/Video 787-4966 755-9403 cell
Frank Davis–TWVPS 787-4659 617-9860 cell
Jeff Burnes–FIMS/FIDS 787-7815 402-1848 cell
Abba Sanneh–CUSE/CUSS 787-6912 390-2707 cell
Steve Kjosness–PRCS 787-7856 735-9820 cell
Micah Egger–Conveyor 787-6906 218-3787 cell
Deb Davis–Radios 787-5193 947-7734 cell

STS SYSTEMS

Allen Tygesen 787-7930 787-4361 fax
Teri Grosvenor 787-4909 787-4361 fax
Darin Benofsky 787-7884 787-4902 fax
Gary Richer 787-4065 787-4902 fax
Jeff Puckett 787-4922 696-0834 cell

ICT Department

IT Service Desk 787-3333 728-3719 fax
Clarence Jaquez 787-6090 830-5500 fax
Matt Breed 787-7555 660-5233 cell

Z-IT-NetworkEngineering (email distribution list)

Z-IT-CompOps (email distribution list)

OPS / Roadways / Parking

Nick Terrana 787-4903 787-4837 fax
Andy Ramsey 787-5187 787-4837 fax

Security

Christian Samlaska 787-7631 787-6120 fax
Clinton Hughes 787-4907 787-6120 fax
Lauren Curtis 787-3356 444-7389 fax
Lisa Rousseau 787-5519 787-6120 fax
Shelie Bumgarner 787-7360 787-6120 fax

Aircraft Fueling Systems & Water Supply

Lisa Kolwitz (FD) 643-0581 431-4908 fax
Adam Griffin (FD) 718-9570 cell 431-4908 fax
Nestor Soriano 246-0407 desk 849-9692 cell
Jamil Simpson 206-240-6221 cell

SAMPLE



Port of Seattle Fire Department

Powder-Actuated Fasteners Permit

On projects that may require powder-actuated fasteners be used, the Contractor is required to pay special attention with respect to the personnel qualifications, proper notifications, and control of the material.

A. Personnel Qualifications:

1. Only a qualified operator is allowed to handle and operate the powder-actuated tools. A qualified operator is a person that meets the requirements of **WAC 296-155-36321** (1) and (2), and who is in possession of a qualified operator card signed both by the operator and the authorized instructor.
2. Qualified operators shall have their operator's card in their possession at all times while operating the equipment.
3. The qualified operator must be competent in all aspect of tool usage, handling, storage, maintenance, and inspections, as required by the Port of Seattle safety manual, and all applicable WAC rules and regulations.

B. Notification Requirements:

The Contractor shall provide a specific Construction Advisory Form (CAF) and a copy of the approved permit every time powder actuated fasteners are to be used on the Project. The form should as a minimum contain the following information:

1. The location where the tool is to be used.
2. Description of the work; type of surface to be penetrated, and the material/item to be fastened.
3. Date(s), and times of operation.
4. The name and contact information for the qualified operator who will be in custody of the tool at all times while on the Port of Seattle property.
5. A copy of the Qualified Operator's Card issued and signed by both the authorized instructor and the operator.
6. The amount of power loads to be kept on site at any given time. The Port of Seattle Fire Department will limit the number/amount of power loads (Per IFC table 5604.3) to a max. of 10lbs of 1.3 explosive and must be in a steel cabinet
7. The type of tool used; direct or indirect acting, and whether it is classified as low, medium or high velocity tool.

8. The method of storage and safekeeping.

The Engineer will distribute the form to the Port of Seattle Operations, Security, Police, Fire and Building Departments. The Engineer must obtain concurrence from all five departments before the work can proceed.

C. Control of the powder actuated tools and power loads:

1. The powder actuated tools and power loads must never be left unattended.
2. When not in use, the Powder actuated tools and power loads must be locked in steel, properly marked container and within a site distance from the qualified operator in custody of the tools and power loads.
3. Overnight/off shift storage of the powder-actuated tools and powder loads on site is not permitted.
4. The number of tools and power loads shall never exceed the amount authorized by the Port of Seattle Security and Fire Departments.
5. Unused or misfired loads must be neutralized, and properly disposed of.
6. Port of Seattle Dispatch **(206) 787-5380** must be notified prior to beginning work using powder actuated tools.

The Qualified Operator\Contractor acknowledges and agrees to fully comply with all qualifications and requirements as stated above. Any violation of the permit may result in immediate suspension of work.

Date issued _____ **Time issued** _____ **Permit Expires** _____

Port of Seattle Project Name _____

Port of Seattle Work Project No. _____

Location _____ **Contractor** _____

Powder Actuated Tool Qualified Operators (list all) _____

Name (Print) and Signature of qualified person performing tool work _____

Name (Print) and Signature of Fire Department Personnel _____

Permit Number _____



READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

PART 1 GENERAL

1.01 DESCRIPTION

- A. In general, project meetings will be held weekly at the job site unless agreed otherwise with the Engineer. The Engineer will conduct project meetings throughout the construction period
- B. The purpose of the project meetings is to enable orderly review of progress during construction and to provide for systematic discussion and analysis of problems that might arise between the Port, Designer or Contractor relative to execution of the Work.

1.02 AUTHORITY DESIGNATION

- A. Persons designated by the Contractor to attend and participate in project meetings shall have all required authority to commit the Contractor to solutions as agreed upon in the project meetings.

1.03 AGENDA DEVELOPMENT

- A. See Appendices A and B for typical preconstruction and weekly project meeting agendas.
- B. Agenda Items: To the maximum extent possible, inform the Engineer at least twenty-four (24) hours in advance of the project meeting regarding any agenda items desired for discussion.

1.04 MEETINGS

- A. Pre-construction Meeting
 - 1. The Engineer will conduct this meeting prior to NTP.
 - 2. Location: At a Port facility to be specified by the Engineer.
 - 3. Attendance:
 - a. Port’s Project team.
 - b. Designer and professional consultants for mechanical, electrical, civil, and structural disciplines, as applicable.

- c. Contractor's project manager and superintendent
 - d. Major Subcontractors, as appropriate
 - e. Major suppliers, as appropriate
 - 4. Typical Agenda: (See Appendix A for sample agenda)
 - B. Weekly Project Meetings
 - 1. The Engineer will conduct weekly meetings to coordinate the Work, answer questions, and resolve problems. Meetings will begin weekly after Pre-construction meeting.
 - 2. Location: At a Port facility to be specified by the Engineer.
 - 3. Attendance:
 - a. Engineer
 - b. Architect and Consultants as needed
 - c. Contractor's project manager and superintendent
 - d. Major subcontractors
 - e. Others, as appropriate
 - 4. See Appendix B for sample agenda.
 - C. Special Meetings
 - 1. The Engineer will call special meetings at the project site or at other locations to coordinate the Work, answer questions and resolve problems. The Contractor shall attend.
- 1.05 PRE-INSTALLATION MEETINGS
- A. The Contractor shall schedule Pre-Installation Meetings at least five (5) days prior to commencing any portion of the Work where such meeting is required by the Specifications or as requested by the Engineer.
 - B. Require attendance of parties directly affecting, or affected by the Work.
 - C. Contractor to prepare agenda, lead the meeting, compile record minutes, and distribute copies within two days after meeting to participants.
 - D. Review conditions of installation, preparation and installation procedures, and coordination with related work.
- 1.06 PRE-PROJECT CLOSE OUT MEETING
- A. At approximately 80% of Contract completion or 60-days before the Substantial Completion date, whichever occurs first, the Engineer will hold a meeting with the Contractor to discuss acceptance/closeout process, to schedule the events and to review responsibilities.
- 1.07 MINUTES
- A. The Engineer typically prepares minutes of project meetings and will distribute copies.

- B. The minutes compiled by the Engineer will be the official record minutes and all clarifications or corrections shall be transmitted in writing to the Engineer within three (3) working days of date of receipt of the minutes.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

Note: This template can be used for a Kick-Off Meeting or Pre-Construction Meeting. It is intended to be as comprehensive as possible. Edit as needed to meet the specific requirements of the meeting and of the contract and delete this box.

MEETING [NOTES OR AGENDA]

Project: [Project Name]
WO Number: [XXXXXX]
Purpose: [Kick-Off Meeting or Pre-Construction Meeting]
Meeting Date: [Day, Date, Year]
Location: [Meeting Location]

Invitees/Attendees(X):

NAME	INI.	EMAIL	TELEPHONE	CELLULAR
POS Engineering Department				
POS Designer / Project Engineer				
POS Project Management Group				
POS Construction Safety				
POS Contract Administration / Contract Compliance				
POS Environmental/Pest Control				
POS Other Departments /POS Consultants				
Contractor				
Sub-Contractor				
Other				

DISCUSSION:

1) PURPOSE OF MEETING

- a. Introduce project team members and other key players. (Sign-In Sheet)
- b. Define lines of authority.
- c. Review key project administrative procedures

- d. Contractor’s proposed schedule
- e. Open discussion

2) PROJECT OVERVIEW (RE, A/E and/or Contractor)

- a. [Summarized or have A/E provide key elements of the project]
- b. [Review Contractor Preliminary Schedule]

3) CONTRACT TIME AND LIQUIDATED DAMAGES (CM Team)

- a. [###] Calendar Day Contract
- b. [List Phasing and/or Milestone and/or Substantial Completion and/or Physical Completion Dates]
- c. Liquidated Damages

4) CORRESPONDENCE AND COMMUNICATIONS (RE)

- a. Lines of authority
- b. Project correspondence and Submittals will be managed through the CMS system.
- c. Use MC-XXXXXXX and WP XXXXXX on all documents submitted
- d. The address for correspondence should be as follows, but all correspondence is to be submitted electronically:

ATTN: [Resident Engineer]
 Port of Seattle Engineering
 Seattle-Tacoma International Airport
 P.O. Box 68727
 Seattle, WA 98168-0727

Or

ATTN: [Resident Engineer]
 Port of Seattle Engineering
 P.O. Box 1209
 Seattle, WA 98121

5) SAFETY MANAGEMENT AND ORIENTATION REQUIREMENTS (Construction Safety Rep)

- a. Requirements of 01 35 29 Safety Management and Requirements of 01 50 00 Temporary Facilities and Controls
- b. Pre-NTP Safety Meeting
- c. POS Safety Orientation
 - a. [Time and Day for Airport or Seaport]
- d. Protect the public

6) EEO, APPRENTICESHIP, SCS REQUIREMENTS (Contract Administration / Contract Compliance)

- a. Requirements of 00 83 00
 - 1. Electronic Payroll Information
 - 2. Other required Documentation
 - 3. Small Contractor and Suppliers (SCS) Utilization requirement [%]
- b. Requirements of 00 83 50
 - 1. Apprenticeship requirement [%]
 - 2. Apprenticeship goals [%]

7) PROJECT LABOR AGREEMENT (PLA Administrator)

- a. Requirements of 00 84 50
- b. Letter of Assent/Proposed Trade Assignment
- c. Pre-Job Meeting/Request for Waiver
- d. Final Trade Assignments/New Employee Reports

- e. PLA Paperwork Submittal
- f. Drug Testing
- g. Craft Workers/Core-to-Union Ratio
- h. Wages/Trust Payment Benefits

8) EROSION AND SEDIMENTATION CONTROL (Erosion Control Lead)

- a. Requirements of 01 57 13 Temporary Erosion and Sediment Control Planning and Execution
- b. Fugitive Dust Control

9) HAZARDOUS MATERIAL MANAGEMENT (POS Environmental)

- a. Requirements of 01 57 23 Pollution Prevention, Planning and Execution [and any other applicable sections]

10) SOIL HANDLING IN CONTAMINATED AREAS (POS Environmental)

- a. Requirements of 02 61 13 Soil Handling in Contaminated Areas
- b. Stockpile Area
- c. Contractor proposed Contaminated Soil Disposal Facility

11) SECURITY AND BADGING REQUIREMENTS (CM Team)

- a. Requirements of [01 14 13 Airport Identification Access Control or 01 14 14 Seaport Personnel Identification_Access Control]
- b. [Badging process and SIDA training and/or AOA Training]
- c. [Use of temporary badges]
- d. Escorts
- e. [TWIC Card]
- f. [Customs Seal]
- g. Keys
- h. [Loading Dock Access]
- i. [Violations/penalties]

12) HAUL ROUTES, ACCESS POINTS, OFFICE/LAYDOWN/PARKING, AND PROJECT CONSTRAINTS (CM Team)

- a. Haul Route
 - 1. [Requirements of 01 55 16 Haul Routes]
 - 2. [Maintenance Requirements]
- b. Access Points
- c. Office / Laydown / Parking area
- d. Materials Storage, Staging, Deliveries
- e. Housekeeping
- f. Project Constraints
 - 1. Coordination with other projects

13) TEMPORARY FACILITIES AND UTILITY SHUTDOWNS

- a. Requirements of 01 50 00 Temporary Facilities and Controls
- b. Construction Water: Provided by the [Port or Contractor]
- c. Construction Electricity: a. [who to contact or where is it provided from?]
- d. [Noise Suppression]
- e. Temporary Ventilation
- f. Temporary barriers/partitions/enclosures
- g. Traffic Control
- h. Dust Control
- i. Water Control

- j. Utility Shutdown procedures

14) CONTRACTOR ON-SITE MANAGEMENT, SUPERVISION AND GENERAL INFORMATION (CM Team)

- a. Project Manager and/or Superintendent to be onsite when work is being performed
- b. Project Information Sheet required to be completed and submitted prior to any activity onsite

15) LAWS, REGULATIONS, PERMITS, FEES, NOTICES, ENVIRONMENTAL COMPLIANCE (CM Team)

- a. Requirements of 00 80 00.SC-04.12
 - 1. [Building Permit – Airport Building Department or City of Seattle]
 - 2. [Mechanical and /or Electrical Permits – L&I or City of Seattle]
 - 3. [NPDES Permit]
 - 4. [Other Permits or Notifications]
- b. Hot Work Permits

16) QUALITY CONTROL / QUALITY ASSURANCE PROGRAM (CM Team)

- a. Requirements of [01 45 16.13a Quality Control]
- b. [Special Inspection provided by the Port]
- c. [Contractor QC requirements]

17) SUBMITTALS (CM Team)

- a. Requirements of 01 33 00 Submittals
- b. All Pre-Construction Submittals have been “Accepted” or “Accepted as Noted”
- c. All [XX] days for submittal review by the Port.
- d. [Critical Submittals]
- e. [Other submittal discussions]

18) CONTRACTOR REPORTS (CM Team)

- a. Contractor Daily Report should include Safety and TESC reporting (rather than separate submittals)
- b. CDRs to be filed [daily / weekly]

19) PROJECT SCHEDULES (CM Team)

- a. Preliminary Schedule in place until Baseline Schedule is accepted
- b. Baseline Schedule shall include a Narrative and Critical Path
- c. Monthly Progress Schedule is due with the Pay Request
- d. 3-Week Look Ahead Schedule will be required prior to each Weekly Meeting
- e. Work Hours
 - 1. Regular work hours
 - 2. Noisy work hours
 - 3. No work permitted time periods
 - 4. Other work restrictions
 - 5. Contractor may request an alteration of work hours

20) MEETINGS (CM Team)

- a. Requirements of 01 31 19 Project Meetings
- b. Weekly Project Meetings will be held at [Location]. [Discuss time and day or Time and day to be determined]
- c. [List other Meetings as needed]

21) PROGRESS PAYMENTS (CM Team)

- a. Requirements of 00 70 00-G.08 and 01 20 00 Measurement and Payment

- b. Submitted on the [##] of each month
- c. Pay Request will not be processed without required supporting documentation
 - 1. Progress Schedule (Submittal)
 - 2. Statement of Intent to Pay Prevailing Wages
 - 3. Monthly Amounts Paid to Sub-contractors (applies to all tiers)
 - 4. Certification of Payment per G-08.04.C
 - 5. Certification As-Builts are current
 - 6. Electronic Payroll (EPI) and/or Certified Payroll up to date
- d. Payment for Stored Materials
- e. Payment within 30 days of becoming due

22) DISCUSSIONS

Item #	Action By	Item Description
MonthDay.## (ie 0207.01)	Ini.	Subject <u>Date</u> Notes regarding Discussion and/or Followup

These meeting notes are provided to document the project record and represent my understanding of the items discussed. Please provide comments, corrections, or revisions within 14 days. If no comments are received, the minutes will stand as published.

Prepared by: [Name], [Title]

[Date]

MEETING MINUTES

Project:
WO Number:
Purpose: Weekly Construction Progress Meeting
Meeting No:
Meeting Date:
Location:

ATTENDEES:

NAME	INI	EMAIL	TELEPHONE	CELLULAR
POS ENGINEERING DEPARTMENT				
POS Project Management Group				
POS Construction Safety				
POS Design Team/Representative				
POS Contract Administration/EPI/OSR				
POS Other Departments/Consultants				
Contractor				
Subcontractors				
Other				

ATTACHMENTS:

Attendance Record/ Sign-in Sheet (if used)
Three-Week Look Ahead Schedule
Submittal Status Record/Report

MEETING MINUTES

Weekly Construction Progress Meeting

RFI Status Record/Report

Other Documents as Needed (NCR Log, CB Log, PLA Status Report, etc)

I. PROJECT SAFETY			
ITEM #	DISCUSSION	ACTION	DATE DUE

II. CONTRACT COMPLIANCE/EPI STATUS/PLA			
ITEM #	DISCUSSION	ACTION	DATE DUE

III. PROJECT STATUS/SCHEDULE UPDATE/THREE-WEEK LOOK AHEAD SCHEDULE			
ITEM #	DISCUSSION	ACTION	DATE DUE

IV. ENVIRONMENTAL/RMM			
ITEM #	DISCUSSION	ACTION	DATE DUE

V. SHUTDOWN REQUESTS/CONSTRUCTION ADVISORIES			
ITEM #	DISCUSSION	ACTION	DATE DUE

VI. QUALITY CONTROL/NON CONFORMANCE			
ITEM #	DISCUSSION	ACTION	DATE DUE

VII. SUBMITTAL STATUS			
ITEM #	DISCUSSION	ACTION	DATE DUE

MEETING MINUTES

Weekly Construction Progress Meeting

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VIII. RFI STATUS			
ITEM #	DISCUSSION	ACTION	DATE DUE

IX. CHANGE MANAGEMENT			
ITEM #	DISCUSSION	ACTION	DATE DUE

X. REQUESTS FOR PAYMENT			
ITEM #	DISCUSSION	ACTION	DATE DUE

XI. OPEN ITEMS/DISCUSSION			
ITEM #	DISCUSSION	ACTION	DATE DUE

MEETING MINUTES

Weekly Construction Progress Meeting

[SAMPLES -DELETE]

- Numbering system: XX = Meeting Number
XX = Item No.
- For each meeting, the item numbers start in section I, or first applicable section, with .01, and continue in consecutive order through section XI. Item numbers should not be restarted with .01 in each section.
- Give each item a title/subject in bold at the top of the section.
- Every item of discussion shall be numbered, even if it is just a status update.
- Sections can be added as necessary, such as Operations and Security, commonly used on Airport projects.
- Closed items shall be listed as closed, and then deleted after the next meeting.
- Focus on the issue. If the issue starts to morph, or branch out, it may be time to start a new item of discussion.
- Items added even as part of the Open Discussion should go in their respective categories whenever possible, or practical.
- Any revisions/corrections should be noted under the specific item number at the meeting when revisions/corrections were noted.

XI. OPEN ITEMS/DISCUSSION			
ITEM #	DISCUSSION	ACTION	DATE DUE
07.01	<p>Fire Protection System Shop Drawings</p> <p>05/23/14 - The Port's project engineer, to expedite his review of the FM-stamped shop drawings.</p> <p>05/30/14 - Comments were returned to PRIME with the submittal approved as noted. Item closed.</p>	CLOSED	
08.01	<p>New Room Construction</p> <p>05/30/14 - LM described her discussion yesterday with a Port maintenance worker and their contractor regarding construction of a room at the Penthouse Level within the project area. She explained that they plan to begin construction of a new room at the designated laydown area just south of the POS Police locker rooms. The maintenance worker indicated the room will be used to store Christmas decorations and carpet. The POS Fire Department requires a safe and secure storage area for this use.</p> <p>The construction will eliminate PRIME's staging area. Additionally, it does not sound like this work in this project has been coordinated with the design for the Penthouse Level Fire Protection Addition project.</p> <p><u>Action:</u> SA and LDM have no information on this project and will investigate the matter together. LDM will review the Penthouse Level to determine if an alternative area is available for material and equipment staging.</p>	SA/LDM	06/12/14

[END OF SAMPLES]

These minutes are provided to document the project record and represent my understanding of the items discussed. Please provide comments, corrections, or revisions at the next meeting. If no comments are received, the minutes will stand as published.

Prepared by:

MEETING MINUTES

Weekly Construction Progress Meeting

[Name]

[Title]

DISTRIBUTION:

Attendees with asterisk (*for internal distribution to others in attendance and for information*)

Resident Engineer, POS AV/EN

Project Engineer, POS EN

POS Contract Compliance

Customer

END OF REPORT

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

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You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

This Section is narrow in scope to cover the most stringent requirements that may be imposed on a Contractor. It is applicable to a large project. Use Section 01 32 16 - Bar Chart Schedule for smaller projects. The Specifier should edit the Section to define requirements appropriate to the scale of the project.

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Network Analysis Schedules (NAS) and schedule documents described herein are for the following purposes:
 - 1. To define the Contractor’s Baseline Plan (including logic and use of resources) for completing the Work.
 - 2. To assure adequate planning, scheduling and reporting during the execution of the Contract.
 - 3. To assist the Contractor and Engineer in monitoring the progress of the Work and to contemporaneously evaluate proposed changes to the Contract and the Network Analysis Schedule.
 - 4. To assist the Contractor and Engineer in the preparation and evaluation of the Contractor’s monthly progress payment.
 - 5. To serve as a communication tool between the Port and the Contractor, and the Contractor and its subcontractors.
- B. The Port encourages the Contractor to use the Schedule to establish an understanding with all parties of the assumptions regarding the Work and the various constraints and opportunities that are possible within the plan. As the Work progresses, the Contractor and the Engineer will use the Schedule to assess impacts and to formulate the best methods to complete the Work on or ahead of the contractual completion dates.
- C. The Work shall be scheduled and performed pursuant to the provisions of the Contract including any specific dates for Milestones, phase completion or requirements included in the General Conditions, Supplemental Conditions, or

elsewhere in the Contract Documents. Milestone and completion dates listed in these specifications, or elsewhere in the Contract Documents, represent only interface dates or major items of the Work. The Contractor is responsible for completion of all aspects of the Work in accordance with the Contract.

- D. At any time throughout the course of the Work, the Engineer reserves the right to require additional activities to be added to the Schedule to further define the Contractor's plan and intentions regarding the execution of the Work. In each instance, such activities or changes shall be made by the Contractor at no cost or delay to the Port.
- E. Should the Contractor desire or intend to complete the Work, or any portion of the Work, earlier than the specified Contract milestone, phase or similar dates or the overall Contract completion date, the Port will not be liable to the Contractor for any costs or other damages should the Contractor be unable to complete the Work before Contractor's earlier milestone or completion dates. The duties and obligations of the Port to the Contractor shall be consistent with and applicable only to the completion of the Work on the specified Contract milestone dates or the Contract completion dates unless the Engineer and the Contractor otherwise agree to in writing and formalized by a change order.
- F. The services provided by the Engineer, the existence of schedules, networks or any other charts or services prepared or performed by the Engineer, shall in no way relieve the Contractor of the responsibility for complying with the requirements of the Contract Documents, including but not limited to, the responsibility for completing the Work within the Contract Time and the responsibility of planning, scheduling, and coordinating the Work. Comply with all schedule procedures specified herein and with reasonable procedure changes that may be necessary, in the opinion of the Engineer, during the Contract duration.
- G. The Contractor, including his Project Manager, Superintendent, and Schedule Manager, shall hold an orientation meeting with the Port, wherein the Contractor presents his approach to planning the Work, developing the schedules, and meeting the requirements of this Section. This orientation meeting shall be held prior to submittal of the Preliminary Schedule. The Contractor shall not delay preparation of the required schedules and schedule documents prior to this meeting; however the Contractor shall be responsible for any changes or corrections to his scheduling as a result of this meeting.

1.02 DEFINITION OF SCHEDULE DOCUMENTS AND SUBMITTAL REQUIREMENTS

Determine if a Preliminary Schedule is applicable to the project. Select the duration of the preliminary schedule from the brackets. If No, delete sub-paragraph 1 in its entirety. In sub-paragraph 2, select the number of days after Notice to Proceed that the baseline schedule is to be provided. This duration should be determined based on whether or not a preliminary schedule is specified.

- A. The following outlines the schedules and schedule documents required by this section to be submitted by the Contractor. Details on each item (and all items) to be submitted are provided in further paragraphs in this section.
 - 1. Preliminary [90]-Day Schedule: This schedule shall detail all Contractor Work, including procurement activities, mobilization, submittals, and

construction activities for the first [60][90] calendar days following the date of NTP of the Contract and shall be used while the Contractor is developing his Baseline Schedule. All critical or completion dates required in the Contract shall be incorporated into this schedule. The following requirements apply to the Preliminary Schedule:

- a. Submit as a Preconstruction Submittal per Section 01 32 19 - Preconstruction Submittals. Submit using the same format requirements as for the Baseline Schedule.
 - b. Preliminary Schedules shall be submitted no later than 14 calendar days after Contract Execution. The Preliminary Schedule shall show submittal dates for all preconstruction submittals as identified in Section 01 32 19-Preconstruction Submittals.
2. Baseline Schedule: This is a detailed schedule, developed using the Critical Path Method (CPM) and Precedence Diagram Method (PDM) and includes a narrative detailing the Contractor's approach to completing the Work and includes manpower loading. It represents the Contractor's plan for the Work from the date of Execution of the Contract to Contract Completion. The following requirements apply to the Baseline Schedule:
- a. The Baseline Schedule shall be submitted in a format and with content acceptable to the Engineer within [30][60] [90] calendar days of the Notice to Proceed.
 - (1) Allow fourteen (14) calendar days for initial review and fourteen (14) calendar days for re-submittal reviews by the Engineer.
 - b. Schedule Narrative: The narrative shall define the key aspects of the Contractor's plan for the Work that includes the following key sections: [Coordinate with a scheduler to determine requirements and expand each of the key sections]
 - (1) The layout (activity coding) and logic used in the Schedule
 - (2) Critical submittals
 - (3) Long lead equipment and material procurement.
 - (4) Constrained activities (constraint type and date)
 - (5) Milestone activities
 - (6) The critical path
 - (7) An overall float analysis
 - (8) Any interface concerns
 - (9) Manpower Loading
 - c. The following bar chart and tabular reports shall be provided with the Baseline Schedule:
 - (1) Complete Schedule organized by Major Area, sorted by sub area and early start date. Provide in a bar chart format.

- (2) Critical Path Schedule: All schedule activities sorted by Total Float, Early Start. Provide in a bar chart format.
 - (3) All schedule activities sorted by responsibility and early start dates. Provide in a bar chart format.
 - d. Manpower Loading:
 - (1) The Baseline manpower loading shall numerically illustrate the planned manpower for all construction tasks.
 - e. Contractor shall provide to the Engineer a certification letter stating that the Contractor has communicated and coordinated with each major subcontractor (those having Contract values greater than 5% of the Work) in the development of the Schedule and that the major subcontractors agree to the requirements for timing and duration of activities as stated therein.
- 3. Progress Schedule: This is a detailed schedule which is derived from the Baseline Schedule. The first Progress Schedule is the initial monthly progress update of the Baseline Schedule. Subsequent Progress Schedules will be submitted on a monthly basis (or more frequently as may be directed by the Engineer) that updates the previously issued Progress Schedule. The Progress Schedule will also be used to compare percent complete requested by the Contractor in the monthly progress payment applications, to analyze delays and impacts in all Time Impact Analyses (TIA), and to determine whether a Recovery Schedule is needed from the Contractor. The following requirements apply to the Progress Schedule:
 - a. Progress Schedules are due monthly to coincide with the progress payment requests.
 - (1) Allow fourteen (14) calendar days for initial review and fourteen (14) calendar days for re-submittal reviews required by the Engineer.
 - b. Narrative of Schedule Status: The narrative shall describe the following key aspects of the submitted schedules. The narratives submitted with the Progress Schedules are required to be stand-alone documents that do not require Progress Schedules to be attached in order for Port management personnel to understand them:
 - (1) Progress in Last Period
 - (2) Critical Path Progress and Concerns
 - (3) Changes to schedule logic or sequencing of the Work including the addition of or deletion of activities.
 - (4) Changes in Milestone dates
 - (5) Potential Delays and Time Impact Analyses
 - (6) Submittal Status (focus on critical submittals and concerns)
 - (7) Equipment and Material Delivery Status
 - (8) Manpower Loading (utilization of resources)

- c. The following bar charts and tabular reports shall be provided with the Progress Schedule:
 - (1) Complete Schedule organized by Major Area, sorted by sub area and early start date, with "Target" schedule included. Provide in a bar chart format.
 - (2) Critical Path Schedule: All schedule activities sorted by Total Float, Early Start. Provide in a bar chart format.
 - (3) All schedule activities sorted by responsibility and early start dates. Provide in a bar chart format.
 - (4) Schedule log (comparison report) of all changes made to the logic or sequencing of the Work. Provide in tabular format.
 - d. Manpower Loading:
 - (1) The Progress manpower loading shall numerically compare the planned (from the accepted baseline) and actual to date manpower for the project.
4. Weekly Look Ahead Schedule: The Contractor shall prepare and issue a more detailed day-to-day plan of upcoming Work identified on the Network Analysis Schedule. The Work activities planned shall be keyed to NAS activity numbers and updated each week to show the planned Work for the current and following two-week period and include Work accomplished in the week prior to the Progress Meeting. The Look Ahead schedule should also include upcoming outages, closures, preparatory meetings and any other contractual or coordination requirements not readily identified in the NAS as a schedule activity. Identify critical path activities on the Three-Week Look Ahead Schedule. Activities shall not exceed 5 work days in duration and provide sufficient level of detail to assign crews, materials and equipment required to complete the Work. The detailed Work plans are to be bar chart type schedules, maintained separately from the project NAS on an electronic spreadsheet program and printed on 8-1/2x11 sheets. Provide the Schedule in a format acceptable to the Engineer.
- a. Submit PDF to Engineer 24 hours prior to the Progress Meeting.
5. Recovery Schedule: The Recovery Schedule shall represent the Contractor's best judgment as to how the Contractor's Work shall be reorganized such that the Work may return to the accepted Progress Schedule within a maximum one-month period. The Recovery Schedule shall be prepared at a similar level of detail as the Progress Schedule and shall be based on the accepted Progress Schedule. The following requirements apply to Recovery Schedules:
- a. Conditions Requiring a Recovery Schedule: Should any conditions exist, such that certain activities shown on the Progress Schedule fall behind schedule to the extent that any of the mandatory critical dates or milestone completion dates are at risk of being delayed, the Contractor shall, at no cost to the Port, submit to the Engineer a Recovery Schedule.
 - b. Submit seven (7) calendar days after notice from the Engineer that a Recovery Schedule is required. Allow seven (7) calendar days for

- review by the Engineer. Any revisions that result from the Engineer's review shall be resubmitted within five (5) calendar days by the Contractor for acceptance by the Engineer.
- c. Narrative: Provide narrative describing the recovery schedule logic including any increases in manpower and shift work.
 - d. Schedule Sorts:
 - (1) Complete Schedule organized by Major Area, sorted by sub-area and early start date. Provide in bar chart format.
 - (2) Critical Path Schedule: This schedule shall show only the critical path activities sorted by total float, early start. Provide in bar chart format.
 - e. Manpower Loading updated to reflect the Recovery Schedule.
 - f. The accepted Recovery Schedule shall then be the Schedule that the Contractor shall use in planning, organizing, directing, coordinating, performing and executing the Work (including all activities of subcontractors, equipment vendors and suppliers) that is included on the Recovery Schedule. All other Work shall proceed per the accepted Progress Schedule.
 - g. No later than seven (7) calendar days prior to the expiration of the Recovery Schedule, the Engineer and Contractor will meet to determine whether the Contractor has regained compliance with the accepted Progress Schedule. At the direction of the Engineer, one of the following will occur:
 - (1) If, in the opinion of the Engineer, the Contractor is still behind schedule, the Contractor shall prepare another Recovery Schedule, at no cost to the Port, to take effect for a maximum of one additional month from the start of the new Recovery Schedule.
 - (2) If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Progress Schedule, the use of the Progress Schedule shall be resumed.
6. Time Impact Analysis (TIA) for Changed Conditions: Time impact analysis shall illustrate the influence of each change or delay on the critical path or milestones. This schedule analysis shall be part of the back-up data required from the Contractor in the event the Contractor claims that Contract changes delayed or impacted the Work and shall be included in any change proposal claiming increase in time. The following requirements apply to Time Impact Analysis:
- a. Each formal TIA shall be submitted in accordance with Document 00 70 00 - General Conditions. . Submit as part of a detailed breakdown required by Document 00 70 00, General Conditions.
 - b. Narrative:

- (1) Describe the Event or Change requiring a TIA and the impact of the Event or Change on the critical path or milestone.
 - (2) Provide a list of affected activities with their associated schedule activity ID.
 - (3) Provide a mitigation plan that reduces or eliminates the claimed delay. The mitigation plan shall include specific Port and Contractor actions as well as the cost to the Contractor to proceed with the mitigation.
- c. Schedule Sorts:
- (1) Provide a time scaled logic diagram format that depicts how the changed or delayed Work affects other activities in the current accepted Progress Schedule. The logic diagram will clearly show how the changes or delays affect critical path activities including contractual completion milestones.
 - (2) Provide complete Schedule organized by Major Area, sorted by sub-area and early start date. Provide in bar chart format.
- d. Manpower Loading updated to reflect Time Impact Analysis.
- e. Extensions of time will be granted only to the extent that such changes or delays cause the time for the changed activity and related activities to exceed the total float along the affected path of activities at the time of the Port directive to proceed with the change or the actual commencement of the delay included in the TIA.
- f. Project float is not for the exclusive use or benefit of either the Contractor or the Port. Liability for delay to Contract or milestone dates rests with the party whose action (or inaction) caused the delay beyond the float that was available at the time of the delaying action (or inaction).
- g. A copy of the Port accepted TIA will be incorporated in the change order signed by the Port. Any changes to the Schedule will be incorporated into the next update of the Progress Schedule following the Port's acceptance of the TIA.
- h. The Contractor shall be responsible for costs associated with the preparation of the TIA and the incorporation of accepted TIA's, or accepted portion of TIA's, in the Progress Schedule.
- i. If agreement is not reached on a TIA or a portion of a TIA, the Progress Schedule, including any time extensions, shall be revised only to the extent accepted by the Port. For any TIA, or portion of a TIA, that is not accepted by the Port, the Contractor may submit a claim in accordance with the Document 00 70 00 – General Conditions.
7. As-Built Schedule: At the end of the Work, an As-Built Schedule will be derived from the final Progress Schedule showing all activities completed.

The As-Built Schedule will be submitted in the same format as the Progress Schedule.

- a. Submit within 30 days of Physical Completion.
- b. Allow fourteen (14) calendar days for initial review and fourteen (14) calendar days for re-submittal reviews required by the Engineer.

8. Schedule of Submittals: Submit per the following table:

DELIVERABLE	ELECTRONIC COPIES	SUBMITTAL DUE	REMARKS
Preliminary (60-Day) Schedule:	1 PDF, 1 Export file .XER	30 calendar days prior to NTP [Delete row if no Preliminary Schedule is used.]	Pre-construction submittal per Section 01 32 19
Baseline Schedule:	1 PDF of each report, 1 Export file .XER	[If no Preliminary, edit to 30 calendar days before NTP. If Preliminary is used, edit to No Later Than 30 calendar days after issuance of NTP.]	Includes narrative
Progress Schedule:	1 PDF of each report, 1 Export file .XER	Monthly at same time as pay estimate	Includes narrative
As-Built Schedule:	1 PDF of each report, 1 Export file .XER	30 calendar days prior to Physical Completion	
Weekly Look Ahead Schedule:	1 PDF	24 hours prior to construction Progress Meetings	
Recovery Schedule:	1 PDF of each report, 1 Export file .XER	No later than 7 calendar days after notice to submit	
Time Impact Analysis (TIA)	1 PDF of each report, 1 Export file .XER	No later than 30 calendar days of date of event	Submit with all changes requesting time extensions

1.03 CONTRACTOR’S SCHEDULE MANAGEMENT

- A. Scheduling Organization: For the duration of the Contract, the Contractor shall provide adequate staff including one employee or consultant designated as the Contractor’s Scheduling Manager (CSM) dedicated exclusively to the implementation and management of the scheduling requirements of the Contract Documents. The CSM (who shall not be the Contractor’s Project Manager, Superintendent, Project Coordinator or quality control manager) shall have previously developed and maintained at least 3 schedules for projects similar in

nature and complexity to this project and shall be experienced in the use of the scheduling software specified in this Section.

1. Contract Work will not be permitted to be performed on site without an acceptable CSM, unless otherwise authorized in writing by the Engineer.
- B. Qualifications of Contractor's Scheduling Manager:
1. The CSM shall demonstrate acceptable professional familiarity with software, have previously developed and maintained at least 3 schedules for projects similar in nature and complexity to this project and have the experience necessary to implement all scheduling requirements of the Contract in a timely and expeditious manner. Submit qualifications as a Preconstruction Submittal in accordance with Section 01 32 19 - Preconstruction Submittals and Section 01 31 00 - Contractor's Project Organization. [PM cross-check both of these Sections to verify inclusion].
 2. The Engineer will monitor the performance of the CSM. The CSM's performance will be judged on the timeliness and completeness of the Contractor's compliance with the scheduling requirements of the Contract Documents. If the CSM fails to perform in accordance with the scheduling requirements of the Contract Documents, the CSM shall, at the direction of the Engineer, be replaced at no cost to the Port or delay allowable to the project.

1.04 COORDINATION

- A. The Contractor shall coordinate the Work with that of the Port, other Port contractors, Port Operations, Port tenants, and utility companies, and shall cooperate fully with the Engineer in maintaining an orderly progress toward completion of the Work as scheduled.
- B. A Time Impact Analysis (TIA) shall be required to support any claim by the Contractor for delay caused by failure of Port-furnished equipment and materials to arrive as scheduled, or failure of other Port interface work or tenants to meet their schedules. The TIA shall be based on Port activities having the same level of predecessor and successor logic to display delay impacts as the Contractor's Work.
- C. The Contractor shall inform its subcontractors of the delivery status of Port-furnished equipment and material, and of the progress of other interfacing Port construction work while the Work is underway.

From this point onward, technical review by a scheduler is required.

1.05 SCHEDULE FORMAT REQUIREMENTS

- A. Unless otherwise specified, the Schedules shall be produced utilizing Microsoft Windows based Primavera Enterprise P6 version 7.0 or newer. The Contractor may request to use different project scheduling software as a substitution in accordance with Specification Section 01 25 00 - Substitutions. Only scheduling software meeting all specified requirements will be considered. If alternative software is accepted, the Contractor will be required to supply the Engineer with an authorized (licensed) Microsoft Windows based version of the software with all user support manuals.

- B. The Schedules shall employ the Critical Path Method (CPM) using retained logic for the planning, scheduling and reporting of the Work to be performed under this Contract. The type of schedule shall be Precedence Diagramming Method (PDM).
- C. Default progress data is disallowed. Actual start and actual finish dates on the Schedule shall match the dates on the Contractors Daily Construction Reports.
- D. Software Settings: Schedule calculations and out-of-sequence progress (if applicable) shall be handled through Retained Logic, not Progress Override or Actual Start Dates. All activity durations and float values shall be shown in days. Activity progress will be shown using Remaining Duration.
- E. Schedules shall include but not be limited to:
 - 1. All critical Milestone and Completion dates defined in the Contract.
 - 2. Activities designating Contract Execution, Notice To Proceed, Mobilization, Completion of each Phase, Final Inspections, Substantial Completion and Physical Completion.
 - 3. Critical procurement and submittal activities including shop drawings and other key submittals, Port review of submittals, re-submittals and Port review of re-submittals, fabrication and delivery for all key, critical paths, near critical path and long-lead equipment and material. The Port reserves the right to require the Contractor to add procurement activities to the schedule for any key or long-lead equipment, materials or submittals it deems necessary to monitor the Contractor's schedule for this Work.
 - 4. Testing activities hold and witness points in construction, Commissioning, Training and Closeout activities.
 - 5. Offsite activities that interface with the Contractor's Work, including work by the Port and Port contractors, delivery of Port-furnished materials and equipment, programming, utilities, agencies, critical Port operations, Port tenants, or similar activities.
 - 6. Construction Activities to the level of detail defined elsewhere in this section.
 - 7. Major construction equipment mobilization and demobilization, for example cranes.
 - 8. Activities that are impacted by Change Order or Event.
- F. Activity Coding and Descriptions
 - 1. The description of Work by activity. Activity descriptions and activity coding shall contain the area of the Work as well as the specific type of Work.
 - 2. Once an activity exists on the schedule, it may not be deleted or renamed to change the scope of the activity and shall not be removed from the schedule logic without approval from the Engineer.
 - 3. Coding of Activities shall be based on the following coding structure, as a minimum. Contractor may add codes as he requires:
 - a. Major Area – Major site area or grouping of activities
 - b. Sub-Area – A further breakdown of the Major Area

- c. Location – Subset of the sub-area coding
- d. Responsibility – Contractor, Subcontractor, Supplier, or Organization responsible for the Work
- e. Specification – Specification section for the Work
4. Activity Code Structure:
 - a. Global codes and Enterprise Project Structure (EPS) codes are not to be used unless approved by the Port.
 - b. Activity Codes shall be maintained at a project level.
 - c. Activity Code Identifier shall utilize the Work Project (WP) number. e.g. “[WP number] – Responsibility”
5. Activity boundaries shall be easily measurable and descriptions shall be clear and concise. The beginning and end of each activity shall be readily verifiable and physical progress shall be quantifiable.
6. Responsibility for each activity shall be identified with a single performing organization (i.e. Contractor/subcontractor). Where deemed necessary to define critical, key or unusual Work, the Port reserves the right to require additional activities be added to the Contractor’s schedule. The organization related to the activity shall be identified in a background sort code, such that reports sorted by organization can be made using the scheduling software.
7. Activity durations shall be in work days. Activity durations over fifteen (15) working days shall be kept to a minimum and shall be used only for non-construction activities, such as shop drawing and sample submittals, fabrication and delivery of materials and equipment, concrete curing, and General Conditions activities. Exceptions to this shall be accepted in writing by the Port.
8. For critical path and near critical path activities, Contractor shall use Finish-to-Start (FS) relationships to the extent possible. Contractor shall use more activities if necessary to use Finish-to-Start (FS) relationships in preference to using Start-to-Start relationships. Lag durations contained in the project schedule shall not have a negative value. Do not use Start-to-Finish (SF) relationships.
9. Activities that constitute the controlling operations or critical path will be identified by use of color (red). The critical path is defined as activities with total float less than one day. Near critical is defined as total float in the range of one (1) to ten (10) days. The critical path and near critical activities will be less than 25 percent of the total activities in the Baseline Schedule.
10. Imposed completion dates for events other than the Milestone Dates or Completion Dates are generally not permitted. Artificial constraints (imposed start or finish dates, zero free float or zero total float) are generally not permitted, except possibly for use in Port-furnished materials, Port interface dates and or similar activities. All Port-furnished materials and Port interface dates shall have an early start/finish and late start/finish range. All Port dates shall be related to the Contractor’s Work with

predecessor and successor logic such that float is correctly calculated on Port-furnished materials and Port interface dates.

11. Activity numbering shall be spaced (or gapped) to allow inclusion of new activities between existing activities while still maintaining a similarity of numbering for like activities. Numbering by area, level, etc. is encouraged to assist in analysis. The numbering may be alphanumeric to allow easier identification of areas, etc.
12. All activities shall be “scheduled” based on the data date of each submitted schedule. Planned durations for remaining Work and planned completions of remaining Work on activities shall be used. Activities shall not “ride” the data date line with scheduled completions being the remaining durations unless the Contractor actually plans to complete Work within the remaining duration.
13. Manpower loading: The activities shall be field manpower loaded. The summarized manpower in the Schedule shall be the total of all field manpower required for all Contract Work. Manpower loading shall be entered using workmen for the loading not work crews. Resource identifier for manpower shall utilize the Work Project (WP) number. e.g. [Work Project Number] - Manpower

G. Schedule Layout and Sequence of Activities

1. The layout shall be consistent with the Work required to meet the Project Conditions and Contract milestone dates. In general, it is desired to have the Work needed to meet the Contract milestones be detailed activities that summarize, or roll-up to provide plan and status information reported for the milestone. Work to complete each milestone shall be easily identifiable in the Contractor’s overall schedule. The summarized overall schedule shall allow reporting of physical progress and manpower loading for the entire Work.
2. The Contractor shall establish the layout that is needed to meet his Contract responsibilities. The Contractor shall use his selected layout to coordinate with the Contractor’s submitted progress payment applications, such that the Schedule, physical progress, the progress payment application and physical progress can be compared to determine the actual progress payments to be made to the Contractor.

H. Formats of Schedules Submitted to Engineer

1. The formats of schedules and schedule documents shall be submitted to the Engineer are described below. The formats described are solely for reporting information and analysis use with the Port and are not intended to direct the Contractor in his own methods of scheduling. Schedules and schedule documents shall be submitted with clear identification of the Port and Contractor’s job numbers, schedule names, descriptions, plot dates, and data dates. Schedules submitted shall be formatted in a fixed sequence of summary and detail activities for the Contract duration for ease of reference in progress updates. This sequence shall be established by the Contractor and acceptable to the Engineer. The sequence shall be set up in the software such that re-sequencing or reorganizing of the Schedules is not required to generate Port required schedules and reports.

This allows a one to one comparison of each Schedule issued with previous Schedules for analysis purposes, including the As-built Schedule.

2. Schedules shall be submitted with the activity description data listed from left to right, as follows: Activity ID, Activity Description, Original Duration, Remaining Duration, Total Float, Percent Complete, Early Start, Early Finish, and budgeted manpower units. The early start and finish dates shall be designated by an "A" after the actual date the activity was started or finished. The Baseline Schedule shall also include the late start and late finish dates to the right of the early finish dates. The Port reserves the right, at no cost, to require the Contractor to add or delete fields from these reports.
 3. Schedules shall be submitted in bar chart format with activity data on the left side and bars on the right side. Logic shall not be displayed. Activity descriptions shall be displayed in the bar area. The bar chart schedules shall be 11x17 inch in size.
 4. The Progress Schedule shall display the previous month's Progress Schedule as a "Target" schedule for comparison use. The first Progress Schedule shall use the Baseline Schedule as the "Target" schedule. The "Target" bars shall be of smaller size, of different color, and below the current schedule's bars. The bar chart size shall be 11" x 17".
 5. All schedules and schedule documents submitted to the Engineer shall be electronic. Submit via CMS and provide a separate PDF file for each report, schedule, or chart. Provide an Export File format [.XER] from the Scheduling software.
- I. Manpower Loading
1. The manpower loading and numerical information shall be combined on one chart. The chart shall be no larger than one 11x17 page, unless the project is particularly long or the information becomes unreadable.
 2. Definitions
 - a. Planned Manpower - represents the average daily field crew size during the monthly or weekly periods for the duration of the project. The average crew size is derived from the baseline schedule and represents the crew loading required to complete the baseline Work.
 - b. Actual Manpower - represents the average daily field crew during each month or week period as recorded through the Contractors Daily Construction Report.
 - c. Forecast Manpower - represents the anticipated average daily field crew size during the monthly or weekly period commencing after the last reported Actual Manpower period and continue for the remainder of the project. The Forecast Manpower shall be as accurate as possible and reflect any anticipated changes to the project. Approved Recovery and TIA scheduling changes would also be incorporated.

- d. Planned Progress - represents the cumulative baseline percent complete at the end of each monthly or weekly period for the duration of the project.
 - e. Actual Progress - represents the cumulative percent complete at the end of each monthly or weekly period as approved in the monthly progress billings or weekly contractor meetings.
 - f. Forecast Progress - represents the cumulative anticipated percent complete at the end of each monthly or weekly period commencing after the last reported Actual Progress period and continues for the remainder of the project. The Forecast Progress shall be as accurate as possible and reflect any anticipated changes to the project. Approved Recovery and TIA scheduling changes shall also be incorporated.
3. Layout of the numerical data will be as follows or in a similar format proposed by the Contractor and as agreed to by the Engineer:
- a. The data labels will be on the left and indicate planned manpower (number of field workers), actual manpower, forecast manpower, planned progress (percent complete), actual progress, and forecast progress.
 - b. The numerical data for each vertical bar or line data point shall be indicated in the table.
 - c. The planned and actual manpower shall be summed on the right-hand side of the table.

1.07 1.08 SCHEDULE UPDATES AND SCHEDULE (NETWORK) REVISIONS

- A. During the course of the Work and issuance of the Progress Schedules, updating to reflect actual progress shall not be considered revisions to the Schedule. Such updating shall include revisions to activity durations and certain sequences on a monthly basis. Included in the Progress Schedule updates shall be activities and changes that have already been reviewed and accepted by the Port such as the effect of accepted Port changes, the agreed duration of delays caused by acts of God or other conditions or events which have affected the progress of the Work. The Progress Schedules, when formally submitted, shall display current progress, as well as displaying the forecast or projected Work to the end of the Project.
- B. On all Progress Schedule submittals, the Contractor shall submit a list of all schedule logic changes along with the reason for each change. This list is an integral part of the Schedule submittal. This list shall be generated from the scheduling software. The Port shall accept this list as part of its overall Progress Schedule submittal review and acceptance process.
- C. Should the Contractor, after Port acceptance of the Baseline Schedule and any Progress Schedules, desire to change the logic of its plan of construction, the Contractor shall submit in writing its requested revisions to the Engineer. The request shall include a written narrative of the reasons for the activity and logic changes, a description of the logic for rescheduling the Work, and the methods of maintaining adherence to mandatory critical dates and milestone dates. In addition, for changes affecting sequences of the Work, the Contractor shall provide a time-scaled logic diagram that compares the original sequence of Work to the

requested revised sequence of Work. The Contractor shall submit the requested revision in a timely manner such that the Port may review the request submittal in the same time frame and manner as required for other schedule submittals. Upon Port acceptance of the request, the Contractor shall include the revision in the next upcoming Progress Schedule.

- D. Neither the updating or revision of the Contractor's Progress Schedule, nor the submittal, updating, change or revision of any schedule (or schedule document) for the Engineer's review and acceptance shall have the effect of amending or modifying in any way, the Contract Time, any Contract completion date, or Contract milestone dates or of modifying or limiting in any way Contractor's obligations under this Contract.

1.09 TIMELINESS OF SCHEDULE DOCUMENT SUBMITTALS

- A. The Schedule (and schedule documents) shall be submitted in a timely manner as required by this Section, the General Conditions and the Supplementary Conditions. Failure to submit the Schedule and schedule documents on time and in an acceptable format shall result in withholding of payments and other remedies as defined in the General Conditions of the Contract.

1.10 ACCEPTANCE PROCESS

- A. The Engineer will review the Contractor's Schedule. If required, a meeting will be held between the Engineer and the Contractor's Scheduling Manager (CSM) and Project Manager to resolve any conflicts between the Contractor's schedule and the overall Project Construction. The Contractor shall revise the schedule as required by the Engineer to support the Project Construction and shall submit the revised schedule to the Engineer within seven (7) calendar days for review and acceptance.
- B. Acceptance by the Engineer of the Contractor's Schedule is advisory only and shall not release the Contractor of the responsibility for accomplishing the Work within each and every contractually required Milestone and Completion Date. Omissions and errors in the Schedule shall not excuse performance that is not in compliance with the Contract. Acceptance by the Engineer in no way makes the Port an insurer of the Schedule's success or liable for time or cost overruns as a result of its shortcomings. The Port disclaims any obligation or liability by reason of its acceptance of the Schedule.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

READ THIS FIRST

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PART 1 GENERAL

1.01 DESCRIPTION

- A. The Work under this Contract will be planned, scheduled, executed and reported using a bar chart schedule. The bar chart Schedules described here serve as a communication tool between the Port and the Contractor, and the Contractor and its subcontractors. The Contractor shall use the schedules to establish a joint understanding of the assumptions regarding the work, and the various constraints and opportunities that are possible within the plan. As the work progresses the project team is expected to use these schedules to assess impacts and to formulate the best methods to complete the work on, or ahead of, the contractual completion dates. Specifically, the purpose is as follows:
 - 1. To assure adequate planning, scheduling and reporting during execution of the Contract.
 - 2. To assure coordination of the work by and between the Contractor and the various subcontractors and suppliers.
 - 3. To assist the Contractor and Engineer in monitoring the progress of the work and to contemporaneously evaluate proposed changes to the Contract and the project schedule.
 - 4. To assist the Contractor and Engineer in the preparation and evaluation of the Contractor's monthly progress payment.
- B. Schedules shall be in a bar chart format with a logical association of predecessor or successor ties between the activities. The Schedules shall be produced using Primavera or Microsoft Project (the most current version). The Contractor may request to use different software as a substitution, in accordance with Division 1, Section 01 25 00 - Substitutions. If the alternate software is accepted, the Contractor will be required to supply the Engineer with an authorized copy of the software with all user support manuals.
- C. If the Contractor should desire or intend to complete the Work earlier than any required Critical or Completion date, the Port will not be liable to the Contractor for any costs or other damages should the Contractor be unable to complete the Work

according to this earlier date. The duties and obligations of the Port to the Contractor shall be consistent with and applicable only to the completion of the Work on the Milestone and Completion dates specified in the Contract, unless the Port and the Contractor otherwise agree and a change order is issued.

- D. At anytime throughout the course of the work, the Engineer reserves the right to require additional activities to be added to the Schedule to further define the contractor's plan and intentions regarding the execution of the Work. In each instance, such activities or changes shall be made by the Contractor at no cost or delay to the Port.

1.02 SCHEDULE - BAR CHART

- A. Pursuant to the General Conditions of this Contract, the following additional scheduling requirements are a part of this Contract.
- B. Work under this Section shall consist of furnishing a Schedule showing in detail how the Contractor plans to execute and coordinate the Work. The Contractor shall use the Critical Path Method (CPM) and precedence Diagram Method (PDM) to generate the Schedule. The Schedule shall be based on, and incorporate the Contract Milestone and Completion Dates included in the Contract, and shall show the order in which the Contractor shall perform the Work, projected dates for the start and completion of separable portions of the Work, and other information concerning Contractor's scheduling as Port may request.
- C. Schedule Requirements: The Schedule shall be in the form of a bar chart and shall consist of horizontal lines, or bars, plotted along a time scale. The horizontal bar(s) shall indicate the start and finish dates as well as the total time period of performance for each activity. The Contractor shall arrange the chart so as to show the activities which are necessary to fulfill each and every Milestone and Completion Date requirement. The schedule shall be sorted by phase, area and early start date.
- D. The Schedule Content: The Contractor's Schedule shall include, but not be limited to:
1. Critical procurement activities including mobilization, shop drawings and other submittals, Engineer review of submittals, fabrication, and delivery of key and long-lead equipment and materials;
 2. Contract Execution; Preconstruction Submittals, Notice To Proceed; Construction/erection activities; Pre Final Inspection, Final Inspection and Substantial Completion.
 3. Offsite activities including interfaces with the work of outside contractors, e.g. utilities, power, or any separate contractor.
 4. Port activities including delivery of materials and equipment, programming, abatement, and services provided.
 5. Testing activities; Hold and witness points in construction; Commissioning, and Training.
 6. Phased Completion, Milestones and associated Substantial Completion Dates if specified.
 7. Activities for project Contract activities and requirements which include, but are not limited to, O&M manuals and record documents.

8. Activities that are impacted by Change Order or Event.
- E. The identity, and logic of activities comprising the Schedule shall meet the following criteria:
1. The description of work by activity. Activity descriptions and coding shall contain the area of the work as well as the specific type of work.
 2. Activity boundaries shall be easily measurable and descriptions shall be clear and concise. The beginning and end of each activity shall be readily verifiable, and progress shall be quantifiable.
 3. Responsibility for each activity shall be identified with a single performing organization.
 4. Activity duration shall be in work days. Unless agreed otherwise with the Engineer, activity durations over fifteen (15) working days shall be kept to a minimum and be used only for non-construction activities, such as shop drawing and sample submittals, fabrication and delivery of materials and equipment, concrete curing, and General Conditions activities.
 5. The Baseline Schedule must indicate which activities are to be performed on day shift versus night shift, and which activities will be performed utilizing two work shifts, or weekend work. The contractor is fully responsible for planning and performing the work in order to meet all of the required project delivery dates, including additional second or third shift work.
 6. Potential problems or constraints related to the implementation of the construction plan shall be identified in writing.
 7. Foreseeable delays to activities such as normal seasonal weather shall be considered and included in the planning and scheduling of all work.
 8. Imposed completion dates for events other than the Completion Dates are not permitted. Artificial Constraints are also not permitted.
 9. The format for the Schedule shall include an activity information table shown on the left side of the page and a bar graph on the right side of the page. The columns in the activity information table on the left side of the page shall include, but are not limited to; Activity ID, Activity Description, Calendar ID, Original Duration, Remaining Duration, Early Start, Early Finish, Total Float, and Predecessors. The bar chart format shall include the Start Date to the left of the bar and the Activity Description to the right of the bar. The logic ties shall be visible on the bar chart. Critical Activities bars shall be identified by a different color than the non-critical activities.
- F. Other Schedules
1. Three-week "Look Ahead" schedule: The three-week "Look Ahead" Schedule shall include the current week's activities from the monthly Schedule, the next two weeks of planned work activities and other schedule information deemed necessary by the Contractor.
 - a. These schedules shall identify critical work, utility shutdowns and activities impacting operations.

2. As-Built project schedule: The As-built shall be submitted at the end of the Project. The as-built schedule shall show actual start and finish dates for all activities in the schedule. This is the final schedule update for the project.

G. Submittals

1. The submittal of the schedule documents shall include:
 - a. The Baseline Schedule shall be submitted prior to issuance of NTP, per Section 01 32 19 - Preconstruction Submittals.
 - (1) The Baseline Schedule shall include a narrative that explains the basis for the Contractor's schedule of construction and any constraints.
 - (2) All requested comments on the Baseline Schedule shall be incorporated, resubmitted and accepted prior to [NTP] [the second Progress Payment].
 - b. The monthly schedule shall be submitted with the monthly request for payment.
 - c. Three-week "Look Ahead" schedule: Contractor shall provide to the Engineer one electronic copy (PDF format) for the project meetings, 24-hours before the scheduled meeting.
 - d. As-Built project schedule shall be submitted at the end of the Project.
2. All schedules and schedule documents shall be electronic, submitted to the Engineer via CMS. Submit one (1) color pdf of each schedule report, (except the Look-ahead schedules) together with an electronic data file of the CPM schedule. The bar chart schedules shall be sized for 11" X 17" printouts.

H. Acceptance Process

1. The Engineer will review the Contractor's Schedule. If required, a meeting will be held between the Engineer and the Contractor to resolve any conflicts between the Contractor's schedule and the overall Project Construction. The Contractor shall revise the schedule as required by the Engineer to support the Project Construction and shall submit its revised schedule to the Engineer within five (5) days for review and acceptance.
2. Acceptance by the Engineer of the Contractor's Schedule is advisory only and shall not release the Contractor of the responsibility for accomplishing the Work within each and every Contract-required Milestone and Completion Date. Omissions and errors in the Schedule shall not excuse performance that is not in compliance with the Contract. Acceptance by the Engineer in no way makes the Port an insurer of the Schedule's success or liable for time or cost overruns from its shortcomings. The Port disclaims any obligation or liability by reason of its acceptance of the Schedule.

1.03 COORDINATION

- A. The Contractor shall coordinate the Work with that of other contractors working on or near the project site and shall cooperate fully with the Engineer in maintaining orderly progress toward completion of the Work as scheduled.
- B. The Contractor shall involve all applicable subcontractors in the schedule development, updating and revisions.
- C. The Contractor shall keep subcontractors informed of the Work underway by utilizing all project schedules.
- D. The Contractor shall coordinate all Work activities with Port departments providing services and support to the project.

1.04 SCHEDULE UPDATES

- A. Update Procedures
 - 1. The Contractor understands and agrees that its Schedule is intended to accurately reflect at all times the status of the Project Construction and projected activities. The Contractor also understands and agrees that updating is a key requirement to accomplish this intent and shall comply with the requirement to update.
 - 2. The graphic format of the Schedule shall include actual start and actual finish dates for activities that have started or finished. For activities in progress, activity progress shall be shown on the activity bar and the forecasted completion shall indicate the earliest the activity can be completed based upon current project status.
 - 3. The Contractor understands and agrees that updating the Schedule is independent from updating the cost for progress payment purposes.
 - 4. Contractor shall submit the accepted updated schedule with the pay application and include a written narrative describing the overall progress of the Work. The narrative shall include the following key aspects:
 - a. Progress in the last period.
 - b. Critical Path progress and schedule concerns.
 - c. Changes to schedule logic or sequencing of the work.
 - d. Potential Delays and Time Impact Analyses.
 - e. Submittal Status (focus on critical submittals and concerns).
 - f. Equipment and Material Delivery Status.
 - 5. The Engineer will not be obligated to review or to process any Application for Progress Payment until the Contractor has submitted all schedules update information and the information accepted.
 - 6. Throughout the progress of the Work, the Contractor shall prepare and maintain a three-week Look-ahead bar chart field schedule reflecting the schedule of work activities accomplished for the previous week and the work scheduled for the forthcoming two weeks. This schedule shall be presented at the weekly project meetings. Activities on the three-week Look-ahead schedules shall be readily identifiable with activities on the Baseline schedule. Submit a pdf of the three-week look-ahead to the Engineer, 24 hours prior to the Project Meeting.

7. Updates shall be submitted on a monthly basis.

Include the following subparagraph 8 only on Lump Sum Contracts.

NOTE: Lump Sum Contracts have the majority of work represented in lump sum line items on the bid sheet and do NOT have a Mobilization/Demobilization bid item.

8. One initial Application for Payment for expenditures not directly related to Work accomplished at the project will be allowed before the acceptance of the Contractor's schedule. This payment will be limited to such items as Permits, Bonds, and Insurance. A second payment or requests for payment for work items not included above will not be allowed without an accepted schedule.

1.05 FLOAT

- A. Schedule float is not for the exclusive use or benefit of either the Contractor or the Port. Neither the Port nor the Contractor "owns" the float. The project or Work "owns" the float. Liability for delay to Contract or milestone dates rests with the party whose action (or inaction) caused the delay beyond the float that was available at the time of the delaying action (or inaction).
- B. Extensions of time will be granted only to the extent that the activity or activities affected exceed the total float or slack along the critical path of activities affected at the time of Notice to Proceed of a Change Order or the commencement of any delay or condition for which an adjustment is warranted under the Contract Documents. The Contractor shall submit documentation supporting its request for a time extension in a form acceptable to the Engineer and consistent with the requirements of the General Conditions.

1.06 TIME IMPACT ANALYSIS FOR CHANGED CONDITIONS

- A. If the Contractor experiences activity delays that the Contractor believes are caused by the Port, and the Contractor seeks to obtain a Contract time extension, the Contractor shall submit a formal written Time Impact Analysis (TIA). The TIA shall define the impact of each change or delay to the current accepted Schedule. The TIA shall include a written narrative of the impact of such delays, and a schedule that depicts how the changed or delayed work affects other activities in the current accepted Schedule.
- B. The Contractor shall continue to track update and submit monthly schedules during the development review and response period for the TIA. The Engineer may withhold monthly payment if the Contractor fails to maintain and submit updated schedules.
- C. In addition to the Contractor's presentation of the impact in the TIA, the Contractor shall include in the TIA, a mitigation plan that reduces or eliminates the claimed delay. The mitigation plan shall include specific Port and Contractor actions as well as the cost to the Contractor to proceed with the mitigation.
- D. In the event that the Contractor requests a Contract time extension, the time impacts to critical path activities in the current accepted Schedule shall be clearly shown. Extensions of time will be granted only to the extent that such changes or delays cause the time for the changed activity and related activities to exceed the total float along the affected path of activities at the time of the Port directive to

proceed with the change or the actual commencement of the delay included in the TIA.

- E. Each formal TIA shall be submitted in accordance with the General Conditions
- F. A copy of the Port accepted TIA will be incorporated in the change order signed by the Contractor and the Port for such change. Any changes to the Schedule will be incorporated into the next update of the Schedule following the Port's acceptance of the TIA.
- G. The Contractor shall be responsible for all costs associated with the preparation of the TIA and the incorporation of accepted TIAs, or portion of TIAs, in the Schedule.
- H. If agreement is not reached on a TIA, or a portion of a TIA, the Schedule, including any time extensions, shall be revised only to the extent accepted by the Port. For any TIA, or portion of a TIA, that is not accepted by the Port, the Contractor may submit a claim in accordance with the Conditions of the Contract.

1.07 RECOVERY SCHEDULE

- A. Should any conditions exist, such that certain activities shown on the Contractor's Schedule fall behind schedule to the extent that any of the mandatory Critical dates or Completion dates are in jeopardy, the Contractor shall be required to, at no cost to the Port, prepare and submit to the Engineer a supplementary recovery schedule, in a form and detail appropriate to the need, to explain and display how it intends to reschedule those activities to regain compliance with the Schedule.
- B. After determination of the requirement for a Recovery Schedule, the Contractor shall, within five (5) work days, present to Engineer the Recovery Schedule. The Recovery Schedule shall represent the Contractor's best judgment as to how work should be reorganized for return to the accepted Schedule. The Recovery Schedule shall be prepared to a similar level of detail as the Schedule.
 - 1. Recovery Schedule: The Recovery Schedule shall represent the Contractor's best judgment as to how the Contractor's work shall be reorganized such that the work may return to the accepted Schedule within a maximum one-month period. The Recovery Schedule shall be prepared at a similar level of detail as the Schedule and shall be based on the accepted Schedule. The following requirements apply to Recovery Schedules:
 - a. Conditions Requiring a Recovery Schedule: Should any conditions exist, such that certain activities shown on the Schedule fall behind schedule to the extent that any of the mandatory critical dates or milestone completion dates are at risk of being delayed, the Contractor shall, at no cost to the Port, submit to the Engineer a Recovery Schedule.
 - b. Allow five (5) work days for review by the Engineer. Any revisions that result from the Engineer's review shall be resubmitted within three (3) work days by the Contractor for acceptance by the Engineer.
 - c. Narrative: Provide narrative describing the recovery schedule logic.

- d. Schedule:
 - (1) Complete Schedule organized by Major Area, sorted by sub area and early start date. Provide in bar chart format.
 - (2) Critical Path Schedule: This schedule shall show only the critical path. Provide in bar chart format.
- e. Manpower Loading and Progress Curve updated to reflect the Recovery Schedule.
- f. The accepted Recovery Schedule shall then be the Schedule that the Contractor shall use in planning, organizing, directing, coordinating, performing and executing the Work (including all activities of subcontractors, equipment vendors and suppliers) that is included on the Recovery Schedule. All other Work shall proceed per the accepted Schedule.
- g. No later than five (5) calendar days prior to the expiration of the Recovery Schedule, the Engineer and Contractor will meet to determine whether the Contractor has regained compliance with the accepted Schedule. At the direction of the Engineer, one of the following will occur:
 - (1) If, in the opinion of the Engineer, the Contractor is still behind schedule, the Contractor shall prepare another Recovery Schedule, at no cost to the Port, to take effect for a maximum of one additional month from the start of the new Recovery Schedule.
 - (2) If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Schedule, the use of the Schedule shall be resumed.

1.08 AS-BUILT SCHEDULE

- A. Provide for the As-Built Record Document an As-Built Schedule prior to request for Final Payment.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

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PART 1 GENERAL

1.01 DESCRIPTION

NTP is typically 45 days. Some projects will require shorter or longer periods (20, 30, or 60). Adjust accordingly.

- A. This section addresses the submittals that must be made by the Contractor and accepted by the Engineer prior to issuance of a Notice to Proceed (NTP). The Port has based the Contract time on issuing an NTP [forty-five (45)] days after Execution and has allowed time in the Contract duration for the Contractor to prepare, submit, and gain acceptance of the required submittals detailed herein.
- B. The Port will not issue a NTP, or accept requests for partial payments, or allow for onsite mobilization (less field office setup) until the Preconstruction submittals have been received and accepted by the Engineer. At the sole discretion of the Engineer, a partial NTP may be granted for portions of the Work.
- C. No time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required herein. The Engineer shall be the sole authority on determining the acceptability of the Contractor's submittals.
- D. Early submission is encouraged. A submittal package that has “Accepted” or “Accepted As Noted” before the Preconstruction Conference can result in a Preconstruction Conference and NTP earlier than that originally contemplated. Poorly prepared, incomplete, or inaccurate submittals as well as non-receipt by the Engineer of required submittals will cause the Preconstruction Conference and the issuance of the NTP to be delayed. The Contract completion date remains "as bid." The Contractor is expressly notified that delay in issuance of NTP, due to incomplete or unacceptable submittals, will reduce the "actual" amount of time the Contractor has to complete the Work of the Contract.

1.02 SUBMITTALS

- A. All submittals shall be made in accordance with Section 01 33 00- Submittals.

B. Required Submittals:

Note to Construction Manager: At STIA, include subparagraphs 2 thru 4 if SC-04.12 PERMITS, LICENSES, FEES AND NOTICES in Document 00 80 00 includes these documents.

1. Registered Design Professional Statement of Special Inspection/Contractor's Written Statement of Responsibility (CSOR) Document 00 80 00, Supplementary Conditions
2. Contractor's Permit Statement (National Pollutant Discharge Elimination System (NPDES) Permit) per Document 00 80 00, Supplementary Conditions.
3. Copies of any permits or other regulatory or public agency approvals required per Document 00 80 00, Supplementary Conditions.
4. List of subcontractors in accordance with General Conditions.
5. Contractor Access Plan per Section 01 14 13 – Airport Personnel Identification/Access Control.
6. Contractor's Project Organization and personnel qualifications per Section 01 31 00 – Contractor's Project Organization.

Select a scheduling system in subparagraph 7, and select a method of quality control in subparagraph 11. Include or omit subparagraphs 12 to 17, as required by the Work.

7. A Baseline Schedule, per Section [01 32 16.13 - Network Analysis Schedules] [Section 01 32 16 - Bar Chart Schedules].
8. Schedule of Values per Section 01 20 00 -Measurement and Payment Procedures.
9. Submittal Log per Section 01 33 00 - Submittals.
10. Safety Plan Compliance Document per Section 01 35 13.13 Operational Safety on Airports During Construction
11. Certificate of Compliance with Construction Safety Phasing Plan per Section 01 35 13.13 Operational Safety on Airports During Construction
12. Safety Plan per Document 01 35 29 - Safety Management
13. (Quality Control Plan per Section 01 45 16.13a or Section 01 45 16.13b - Contractor's Quality Control Program)
14. (Material Test Plan per Section 01 45 01 Material Laboratory Testing (typical to airfield projects).
15. Temporary Power Plan per Section 01 50 00 - Temporary Facilities and Controls
16. Preconstruction Submittals called out in Section 01 55 16 - Haul Routes.
17. Temporary Erosion and Sediment Control Plan per Section 01 57 13 - Temporary Erosion and Sediment Control Planning and Execution.

18. Pollution Prevention Plan per Section 01 57 23 - Pollution Prevention Planning and Execution.
19. Waste Management Plan and Final Report per Section 01 74 19 – Construction Waste Management
20. Long lead procurement items as defined in technical specifications.
21. Critical materials and systems defined in the technical specifications of the Contract Documents that will be installed during the first 120 calendar days following NTP.

Edit list below as necessary or remove this paragraph if RMM is not part of this project.

22. Preconstruction submittals for regulated materials
 - a. Asbestos (see Section 02 82 13)
 - b. Lead (see Section 02 83 19)
 - c. Light ballasts and universal waste lamps (see Section 02 84 16)
 - d. PCB's and PCB-containing materials (see Section 02 84 33)
 - e. PCB caulk (see Section 02 84 33.13)
 - f. Fugitive and silica dust (see Section 02 87 00)

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

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PART 1 GENERAL

1.01 DESCRIPTION

- A. Individual Submittals are required in accordance with the pertinent sections of these specifications.

Ensure all required submittals are called out in the applicable specification section.

Ensure those submittals requiring Port Aviation Facilities & Infrastructure or Maintenance review are identified in the draft submittal log provided during design.

- B. Submittal Log: After Contract Execution, the Engineer will provide an electronic draft Submittal Log to the Contractor indicating those Submittals generally required by the specifications. The Contractor shall check the required Submittals for completeness and accuracy against the bid documents and return the completed Submittal Log to the Engineer within [10] [15] [30] calendar days. The Port will complete the first six (6) columns. The Contractor shall complete the “Contractor Priority” and “Date Due from Contractor” columns. The Contractor may also make comments in the “Remarks” column. This date shall correspond with that shown on the Project Schedule for each Submittal. A copy of the Submittal Log is attached to this Specification Section, for reference purposes only. The Contractor is expected to provide all listed Submittals unless specifically requested to be removed from the Submittal Log and accepted by the Engineer.
- C. All Submittal coversheets shall bear the Contract name and number, the date of submission, reference to the specification section and drawing number to which the Submittal applies, the nature of the Submittal, and the Contractor’s signature.
- D. Submit all shop drawings, catalog cuts, and brochures in the quantity specified herein, electronically, using the Contract Management System (CMS) Submittal Workflow process or other format as accepted by the Engineer.
 - 1. Submittal drawings shall include the official Port project name and work project number in the title blocks of all drawings that are created or modified for specific use on the project.

- E. Prepare a separate Submittal form for each product or procedure and identify by referencing the specification section and paragraph number.
- F. The Port will return the Submittal electronically via the CMS Submittal Workflow process, within [14] [21] 30 days of receipt by the Engineer. Submittal status is reviewed in weekly Progress Meetings. See Deferred Submittals section for additional information on submittal process and timelines.
- G. The Port will allow one (1) review of the original Submittal and one (1) submittal reiteration, which is included in the cost of the project. The Port has the right to recover any additional cost that may result from the review of any subsequent re-submittals.

If there are additional reviewers outside the Port that will require additional review time – ie. WSDOT and SDOT, add the following sentence with modifications as appropriate for this contract:

- H. There are Submittals in this Contract that have additional review by [WSDOT/SDOT/specify the reviewer]. Allow 14] [21] 30 additional days for this additional review time.
- I. Engineer shall receive submittals, including shop drawings, product data and samples from Contractor and shall review and take other appropriate action on them, but only for conformity with the design concept of the Project and with the provisions and intent of the Contract Documents. Shop drawings, samples, and other submission reviews by Engineer shall not include checking of dimensions or openings for potential conflict. Engineer's acceptance of a specific item shall not indicate acceptance of an assembly of which the item is a component. Submittals will be returned, "Receipt Acknowledged", "Accepted", "Accepted as Noted", "Revise and Resubmit" or "Not Accepted".
- J. Section 01 32 19 - Preconstruction Submittals contains required submittals that must state "Accepted" or "Accepted as Noted" by the Port prior to issuance of Notice to Proceed.
- K. See Section 01 25 00 - Substitutions for procedures regarding requests for substitutions.

1.02 COMPLIANCE

- A. The Port may not pay for materials delivered or incorporated into the Work without an accepted submittal.
- B. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.03 SHOP DRAWINGS

For WSDOT/SDOT submittals, define additional types of submittals based on inclusion of WSDOT/SDOT specs (for example ROM, QPL, Mfr certificate of compliance), WSDOT/SDOT meas and payment does not apply.

- A. Quality: Prepare shop drawings accurately to scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection,

erection, or assembly with respect to the work. Calculations associated with shop drawing design shall also be submitted.

- B. Structural Fabrication and Erection Drawings: All shop drawings which indicate structural fabrication or erection details and associated calculations shall bear the seal of a licensed structural engineer in the State of Washington.
- C. Thoroughly review all shop and detail drawings prior to submittal, including all those provided by subcontractors and suppliers at any tier, to assure coordination with other parts of the Work. Failure to comply will be cause for rejection. Submittals shall bear the Contractor's **approval** stamp and initials of the reviewer.
- D. Components or materials which require shop drawings and which arrive at the job site prior to acceptance of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.
- E. All drawings submitted to the Engineer shall be drawn on sheets each 24 inches wide by 36 inches long in overall dimensions or on small sheets that are multiples of 8-1/2 inches by 11 inches.
- F. Type of Prints Required: Submit one (1) electronic copy of all shop drawings or supplemental working drawings in accordance with Document 00 70 00 – General Conditions.
- G. Submit shop and detail drawings in related packages. All equipment or material details that are interdependent or are related in any way must be submitted together as a complete package indicating the complete system. Submittals shall not be altered once accepted for construction. Clearly mark and date revisions. Major revisions must be resubmitted for acceptance
- H. All documents submitted to the Port and not returned to the Contractor, shall be retained by the Port, including software and source codes, etc., that is developed or used for the project. See Document 00 70 00 – General Conditions.

1.04 MANUFACTURERS' LITERATURE

- A. Submit one (1) electronic copy of manufacturers' literature. The electronic data shall have software search features and interactive capabilities.
 - 1. Product data, catalog cuts, or brochures shall show the type, size ratings, style, color, manufacturer and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. Submit catalog data in electronic form. The electronic data shall have software search features and interactive capabilities. Specific items shall be clearly marked or highlighted. General catalogs or partial lists will not be accepted.

Delete "1.05 Manufacturer's Certificate of Compliance" if the WSDOT signage specs are not used or referenced.

1.05 MANUFACTURER'S CERTIFICATE OF COMPLIANCE

- A. The Manufacturer's Certificate of Compliance must identify the manufacturer, the type and quantity of material being certified, the applicable specifications being affirmed, and the signature of a responsible corporate official of the manufacturer and include supporting mill tests or documents. A Manufacturer's Certificate of Compliance, when requested in the technical specs, shall be furnished with each

lot of material delivered to the Work and the lot so certified shall be clearly identified in the certificate.

1.06 SAMPLES

- A. The sample submitted shall be the exact or precise article proposed to be furnished.
- B. Submit three (3) samples of each article proposed.

1.07 MOCKUPS

- A. Provide any mockups required in the technical specifications for evaluation by the Engineer, allowing up to [30] [60] [90] [120] [180] days for review.

1.08 DEFERRED SUBMITTALS

- A. Deferral of any submittal items shall have prior approval of the Authority Having Jurisdiction (AHJ). The Deferred Submittals are listed on the Contract Documents or on the building permit(s). The Contractor shall submit complete information, including design calculations, for each individual deferred item in a single submittal package promptly after the Execution of the Contract.
- B. The Engineer shall send them to the AHJ for acceptance.
- C. Deferred Submittal items shall not be installed until the design and submittal documents have been accepted by the AHJ. The Contractor shall allow an additional [14] [20] [30] days for deferred submittal review beyond the time specified in paragraph 1.01F for standard submittal review to account for the additional AHJ department review time.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
00 00 00	0.0A.1		Sample 1 Schedule	SC	B	12/7/2017			Chen K				Huang L	Lee F	
00 00 00	0.0B		Sample 2 Shop Drawing	SD	A	12/17/2017	Smith J, Jones S			Doe J				Lee F	
00 00 00	0.0		Sample 3 Warranty	WA	C	12/31/2017	Smith J				Anderson B			Anderson B	
00 70 00	G-04.33C		List of Subcontractors	PC											
00 80 00	SC-04.01		Site Assessment Survey- Existing conditions Video	PC											
00 80 00	SC-04.12		Contractor's Written Statement of Responsibility	PC											
00 80 00	SC-04.14.J		Asbestos Awareness Training	CC							PCS				
00 83 50	1.09B		Apprentice Utilization Goal	PP											
01 14 13c	2A		Final Contractor Access Plan	PC/PP											
01 20 00	1.02A.2		Schedule of Values	PC/CH											After approval, forward a copy to CPO
01 20 00	1.02A.3		Contractor and Sub-Contractor Labor and Equipment Rates	PC											
01 31 00	1.03A		Contractor's Project Organization	PC/QR/PP											
01 32 16	1.02G.1a		Baseline Schedule, Narrative & Reports	PC/CH							Pitts B				
01 32 16	1.02G.1b		Monthly Progress Schedule, Narrative & Reports	CH											
01 32 16	1.02G.1d		As-built Record Schedule	AS											
01 33 00	1.01B		Submittal Log	PC											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
01 35 13.13	1.03.A		Safety Plan Compliance Document	PC											
01 35 13.13	1.03.B		Certificate of Compliance with Construction Safety Phasing	PC											
01 35 13.13	1.03.C		Safety Plan Compliance Document Daily Inspection Report	TD											Submit as attachments to CDR's
01 35 29	1.04A		Site Specific Safety Plan	PC/PP											
01 35 29	1.04B		Chemical Exposure Plan	PP											
01 45 16 13a	1.03A		Quality Control Plan	PC/PP											
01 45 16 13a	1.03B		Quality Control Reports	PP											
01 45 16 13a	1.03C		Pre-Installation Meeting List	PP											
01 45 29	1.03A		Schedule of Special Inspections	PC/PP											
01 50 00	1.02C		Temporary Power Plan	PC/PP											
01 55 16	1.03A.1-3		Haul Route Submittal info	PC/PP											
01 55 16	1.03A.4		Haul Route Activities	AS											
01 55 16	1.03A.5		Haul Route Closeout Activities	AS											
01 55 26	3.08A		Traffic Control Supervision Designation	PP											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
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CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
01 55 26	3.08B		Traffic Control Plan	PP											
01 55 26	3.08C		Haul Route Permits	PP											
01 57 13	1.03A		Contractor Erosion and Sediment Control Plan (CESCP)	PC/PP											
01 57 13	1.03B		CESCP Materials & Certifications	MD/QR											
01 57 23	1.04A.1		Pollution Prevention Plan	PC/PP							Environmental				
01 57 23	1.04A.2		Hazardous Material Insurance Endorsements	CC											
01 57 23	1.04A.3		Hazardous Material Transport - MCS-90 Certificate	CC											
01 57 23	1.04A.4		List of Hazardous Material Drivers and Endorsements	NP											
01 74 19	1.03A		Waste Management Plan	PC/PP							Environmental				
01 74 19	1.03B		Waste Management Final Report	PP							Environmental				
01 78 23	1.02A.1		Aviation O&Ms - CMMS Source File/Forms	CH											
01 78 23	1.02A.2		Aviation O&M Manuals - Draft	OM											60 days prior to punchlist
01 78 23	1.02A.3		Aviation O&M Manuals - Final	OM											Submit prior to final inspection
01 78 23	1.03A		Seaport O&Ms - CMMS Input Form	CH											

Submittal Type Legend															
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CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
01 78 23	1.03.C		Seaport O&M Manual - Draft	OM											
01 78 23	1.03.D		Seaport O&M Manual - Final	OM											
01 78 29	1.03B		As-Built Redline Drawings	AS											
01 78 29	1.03C		Final As-Built Redline Drawings	AS											
01 78 36	1.04A		Written Warranties	WA											60 days prior to punchlist
01 78 36	1.04B		Special Warranties	WA											
01 78 36	1.04C		Final Executed Warranties	WA											include in Final O&M
01 79 00	1.03		Training Plan & Syllabus	PP											
02 41 13	1.03A		Demolition Materials	MD											
02 41 13	1.03B		Demolition Plan	PP											
02 61 13	1.03		Contaminated Soils Management Plan	PP											
02 82 13	1.05B		Asbestos Work Plan	PC							PCS				
02 82 13	1.05.C		Asbestos - Daily work records	PP							PCS				
02 82 13	1.05.D		Asbestos - Project record documents	PP											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
02 83 19	1.05B		Lead - Work Plan	PC							PCS				
02 83 19	1.05.C		Lead - Daily work records	PP											
02 83 19	1.05.D		Lead - Project record documents	PP							PCS				
02 83 33	1.03D.5		PCB Caulking - Work Plan	PP											
02 83 33	1.03.C		Demolition Containing Lead - Qualifications	PP											
02 83 33	1.03.D		Demolition Containing Lead - Pre-NTP Submittals	PC											
02 83 33	1.03E.2c		Demolition Containing Lead - Air Monitoring Results	TD											
02 87 00	1.06B		Fugitive and Silica Dust - Work Plan	PC							PCS				
02 87 00	1.06.C		Fugitive and Silica Dust - Daily Work Records	PP											
02 87 00	1.06.D		Fugitive and Silica Dust - Project record documents	PP							PCS				
03 11 00	1.03B.1		Concrete Formwork and Falsework Drawings	SD											
03 11 00	1.03B.2		Concrete Formwork and Falsework Sequence	PP											
03 21 00	1.03B.1		Concrete Reinforcement Material Testing Certified Test Reports	TD											
03 21 00	1.03B.2		Concrete Reinforcement Shop Drawings	SD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
03 30 00	1.03B.1		CIP Concrete Mix Designs - each class of concrete	MD/TD											
03 30 00	1.03B.2		CIP Concrete - Non-Shrink Grout	MD/CC											
03 30 00	1.03B.3		CIP Concrete - Membrane	MD											
03 30 00	1.03B.4		CIP Concrete - Test Reports	TD											
03 30 00	1.03B.6		CIP Concrete Batch Tickets	TD											
03 30 00	1.03B.7		CIP Concrete Placement & Sequencing	PP/SD											
03 30 00	1.03B.8		CIP Concrete - Finishing Procedure	PP											
03 31 00	1.03		Structural PCC Materials (FAA)	MD											
03 35 10	1.03A		Blast Finished Concrete Materials	MD											
03 35 10	1.03B.1		Blast Finished Concrete - Blasting Procedure	PP											
03 35 10	1.03B.2		Blast Finished Concrete - Mock-up	MU											
03 37 13	1.03A		Shotcrete Materials	MD											
03 37 13	1.03B.1		Shotcrete Mix Design	TD											
03 37 13	1.03B.2		Shotcrete Fiber Reinforcement Certification	CC											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
03 37 13	1.03B.3		Shotcrete Mockup	MU											
03 37 13	1.03B.4		Shotcrete Installation Plan	PP											
03 40 00	1.03A		Precast Concrete Materials	MD											
03 40 00	1.03B.1		Precast Concrete Mix Design	TD											
03 40 00	1.03B.2		Precast Concrete Delivery Slip	TD											
03 40 00	1.03B.3		Precast Concrete Finish Sample	MU											
03 40 00	1.03B.4		Precast Concrete Shop Drawings	SD											
03 40 00	1.03B.5		Precast Concrete Structural calculations	CA											
03 40 00	1.03B.7		Precast Concrete Inserts	MD											
03 40 00	1.03B.8		Precast Concrete Piping	CC/TD/AS											
03 52 16	1.03B.1		Lightweight Insulating Concrete Insulation - each type	MD											
03 52 16	1.03B.2		Lightweight Insulating Concrete Test Reports	TD											
03 54 13	1.03A		Gypsum Floor Underlayment Materials	MD											
03 63 00	1.03A		Epoxy Mortar Materials	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
03 64 23	1.03B		Epoxy Injected Concrete Pile Restoration Work Plan, Material Certifications, Test Data	PP/MD/TD											
04 22 00	1.03B.1a		Concrete Unit Masonry Mortar Mix Design(s)	TD											
04 22 00	1.03B.1b		Concrete Unit Masonry Grout Mix Design(s)	TD											
04 22 00	1.03B.1c		Concrete Unit Masonry Material Certifications	CC											
04 22 00	1.03B.1d		Concrete Unit Masonry Construction Procedures	PP											
04 22 00	3.02B		Concrete Unit Masonry Sample Panel	MU											
05 05 19	1.03B.1		Post Installed Concrete Anchors Materials	MD											
05 05 19	1.03B.2		Post Installed Concrete Anchors Installer Qualifications	QR											
05 05 19	1.03B.3		Post Installed Concrete Anchors Special Inspection & Testing Reports	TD											
05 05 23	1.03B.1		Welding Shop and Erection Details	SD											
05 05 23	1.03B.2		Welding Filler Materials	MD											
05 05 23	1.03B.3		Weld Qualifications	QR											
05 05 23	1.03B.4		Welding Testing & Inspection Results	TD											
05 05 23	1.03B.5		Welding Supervisor Qualifications	QR											

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CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
05 05 23	1.03B.6		Welder Qualifications	QR											
05 05 23	1.03B.7		Weld Inspection Work Schedule	CH											
05 12 00	1.03B.1		Structural Steel Manufacturer/Fabricator Contact Information	QR											
05 12 00	1.03B.2		Structural Steel Shop Drawings	SD											
05 12 00	1.03B.3		Structural Steel Erection Details	SD											
05 12 00	1.03B.4		Structural Steel Shop Primer	MD/TD											
05 12 00	1.03B.5		Structural Steel Mill Certificates	CC											
05 12 00	1.03B.6		Structural Steel Fabricator Qualifications	QR											
05 12 00	1.03B.7		Structural Steel Member Identification Plan	PP											
05 12 00	1.03B.8		Structural Steel Fabrication & Erection Drawings	SD/PP											
05 21 00	1.03B		Steel Joists Shop Drawings	SD											
05 31 13	1.03B.1		Steel Floor and Roof Deck Shop and Erection Details	SD											
05 31 13	1.03B.2		Steel Floor and Roof Deck Lab Tests or Mill Certificates	CC											
05 40 00	1.03B		Cold Formed Metal Framing Shop Drawings	SD											

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CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
05 50 00	1.03B		Metal Fabrications Shop Drawings	SD											
05 51 00	1.03B.1		Metal Stairs Shop Drawings	SD											
05 51 00	1.03B.2		Metal Stairs Samples	SA											
05 51 00	3.02A.4		Metal Stairs Design Load Criteria	CA											
05 52 13	1.03B.1		Steel Pipe Handrail & Railing Shop Drawings	SD											
05 52 13	1.03B.2		Steel Pipe Handrail & Railing Samples	SA											
05 52 50	1.03B.1		Glass Railings Qualification Product Data	MD											
05 52 50	1.03B.2		Glass Railings Shop Drawings	SD											
05 52 50	1.03B.3		Glass Railings Verification Samples	SA											
05 52 50	1.04E		Glass Railings Calculations	CA											
05 52 50	2.05E		Glass Railings Qualification Data	QR											
05 53 00	1.03B.1		Gratings Material Data	MD											
05 53 00	1.03B.2		Gratings Shop Drawings	SD											
05 53 00	1.03B.3		Gratings - Fasteners	TD											

Submittal Type Legend															
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CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
05 53 00	1.04		Gratings Special Warranties	WA											
06 05 00	1.03B		Lumber & Timber Shop Drawings	SD											
06 10 00	1.03C		Rough Carpentry Fabricated Structural Members	SD											
06 10 00	1.03E		Rough Carpentry Proposed Modifications	CA/SD											
06 10 00	2.05F		Rough Carpentry - Pressure Treated Lumber & Plywood	CC											
06 10 00	2.05H		Rough Carpentry Certificates of Grade	CC											
06 17 53	1.03B.1		Pre-Fabricated Wood Trusses Shop Drawings	SD											
06 17 53	1.03B.2		Pre-Fabricated Wood Trusses Erection Instructions	PP											
06 17 53	1.03B.3		Pre-Fabricated Wood Trusses Load Carrying Certification	CC											
06 17 53	1.03B.4		Pre-Fabricated Wood Trusses Grade Marks	CC											
06 17 53	1.03B.5		Pre-Fabricated Wood Trusses Qualifications of Fabricator	QR											
06 20 00	1.03B.1		Finish Carpentry Samples	SA											
06 41 00	1.03B.1		Finish Carpentry - Custom Cabinets Product Data	MD											
06 41 00	1.03B.2		Finish Carpentry - Cabinets Quality Certification	CC											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

Contractor Priority

A = Contractor has indicated this is a top priority submittal

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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal

Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
06 41 00	1.03B.3		Finish Carpentry - Cabinets Shop Drawings	SD											
06 42 19	1.03B.1		Plastic Laminate Panels & Metal Trim Materials	MD											
06 42 19	1.03B.2		Plastic Laminate Panels & Metal Trim Samples	SA											
07 10 00	1.03B.1		Waterproofing Installation Drawings	SD											
07 10 00	1.03B.2		Waterproofing Field Quality Control Procedures	PP											
07 10 00	1.03B.3		Waterproofing Safety Data Sheet - each material	MD											
07 10 00	1.03B.4		Waterproofing Manufacturer's Certificate of Conformance	CC											
07 14 00	1.03A		Fluid Applied Waterproofing Materials	MD											
07 19 00	1.03A		Fluid Applied Waterproofing Water Repellant Coating Materials	MD											
07 19 00	1.03B		Fluid Applied Waterproofing Certification of Installation	CC											
07 19 00	1.08A		Fluid Applied Waterproofing Water Repellant Coating Warranty	WA											
07 21 00	1.03A		Roof and Deck Board Insulation Materials	MD											
07 26 00	1.03A		Underslab Vapor Retarder Materials	MD											
07 41 13	1.03A		Preformed Metal Roofing Materials	MD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
07 41 13	1.03B.1		Preformed Metal Roofing Performance Test Reports	TD											
07 41 13	1.03B.2		Preformed Metal Roofing Manufacturer's Standard Warranty	WA											
07 41 13	1.03B.3		Preformed Metal Roofing Samples	SA											
07 41 13	1.03B.4		Preformed Metal Roofing Shop Drawings	SD											
07 41 18	1.03A		Preformed Metal Facia Materials	MD											
07 41 18	1.03B.1		Preformed Metal Facia Performance Test Reports	TD											
07 41 18	1.03B.2		Preformed Metal Facia Manufacturer's Standard Warranty	WA											
07 41 18	1.03B.3		Preformed Metal Facia Samples	SA											
07 41 18	1.03B.4		Preformed Metal Facia Shop Drawings	SD											
07 41 43	1.03A		Preformed Metal Sandwich Panels Materials	MD											
07 41 43	1.03B.1		Preformed Metal Sandwich Panels Performance Test Reports	TD											
07 41 43	1.03B.2		Preformed Metal Sandwich Panels Manufacturer's Standard Warranty	WA											
07 41 43	1.03B.3		Preformed Metal Sandwich Panel Samples	SA											
07 41 43	1.03B.4		Preformed Metal Sandwich Panel Shop Drawings	SD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
07 50 00	1.03A.2a		Single Ply Roofing Materials Product Data & Installation Instructions	MD											
07 50 00	1.03A.2b		Single Ply Roofing and Materials Samples	SA											
07 50 00	1.03A.2c		Single Ply Roofing Safety Data Sheet - each material	MD											
07 50 00	1.03A.3a		Single Ply Roofing Product Compatability	CC											
07 50 00	1.03B.1		Singly Ply Roofing Shop Drawings	SD											
07 50 00	1.04A		Single Ply Roofing Installer Certification	QR											
07 50 00	1.09A		Single Ply Roofing Sample Warranty	WA											
07 50 00	1.09B		Single Ply Roofing Final Warranty	WA											
07 53 00	1.03A		Mechanically Attached Elastomeric Sheet Roofing Materials	MD											
07 53 00	1.03B.1		Mechanically Attached Elastomeric Manufacturer Certification of Installation	CC											
07 53 00	1.03B.2		Mechanically Attached Elastomeric Warranty	WA											
07 53 00	1.03B.3		Mechanically Attached Elastomeric Sheet Roofing Samples	SA											
07 53 00	1.03B.4		Mechanically Attached Elastomeric Closeout Documents	OM											
07 60 00	1.03A		Flashing & Sheet Metal Materials	MD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
07 60 00	1.04A		Flashing & Sheet Metal Special Warranties	WA											
07 81 16	1.03A		Cementitious Fireproofing Materials - STIA	MD											
07 81 16	1.03B		Cementitious Fireproofing Installation Instructions - STIA	PP											
07 81 16	1.03A		Cementitious Fireproofing Materials	MD											
07 81 16	1.03B.1		Cementitious Fireproofing Certified Test Reports	TD											
07 81 16	1.06C		Cementitious Fireproofing Safety Data Sheet - each material	MD											
07 84 00	1.03A		Firestopping Materials	MD											
07 84 00	1.03B.1		Firestopping Characteristics, Installation Procedures	PP											
07 84 00	1.03B.2		Firestopping Shop Drawings	SD											
07 84 00	1.03B.3		Firestopping Certificate of Conformance	CC											
07 92 00	1.03A		Joint Sealers Materials	MD											
07 92 00	1.04A		Joint Sealers Warranty	WA											
08 11 00	1.03A		Steel Doors and Frames Materials	MD											
08 11 00	1.03B		Steel Doors and Frames Shop Drawings	SD											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
08 11 00	1.04D		Steel Doors and Frames Safety Data Sheet - each material	MD											
08 11 16	1.03A		Aluminum Doors & Frames Materials	MD											
08 11 16	1.03B.1		Aluminum Doors & Frames Certified Laboratory Test Reports	TD											
08 11 16	1.03B.2		Aluminum Doors & Frames Shop Drawings	SD											
08 11 16	1.03B.3		Aluminum Doors & Frames Finish Samples	SA											
08 14 00	1.03B.1		Wood Doors Product Data	MD											
08 14 00	1.03B.2		Wood Doors Shop Drawings	SD											
08 14 00	1.03B.3		Wood Doors Samples	SA											
08 14 00	1.04A		Wood Doors Special Warranties	WA											
08 15 13	1.03A		Laminated Plastic Doors Product Data	MD											
08 15 13	1.05A		Laminated Plastic Doors Special Warranties	WA											
08 30 00	1.03A		Special Doors Product Data	MD											
08 30 00	1.03B.1		Special Doors Shop Drawings	SD											
08 30 00	1.03B.2		Special Doors Material List	MD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
08 30 00	3.03		Special Doors O&M Data	OM											
08 31 00	1.03B.1		Plastic Laminate Access Panels Product Data & Installation Inst.	MD											
08 36 13	1.03A		Sectional Overhead Doors Product Data	MD											
08 36 13	1.03B		Sectional Overhead Doors Materials List	MD											
08 36 13	3.03A		Sectional Overhead Doors O&M Data	OM											
08 42 29	1.03A		Transit Station Doors Product Data	MD											
08 42 29	1.03B		Transit Station Doors Shop Drawings	SD											
08 51 13	1.03A		Aluminum Windows Product Data	MD											
08 51 13	1.03B		Aluminum Windows Shop Drawings	SD											
08 70 00	1.03B.1		Hardware Samples	SA											
08 70 00	1.03B.3		Hardware Product Data	MD											
08 70 00	1.03B.4		Hardware Schedule	CH											
08 70 00	1.05		Hardware Special Warranties	WA											
08 80 00	1.03A		Glazing Product Data	MD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
08 80 00	1.03B		Glazing Samples	SA											
08 80 00	1.03B		Glazing Shop Drawings	SD											
08 80 00	1.07A		Glazing Special Warranties	WA											
08 91 00	1.03A		Wall Louvers Product Data	MD											
08 91 00	1.03B.1		Wall Louvers Shop Drawings	SD											
08 91 00	1.03B.2		Wall Louvers Samples	SA											
08 91 00	1.03B.3		Wall Louvers Worker Qualifications	QR											
08 91 26	1.03A		Door Louvers Product Data	MD											
08 91 26	1.03B		Door Louvers Shop Drawings	SD											
09 20 00	1.03A		Gypsum Board Product Data	MD											
09 20 13	1.03A		Lath & Plaster Product Data	MD											
09 20 13	1.03B.1		Lath & Plaster Certificate of Conformance	CC											
09 20 13	1.03B.2		Lath & Plaster Applicator's Qualifications	QR											
09 20 13	1.03B.3		Lath & Plaster Manufacturer's Written Instructions	PP											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 21 16	1.03A		Drywall Shaft System Materials	MD											
09 21 16	1.03B.1		Drywall Shaft System Installer Qualifications	QR											
09 24 00	1.03A		Exterior Lath & Plaster (Stucco) Product Data	MD											
09 24 23	1.03A		Stucco Materials Product Data	MD											
09 24 23	1.03B.1		Stucco Applicator's Qualifications	QR											
09 26 00	1.03A		Gypsum Base Materials Product Data	MD											
09 26 13	1.03A		Gypsum Veneer Plaster Materials Product Data	MD											
09 26 13	1.03B.1		Gypsum Veneer Plaster Applicator's Qualifications	QR											
09 30 13	1.03A		Ceramic Tile Product Data	MD											
09 51 00	1.03A		Acoustical Ceilings Product Data	MD											
09 51 00	1.03B.1		Acoustical Ceilings Shop Drawings	SD											
09 51 00	1.03B.2		Acoustical Ceilings Samples	SA											
09 51 00	1.03B.3		Acoustical Ceilings Calculations	CA											
09 51 13	1.03A		Metal Acoustical Ceiling Panels Product Data	MD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 51 13	1.03B.1		Metal Acoustical Ceiling Panels Shop Drawings	SD											
09 51 13	1.03B.2		Metal Acoustical Ceiling Panels Samples	SA											
09 51 13	1.03B.3		Metal Acoustical Ceiling Panels Calculations	CA											
09 51 23	1.03A		Composition Acoustical Ceilings Product Data	MD											
09 51 23	1.03B.1		Composition Acoustical Ceilings Shop Drawings	SD											
09 51 23	1.03B.2		Composition Acoustical Ceilings Samples	SA											
09 51 23	1.03B.3		Composition Acoustical Ceilings Calculations	CA											
09 51 23	1.05A		Composition Acoustical Ceilings Spare Parts Information	OM											
09 54 23	1.03A		Metal Linear Ceiling System Product Data	MD											
09 54 23	1.03B.1		Metal Linear Ceiling System Shop Drawings	SD											
09 54 23	1.03B.2		Metal Linear Ceiling System Samples	SA											
09 54 23	1.03B.3		Metal Linear Ceiling System Maintenance Instructions	OM											
09 54 23	1.03B.4		Metal Linear Ceiling System Replacement Materials	OM											
09 58 00	1.03A		Integrated Ceiling System Material Data	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 58 00	1.03B.1		Integrated Ceiling System Installer Qualifications	QR											
09 58 00	1.03B.2		Integrated Ceiling System Shop Drawings	SD											
09 58 00	1.03B.3		Integrated Ceiling System Samples	SA											
09 65 00	1.03A		Resilient Flooring Product Data	MD											
09 65 00	1.03B.1		Resilient Flooring Samples	SA											
09 65 00	1.03B.2		Resilient Flooring Shop Drawings	SD											
09 65 13	1.03A		Resilient Wall Base Product Data	MD											
09 65 13	1.03B.1		Resilient Wall Base Samples	SA											
09 66 13	1.03A		Portland Cement Terrazzo Product Data	MD											
09 66 13	1.03B.1		Portland Cement Terrazzo Samples	SA											
09 66 16	1.03A		Plastic Matrix Terrazzo Product Data	MD											
09 66 16	1.03B.1		Plastic Matrix Terrazzo Layout Drawings	SD											
09 66 16	1.03B.2		Plastic Matrix Terrazzo Samples	SA											
09 66 16	1.05		Plastic Matrix Terrazzo Standard Of The Work	MU											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 66 16	1.05B		Plastic Matrix Terrazzo Installer Qualifications	QR											
09 66 16	1.06		Plastic Matrix Terrazzo Special Warranties	WA											
09 68 00	1.03A		Carpeting Product Data	MD											
09 68 00	1.03B.1		Carpeting Samples	SA											
09 68 00	1.03B.2		Carpeting Fire Test Certification	CC											
09 69 00	1.03A		Access Flooring Product Data	MD											
09 69 00	1.03B.1		Access Flooring Shop Drawings	SD											
09 69 00	1.03B.2		Access Flooring Samples	SA											
09 69 00	1.03B.3		Access Flooring Certification and Test Data	CC/TD											
09 69 00	1.03B.4		Access Flooring Calculations	CA											
09 69 00	1.03B.5		Access Flooring Installer Qualifications	QR											
09 69 00	3.04A		Access Flooring Spare Parts Information	OM											
09 72 00	1.03A		Wall Covering Product Data	MD											
09 72 00	1.03B.1		Wall Covering Safety Data Sheet - each material	MD											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 72 00	1.08A		Wall Covering Spare Parts Information	OM											
09 81 00	1.03A		Acoustical Insulation Product Data	MD											
09 84 13	1.03A		Acoustical Wall System Product Data	MD											
09 84 13	1.03B.1		Acoustical Wall System Samples	SA											
09 84 13	1.03B.2		Acoustical Wall System Layout Drawings	SD											
09 84 13	3.02A		Acoustical Wall System Spare Parts Information	OM											
09 90 00	1.03A		Paints and Coatings Product Data	MD											
09 90 00	1.03B.1		Paints and Coatings Color Samples	SA											
09 96 26	1.03A		Coating System for Steel Piling Product Data	MD											
09 96 26	2.04E.7b		Coating System for Steel Piling Color Samples	SA											
09 96 26	2.04E.7c		Coating System for Steel Piling Material Warranty	WA											
09 96 26	2.07A		Coating System for Steel Piling Certificate of Compliance	CC											
09 96 26	2.07B		Coating System for Steel Piling Demonstrated Performance	QR											
09 96 26	3.01A		Coating System for Steel Piling Shop Drawings	SD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
09 96 26	3.01B.1		Coating System for Steel Piling Work Plan and Schedule	PP/CH											
09 96 26	3.04A.3		Coating System for Steel Piling Installer Qualifications	QR											
09 96 46	1.03A		Intumescent Paint Product Data	MD											
09 96 46	1.03B.1		Intumescent Paint Material List	MD											
09 96 46	1.03B.2		Intumescent Paint Mock Up	MU											
09 96 46	1.03C		Intumescent Paint Applicator's Qualifications	QR											
09 97 00	1.03A		Special Coatings Product Data	MD											
09 97 00	1.03B.1		Special Coatings Samples - All Paints and Finishes	SA											
09 97 13	1.03A		Special Coatings - Metal Product Data	MD											
09 97 13	1.03C.1		Special Coatings - Metal Samples - All Paints and Finishes	SA											
09 97 13	1.07		Special Coatings - Metal Special Warranties	WA											
09 97 23	1.03A		Special Coatings - Stucco Product Data	MD											
09 97 23	1.03B.1		Special Coatings - Stucco Mock Up	MU											
09 97 23	1.05		Special Coatings - Stucco Special Warranties	WA											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

Contractor Priority
 A = Contractor has indicated this is a top priority submittal
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal

Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
10 11 00	1.03A		Miscellaneous Specialties Product Data	MD											
10 11 00	1.03B.1		Miscellaneous Specialties Shop Drawings	SD											
10 11 00	1.03B.2		Miscellaneous Specialties Samples	SA											
10 14 00	1.03A		Identification Devices Product Data	MD											
10 14 00	1.03B.1		Identification Devices Shop Drawings	SD											
10 14 13	1.03A		Specialty Sign Product Data	MD											
10 14 13	1.03B.1a		Specialty Sign Samples	SA											
10 14 13	1.03B.1b		Specialty Sign Shop Drawings	SD											
10 14 13	1.03B.1c		Specialty Sign Face Patterns	SD											
10 14 53	1.03A		Traffic Signs Product Data	MD											
10 14 53	1.03B		Traffic Signs Shop Drawings	SD											
10 21 13	1.03A		Metal Toilet Compartment Product Data	MD											
10 26 13	1.03A		Wall Guards Product Data	MD											
10 26 13	1.03B		Wall Guard Samples	SA											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
A = Contractor has indicated this is a top priority submittal					*At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal*										
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
10 28 13	1.03A		Toilet Accessories Product Data	MD											
10 44 16	1.03A		Portable Fire Extinguishers & Cabinets Product Data	MD											
10 44 16	1.03B		Portable Fire Extinguishers & Cabinets Color Samples	SA											
10 56 29	1.03A		Modular Equipment Rack System Product Data	MD											
10 56 29	1.03B.1		Modular Equipment Rack System Samples	SA											
10 56 29	1.03B.2		Modular Equipment Rack System Shop Drawings	SD											
10 86 00	1.03A		Inspection Mirrors Product Data	MD											
10 86 00	1.03A.1		Inspection Mirrors Shop Drawings	SD											
10 86 00	1.03A.2		Inspection Mirrors Material List	MD											
10 86 00	1.03A.3a		Inspection Mirrors Manuals	OM											
10 86 00	1.03A.3b		Inspection Mirrors Test Reports	TD											
10 86 00	1.03A.3c		Inspection Mirrors Certification	CC											
10 86 00	1.06A		Inspection Mirrors Special Warranties	WA											
10 88 00	1.03A		Truck Scales Product Data	MD											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
10 88 00	1.03B.1		Truck Scales Detailed Construction Drawings	SD											
10 88 00	1.03B.2		Truck Scales Schematic Diagrams & Operation and Maintenance Data	OM											
10 88 00	1.04A		Truck Scales Manufacturer's Qualifications	QR											
10 88 00	1.04B		Truck Scales Seal of Certification	CC											
10 88 00	1.04C		Truck Scales Existing Scale Operational Status	AS											
10 88 00	1.06A		Truck Scales Special Warranties	WA											
10 88 00	3.02A		Truck Scales Operator Instruction	OT											
10 88 00	3.03A		Truck Scales New Scale Service	SE											
11 12 00	1.03A		Parking Control Equipment Product Data	MD											
11 12 00	1.03B.1		Parking Control Equipment Shop Drawings	SD											
11 12 00	1.03B.2		Parking Control Equipment Material List	MD											
11 13 00	1.03A		Loading Dock Equipment Product Data	MD											
11 13 00	1.03B.1		Loading Dock Equipment Shop Drawings	SD											
11 13 00	1.03B.2		Loading Dock Equipment Detailed Equipment Assemblies	SD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
11 13 13	1.03A		Dock Bumpers Product Data	MD											
11 13 13	1.03B		Dock Bumpers Construction Details	SD											
11 13 13	1.04A		Dock Bumpers Sample of Special Warranty	WA											
12 21 13	1.03A		Horizontal Window Blinds Product Data	MD											
12 21 13	1.03B.1		Horizontal Window Blinds Shop Drawings	SD											
12 21 13	1.03B.2		Horizontal Window Blinds Samples	SA											
12 21 13	1.03B.3		Horizontal Window Blinds Color Charts	SA											
12 21 13	1.03B.4		Horizontal Window Blinds Flame Resistance	CC											
12 21 13	1.05A		Horizontal Window Blinds Special Warranties	WA											
13 34 00	1.08A		Pre-Engineered Structures Product Data	MD											
13 34 00	1.08C		Pre-Engineered Structures -Steel Building Frame System Shop Drawings	SD											
13 34 00	1.08C.10a		Pre-Engineered Structures -Panelized Stud Wall & Roof Truss System Shop Drawings	SD											
13 34 00	1.08C.10b		Pre-Engineered Structures Floor Plan	SD											
13 34 00	1.08C.10c		Pre-Engineered Structures Installation Instructions	MD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
13 34 00	1.08E.1		Pre-Engineered Structures -Roofing & Siding Shop Drawings	SD											
13 34 00	1.08E.2		Pre-Engineered Structures -Roofing & Siding Product Data	MD											
13 34 00	1.08E.3		Pre-Engineered Structures -Metal Finishes Color Sample	SA											
13 34 00	1.08E.4		Pre-Engineered Structures -Roofing & Siding Installation Instructions	MD											
13 34 00	1.09A		Pre-Engineered Structures -Special Warranties	WA											
14 21 13	1.04A		Electric Traction Freight Elevator Product Data	MD											
14 21 13	1.04B		Electric Traction Freight Elevator Complete Working Drawings	SD											
14 21 13	1.07A		Electric Traction Freight Elevator Special Warranties	WA											
14 21 13	1.09		Electric Traction Freight Elevator Maintenance	SE											
14 21 13	3.07A		Electric Traction Freight Elevator Instruction of Owner's Personnel	OT											
14 21 13	3.07B		Electric Traction Freight Elevator Operation & Maintenance Data	OM											
14 21 13	3.07C		Electric Traction Freight Elevator Parts Cabinet	ES											
14 21 13	3.08A		Electric Traction Freight Elevator Performance Test Reports	TD											
14 21 23	1.04A		Electric Traction Passenger Elevator Product Data	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
14 21 23	1.04A		Electric Traction Passenger Elevator Detailed Shop Drawings & Layout	SD											
14 21 23	1.07		Electric Traction Passenger Elevator Special Warranties	WA											
14 21 23	1.09		Electric Traction Passenger Elevator Maintenance	SE											
14 21 23	3.07A.1		Electric Traction Passenger Elevator Instruction of Owner's Personnel	OT											
14 21 23	3.07A.2		Electric Traction Passenger Elevator Operation & Maintenance Data	OM											
14 21 23	3.07A.3		Electric Traction Passenger Elevator Performance Test Reports	TD											
14 24 00	1.04B.1		Hydraulic Elevator Product Data	MD											
14 24 00	1.04B.2		Hydraulic Elevator Shop Drawings	SD											
14 24 00	1.04B.3		Hydraulic Elevator Certified Test Data	TD											
14 24 00	1.04B.4		Hydraulic Elevator Operating Permit	NP											
14 24 00	1.04C		Hydraulic Elevator Warranty	WA											
14 24 00	3.02B		Hydraulic Elevator Acceptance Testing	TD											
14 24 00	3.03A		Hydraulic Elevator Instruction of Owner's Personnel	OT											
14 24 00	3.03C		Hydraulic Elevator Maintenance	SE											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
14 31 00	1.03B.1		Escalator Product Data	MD											
14 31 00	1.03B.2		Escalator Shop Drawings	SD											
14 31 00	1.03B.3		Escalator Finish Samples	SA											
14 31 00	1.05A		Escalator Maintenance	SE											
14 31 00	1.05B		Escalator Warranty	WA											
14 31 00	3.04A		Escalator Instruction of Owner's Personnel	OT											
20 00 00	1.03B.1		Mechanical Work Product Data	MD											
20 00 00	1.03B.2		Mechanical Supports & Anchorage Shop Drawings	SD											
20 00 00	1.03B.3		Mechanical Work Access Door Coordination Drawings	SD											
20 00 00	1.03B.4		Mechanical Equipment Coordination Drawings	SD											
20 00 00	1.03B.5		Mechanical Identification Samples	SA											
20 05 16	1.03B.1-3		Piping Expansion Shop Drawings	SD											
20 05 16	1.03B.4		Piping Expansion Product Data	MD											
20 05 16	1.03B.5		Piping Expansion Design Data and Calculations	CA											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
20 05 16	1.03B.6		Piping Expansion Installation Instructions	mD											
20 05 16	1.03B.7		Piping Expansion Certificate of Conformance	CC											
20 05 16	1.07A		Piping Expansion List of Spare & Extra Parts	OM											
20 05 29	1.03B.1		Hangers & Supports Shop Drawings	SD											
20 05 29	1.03B.1		Hangers & Supports Calculations	CA											
20 05 29	1.03B.2		Hangers & Supports - Trapeze Hanger Delegated Design Shop Drawings	SD											
20 05 29	1.03B.2		Hangers & Supports - Trapeze Hanger Delegated Design Calculations	CA											
20 05 29	1.03B.3		Hangers & Supports Product Data	MD											
20 05 29	1.03B.5		Hangers & Supports Installation Instructions	MD											
20 05 29	1.03B.6		Hangers & Supports Certificate of Conformance	CC											
20 05 48	1.04B.1		Mechanical Sound Vibration & Seismic Control Shop Drawings	SD											
20 05 48	1.04B.2		Mechanical Sound Vibration & Seismic Control Product Data	MD											
20 05 48	1.04B.3		Mechanical Sound Vibration & Seismic Control Design Data and Calculations	CA											
20 05 48	1.04B.4		Mechanical Sound Vibration & Seismic Control Test Reports	TD											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
20 05 48	1.04B.5		Mechanical Sound Vibration & Seismic Control Installation Instructions	MD											
20 05 48	1.04B.6		Mechanical Sound Vibration & Seismic Control Certificate of Conformance	CC											
20 05 48	1.04B.7		Mechanical Sound Vibration & Seismic Control Manufacturer's Field Reports	TD											
20 05 48	1.05		Mechanical Sound Vibration & Seismic Control Project Record Documents	AS											
20 05 53	1.03B.1		Mechanical Identification Product Data	MD											
20 05 53	1.03B.2		Mechanical Identification Shop Drawings	SD											
20 05 53	1.03B.3		Mechanical Identification Valve Schedule	CH											
20 05 53	1.03B.4		Mechanical Identification Equipment Label Schedule	CH											
20 05 53	1.03B.5		Mechanical Identification Installation Instructions	MD											
20 05 53	1.03B.6		Mechanical Identification Certificate of Conformance	CC											
20 07 00	1.03B.1		Mechanical Insulation Product Data	MD											
20 07 00	1.03B.2		Mechanical Insulation Installation Instructions	MD											
20 07 00	1.03B.3		Mechanical Insulation Certificate of Conformance	CC											
20 21 16	1.04B.1-3		Piping Specialties Product Data	MD											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
20 21 16	1.04B.4		Piping Specialties Schedule	CH											
20 21 16	1.04B.5		Piping Specialties Electrical Characteristics & Connections	SD											
20 21 16	1.04B.6		Piping Specialties Pressure Gage & Thermometer Samples	SA											
20 21 16	1.04B.7		Piping Specialties Installation Instructions	MD											
20 21 16	1.04B.8		Piping Specialties Certificate of Conformance	CC											
20 21 16	1.04B.9		Piping Specialties Project Record Documents	AS											
20 21 16	1.04B.10		Piping Specialties Operation & Maintenance Data	OM											
20 21 16	1.10B		Piping Specialties Maintenance	SE											
21 10 00	1.03B.2		Basic Fire Suppression Shop Drawings & Calculations	SD/CA											
21 10 00	1.03B.3		Basic Fire Suppression Product Data	MD											
21 10 00	1.03B.4		Basic Fire Suppression Certificate of Conformance	CC											
21 10 00	1.03B.5		Basic Fire Suppression Welding Procedures	PP											
21 10 00	1.07B		Basic Fire Suppression Warranty	WA											
21 10 00	1.08A		Basic Fire Suppression Spare Parts Information	OM											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
21 12 00	1.03B.1		Standpipes and Hoses Shop Drawings	SD											
21 12 00	1.03B.2		Standpipes and Hoses Product Data	MD											
21 12 00	1.03B.3		Standpipes and Hoses Field Test Reports	TD											
21 12 00	1.03B.4		Standpipes and Hoses Installation Instructions	MD											
21 12 00	1.03B.5		Standpipes and Hoses Certificate of Conformance	CC											
21 12 00	1.07B		Standpipes and Hoses Warranty	WA											
21 12 00	1.08A		Standpipes and Hoses Spare Parts Information	OM											
21 13 13	1.03B.1		Wet-Pipe Fire Suppression Sprinkler Product Data	MD											
21 13 13	1.03B.2		Wet-Pipe Fire Suppression Sprinkler Certificate of Conformance	CC											
21 13 13	1.04B		Wet-Pipe Fire Suppression Sprinkler Project Record Documents	AS											
21 13 13	1.04C		Wet-Pipe Fire Suppression Sprinkler Operation & Maintenance Data	OM											
21 13 13	1.08A		Wet-Pipe Fire Suppression Sprinkler Warranty	WA											
21 13 13	1.09A		Wet-Pipe Fire Suppression Sprinkler Spare Parts Information	OM											
21 13 16	1.04B.1		Dry Pipe Fire Suppression Sprinkler Shop Drawings	SD											

[PROJECT NAME]
 [MC - #]
 [WP #]



SUBMITTAL LOG
 [Contractor]

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
21 13 16	1.04B.2		Dry Pipe Fire Suppression Sprinkler Product Data	MD											
21 13 16	1.04B.3		Dry Pipe Fire Suppression Sprinkler Certificate of Conformance	CC											
21 13 16	1.09A		Dry Pipe Fire Suppression Sprinkler Warranty	WA											
21 13 16	1.10A		Dry Pipe Fire Suppression Sprinkler Spare Parts Information	OM											
21 13 26	1.03B.1		Deluge System Shop Drawings	SD											
21 13 26	1.03B.2		Deluge System Product Data	MD											
21 13 26	1.03B.3		Deluge System Samples	SA											
21 13 26	1.03B.4		Deluge System Design Data	CA											
21 13 26	1.03B.5		Deluge System Certificate of Conformance	CC											
21 13 26	1.08A		Deluge System Warranty	WA											
21 13 26	1.09A		Deluge System Spare Parts Information	OM											
21 30 00	1.03B.1		Fire Pumps Shop Drawings	SD											
21 30 00	1.03B.2		Fire Pumps Product Data	MD											
21 30 00	1.03B.3		Fire Pumps Field Test Reports	TD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
21 30 00	1.03B.4		Fire Pumps Installation Instructions	MD											
21 30 00	1.03B.5		Fire Pumps Certificate of Conformance	CC											
21 30 00	1.09A		Fire Pumps Maintenance	SE											
21 30 00	1.10A		Fire Pumps Spare Parts Information	OM											
21 30 00	3.03A		Fire Pumps Instruction of Owner's Personnel	OT											
22 11 16	1.03B.1		Domestic Water Piping Product Data	MD											
22 11 16	1.03B.2		Domestic Water Piping Installation Instructions	MD											
22 11 16	1.03B.3		Domestic Water Piping System Cleaning & Disinfection Procedures	PP											
22 11 16	1.03B.4		Domestic Water Piping Certificate of Conformance	CC											
22 11 16	1.03B.5		Domestic Water Piping Fixture Schedule	CA											
22 11 16	1.04A		Domestic Water Piping Project Record Documents	AS											
22 11 16	1.04B		Domestic Water Piping Operation & Maintenance Data	OM											
22 11 23	1.03B.1		Plumbing Pumps Product Data	MD											
22 11 23	1.03B.2		Plumbing Pumps Installation Instructions	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
A = Contractor has indicated this is a top priority submittal					*At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal*										
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C = Contractor has indicated this submittal has low priority															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
22 11 23	1.03B.3		Plumbing Pumps Certificate of Conformance	CC											
22 11 23	1.08A		Plumbing Pumps Spare Parts Information	OM											
22 13 16	1.02B.1		Sanitary Waste and Vent Piping Shop Drawings	SD											
22 13 16	1.02B.2		Sanitary Waste and Vent Piping Product Data	MD											
22 13 16	1.02B.3		Sanitary Waste and Vent Piping Installation Instructions	MD											
22 13 16	1.02B.4		Sanitary Waste and Vent Piping Certificate of Conformance	CC											
22 13 16	1.02B.5		Sanitary Waste and Vent Piping Drain Schedules	CH											
22 13 16	1.08A		Sanitary Waste and Vent Piping Spare Parts Information	OM											
22 14 13	1.03B.1		Storm Drainage Piping Shop Drawings	SD											
22 14 13	1.03B.2		Storm Drainage Piping Product Data	MD											
22 14 13	1.03B.3		Storm Drainage Piping Installation Instructions	MD											
22 14 13	1.03B.4		Storm Drainage Piping Certificate of Conformance	CC											
22 14 13	1.09A		Storm Drainage Piping Spare Parts Information	OM											
22 34 00	1.03B.1		Water Heater Shop Drawings	SD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
22 34 00	1.03B.2		Water Heater Product Data	MD											
22 34 00	1.03B.3		Water Heater Installation Instructions	MD											
22 34 00	1.03B.4		Water Heater Certificate of Conformance	CC											
22 34 00	3.03A		Water Heater Spare Parts Information	OM											
22 40 00	1.03B.1		Plumbing Fixtures Product Data	MD											
22 40 00	1.03B.2		Plumbing Fixtures Samples	SA											
22 40 00	1.03B.3		Plumbing Fixtures Installation Instructions	MD											
22 40 00	1.03B.4		Plumbing Fixtures Certificate of Conformance	CC											
22 40 00	1.03B.5		Plumbing Fixtures & Equipment Schedule	CH											
22 40 00	1.03B.6		Plumbing Fixtures Mockup	MU											
22 40 00	1.04A		Plumbing Fixtures Operation & Maintenance Data	OM											
23 05 93	1.03B.1		Testing & Balancing Testing & Balancing Firm Qualifications	QR											
23 05 93	1.03B.2		Testing & Balancing Preliminary Report & Drawings	PP											
23 05 93	1.03B.3		Testing & Balancing Equipment Calibration Certification	CC											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 05 93	1.03B.4		Testing & Balancing Field Reports	TD											
23 05 93	1.03B.5		TAB Report - Forms	TD											
23 05 93	1.03B.6		TAB Report - Final	OM											
23 05 93	3.07A		Testing & Balancing Instruction of Owner's Personnel	OT											
23 09 23	1.03B.1		Direct Digital Control Shop Drawings	SD											
23 09 23	1.03B.2		Direct Digital Control Product Data	MD											
23 09 23	1.03B.3		Direct Digital Control Installation Instructions	MD											
23 09 23	1.03B.4		Direct Digital Control Certificate of Conformance	CC											
23 09 23	1.03B.5		Direct Digital Control Operation & Maintenance Data	OM											
23 09 23	1.08A		Direct Digital Control Spare Parts Information	OM											
23 09 23	3.22A		Direct Digital Control Instruction of Owner's Personnel	OT											
23 09 23	3.22B		Direct Digital Control Training Plan	PP											
23 11 23	1.03B.1		Process Air & Gas Piping Shop Drawings	SD											
23 11 23	1.03B.2		Process Air & Gas Piping Product Data	MD											

[PROJECT NAME]
 [MC - #]
 [WP #]



SUBMITTAL LOG
 [Contractor]

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 11 23	1.03B.3		Process Air & Gas Piping Samples	SA											
23 11 23	1.03B.4		Process Air & Gas Piping Design Data and Calculations	CA											
23 11 23	1.03B.5		Process Air & Gas Piping Test Reports	TD											
23 11 23	1.03B.6		Process Air & Gas Piping Installation Instructions	MD											
23 11 23	1.03B.7		Process Air & Gas Piping Certificate of Conformance	CC											
23 11 23	1.03B.8		Process Air & Gas Piping Manufacturer's Field Reports	TD											
23 11 23	1.03B.9		Process Air & Gas Piping Equipment Schedules	CH											
23 11 23	1.08A		Process Air & Gas Piping Spare Parts Information	OM											
23 20 00	1.04B.1		Heating and Cooling Piping Shop Drawings	SD											
23 20 00	1.04B.2		Heating and Cooling Piping Product Data	MD											
23 20 00	1.04B.3		Heating and Cooling Piping Design Data	CA											
23 20 00	1.04B.4		Heating and Cooling Piping Test Reports	TD											
23 20 00	1.04B.5		Heating and Cooling Piping Installation Instructions	MD											
23 20 00	1.04B.6		Heating and Cooling Piping Certificate of Conformance	CC											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 20 00	1.04B.7		Heating and Cooling Piping Welder's Certification	QR											
23 20 00	1.10A		Heating and Cooling Piping Spare Parts Information	OM											
23 21 23	1.03B.1		Hydronic Pumps Product Data	MD											
23 21 23	1.03B.2		Hydronic Pumps Installation Instructions	MD											
23 21 23	1.03B.3		Hydronic Pumps Certificate of Conformance	CC											
23 21 23	1.08A		Hydronic Pumps Spare Parts Information	OM											
23 31 00	1.04B.1		Hydronic Pumps Duct Shop Drawings	SD											
23 31 00	1.04B.2		Hydronic Pumps Smoke & Fire Damper Installation Instructions	MD											
23 31 00	1.04B.3		Hydronic Pumps Certificate of Conformance	CC											
23 31 00	1.04B.4		Hydronic Pumps Test Reports	TD											
23 31 00	1.04B.5		Hydronic Pumps - Glass Fiber Ducts Installation Instructions	MD											
23 33 00	1.03B.1		Duct Accessories Shop Drawings	SD											
23 33 00	1.03B.2		Duct Accessories Product Data	MD											
23 33 00	1.03B.3		Duct Accessories - Smoke & Fire Damper Installation Instructions	MD											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 33 00	1.03B.4		Duct Accessories Certificate of Conformance	CC											
23 33 00	1.07A		Duct Accessories Special Warranties	WA											
23 33 00	1.08A		Duct Accessories Spare Parts Information	OM											
23 34 00	1.03B.1		Fans Shop Drawings	SD											
23 34 00	1.03B.2		Fans Product Data	MD											
23 34 00	1.03B.3		Fans Test Reports	TD											
23 34 00	1.03B.4		Fans Installation Instructions	MD											
23 34 00	1.03B.5		Fans Certificate of Conformance	CC											
23 34 00	1.08A		Fans Maintenance	SE											
23 34 00	1.09A		Fans Spare Parts Information	OM											
23 34 00	3.04A		Fans Operation & Maintenance Data	OM											
23 36 00	1.03B.1		Air Terminal Units Product Data	MD											
23 36 00	1.03B.2		Air Terminal Units Sound Power Levels	CA											
23 36 00	1.03B.3		Air Terminal Units Installation Instructions	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 36 00	1.03B.4		Air Terminal Units Certificate of Conformance	CC											
23 36 00	1.08A		Air Terminal Units Spare Parts Information	OM											
23 37 00	1.03B.1		Air Outlets & Inlets Product Data	MD											
23 37 00	1.03B.2		Air Outlets & Inlets Test Reports	TD											
23 37 00	1.03B.3		Air Outlets & Inlets Certificate of Conformance	CC											
23 37 00	1.06A		Air Outlets & Inlets Spare Parts Information	OM											
23 51 00	1.03B.1		Breeching, Chimneys & Stacks Shop Drawings	SD											
23 51 00	1.03B.2		Breeching, Chimneys & Stacks Product Data	MD											
23 51 00	1.03B.3		Breeching, Chimneys & Stacks Samples	SA											
23 51 00	1.03B.4		Breeching, Chimneys & Stacks Installation Instructions	MD											
23 51 00	1.03B.5		Breeching, Chimneys & Stacks Certificate of Conformance	CC											
23 52 00	1.03B.1		Heating Boiler & Accessories Product Data	MD											
23 52 00	1.03B.2		Heating Boiler & Accessories Test Reports	TD											
23 52 00	1.03B.3		Heating Boiler & Accessories Installation Instructions	MD											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 52 00	1.03B.4		Heating Boiler & Accessories Certificate of Conformance	CC											
23 52 00	1.03B.5		Heating Boiler & Accessories Manufacturer's Field Reports	TD											
23 52 00	1.03B.6		Heating Boiler & Accessories Control Valves & DDC Control Panel Locations	SD											
23 52 00	1.03B.7		Heating Boiler & Accessories Equipment Schedules	CH											
23 52 00	1.08A		Heating Boiler & Accessories Boiler Maintenance Service	SE											
23 52 00	1.09A		Heating Boiler & Accessories Maintenance Materials	ES											
23 52 00	1.10A		Heating Boiler & Accessories Spare Parts Information	OM											
23 52 00	3.02A		Heating Boiler & Accessories Instruction of Owner's Personnel	OT											
23 65 00	1.03B.1		Packaged Cooling Tower Shop Drawings	SD											
23 65 00	1.03B.2		Packaged Cooling Tower Product Data	MD											
23 65 00	1.03B.3		Packaged Cooling Tower Field Test Reports	TD											
23 65 00	1.03C		Packaged Cooling Tower Certificate of Conformance	CC											
23 65 00	1.03C.1		Packaged Cooling Tower Manufacturer's Field Reports	TD											
23 65 00	1.03C.2		Packaged Cooling Tower Condenser Water Flow Diagrams	AS											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 65 00	1.04B		Packaged Cooling Tower Operation & Maintenance Data	OM											
23 65 00	1.09A		Packaged Cooling Tower Maintenance Service	SE											
23 65 00	1.10A		Packaged Cooling Tower Spare Parts Information	OM											
23 65 00	3.05A		Packaged Cooling Tower Instruction of Owner's Personnel	OT											
23 73 00	1.03B.1		Air Handling Units Shop Drawings	SD											
23 73 00	1.03B.3		Air Handling Units Product Data	MD											
23 73 00	1.03B.4		Air Handling Units Replacement Filter Media with Frame Sample	SA											
23 73 00	1.03B.5		Air Handling Units Installation Instructions	MD											
23 73 00	1.03B.6		Air Handling Units Certificate of Conformance	CC											
23 73 00	1.09A		Air Handling Units Spare Parts Information	OM											
23 81 00	1.04B.1		Unitary Air Conditioning Equipment Shop Drawings	SD											
23 81 00	1.04B.2		Unitary Air Conditioning Equipment Product Data	MD											
23 81 00	1.04B.3		Unitary Air Conditioning Installation Instructions	MD											
23 81 00	1.04B.4		Unitary Air Conditioning Certificate of Conformance	CC											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 81 00	1.08A		Unitary Air Conditioning Maintenance Service	SE											
23 81 00	1.09A		Unitary Air Conditioning Spare Parts Information	OM											
23 81 00	3.04A		Unitary Air Conditioning Instruction of Owner's Personnel	OT											
23 81 00	3.06A		Unitary Air Conditioning Operation & Maintenance Data	OM											
23 81 13	1.03B.1		Terminal Heating & Cooling Units Shop Drawings	SD											
23 81 13	1.03B.2		Terminal Heating & Cooling Units Product Data	MD											
23 81 13	1.03B.3		Terminal Heating & Cooling Units Installation Instructions	MD											
23 81 13	1.03B.4		Terminal Heating & Cooling Units Certificate of Conformance	CC											
23 81 13	1.04A		Terminal Heating & Cooling Units Project Record Documents	AS											
23 81 13	1.04B		Terminal Heating & Cooling Units Operation & Maintenance Data	OM											
23 81 13	1.09A		Terminal Heating & Cooling Units Spare Parts Information	OM											
23 81 43	1.03B.1		Heat Pumps Shop Drawings	SD											
23 81 43	1.03B.2		Heat Pumps Product Data	MD											
23 81 43	1.03B.3		Heat Pumps Equipment Schedules	CH											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal

Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
23 81 43	1.03B.4		Heat Pumps Installation Instructions	MD											
23 81 43	1.03B.5		Heat Pumps Certificate of Conformance	CC											
23 81 43	1.11A		Heat Pumps Maintenance Service	SE											
23 81 43	1.12A		Heat Pumps Spare Parts Information	OM											
23 81 43	3.04A		Heat Pumps Instruction of Owner's Personnel	OT											
26 05 13	1.03B.1		Airport Underground Cable (FAA) 5000 Volt Cable Product Data	MD											
26 05 13.23	1.03B.2		Airport Underground Cable (FAA) Connectors & Splice Materials Product Data	MD											
26 05 13.23	1.03B.3		Airport Underground Cable (FAA) Cable Test Results	TD											
26 05 13	1.03B.1		Medium Voltage Cables Product Data	MD											
26 05 13	1.03B.2		Medium Voltage Cables Qualifications of Splicer	QR											
26 05 13	1.03B.3		Medium Voltage Cables Electrical Contractor Experience	QR											
26 05 13	1.03B.4		Medium Voltage Cables Diagram	PP											
26 05 13	1.03B.5		Medium Voltage Cables Switchover and Outage Plan	PP											
26 05 13	1.03B.6		Medium Voltage Cables Schedule of Inspection Work	CH											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

Contractor Priority

A = Contractor has indicated this is a top priority submittal

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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 05 13	1.03B.7		Medium Voltage Cables Product Certificate	CC											
26 05 13	1.03B.8		Medium Voltage Cables Qualification Data	QR											
26 05 13	1.03B.9		Medium Voltage Cables Product Test Reports	TD											
26 05 13	1.03B.10		Medium Voltage Cables Schedule of Cable Pulls	CH											
26 05 13	1.03B.11		Medium Voltage Cables Field Test Reports	TD											
26 05 13	1.03B.12		Medium Voltage Cables Maintenance Data	OM											
26 05 19	1.03B.1		600v < Wire and Cable Materials Data	MD											
26 05 19	1.03B.2		600v < Wire and Cable Field Test Reports	TD											
26 05 23	1.03B.1		Control/Signal Transmission Media Product Data	MD											
26 05 23	1.03B.2		Control/Signal Transmission Media Certificate of Conformance	CC											
26 05 23	1.03B.3		Control/Signal Transmission Media Samples	SA											
26 05 23	1.03B.4		Control/Signal Transmission Media Qualification Data	QR											
26 05 23	1.03B.5		Control/Signal Transmission Media Field Test Reports	TD											
26 05 23	1.03B.6		Control/Signal Transmission Media Operation & Maintenance Data	OM											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 05 23	3.05A		Control/Signal Transmission Media Instruction of Owner's Personnel	OT											
26 05 26	1.03B.1		Grounding Product Data	MD											
26 05 26	1.03B.2		Grounding Plan & Calculations	SD/CA											
26 05 26	1.03B.3		Grounding Bond Locations	PP											
26 05 26	1.03B.4		Grounding Field Test Reports	TD											
26 05 26	1.03B.5		Grounding As-Built Data	AS											
26 05 29	1.03B.1		Hangers & Supports Product Data	MD											
26 05 29	1.03B.2		Hangers & Supports Shop Drawings & Calculations	SD/CA											
26 05 29	1.03B.3		Hangers & Supports Field Quality Control Reports	TD											
26 05 33	1.03B.1		Raceways and Boxes Product Data	MD											
26 05 33	1.03B.2		Raceways and Boxes Custom Enclosures & Cabinets Shop Drawings	SD											
26 05 33	1.03B.3		Raceways and Boxes Coordination Drawings	SD											
26 05 33	1.03B.5		Raceways and Boxes Professional Engineer Qualification Data	QR											
26 05 33	1.03B.6		Raceways and Boxes Seismic Qualification Certification	QR											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 05 36	1.03B.1		Cable Trays Product Data	MD											
26 05 36	1.03B.2		Cable Trays Installation Instructions	MD											
26 05 36	1.03B.3		Cable Trays Shop Drawings	SD											
26 05 36	1.03B.4		Cable Trays Seismic Qualification Certification	QR											
26 05 36	1.03B.5		Cable Trays Design Data and Calculations	CA											
26 05 36	1.03B.6		Cable Trays Coordination Drawings	SD											
26 05 36	1.03B.7		Cable Trays Test Reports	TD											
26 05 36	1.03B.8		Cable Trays Field Test Reports	TD											
26 05 36	1.03B.9		Cable Trays Operation & Maintenance Data	OM											
26 05 43	1.03A		Airport Underground Electrical Duct (FAA) Product Data	MD											
26 05 43	1.03B.1		Underground Ducts and Manholes Product Data	MD											
26 05 43	1.03B.2		Underground Ducts and Manholes Shop Drawings	SD											
26 05 43	1.03B.3		Underground Ducts and Manholes - Ductbank Coordination Drawings	SD											
26 05 43	1.03B.4		Underground Ducts and Manholes - Concrete & Steel Mill Certifications	CC											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 05 43	1.03B.5		Underground Ducts and Manholes - Qualification Data	QR											
26 05 43	1.03B.6		Underground Ducts and Manholes - Factory Test Reports	TD											
26 05 43	1.03B.7		Underground Ducts and Manholes - Project Record Documents	AS											
26 05 48	1.03B.1		Seismic Controls - Bracing Assemblies Layout & Details	SD											
26 05 48	1.03B.2		Seismic Controls - Restraint Assemblies Structural Calculations	CA											
26 05 48	1.03B.3		Seismic Controls - Product Data	MD											
26 05 48	1.03B.13		Seismic Controls - Undefined Anchorage & Bracing Shop Drawings	SD											
26 05 48	1.03B.14		Seismic Controls -Design Analysis	CA											
26 05 48	1.03B.15		Seismic Controls - Fabrication & Arrangement Details	SD											
26 05 48	1.03B.16		Seismic Controls - Pre-Approval and Evaluation Documentation	CC											
26 05 48	1.03B.17		Seismic Controls - Coordination Drawings	SD											
26 05 48	1.03B.18		Seismic Controls - Certificate of Conformance	CC											
26 05 48	1.03B.19		Seismic Controls - Qualification Data	QR											
26 05 53	1.03B		Electrical Identification Samples	SA											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 05 53	1.03C.1		Electrical Identification Product Data	MD											
26 05 53	1.03C.2		Electrical Identification Schedule	CH											
26 05 72	1.03A		Short Circuit Coordination & Asrc Flash Study - Short Circuit & Protective Device Study	TD											
26 05 72	1.03D		Short Circuit Coordination & Asrc Flash Study - Operation & Maintenance Data	OM											
26 05 72	1.03E		Short Circuit Coordination & Asrc Flash Study - Power System Equipment Database	AS											
26 08 00	1.03B.1		Acceptance Testing Field Test Reports	TD											
26 09 23	1.03B.1		Lighting Controls Product Data	MD											
26 09 23	1.03B.2		Lighting Controls Shop Drawings	SD											
26 09 23	1.03B.3		Lighting Controls Certificate of Conformance	CC											
26 09 23	1.03B.4		Lighting Controls Field Test Reports	TD											
26 09 23	1.03B.5		Lighting Controls Operation & Maintenance Data	OM											
26 09 23	1.03B.6		Lighting Controls Special Warranties	WA											
26 09 23	3.08A		Lighting Controls Instruction of Owner's Personnel	OT											
26 09 26	1.03B.1		Panelboards Product Data	MD											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution						

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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 09 26	1.03B.2		Panelboards Shop Drawings	SD											
26 09 26	1.03B.3		Panelboards Seismic Qualification Certification	CC											
26 09 26	1.03B.4		Panelboards Field Test Reports	TD											
26 09 26	1.03B.5		Panelboards Operation & Maintenance Data	OM											
26 09 26	1.03B.6		Panelboards Schedule	CH											
26 09 26	1.06A		Panelboards Spare Parts Information	OM											
26 11 16	1.03C.1		Secondary Unit Substation Product Data	MD											
26 11 16	1.03C.2		Secondary Unit Substation Shop Drawings	SD											
26 11 16	1.03C.3		Secondary Unit Substation Time-Current Characteristic Curves	SD											
26 11 16	1.03C.4		Secondary Unit Substation Primary Fuses	CA											
26 11 16	1.03C.5		Secondary Unit Substation Certificate of Conformance	CC											
26 11 16	1.03C.6		Secondary Unit Substation Test Reports	TD											
26 11 16	1.03C.6		Secondary Unit Substation Field Test Reports	TD											
26 11 16	1.03C.7		Secondary Unit Substation Manufacturer's Seismic Qualification Certification	CC											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 11 16	1.03C.8		Secondary Unit Substation Operation & Maintenance Data	OM											
26 11 16	1.08A		Secondary Unit Substation Spare Parts Information	OM											
26 11 16	1.09A		Secondary Unit Substation Warranty	WA											
26 11 16	3.07A		Secondary Unit Substation Instruction of Owner's Personnel	OT											
26 12 00	1.03B.1		Medium Voltage Transformers Product Data	MD											
26 12 00	1.03B.3		Medium Voltage Transformers Wiring Diagrams	SD											
26 12 00	1.03B.4		Medium Voltage Transformers Certificate of Conformance	CC											
26 12 00	1.03B.5		Medium Voltage Transformers Seismic Qualification Certification	CC											
26 12 00	1.03B.6		Medium Voltage Transformers Test Reports	TD											
26 12 00	1.03B.7		Medium Voltage Transformers Sound Level Test Reports	TD											
26 12 00	1.03B.8		Medium Voltage Transformers Field Test Reports	TD											
26 12 00	1.03B.9		Medium Voltage Transformers Operation & Maintenance Data	OM											
26 12 00	1.06A		Medium Voltage Transformers Spare Parts Information	OM											
26 12 00	3.07A		Medium Voltage Transformers Instruction of Owner's Personnel	OT											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 12 00	3.08A		Medium Voltage Transformers Certification of Installation	CC											
26 12 00	3.09A		Medium Voltage Transformers Record Drawings	AS											
26 12 19	1.03A		Airport Transformer Vault (FAA) Material Data	MD											
26 13 00	1.03B.1		Medium Voltage Load Interrupter Switchgear Product Data	MD											
26 13 00	1.03B.2		Medium Voltage Load Interrupter Switchgear Shop Drawings	SD											
26 13 00	1.03B.3		Medium Voltage Load Interrupter Switchgear Coordination Drawings	SD											
26 13 00	1.03B.4		Medium Voltage Load Interrupter Switchgear Wiring Diagrams	SD											
26 13 00	1.03B.5		Medium Voltage Load Interrupter Switchgear Test Reports	TD											
26 13 00	1.03B.6		Medium Voltage Load Interrupter Switchgear Seismic Qualification Certification	CC											
26 13 00	1.08A		Medium Voltage Load Interrupter Switchgear Spare Parts Information	OM											
26 13 00	1.08B		Medium Voltage Load Interrupter Switchgear Maintenance Tools	ES											
26 13 00	3.08A		Medium Voltage Load Interrupter Switchgear Instruction of Owner's Personnel	OT											
26 13 00	3.09A		Medium Voltage Load Interrupter Switchgear Operation & Maintenance Data	OM											
26 13 00	3.09B		Medium Voltage Load Interrupter Switchgear Record Drawings	AS											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 13 19	1.03B.1		Medium Voltage Vacuum Interrupter Switchgear Product Data	MD											
26 13 19	1.03B.2		Medium Voltage Vacuum Interrupter Switchgear Shop Drawings	SD											
26 13 19	1.03B.3		Medium Voltage Vacuum Interrupter Switchgear Coordination Drawings	SD											
26 13 19	1.03B.4		Medium Voltage Vacuum Interrupter Switchgear Wiring Diagrams	SD											
26 13 19	1.03B.5		Medium Voltage Vacuum Interrupter Switchgear Test Reports	TD											
26 13 19	1.03B.6		Medium Voltage Vacuum Interrupter Switchgear Seismic Qualification Certification	CC											
26 13 19	1.07A		Medium Voltage Vacuum Interrupter Switchgear Spare Parts Information	OM											
26 13 19	3.09A		Medium Voltage Vacuum Interrupter Switchgear Instruction of Owner's Personnel	OT											
26 13 26	1.03B.1		Medium Voltage Circuit Breaker Switchgear Product Data	MD											
26 13 26	1.03B.2		Medium Voltage Circuit Breaker Switchgear Shop Drawings	SD											
26 13 26	1.03B.3		Medium Voltage Circuit Breaker Switchgear Coordination Drawings	SD											
26 13 26	1.03B.4		Medium Voltage Circuit Breaker Switchgear Certificate of Conformance	CC											
26 13 26	1.03B.5		Medium Voltage Circuit Breaker Switchgear Seismic Qualification Certification	CC											
26 13 26	1.03B.6		Medium Voltage Circuit Breaker Switchgear Field Test Reports	TD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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C = Contractor has indicated this submittal has low priority															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 13 26	1.03B.7		Medium Voltage Circuit Breaker Switchgear Test Reports	TD											
26 13 26	1.03B.8		Medium Voltage Circuit Breaker Switchgear Operation & Maintenance Data	OM											
26 13 26	1.08A		Medium Voltage Circuit Breaker Switchgear Spare Parts Information	OM											
26 13 26	3.08A		Medium Voltage Circuit Breaker Switchgear Instruction of Owner's Personnel	OT											
26 18 39	1.03B.1		Medium Voltage Motor Controllers Product Data	MD											
26 18 39	1.03B.2		Medium Voltage Motor Controllers Shop Drawings	SD											
26 18 39	1.03B.3		Medium Voltage Motor Controllers Coordination Drawings	SD											
26 18 39	1.03B.4		Medium Voltage Motor Controllers Wiring Diagrams	SD											
26 18 39	1.03B.5		Medium Voltage Motor Controllers Test Reports	TD											
26 18 39	1.03B.6		Medium Voltage Motor Controllers Seismic Qualification Certification	CC											
26 18 39	1.03B.7a		Medium Voltage Motor Controllers Dimensioned Outline Drawings of Equipment	SD											
26 18 39	1.03B.7b		Medium Voltage Motor Controllers Equipment Anchorage Devices	MD											
26 18 39	1.03B.8		Medium Voltage Motor Controllers Operation & Maintenance Data	OM											
26 18 39	1.07A		Medium Voltage Motor Controllers Spare Parts Information	OM											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
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Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 18 39	3.09A		Medium Voltage Motor Controllers Instruction of Owner's Personnel	OT											
26 22 00	1.03B.1		Dry Type Transformers Product Data	MD											
26 22 00	1.03B.2		Dry Type Transformers Test Reports	TD											
26 22 00	1.03B.3		Dry Type Transformers Seismic Qualification Certification	CC											
26 23 00	1.03B.1		Low Voltage Switchgear Product Data	MD											
26 23 00	1.03B.2		Low Voltage Switchgear Shop Drawings	SD											
26 23 00	1.03B.3		Low Voltage Switchgear Seismic Qualification Certification	CC											
26 23 00	1.03B.4		Low Voltage Switchgear Mimic Bus Sample	SA											
26 23 00	1.03B.5		Low Voltage Switchgear Qualification Data	QR											
26 23 00	1.03B.6		Low Voltage Switchgear Field Test Reports	TD											
26 23 00	1.03B.7		Low Voltage Switchgear Manufacturer's Field Reports	TD											
26 23 00	1.03B.8		Low Voltage Switchgear Updated Mimic Bus Diagram	AS											
26 23 00	1.03B.9		Low Voltage Switchgear Operation & Maintenance Data	OM											
26 23 00	1.08A		Low Voltage Switchgear Spare Parts Information	OM											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

Contractor Priority
 A = Contractor has indicated this is a top priority submittal
 B = Contractor has indicated this submittal has medium priority
 C = Contractor has indicated this submittal has low priority

At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal

Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 23 00	3.09		Low Voltage Switchgear Instruction of Owner's Personnel	OT											
26 24 13	1.03B.1		Low Voltage Switchboards Product Data	MD											
26 24 13	1.03B.2		Low Voltage Switchboards Shop Drawings	SD											
26 24 13	1.03B.3		Low Voltage Switchboards Seismic Qualification Certification	CC											
26 24 13	1.03B.4		Low Voltage Switchboards Dimensioned Outline Drawings of Equipment	SD											
26 24 13	1.03B.5		Low Voltage Switchboards Equipment Anchorage Devices	MD											
26 24 13	1.03B.6		Low Voltage Switchboards Mimic Bus Sample	SA											
26 24 13	1.03B.7		Low Voltage Switchboards Field Test Reports	TD											
26 24 13	1.03B.8		Low Voltage Switchboards Manufacturer's Field Reports	TD											
26 24 13	1.03B.9		Low Voltage Switchboards Updated Mimic Bus Diagram	AS											
26 24 13	1.03B.10		Low Voltage Switchboards Operation & Maintenance Data	OM											
26 24 13	1.08A		Low Voltage Switchboards Spare Parts Information	OM											
26 24 13	3.11		Low Voltage Switchboards Instruction of Owner's Personnel	OT											
26 24 19	1.03B.1		Motor Control Centers Product Data	MD											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
Contractor Priority															
A = Contractor has indicated this is a top priority submittal					*At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal*										
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 24 19	1.03B.2		Motor Control Centers Shop Drawings	SD											
26 24 19	1.03B.3		Motor Control Centers Seismic Qualification Certification	CC											
26 24 19	1.03B.4		Motor Control Centers Dimensioned Outline Drawings of Equipment	SD											
26 24 19	1.03B.5		Motor Control Centers Equipment Anchorage Devices	MD											
26 24 19	1.03B.6		Motor Control Centers Field Test Reports	TD											
26 24 19	1.03B.7		Motor Control Centers Manufacturer's Field Reports	TD											
26 24 19	1.03B.8		Motor Control Centers Operation & Maintenance Data	OM											
26 24 19	1.03B.9		Motor Control Centers Load Current & Overload Relay Heater List	AS											
26 24 19	1.03B.10		Motor Control Centers Load Current & List of Settings	AS											
26 24 19	1.07		Motor Control Centers Spare Parts Information	OM											
26 24 19	3.10		Motor Control Centers Instruction of Owner's Personnel	OT											
26 25 00	1.03B.1		Low Voltage Busway Shop Drawings	SD											
26 25 00	1.03B.2		Low Voltage Busway Product Data	MD											
26 25 00	1.03B.3,4		Low Voltage Busway Coordination Drawings	SD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 25 00	1.03B.5		Low Voltage Busway Seismic Qualification Certification	CC											
26 25 00	1.03B.6		Low Voltage Busway Dimensioned Outline Drawings of Equipment	SD											
26 25 00	1.03B.7		Low Voltage Busway Equipment Anchorage Devices	MD											
26 25 00	1.03B.8		Low Voltage Busway Operation & Maintenance Data	OM											
26 27 16	1.05		Pad Mounted Sectionalizing Cabinets Independent Electrical Test Company	QR											
26 27 16	1.06B.1		Pad Mounted Sectionalizing Cabinets Product Data	MD											
26 27 16	1.06B.2		Pad Mounted Sectionalizing Cabinets Shop Drawings	SD											
26 27 16	1.06B.3		Pad Mounted Sectionalizing Cabinets Field Test Reports	TD											
26 27 16	1.06B.3		Pad Mounted Sectionalizing Cabinets Test Reports	TD											
26 27 16	1.06B.4		Pad Mounted Sectionalizing Cabinets Seismic Qualification Certification	CC											
26 27 16	1.06B.5		Pad Mounted Sectionalizing Cabinets Operation & Maintenance Data	OM											
26 27 16	1.07D		Pad Mounted Sectionalizing Cabinets As Found Status of Shock Detectors	AS											
26 27 16	3.07A		Pad Mounted Sectionalizing Cabinets Instruction of Owner's Personnel	OT											
26 27 16	1.03B.1		Cabinets & Enclosures Product Data	MD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 27 16	1.03B.2		Cabinets & Enclosures Installation Instructions	MD											
26 27 16	1.03B.3		Cabinets & Enclosures Shop Drawings	SD											
26 27 16	1.05A		Cabinets & Enclosures Spare Parts Information	OM											
26 27 26	1.03B.1		Wiring Devices Product Data	MD											
26 27 26	1.03B.2		Wiring Devices Receptacle & Switchplates Legend	CH											
26 27 26	1.03B.3		Wiring Devices Samples for Color Selection	SA											
26 27 26	1.03B.4		Wiring Devices Operation & Maintenance Data	OM											
26 27 26	1.06B		Wiring Devices TVSS Receptacles	ES											
26 28 13	1.03B.1		Fuses Product Data	MD											
26 28 13	1.06A		Fuses Spare Parts Information	OM											
26 28 13	1.06A		Fuses (3 ea. type and size)	ES											
26 28 16	1.03B.1		Enclosed Switches & Circuit Breaker Product Data	MD											
26 28 16	1.03B.2		Enclosed Switches & Circuit Breaker Shop Drawings	SD											
26 28 16	1.03B.3		Enclosed Switches & Circuit Breaker Seismic Qualification Certification	CC											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 28 16	1.03B.4		Enclosed Switches & Circuit Breaker Field Test Reports	TD											
26 28 16	1.03B.5		Enclosed Switches & Circuit Breaker Manufacturer's Service Report	TD											
26 28 16	1.03B.6		Enclosed Switches & Circuit Breaker Operation & Maintenance Data	OM											
26 28 16	1.07A		Enclosed Switches & Circuit Breaker Spare Parts Information	OM											
26 29 13	1.03B.1		Motor Controller Product Data	MD											
26 29 13	1.03B.2		Motor Controller Shop Drawings	SD											
26 29 13	1.03B.3		Motor Controller Seismic Qualification Certification	CC											
26 29 13	1.03B.4		Motor Controller Field Test Reports	TD											
26 29 13	1.03B.5		Motor Controller Manufacturer's Service Report	TD											
26 29 13	1.03B.6		Motor Controller Operation & Maintenance Data	OM											
26 29 13	1.03B.7		Motor Controller Load Current & Overload Relay Heater List	AS											
26 29 13	1.03B.8		Motor Controller Adjustable Overload Relay Settings	AS											
26 29 13	1.07A		Motor Controller Spare Parts Information	OM											
26 29 13	1.07A		Motor Controller Fuses & Indicating Lights	ES											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 29 13	3.11A		Motor Controller Instruction of Owner's Personnel	OT											
26 29 23	1.03B.1		Variable Frequency Controllers Product Data	MD											
26 29 23	1.03B.2		Variable Frequency Controllers Shop Drawings	SD											
26 29 23	1.03B.3		Variable Frequency Controllers Coordination Drawings	SD											
26 29 23	1.03B.4		Variable Frequency Controllers Seismic Qualification Certification	CC											
26 29 23	1.03B.5		Variable Frequency Controllers Field Test Reports	TD											
26 29 23	1.03B.6		Variable Frequency Controllers Manufacturer's Field Reports	TD											
26 29 23	1.03B.7		Variable Frequency Controllers Operation & Maintenance Data	OM											
26 29 23	1.03B.8		Variable Frequency Controllers Load Current & Overload Relay Heater List	AS											
26 29 23	1.03B.10		Variable Frequency Controllers Adjustable Overload Relay Settings	AS											
26 29 23	1.07A		Variable Frequency Controllers Spare Parts Information	OM											
26 29 23	1.07A		Variable Frequency Controllers Extra Materials	ES											
26 29 23	3.10		Variable Frequency Controllers Instruction of Owner's Personnel	OT											
26 31 00	1.03A		Wind & Solar Electrical Generation Product Data	MD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 31 00	1.03B		Wind & Solar Electrical Generation Seismic Qualification Certification	CC											
26 31 00	3.02E		Wind & Solar Electrical Generation Instruction of Owner's Personnel	OT											
26 32 13	1.03B.1		Engine Generator Product Data	MD											
26 32 13	1.03B.2		Engine Generator Shop Drawings	SD											
26 32 13	1.03B.3		Engine Generator Test Reports	TD											
26 32 13	1.03B.3		Engine Generator Field Test Reports	TD											
26 32 13	1.03B.4		Engine Generator Manufacturer's Field Reports	TD											
26 32 13	1.03B.5		Engine Generator Seismic Qualification Certification	CC											
26 32 13	1.03C		Engine Generator Operation & Maintenance Data	OM											
26 32 13	1.07A		Engine Generator Spare Parts Information	OM											
26 32 13	1.07A		Engine Generator Extra Materials	ES											
26 32 13	1.08B		Engine Generator Five Year Manufacturer's Warranty	WA											
26 32 13	3.09A		Engine Generator Instruction of Owner's Personnel	OT											
26 32 29	1.03B.1		Rotary 400Hz Converters Design Data	CA											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 32 29	1.03B.2		Rotary 400Hz Converters Shop Drawings	SD											
26 32 29	1.03B.3		Rotary 400Hz Converters Product Data	MD											
26 32 29	1.03B.4		Rotary 400Hz Converters Test Reports	TD											
26 32 29	1.03B.5		Rotary 400Hz Converters Seismic Qualification Certification	CC											
26 32 29	1.03B.6		Rotary 400Hz Converters Operation & Maintenance Data	OM											
26 32 29	1.06B		Rotary 400Hz Converters Five Year Manufacturer's Warranty	WA											
26 32 29	1.07A		Rotary 400Hz Converters Service and Maintenance	SE											
26 32 29	1.08A		Rotary 400Hz Converters Spare Parts Information	OM											
26 32 29	1.08A		Rotary 400Hz Converters Extra Materials	ES											
26 32 29	3.06A		Rotary 400Hz Converters Instruction of Owner's Personnel	OT											
26 33 53	1.03B.1		Static Uninterruptible Power Supply Product Data	MD											
26 33 53	1.03B.2		Static Uninterruptible Power Supply Shop Drawings	SD											
26 33 53	1.03B.3		Static Uninterruptible Power Supply Seismic Qualification Certification	CC											
26 33 53	1.03B.4		Static Uninterruptible Power Supply Certificate of Conformance	CC											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
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C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 33 53	1.03B.5		Static Uninterruptible Power Supply Qualification Data	QR											
26 33 53	1.03B.6		Static Uninterruptible Power Supply Factory Test Reports	TD											
26 33 53	1.03B.7		Static Uninterruptible Power Supply Field Test Reports	TD											
26 33 53	1.03B.8		Static Uninterruptible Power Supply Operation & Maintenance Data	OM											
26 33 53	1.06B		Static Uninterruptible Power Supply Special Battery Warranty - Material & Workmanship	WA											
26 33 53	1.06.D		Static Uninterruptible Power Supply Three Year UPS Warranty - Parts & Service	WA											
26 33 53	1.08A		Static Uninterruptible Power Supply Spare Parts Information	OM											
26 33 53	1.08A		Static Uninterruptible Power Supply Extra Materials	ES											
26 33 53	3.07A		Static Uninterruptible Power Supply Instruction of Owner's Personnel	OT											
26 35 33	1.03B.1		Low Voltage Power Factor Correction Capacitors Product Data	MD											
26 35 33	1.03B.2		Low Voltage Power Factor Correction Capacitors Shop Drawings	SD											
26 35 33	1.03B.3		Low Voltage Power Factor Correction Capacitors Seismic Qualification Certification	CC											
26 35 33	1.03B.4		Low Voltage Power Factor Correction Capacitors Field Test Reports	TD											
26 35 33	1.03B.5		Low Voltage Power Factor Correction Capacitors Project Record Documents	AS											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
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At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 35 33	1.03B.6		Low Voltage Power Factor Correction Capacitors Operation & Maintenance Data	OM											
26 35 33	1.05B		Low Voltage Power Factor Correction Capacitors Two Year Special Warranty	WA											
26 35 33	1.06A		Low Voltage Power Factor Correction Capacitors Spare Parts Information	OM											
26 35 33	1.06A		Low Voltage Power Factor Correction Capacitors Extra Materials	ES											
26 36 00	1.03B.1		Transfer Switches Product Data	MD											
26 36 00	1.03B.2		Transfer Switches Seismic Qualification Certification	CC											
26 36 00	1.03B.3		Transfer Switches Operation & Maintenance Data	OM											
26 36 00	3.07		Transfer Switches Instruction of Owner's Personnel	OT											
26 43 13	1.03B.1		Transient Voltage Suppression Product Data	MD											
26 43 13	1.03B.2		Transient Voltage Suppression Product Certificates	CC											
26 43 13	1.03B.3		Transient Voltage SuppressionField Test Reports	TD											
26 43 13	1.03B.4		Transient Voltage SuppressionMaintenance Data	OM											
26 43 13	1.03B.5		Transient Voltage SuppressionWarranties	WA											
26 43 13	1.08A		Transient Voltage Suppression Extra Materials	ES											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 43 13	3.05A		Transient Voltage Suppression Instruction of Owner's Personnel	OT											
26 51 00	1.03B.1		Interior Lighting Product Data	MD											
26 51 00	1.03B.2		Interior Lighting Shop Drawings	SD											
26 51 00	1.03B.3		Interior Lighting Wiring Diagrams	SD											
26 51 00	1.03B.4		Interior Lighting Coordination Drawings	SD											
26 51 00	1.03B.5		Interior Lighting Product Certification	CC											
26 51 00	1.03B.6		Interior Lighting Dimming Ballast Compatability Certification	CC											
26 51 00	1.03B.7		Interior Lighting Field Test Reports	TD											
26 51 00	1.03B.8		Interior Lighting Maintenance Data	OM											
26 51 00	1.03B.9		Interior Lighting Manufacturer's Representatives Listing	QR											
26 51 00	1.04E		Interior Lighting Mockup	MU											
26 51 00	1.08A		Interior Lighting General Warranty	WA											
26 51 00	1.08B		Interior Lighting Special Warranty for Batteries	WA											
26 51 00	1.08C		Interior Lighting Special Warranty Period for Batteries	WA											

Submittal Type Legend				
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 51 00	1.08D		Interior Lighting Special Warranty for Fluorescent Ballasts	WA											
26 51 00	1.09A		Interior Lighting Spare Parts Information	OM											
26 55 36	1.03A		Airport Obstruction Lights Material Data	MD											
26 56 00	1.03B.1		Exterior Lighting Plan	SD											
26 56 00	1.03B.2		Exterior Lighting Product Data	MD											
26 56 00	1.03B.3		Exterior Lighting Shop Drawings	SD											
26 56 00	1.03B.4		Exterior Lighting Samples	SA											
26 56 00	1.03B.5		Exterior Lighting Product Certification	CC											
26 56 00	1.03B.6		Exterior Lighting Field Test Reports	TD											
26 56 00	1.03B.7		Exterior Lighting Maintenance Data	OM											
26 56 00	1.03B.8		Exterior Lighting Calculations	CA											
26 56 00	1.07A		Exterior Lighting General Warranty	WA											
26 56 00	1.07B		Exterior Lighting Special Warranty	WA											
26 56 00	1.08A		Exterior Lighting Spare Parts Information	OM											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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Spec. Section No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
26 56 00	1.08A		Exterior Lighting Extra Materials	ES											
27 05 28	1.03B.1		Communication Pathways Cable Tray & Conduit Layout Drawings	SD											
27 05 28	1.03B.2		Communication Pathways Cable Tray & Accessories Shop Drawings	SD											
27 05 28	1.03B.3		Communication Pathways Cable Tray Product Data	MD											
27 05 53	1.03A		Labeling and Nomenclature Materials Data	MD											
27 05 53	1.02B.1		Identification and Labeling Product Data	MD											
27 05 53	1.02B.2		Identification and Labeling Label Schedule	CH											
27 08 00	2.01A		Communications Infrastructure Commissioning Documents	TD											
27 11 00	1.03A		Communication System Equipment Rooms Product Data	MD											
27 13 00	1.06B.1		Backbone Cabeling Installation Contractor Certification	QR											
27 13 00	1.06B.2		Backbone Cabeling Trades People Qualifications	QR											
27 13 00	1.06B.3		Backbone Cabeling Discrepancy Report	AS											
27 13 00	1.06B.4		Backbone Cabeling Systimax 20 Year Warranty	WA											
27 13 00	1.06B.5		Backbone Cabeling Non-Systimax Products Warranty	WA											

Submittal Type Legend									
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports					
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty					
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
27 13 00	1.06C.1		Backbone Cabling Product Data	MD											
27 13 00	1.06C.2		Backbone Cabling Test Results	TD											
27 13 00	1.06C.3		Backbone Cabeling Pre-Installation Fiber Optics Reel Tests	TD											
27 13 00	1.06C.4		Backbone Cabeling Conduit & Cable Tray Fill Plan	PP											
27 13 00	1.06C.5		Backbone Cabeling Single Line Schematic Diagrams	SD											
27 13 00	1.06C.6		Backbone Cabeling Cable Pulling Plan	PP											
27 13 00	1.06C.7		Backbone Cabeling Splice Plan	PP											
27 13 00	1.06C.8		Backbone Cabeling Test Plan	PP											
27 13 00	1.06C.9		Backbone Cabeling Requests for Inspection	PP											
27 13 00	1.06C.10		Backbone Cabeling Final As-Built Backbone Wiring Diagrams	AS											
27 15 00	1.05B.1a		Horizontal Cabling Product Data	MD											
27 15 00	1.05B.1b		Horizontal Cabling Test Results	TD											
27 15 00	1.05B.1c		Horizontal Cabling Pre-Installation Fiber Optics Reel Tests	TD											
27 15 00	1.05B.1d		Horizontal Cabling Conduit & Cable Tray Fill Plan	PP											

Submittal Type Legend															
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports											
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
27 15 00	1.05B.1e		Horizontal Cabling Single Line Schematic Diagrams	SD											
27 15 00	1.05B.1f		Horizontal Cabling Test Plan	PP											
27 15 00	1.05B.1g		Horizontal Cabling Requests for Inspection	PP											
27 15 00	1.05B.1h		Horizontal Cabling Final As-Built Horizontal Wiring Diagrams	AS											
27 15 00	1.05b.2a		Horizontal Cabling Installation Contractor Certification	QR											
27 15 00	1.05B.2b		Horizontal Cabling Trades People Qualifications	QR											
27 15 00	1.05B.2c		Horizontal Cabling Discrepancy Report	AS											
27 15 00	1.05B.2d		Horizontal Cabling Systemax 20 Year Warranty	WA											
27 15 00	1.05B.2e		Horizontal Cabling Non-Systemax Products Warranty	WA											
28 05 00	1.03B.1a		Security Systems Terminal Strips Product Data	MD											
28 05 00	1.03B.1b		Security Systems Junction Boxes Product Data	MD											
28 05 00	1.03B.1c		Security Systems Door Security Hardware Copper Cable	MD											
28 13 00	1.03B.1		Access Control Card Reader	SA											
28 13 00	1.03B.2		Access Control Balanced Magnetic Switches	SA											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution		

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
28 13 00	1.03B.3		Access Control REX and Faceplate	SA											
28 13 00	1.03B.4		Access Control Electronic Locking Device	SA											
28 13 00	1.03B.5		Access Control Audio/Visual Indicator	SA											
28 13 00	1.03B.6		Access Control Junction and Interface Terminal Boxes	SA											
28 13 00	1.03B.7		Access Controller	SA											
28 13 00	1.03B.8		Access Control Intellikey	SA											
28 13 00	1.06A		Access Control Warranties	WA											
28 13 00	1.07A		Access Control Maintenance and Service	SE											
28 23 00	1.03A		CCTV System Product Data	MD											
28 23 00	1.03B		CCTV System Operation & Maintenance Data	OM											
28 31 00	1.03B.1		Fire Alarm System Product Data	MD											
28 31 00	1.03B.2		Fire Alarm System Riser Diagrams	SD											
28 31 00	1.03B.3		Fire Alarm System Wiring Diagrams	SD											
28 31 00	1.03B.4		Fire Alarm System Floor Plans	SD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
28 31 00	1.03B.5		Fire Alarm System Device Address List	CH											
28 31 00	1.03B.6		Fire Alarm System Operating Instructions	MD											
28 31 00	1.03B.7		Fire Alarm System Product Certification	CC											
28 31 00	1.03B.8		Fire Alarm System Operation & Maintenance Data	OM											
28 31 00	1.03B.9		Fire Alarm System Spare Parts Information	OM											
28 31 00	1.03B.10		Fire Alarm System Contact Information of Suppliers	OM											
28 31 00	1.07A		Fire Alarm System Warranties	WA											
28 31 00	3.05A		Fire Alarm System Report of Pre-Testing	TD											
28 31 00	3.05E		Fire Alarm System Report of Tests & Inspections	TD											
28 31 49	1.03B.1		Carbon Monoxide Detection System Operation	PP											
28 31 49	1.03B.2		Carbon Monoxide Detection System Control Diagrams	SD											
28 31 49	1.03B.3		Carbon Monoxide Detection System One Line Drawings	SD											
28 31 49	1.03B.4		Carbon Monoxide Detection System Product Data	MD											
28 31 49	1.05A		Carbon Monoxide Detection System Warranties	WA											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
31 00 00	1.04A.1a		Earthwork - Select Fill Material	SA											
31 00 00	1.04A.1b		Earthwork - Backfill	SA											
31 00 00	1.04A.1c		Earthwork - Rock Rip Rap	SA											
31 00 00	1.04A.1d		Earthwork - Rip Rap Overlay	SA											
31 00 00	1.04A.1e		Earthwork - Utility Bedding	SA											
31 00 00	1.04A.1f		Earthwork - Underground Marking Tape	SA											
31 00 00	1.04A.1g		Earthwork - Gravel Borrow	SA											
31 11 00	1.03A		Clearing, Grubbing & Cleanup Material Data	MD											
31 11 10	1.03A		Clearing & Grubbing (FAA) Material Data	MD											
31 22 19	1.03A		Topsoiling (FAA) Material Data	MD											
31 23 00	1.03A		Excavation & Embankment (FAA)	MD											
31 31 00	1.03A		Soil Treatment	MD											
31 50 00	3.03A.2		Trench Safety Systems Design	PP											
31 62 00	1.03A		Pile Driving Equipment Product Data	MD											

Submittal Type Legend				
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CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement	
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution	

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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
31 64 00	1.03A		Caissons Material Data	MD											
32 01 90	1.03A		Landscape Maintenance Product Data	MD											
32 01 90	3.13A		Landscape Maintenance Monthly Status Report	TD											
32 11 00	1.03A		Base Course Materials	TD											
32 11 13	1.03A		Lime Treated Subgrade (FAA) Materials	MD											
32 11 16	1.03A		Subbase Course (FAA) Materials	TD											
32 11 23	1.03A		Crushed Aggregate Base Course (FAA) Materials	TD											
32 11 23	1.03A		Aggregate Base Course Materials	TD											
32 12 13	1.03A		Bituminous Tack Coat (FAA) Materials	MD											
32 12 13	1.03A		Bituminous Prime Coat (FAA) Materials	MD											
32 12 16	1.03A		Plant Mix Bituminous Pavement Materials	MD/TD											
32 12 16	1.03A.1		Bituminous Concrete Pavement Asphalt Material Samples	SA											
32 12 16	1.03A.2		Bituminous Concrete Pavement Asphalt Quality	TD											
32 12 16	1.03A.3		Bituminous Concrete Pavement Asphalt Mix Design	MD/TD											

Submittal Type Legend															
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CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
32 12 16	1.03A.4		Bituminous Concrete Pavement Asphalt Binder Supplier	QR											
32 12 19	1.03A		Porous Friction Course Materials	TD											
32 12 36	1.03A		Seal Coats & Bituminous Surface Treatment Materials	MD											
32 13 13	1.03A		Portland Cement Concrete Pavement Materials	MD											
32 13 13	1.03A		Portland Cement Concrete Paving Materials	MD											
32 13 73	1.03A		Adhesive Compound Materials	MD											
32 13 73	1.03A		Joint Sealing Filler Materials	MD											
32 15 40	1.03B.1		Crushed Stone Surfacing Screened Gravel Material Data	MD											
32 15 40	1.03B.2		Crushed Stone Surfacing Material Data	MD											
32 15 40	1.03B.3		Crushed Stone Surfacing Maintenance Rock Material Data	MD											
32 15 40	1.03B.4		Crushed Stone Surfacing Base Course Material Data	MD											
32 16 13	1.03B.1		Curb & Gutter Mix Design	MD/TD											
32 16 13	1.03B.2		Curb & Gutter Shop Drawings	SD											
32 17 23	1.03A		Runway & Taxiway Painting Materials	TD											

Submittal Type Legend															
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CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
32 31 13	1.03A		Chain Link Fence (FAA) Materials	MD											
32 31 13	1.03A		Chain Link Fences and Gates Material Data	MD											
32 31 13	1.03B.1		Chain Link Fences and Gates Shop Drawings	SD											
32 90 00	1.03B.1		Planting Material List	PP											
32 90 00	1.03B.2		Planting Record Drawings	AS											
32 90 00	1.03B.3		Planting Material Certificates	CC											
32 92 19	1.03A		Seeding (FAA) - Seed Certification	CC											
32 92 19	1.03B.1		Hydroseeding for Erosion Control & Landscaping -Hydroseed Materials	MD											
32 92 19	1.03B.1		Hydroseeding for Erosion Control & Landscaping -Seeding Material Samples	SA											
32 92 19	1.03B.1		Seeding - Seed Sample	SA											
32 92 19	1.03B.1		Seeding - Jute Mat Sample	SA											
32 92 19	1.03B.1		Seeding - Mulch Sample	SA											
32 96 43	2.01A		Transplanting Trees - Soil Amendment Product Data	MD											
33 10 00	1.03A		Water Distribution Product Data	MD											

Submittal Type Legend															
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CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty											
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement												
MD Manufacturer Product Data	OT Owner Training	SA Sample	SU Substitution												
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
33 24 13	1.03A.1		Monitoring Well Construction Notification Forms	NP											
33 24 13	1.03A.2		Monitoring Well Records	AS											
33 24 13	1.03A.4		Monitoring Well Survey Coordinate Data	AS											
33 31 00	1.03A		Industrial Waste and Sanitary Sewage System Product Data	MD											
33 32 13	1.03A.1		Sewage Lift Station Shop Drawings	SD											
33 32 13	1.03A.2		Sewage Lift Station Product Data	MD											
33 32 13	1.03A.3		Sewage Lift Station Product Certification	CC											
33 32 13	1.03A.4		Sewage Lift Station Field Test Reports	TD											
33 40 00	1.03A		Site Drainage Product Data	MD											
33 41 00	1.03A		Storm Drainage Product Data	MD											
33 41 13	1.03A		Pipe for Storm Drains and Culverts Product Data	MD											
33 42 13	1.03A		Concrete Culverts / Misc Dainage (FAA) Material Data	MD											
33 46 00	1.03A.1		Subdrainage - Drain Pipe Material Data	MD											
33 46 00	1.03A.2		Subdrainage - Underdrain Pipe Material Data	MD											

Submittal Type Legend					
AS As Built	MU Mock-Up/ Proof of Concept	PC Pre-Construction Subm.	SC Schedule	TD Test Data/ Reports	
CA Calculations	NP Notice or Permit	PP Plan/ Procedure	SD Shop Drawing	WA Warranty	
CC Cert. of Compliance	OM O&M Manual	QR Qualification Resume	SE Service Agreement		
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
33 46 00	1.03A.3		Subdrainage - Manholes Shop Drawings	SD											
33 46 00	1.03A.4		Subdrainage - Gravel Backfill for Drains Material Data	MD											
33 46 16	1.03A		Pipe Underdrains for Airports (FAA) Material Data	MD											
33 49 13	1.03A		Manholes, Catch Basins & Inlets Product Data	MD											
33 63 00	1.03A		Steam Distribution Product Data	MD											
34 11 00	1.03B.1		Railroad Work - Welding	CC											
34 11 00	1.03B.2		Railroad Work - Reports	TD											
34 43 23	1.03A		Airport Wind Cones (FAA) Material Data	MD											
34 71 13	1.03B.1		Roadway Guardrail Shop Drawings	SD											
34 71 13	1.03B.2		Roadway Guardrail Erection Drawings	SD											
34 77 13	1.03B.1		Aircraft Passenger Loading Bridge Disposal Manifest Form	AS											
34 77 13	1.03B.2		Aircraft Passenger Loading Bridge Shop Drawings	SD											
34 77 13	1.03B.3		Aircraft Passenger Loading Bridge Interface w/Terminal Drawings	SD											
34 77 13	1.03B.4		Aircraft Passenger Loading Bridge Electrical Interface Drawings	SD											

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
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							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
34 77 13	1.03B.5		Aircraft Passenger Loading Bridge Communication Interface Drawings	SD											
34 77 13	1.03B.6		Aircraft Passenger Loading Bridge List of Operational Limit Settings	AS											
34 77 13	1.03B.7		Aircraft Passenger Loading Bridge Material Inventory Log	AS											
34 77 13	1.03B.8		Aircraft Passenger Loading Bridge Material Damage Log	AS											
34 77 13	1.03B.9		Aircraft Passenger Loading Bridge Sealant	MD											
34 77 13	1.03B.10		Aircraft Passenger Loading Bridge Plan and Schedule	PP											
34 77 13	1.03B.11		Aircraft Passenger Loading Bridge Acceptance Testing Plan	PP											
34 77 13	1.03B.12		Aircraft Passenger Loading Bridge Special Warranties	WA											
35 01 50	1.03B.1		Dredging - Borrow Source	MD											
35 01 50	1.03B.2		Dredging - Cover Material	MD											
35 01 50	1.03B.3		Dredging - Work Plan	PP											
35 59 13	1.03B.1		Fender System Manufacturer Qualifications Contact Information	QR											
35 59 13	1.03B.2		Fender System Shop Drawings	SD											
35 59 13	1.03B.3		Fender System Performance Testing	TD											

[PROJECT NAME]
 [MC - #]
 [WP #]



SUBMITTAL LOG
 [Contractor]

Submittal Type Legend															
AS As Built			MU Mock-Up/ Proof of Concept			PC Pre-Construction Subm.			SC Schedule			TD Test Data/ Reports			
CA Calculations			NP Notice or Permit			PP Plan/ Procedure			SD Shop Drawing			WA Warranty			
CC Cert. of Compliance			OM O&M Manual			QR Qualification Resume			SE Service Agreement						
MD Manufacturer Product Data			OT Owner Training			SA Sample			SU Substitution						
Contractor Priority															
A = Contractor has indicated this is a top priority submittal															
B = Contractor has indicated this submittal has medium priority															
C = Contractor has indicated this submittal has low priority															
At Least One Critical Reviewer and Only One Final Reviewer are Required for Each Submittal															
Spec. Secion No.	Para. No.	Free Type	Title	Submittal Type	Contr Priority	Date Due from Contr	Design Team Reviewers		F&I / Maintenance Reviewers		Additional Reviewers		CM Reviewers		Remarks
							Critical	Other	Critical2	Other2	Critical3	Other3	Pre-Final (Optional) *One Per Submittal*	Final (Required) *One Per Submittal*	
35 59 13	1.03B.4		Fender System Fender Visual Inspection	TD											
35 59 13	1.03B.5		Fender System Material Schedules	CH											
35 59 13	1.03B.6		Fender System Installation Instructions	MD											
35 59 13	1.03B.7		Fender System Operation & Maintenance Data	OM											
41 22 13	1.03A		Bridge Cranes Shop Drawings	SD											



Safety Plan Compliance Document Contractor Daily Inspection Checklist

DATE	
LOCATION	
NAME	
SIGNATURE	
WP #	

To be completed by the Contractor

ITEM	DESCRIPTION / OBSERVATION	✓
FOD - Existing		
FOD - Potential		
Barricades / Lights / Fencing		
Material Storage		
Equipment Storage		
Wildlife Attractant (ponding, grass seed, trash, etc.)		
Security Issues		
Contractor Access and Parking		
ARFF Access		
Excavation / Open Trenches		
Flags / Beacons / Head Lights		
Aircraft Clearances		
Utility Protection		
Markings, Lights, Signs, Visual NAVAIDs		
Hotwork		
Phasing and Coordination		
Special Conditions		

PART 1 GENERAL

1.01 SUMMARY

- A. The Sea-Tac International Airport is a complex operating facility which is governed by a very strict set of operating rules to insure the safety of the traveling public, the operators of the various airlines and those individuals who function as support personnel to the facility. It is recognized and understood that the Contractor is required to comply with the most current edition requirements contained in FAA Advisory Circulars and Port Rules and Regulations as they pertain to this project. It is understood and accepted by the Port that the Contractor has familiarized itself with general Airport operations and has taken these into consideration in arriving at its bid prices and in scheduling its various activities.
- B. Following are the general safety operations and objectives that must be achieved to maximize safety and to minimize time and economic loss to the aviation community, construction contractors and others directly or indirectly affected by the project. The Contractor shall keep these objectives in mind when formulating schedules and operational activities. The Contractor shall be responsible for controlling their operations and the operations of subcontractors (at all levels) and suppliers so as to comply with the requirements of this Section.
 - 1. Keep the airport operational for all users
 - 2. Minimize delays to aircraft operations
 - 3. Maintain safety of aircraft movement and airport operations as a whole
 - 4. Minimize delays to construction operations
 - 5. Minimize airport operation and construction activity conflicts
 - 6. Maintain safety of personnel using the airport at all times

1.02 DEFINITIONS

- A. Air Operations Area (AOA): That area within the airfield perimeter security fence.
- B. Air or Aircraft Movement Area (AMA): The movement area consists of runways, taxiways and other areas of the airport that are used for taxiing or hover taxiing, air taxiing, takeoff and landing of aircraft, exclusive of loading aprons and aircraft parking areas.
- C. Non-Movement Area: That area of the Airport Operations Area not defined as a movement area and including the exterior of buildings on or adjacent to the non-movement area. Aircraft in motion on these surfaces are not under control of the air traffic control tower.
- D. Apron: That non-movement area prepared for the positioning or parking of aircraft during ground operations not involving landing and takeoff of airplanes. The areas are usually designed according to use, such as terminal, cargo, parking, service hangar, or holding apron. Such terms as "ramp," "hardstand," "turnaround," etc., are synonymous with apron. Other sub-area designations are:
 - 1. Aircraft Parking Positions - used for parking aircraft to enplane and deplane passengers, load or unload cargo.

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2. Aircraft Service Area - on or adjacent to an aircraft parking position. They are used by airline personnel and equipment for servicing aircraft and staging of baggage, freight and mail for loading and unloading of aircraft.
 3. Service/Fire Lanes - identified rights-of-way on apron designated for aircraft ground service vehicles and fire equipment.
 4. Taxi lanes - reserved to provide taxiing aircraft with access to and from parking positions.
- E. Runway: A clearly defined area on the airport that has been prepared and is suitable for landing and takeoff of airplanes. The principal runway elements include the structural pavement, shoulders, blast pads, runway safety area, extended runway safety area and airport imaginary surfaces. The runway drainage system, lighting, marking and areas required for landing aids are also integral design parts of the runway.
- F. Taxiway: A defined path over which airplanes can taxi from one part of an airport to another. It includes the structural pavement, shoulder, taxiway safety area and obstacle-free area.
- G. Vehicle Control Line: A red line bordered on both sides by white lines painted on the ramp parallel to and within 12 feet of the north-south vehicle drive lanes. The vehicle control line is present where movement area surfaces boundary non-movement areas and service roads.
- H. Vehicle Drive Lanes: Identified rights-of-way in the non-movement area designated for vehicular movement on the AOA. Drive lanes are delineated by white lines or traffic markings painted on the pavement.
- I. Terminal Buildings and Support Facilities: Interior of terminal and concourses, and support facilities such as cargo buildings (including exterior of buildings and roofs), which are inside the AOA.
- J. Street-Side of Buildings: Exterior of building and roof on street side, outside of the AOA streets, multilanes, drives, parking garage and remote parking lots. This area is also referred to as the landside of the airport.
- K. Foreign Object Debris (FOD): Any object capable of being ingested into aircraft engines or penetrating aircraft tires. Examples are knives, forks, spoons, hand tools, bolts, nails, nuts, cable, polyurethane, vehicle parts, sand, gravel, paper, rocks, dirt, cans, glass, wood, et al.
- L. Director, Airport Operations: That individual who directs all airfield operations and activities with respect to safety, security, airport rules and regulations, and emergency situations.
- M. Manager-Airfield Security/Airport Security Coordinator: That individual appointed by the General Manager, Airfield Line of Business, who directs all activities with respect to security.
- N. Unsuitable Weather: Atmospheric or environmental conditions which restrict construction activities and effect operation of aircraft while approaching a runway to land; during landing; taxiing between runways, ramps, aprons, hangars, or loading zones; standing by to takeoff; or during takeoff as determined by the General Manager, Airfield Line of Business or the General Manager or his authorized representative. In addition, that atmospheric or environmental condition

which may, in the opinion of the Engineer, affect the final outcome, position, or condition of construction work, maintenance work, or improvement of any sort or nature.

- O. Jet Blast: Jet blast is the force of jet exhaust produced by the aircraft engines. The high velocities produced by aircraft engines are capable of causing bodily injury and damage to equipment. The drag and uplift forces produced by jet engines are capable of moving large boulders. A jet engine operating at maximum thrust is capable of lifting a 2-foot boulder 35 feet behind the airplane completely off the ground.

As an example, a DC10 at takeoff thrust can produce a velocity of 750 mph 10 feet behind the aircraft; a velocity of 260 mph 100 feet behind the aircraft; a velocity of 55 mph 1,000 feet behind the aircraft; 10 mph 4,400 feet behind the aircraft. At maximum values these velocities may extend 30' out beyond the wingtips of the aircraft and to a height of 60' above ground level. (This information is taken from FAA Advisory Circular 150/5300-13 Figure 8-4.)

- P. Low Visibility Operations: Low Visibility Operations means movement of aircraft for takeoff landing or taxi when the visibility is reported to be less than 1,200 feet runway visual range (RVR).

INSTRUCTIONS: The following paragraph is required for projects at the airport that are subject to a Construction Safety Phasing Plan (CSPP), which is a Federal Aviation Administration requirement for certain projects per Advisory Circular 150/5370-2F.

1. Attach the CSPP to the end of this section. (obtain from PMG)
2. Add the Safety Plan Compliance Document Daily Inspection Report to the end of this section as Attachment A.
3. Include the following SUBMITTALS verbiage.
4. Delete SUBMITTALS section if project doesn't require a CSPP.

1.03 SUBMITTALS

- A. Prior to issuance of the Notice to Proceed, the Contractor shall submit a Safety Plan Compliance Document (SPCD) for review and acceptance by the Port. The document details how the Contractor will comply with the Construction Safety Phasing Plan (CSPP) as prepared by the Port.
- B. Submit signed document that the Contractor will comply with the CSPP or submit a SPCD that indicates revisions to the CSPP. Major or significant revisions to the CSPP may require FAA approval, which could take 90 days.
- C. Prepare and submit SPCD Daily Inspection Report as an attachment to the Contractor Daily Report.
- D. The CSPP and a sample SPCD Daily Inspection Report are attached to this section.

1.04 REFERENCES

The rules, requirements and regulations specified in this section have been compiled from the following sources:

- A. Sea-Tac International Airport Schedule of Rules and Regulations No. 5 (Effective February 12, 2015)

- B. Port Regulations for Airport Construction, Revision 2004.
- C. Federal Aviation Administration Advisory Circular 150/5370-2F, 150/5210-5C Appendix 1, and 70/7460-1L (Current Edition).
- D. Federal Aviation Regulations (FAR) Part 77.
- E. FAA order NM 5200.3.

1.05 REQUIREMENTS AND REGULATIONS RELATING TO THE OPERATION OF MOTOR VEHICLES

A. General:

- 1. During the term of this Contract, the Contractor shall recognize and abide by the following rules and controls as they may be modified by federal regulations.
- 2. In addition to these regulations, the Engineer is empowered to issue such other instructions as may be deemed necessary for the safety and well being of Airport users or otherwise in the best interests of the Port.

B. Operation of Motor Vehicles:

1. General:

- a. Motor vehicle operations within and on the Airport premises shall be governed generally by the provisions of the Washington State Motor Vehicle Codes and Traffic Direction procedures and signals for turns, lights and safe-driving precaution shall be in conformity therewith. In addition, motor vehicles shall conform to all special regulations prescribed by the Commission or procedures imposed pursuant to Commission regulation by the Director.
- b. Traffic on enplaning and deplaning drives, public thoroughfares and parking areas of the Airport is limited to those vehicles properly licensed to operate on public streets and highways.
- c. All vehicular equipment in the AOA, cargo, tunnel, access road, aircraft parking or storage areas shall at all times comply with any lawful signal or direction of Port employees. All traffic signs, lights and signals shall be obeyed, unless otherwise directed by Port employees.
- d. Every person operating motorized equipment of any character on any area shall operate the same in a careful and prudent manner and at a rate of speed posted or fixed by this section and at no time greater than is reasonable and proper under the conditions existing at the point of operation, taking into account traffic and road conditions, view obstructions and consistent with all conditions so as not to endanger the life, limb, or property or the rights of others entitled to the use thereof.

2. Operation of Vehicles Within AOA:

- a. All motor vehicles that enter the AOA shall possess exhaust systems which are protected with screens, mufflers, or other devices adequate to prevent the escape of sparks or the propagation of flame.

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- b. Regardless of the time of day, all powered construction vehicles that are equipped with headlights shall operate with the headlights on when the vehicle is in motion on the AOA.
- c. All Contractor vehicles shall be equipped with the following visibility/identification features: 1) Operable yellow flashing beacons, beacons must be lighted during all periods of vehicle operation; 2) 3 foot by 3 foot flags having a checkered pattern of international orange and white squares at least 1 foot on each side (For fabric color specifications see FAA Advisory Circular 150/5210-5C, Appendix A.). Attach flag on top of vehicle with rigid pole so that flag will be visible at all times. Vehicles without beacons/flags will not be permitted to enter the AOA.
- d. No person shall operate any motor vehicle or motorized equipment in the AOA of the Airport unless such motor vehicle or motorized equipment is in a safe and mechanically reliable condition for such operation.
- e. Any person operating equipment in the Air Operations Area shall, in addition to this section, abide by all existing Federal Aviation Administration and other governmental rules and regulations.
- f. No person shall operate any motor vehicle or motorized equipment on the aircraft movement or non-movement areas of the Airport at a speed in excess of twenty (20) miles [32 km/h] per hour, or the posted speed limit, whichever is lower, less where conditions warrant. Designated motor vehicle drive lanes shall be utilized where provided unless specific authorization to the contrary is given by the Engineer.
- g. No person operating a motor vehicle or motorized equipment in the AOA shall in any way hinder, stop, slow, or otherwise interfere with the operation of any aircraft on the Airport.
- h. All aircraft and emergency vehicles have priority over Contractor vehicles. Contractor vehicles shall yield right of way to aircraft and emergency vehicles. Contractor shall ensure that under no circumstances will any Contractor or subcontractor or other vehicle associated with the job pass beneath any part of an aircraft or loading bridge, or block the access to any parking gate or delay any aircraft movement.
- i. Vehicles shall remain within established drive lanes. The Vehicle Control Line separates the aircraft movement area (runways and taxiways) from the non-movement area (terminal and aircraft aprons and parking areas). It is prohibited to use runways or taxiways or adjacent field areas unless specifically indicated on the drawings. It is emphasized that the Contractor's authority to operate does not extend to active aircraft movement area. The Contractor shall operate along established haul routes with prior approval of the Director, Airport Operations, or the Director's designee, and the Engineer. No vehicle shall cross the Vehicle Control Line without approval of the Airport Traffic Control Tower and must be in radio

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contact with the Tower, under escort, or on an established haul route.

- j. Contractor vehicles shall not deviate from haul routes specified on the drawings.
- k. Escorts: At all times during work within 250 feet of the centerline of an operating runway or 160 feet of the centerline of an operating taxiway, or when entering or crossing an active movement area, vehicles shall be accompanied by an approved Port Escort. All requests for escorts and operations involving an aircraft movement area, or any other activity that may tend to interfere with the general operation of the Airport, shall be approved by the Director, Airport Operations by way of the Engineer. A minimum of 24 hours' prior notice shall be given the Engineer in each case. See Section 01500 - Temporary Facilities and Controls, for submittal requirements.

C. Parking:

- 1. No parking is permitted on any Airport roadway as the primary purpose of the Airport roadways is for motor vehicle traffic.
- 2. No person shall park any motor vehicle, other equipment, or materials in the AOA of the Airport, except in a neat and orderly manner and at such points as prescribed by the Contract documents.
- 3. No person shall park any motor vehicle or other equipment or materials in the AOA of the Airport within fifteen (15) feet of any fire hydrant or standpipe.
- 4. Parking of construction workers' private vehicles shall also be within the storage area construction fence located outside the AOA or in a public or private parking facility outside the AOA. Under no circumstances will vehicles or equipment be parked within five (5) feet of the Airport Perimeter Security fence line.
- 5. Vehicles parked within the AOA shall be chocked or have the parking brake activated.

D. Impoundment of Motor Vehicles:

- 1. Any vehicle in violation of the provisions as referenced in Chapter 46.52 (Abandoned Vehicles) or Chapter 46.61 (Rules of the Road) of the Revised Code of Washington may be subject to impoundment pursuant to the provisions and procedures contained therein.
- 2. No vehicle shall be impounded except under the direction of an authorized police officer of the Port.

E. Vehicle Identification:

- 1. All vehicular equipment operating within the AOA must display signs of commercial design on both sides of the vehicle to identify the vehicle as belonging to the Contractor firm. The Contractor's name must appear in letters a minimum of two inches high. Magnetic signs are acceptable.
- 2. Vehicles that appear at access gates without signs on both sides of the vehicle will be denied access. Vehicles found to be missing signs within the

Air Operations Area will be escorted off the job site and not be permitted to re-enter until signs have been installed.

- F. Load Limits: Unless otherwise indicated, when using airport roadways, the Contractor shall restrict the gross combination weight to the legal limits allowed on public roads.

1.06 REQUIREMENTS AND REGULATIONS RELATING TO OPERATORS OF VEHICLES

- A. All drivers operating vehicles on airport property must carry a valid United States driver's license on his/her person, appropriately endorsed for the type of equipment being operated.
- B. All personnel (including drivers) working within the AOA must have a valid Port Identification/Access badge. See Section 01 14 13 - Airport Personnel Identification/Access Control for Procedures required for badge issuance.
- C. All personnel working within the AOA shall receive special drivers training and be approved by the Port before being allowed to operate within the AOA or be escorted by Port approved escort. Personnel operating outside the AOA may operate vehicles without attending the special drivers training course.
- D. Contractors, Subcontractors, Suppliers and Contractor occasional deliveries requiring access to the AOA in support of the Contract work that do not have valid Port identification shall be escorted by authorized Contractor personnel. The Port will not provide escorts for the Contractor's work.

1.07 REQUIREMENTS FOR ORIENTATION OF CONTRACTOR PERSONNEL AND PROJECT MEETINGS

- A. Air Operations Orientation:
 - 1. After Execution of the Contract, but prior to the start of the Work, arrange with the Engineer to have all supervisory and job office personnel assigned to this project attend an "Air Operations Orientation." This orientation will be conducted by the Port for discussion of the rules and regulations pertinent to this Contract. The orientation will be repeated at reasonable intervals during the construction period. Port attendees will include the Engineer and the Director, Airport Operations or the Director's authorized representative.
 - 2. The Air Operations Orientation may be conducted as part of the preconstruction meeting and shall not be considered an educational course in Air Operations Safety, but a discussion of existing rules or regulations related to airport activities. The Contractor shall be totally responsible and liable for the actions of his employees, agents, or representatives.
- B. Safety and Security Meetings: An airport safety and security meeting will be conducted after Execution of the Contract and prior to commencing construction. Additional construction safety meetings will be scheduled throughout the life of the Contract.

1.08 SECURITY REQUIREMENTS

- A. General Intent: It is intended that the Contractor shall comply with all requirements of the Airport Security Plan (ASP) and with the security requirements specified herein.

- B. Security Identification Display Area (SIDA) Training: Comply with the requirements of Section 01 14 13 - Airport Personnel Identification/Access Control.
- C. Identification/Access Badging: All Contractor personnel shall have Port-issued identification/access badges. See Section 01 14 13 - Airport Personnel Identification/Access Control for procedures required for issuance of Identification/Access badges.
- D. Perimeter Fence Security:
 - 1. Do not open gates or remove fencing without approval of the Engineer. Adequate precautions shall be taken to prevent entrance of unauthorized persons to Airport-restricted areas or inadvertent entry of dogs or large animals into the AOA.
 - 2. Prior to securing work each evening, ensure that all access gates which have been opened are closed and locked and that perimeter fencing is restored to a condition that will maintain present security standards.
 - 3. Five Foot Rule: No Contractor will be permitted to store materials, park equipment or erect permanent or semi-permanent structures within five (5) feet of either side of the AOA perimeter security fence.
 - 4. Use of Gates: Access to work within the AOA shall be limited to only the gates shown on the drawings. Use of the gates shown for continuous access (in excess of twice per work shift) will require the gate be manned by Port Operations or Security personnel, provided by the Port. Gates for Contractor access during hours of darkness shall be supplied with a light plant and generator whenever the gate is in use. Furnishing, fueling and maintaining the light plants shall be the responsibility of the Contractor. The Contractor shall schedule with the Engineer a minimum of 48 hours prior to requiring continuous access through a gate.
 - 5. Prior to removing or making holes in the Airport perimeter fencing, the Contractor shall obtain permission and written approval from the Engineer, and take adequate precautions to prevent entry of unauthorized personnel or animals.

1.09 SAFETY REQUIREMENTS

- A. In addition to the requirements specified in other sections, the following Safety Requirements shall also apply to the Contractor's activities:
 - 1. Traffic Control: The Contractor shall furnish all required traffic control to protect the public outside the AOA. The actions, equipment and position of flagmen, when required, shall be the sole responsibility of the Contractor. The Contractor shall provide flagmen and construction traffic control on public facilities in accordance local jurisdiction requirements and the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).
 - 2. In the event an employee of the Contractor violates a safety provision, they shall be prohibited from returning to work on the AOA without first attending another Airport Safety Orientation class and approval of the Director, Airport Operations. Subsequent violations will be deemed as just and sufficient cause to demand the employee be permanently removed from the job site. The Contractor shall be responsible for all costs and delays caused by safety violation.

3. Contractor's Designated Representative: The Contractor shall inform its supervisors and workmen of the airport activity and operations that are inherent to this airport, as well as the safety requirements and security regulations of the airport. The Contractor shall conduct its construction activities to conform to both routine and emergency requirements. During the course of construction, the Contractor shall designate a responsible representative who will be personally available on a 24-hour basis. The Contractor shall advise the Engineer of the representative's name and telephone number (the telephone shall not be connected to an answering machine). The Contractor shall comply with all current safety laws, ordinances and regulations as they may apply to this Contract.

1.10 INTERRUPTIONS AND STOPPAGES OF THE WORK DUE TO AIRCRAFT OPERATIONS AND HAZARDOUS CONDITIONS

A. Work Stoppages:

1. Work may be stopped by the Director, Airport Operations or the Director's designee, through the Engineer, any time the former considers that the intent of the regulations regarding safety or Security Requirements are being violated or that a hazardous condition exists. This decision to suspend the operation will be final and will only be rescinded when satisfied that the Contractor has taken action to correct the condition and prevent recurrence.
2. Frequent inspections will be made by the Director, Airport Operations or the Director's authorized representative during the critical phases of the work to insure that the Contractor is following the recommended safety procedures. The Inspector shall report any violations or potential safety hazards to the Engineer who will in turn advise the Contractor of the concern for immediate correction by the Contractor.
3. Work may also be stopped or suspended by Airport Operations through the Engineer during periods of extremely inclement weather, such as low visibility, snow or ice accumulation, or when it is necessary to provide an extra margin of safety to aircraft operations due to other unsuitable conditions, or reduce other activities in favor of conducting snow removal operations required to keep the airport operational.
4. Work may be stopped or suspended by Airport Operations through the Engineer during periods when a VIP (e.g. POTUSA) or critical event is occurring.

B. Intermittent Construction Operations:

1. Portions of the Work in this Contract will occur in the AOA. Heavy construction may require closing of certain areas by the Airport. However, some work may be done on an intermittent basis. The Contractor shall maintain constant communication with the Engineer when working on an AOA location, and immediately obey all instructions from the Engineer. Failure to obey instructions or maintain proper communication will be cause to suspend the Contractor's operations in such areas until satisfactory conditions are assured.

2. When directed to cease work and move from the area, the Contractor shall immediately respond and move all material, equipment and personnel outside areas. Operations shall not be resumed until directed from the Director, Airport Operations through the Engineer. Every reasonable effort will be made to cause minimum disturbance to the Contractor's operations; however, no guarantee can be made as to the extent to which disturbance can be avoided.
3. Limitation of Operations: The Contractor shall be responsible for controlling its operations and those of its subcontractors so as to provide for the free movement of aircraft in the apron areas of the AOA.

1.11 REQUIREMENTS AND REGULATIONS AFFECTING THE CONDUCT OF THE WORK

A. General:

1. Requirements to Begin Work: Before starting work, the Contractor shall provide and have available all flags, signs, barricades, lights and electrical generators as may be required for the protection of air traffic, vehicular traffic and the construction work. All personnel shall have the proper identification badges and have received the required training and instruction.
2. No hazardous materials will be stored within the terminal complex.
3. No burning is permitted on Airport property.
4. Smoking by personnel is prohibited on the AOA and inside the terminal.
5. Construction Activity and Aircraft Movements:
 - a. Prior to the start of the construction activities in the AOA affecting aircraft movement areas, the safety requirements relating thereto will be coordinated by the Port between the Director, Airport Operations, air carriers, fixed base operators, other users and appropriate representatives of the FAA. This coordination will be based on the Contractor's accepted construction schedule with the primary purpose of compliance with the Contract document requirements.
 - b. Construction activity and storage of equipment, relating to off-AOA projects are not exempt from all the regulations that govern the AOA. Materials can not be stored in violation of POS security fence set back clearances (5' rule). Activity and storage of equipment may also have an impact on the FAR Part 77 surfaces that are prescribed to protect the airspace associated with the airport.
 - c. Construction work will not be allowed within the safety area of an open runway or within the object free area of an open taxiway (160' from centerline) without prior permission of the Director, Airport Operations or authorized designee. (Refer to 1.11 Obstructions to Navigation.)
6. Limitation of Construction Activities:
 - a. During construction there shall not be lips greater than 1 inch for pavement traveled by aircraft and 3 inches for edges between old and new surfaces at edges and ends not traveled by aircraft.

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- b. Open-flame welding or torch-cutting operations are prohibited unless adequate fire and safety precautions are provided and have been accepted by the Fire Department through the Engineer.
 - c. Open trenches, excavations and stockpiled material at the construction site shall be prominently marked with barricades and lights as detailed on the drawings.
 - d. Stockpiled material shall be limited in height and constrained in a manner to prevent movement resulting from aircraft blast or wind conditions.
 - e. The Contractor will ensure that all lighting fixtures are shielded against interference with the vision of pilots and air traffic controllers.
 - f. During non-working hours, all trenches and excavations outside of the barricaded work areas shall be backfilled or covered unless otherwise indicated in the Contract documents.
 - g. Non-working hours shall be defined as when construction is not taking place within a work area.
- B. Construction Adjacent to Runways:
- 1. All equipment and material above the runway centerline grade and within a distance of 250 feet from the runway centerline must be removed when the runway is being used by aircraft unless specifically allowed by the phasing drawings.
 - 2. Within 250 feet of the runway centerline, all open trenches, lips greater than one inch, and drop-offs greater than three inches must be filled, covered, or sloped when the runway is open.
 - 3. Notification to the Director, Airport Operations or his representative, by way of the Engineer, is required prior to beginning any construction within the aircraft movement area. Notification of the proposed construction should be made a minimum of fourteen (14) days prior to beginning work.
- C. Construction Adjacent to Taxiways:
- 1. No equipment or material within 160 feet of a taxiway centerline shall be above the taxiway centerline grade while the taxiway is being used by aircraft unless specifically allowed in the phasing drawings.
 - 2. Open trenches or abrupt drop-offs may be made adjacent to taxiway pavement edges only as shown on drawings.
 - 3. Marking and lighting of work areas adjacent to taxiways shall be required and accepted by the Engineer.
- D. Barricades and Marking of Barricades:
- 1. Barricades shall be Multi-Barrier AR-10 X 96 HDPE, or OTW Safety AR10x96 O V.2, or Sherwin Industries, Inc. RRM-Safety Barricade Model #1008-25, or Neubert Aero Corp., 8ft Airport "low-profile" barricade or approved equal compliant with FAA Advisory Circular 150/5370-2F with 6" X 72" orange and white reflective striping on both sides.

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2. Each barricade shall be provided with two (2) screw-in C01 airfield grade 360-degree red flashing solar lights. Lights shall have an override switch to allow lights to be operative during all hours of low visibility. If required, supplement with generator-powered constant burn lights that meet the requirements of FAA Advisory Circular 150/5370-2F.
 3. Barricades shall be installed as shown on the drawings or relocated by the Contractor at the direction of the Engineer whenever the need arises throughout the duration of the Contract. Barricades shall be placed indicated on the drawings to separate active areas from areas under construction. Placement of the barricades shall be in accordance with the drawings and shall be accepted by the Engineer.
 4. Barricade lights shall be operative at all times. It shall be the Contractor's responsibility to immediately repair or replace any light or flasher that is not operating.
 5. Barricades shall be in place prior to commencing construction operations, and shall be maintained in good appearance for the life of the contract.
 6. Barricades shall be relocated as noted by the phasing plans or as directed by the Engineer.
 7. Barricades shall be filled to capacity with water where shown on the drawings or as directed by the Engineer.
 8. Install red delineator reflectors between barricades where indicated on the plan sheets.
- E. Reflector Markers:
1. Reflector markers shall be of an impact-resistance color impregnated special polymer extrusion that has been UV-stabilized with both ground and pavement mounts. Height shall be 18"; color shall be solid red or orange; or as specified in the specifications for color. Reflectors shall meet FAA AC 5345-39C.
 2. Install reflector markers as shown on the drawings.
- F. Closures: No ramp, apron, taxiway, or runway area shall be closed to aircraft without approval of the Director, Airport Operations through the Engineer. This will enable Notices to Airmen (NOTAMS), or other advisory communications to be issued. A minimum of 72 hours notice of requested closing shall be directed to the Engineer. The Engineer will arrange inspections prior to opening any area to air traffic. Any waste material, or debris must be removed from aprons promptly to avoid possible damage to aircraft.
- G. Debris
1. Debris Control: When Airport roadways and public highways are used in connection with construction under this Contract, the Contractor shall remove all debris cluttering the surfaces of such roadways. Trucks and equipment shall have all accumulated dirt, mud, rocks and debris removed before accessing the AOA and when leaving the work area. Loads shall be struck flush and secured to prohibit loss of material. If spillage occurs, such roadways shall be swept clean immediately after such spillage to allow for safe operation of vehicles as determined by the Engineer. If the Contractor

- is negligent in cleanup and Port forces are required to perform the Work, the expense of said cleanup shall be paid by the Contractor.
2. No loose material or waste (FOD), capable of causing damage to aircraft or capable of being ingested into jet engines may be left in the working area on or next to runways, taxiways, ramps, or aprons. The Contractor shall direct special attention to all areas that are operational to aircraft during construction. These shall be kept clean and clear of all materials or debris at all times.
 3. Food waste on a work site is a safety concern in that it attracts animals and birds that may impact the safe movement and operation of aircraft on the airfield. Food waste shall be promptly removed from construction sites.
- H. Existing Airport Pavements and Facilities: The Contractor shall preserve or protect existing and new pavements and other facilities from damage due to construction operations. Existing pavements, facilities, utilities, or that are damaged shall be replaced or reconstructed to original strength and appearance at the Contractor's expense. The Contractor shall take immediate action to replace any damaged facilities and equipment and reconstruct any damaged area that is to remain in service.
- I. Storage Areas:
1. The storage area(s) depicted on the plans shall be used to store all idle equipment, supplies and construction materials (other than bulk materials such as aggregate, sand and soil). Storage shall not interfere with operational areas.
 2. All material and equipment shall be stored at storage sites indicated on the Contract drawings.
 3. Do not store materials or equipment in areas in which the equipment or materials will affect the operation of FAA electronic apparatus.
 4. All equipment storage and movement shall have prior approval of the Director, Airport Operations, or the Director's authorized designee and the Engineer.
 5. The perimeter of any storage area that abuts an AOA pavement shall be protected by barricades no more than 10 feet apart marked with red flashing lights. Upon completion of all Work, remove all and barricades and lights from the project site.
 6. Contractor's vehicles, equipment and materials shall be stored in areas designated on the drawings. Upon completion of the Work, the storage area shall be cleaned up and returned to its original condition to the satisfaction of the Engineer.
 7. Equipment not in use during construction and during all non-construction hours shall be parked in the Contractor's storage area. All exceptions shall be approved in advance by the Director, Airport Operations by way of the Engineer. Parking of construction workers' private vehicles shall not be allowed within storage areas located on the AOA.
 8. Stockpile areas shall be used to store all bulk materials needed for the project and may or may not be fenced at the Contractor's option. However,

barricades, as specified herein, shall be installed where potential conflicts with aircraft or ground vehicular traffic exists. Stockpiles shall not penetrate the FAR Part 77 imaginary surfaces or present FOD problems.

9. Equipment and materials shall not be stored between runways. . An exception to this is for tracked construction vehicles/devices, and certain materials that are specified in Contract drawings. The height of the equipment and the location where it will be stored must be specified in the drawings.

1.12 OBSTRUCTIONS TO NAVIGATION

The Contractor shall limit the height of vehicles, equipment, stockpiled materials excavated earth, to the limits as specified on the drawings.

1.13 DAILY INSPECTIONS

- A. The Director, Airport Operations or the Director's representative will conduct a daily inspection of each construction site before workers leave for the day to ensure that areas surrounding the sites are safe for aircraft operations. Inspector(s) will be watchful for Foreign Object Debris (FOD) that can be ingested into aircraft engines, loose polyethylene and other light materials capable of being blown onto aircraft movement areas by wind, unlighted construction and obstruction lights, vehicles and equipment left outside construction areas, construction areas left unlocked, access gates left open, weak partitions or fences, etc. All discrepancies shall be corrected before workers depart from the work site.
 1. The Contractor or Port Inspector shall be responsible for contacting Airport Operations to schedule the daily inspections. Based on the current workload and location of the Airport Operations Specialist, the Contractor should anticipate approximately 30-minutes of waiting time.
- B. Inspectors will review potentially hazardous conditions, which may occur during airport construction, and maintenance including, but not limited to the following:
 1. Trenches, holes, or excavation on or adjacent to any open runway or related safety area.
 2. Unmarked/unlighted holes or excavations in any apron, open taxiway, open taxi lane, or related safety area.
 3. Mounds or piles of earth, construction materials, temporary structures, or other objects on or in the vicinity of any open runway, taxiway, taxi lane or in a related safety, approach or departure area.
 4. Pavement drop-offs or pavement turf lips (either permanent or temporary) which would cause, if crossed at normal operating speeds, damage to aircraft that normally use the airport.
 5. Vehicles or equipment (whether operating or idle) on any open runway, taxiway, taxi lane, or in any related safety, approach or departure area.
 6. Vehicles, equipment, excavations, stockpiles, or other materials which could impinge upon NAVAID critical areas and degrade or otherwise interfere with electronic signals from radios or electronic NAVAIDs or interfere with visual NAVAID facilities.

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 35 13.13 - Operational Safety On Airports During Construction

7. Unmarked utility, NAVAID, weather service, runway lighting, or other power or signal cables that could be damaged during construction.
 8. Objects (whether marked/flagged or not) or activities anywhere on or in the vicinity of airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
 9. Unflagged/unlighted low visibility items (such as tall cranes, drills, etc.) in the vicinity of an active runway, or in any approach or departure area.
 10. Misleading or malfunctioning obstruction lights.
 11. Unlighted/unmarked obstruction in an approach to any open runway.
 12. Inadequate approach/departure surfaces (needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas).
 13. Inadequate, confusing, or misleading marking/lighting of runways (including displaced or relocated thresholds), taxiways, or taxi lanes.
 14. Water, snow, dirt, debris, or other transient accumulation which temporarily obscures pavement marking, pavement edges, or derogates the visibility of runway/taxiway marking, lighting or of construction and maintenance areas.
 15. Inadequate or improper methods of marking, barricading, or lighting temporarily closed portions of airport operation areas.
 16. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, aprons or related safety areas.
 17. Inadequate fencing or other marking to separate construction or maintenance areas from open aircraft operating areas.
 18. Inadequate control of vehicle and human access to and non-essential, non-aeronautical activities on, open aircraft operating areas.
 19. Improper radio communication maintained between construction/maintenance vehicles and air traffic control tower or other on-field communications facility (e.g., FAA Flight Service Station (FSS) or unicom radio).
 20. Construction/maintenance activities or materials which could hamper Aircraft Rescue and Fire Fighting (ARFF) vehicle access from the ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
 21. Bird attractants such as edibles (food scraps, etc.) trees, brush, other trash, grass/crop seeding, or pond water on or near the airport.
 22. Personnel at the construction site without proper POS identification.
 23. No escorts for persons at the job site without proper identification.
 24. Vehicles involved in the project do not meet the safety requirements of POS Rules and Regulations.
 25. Improperly marked, lighted and flagged vehicles involved in the project.
- C. All work shifts, including the nightly work shifts are totally inclusive of the Contractor moving onto the site, performing work activities, performing all clean-up, having the work area and haul routes inspected and approved by the

inspector(s) and moving off the site. The Contractor shall provide adequate lighting for the needs of the inspection personnel.

- D. Any Aircraft Movement Surface or adjoining runway, taxiway or taxilane safety area that does not pass inspection must remain closed until such time cleanup is performed and approved. Damages will be assessed for any delays in the opening of the surface as defined in Document 00 80 00 - Supplementary Conditions.

1.14 EMERGENCY PROCEDURES

- A. The Contractor shall familiarize itself with airport emergency procedures and shall conduct his operation so as not to conflict with such events. Clear routes for Airport Rescue and Fire Fighting (ARFF) equipment shall be maintained in operational condition at all times.
- B. In case of an emergency caused by an accident, fire, or personal injury or illness, Port Police are to be immediately notified by calling 9-911 from airport phone (Port Police Dispatch), 911 from outside phones. Police will coordinate with other emergency agencies as necessary.

1.15 ADMINISTRATIVE REQUIREMENTS

- A. Applicability: The provisions of this section shall apply to the Contractor, subcontractors at all tiers, suppliers and all others which may have access to the Air Operations Area by way of the Contractor's activities.
- B. Exclusion From Claims: Impacts caused by failure of the Contractor, subcontractors at all tiers, and all others to comply, implement and maintain the provisions of this section shall not be cause for a claim of delay or increased cost to the Port.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices or Lump Sum price bid for the Project.

End of Section

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

PART 1 GENERAL

1.01 CONTRACTOR FULLY RESPONSIBLE FOR SAFETY

- A. The Contractor assumes full and sole responsibility for and shall comply with all laws, regulations, ordinances, and governmental orders pertaining to safety in the performance of this Contract. The Contractor shall conduct all operations under this Contract to offer the least possible obstruction and inconvenience to the Port, its tenants, the public and abutting property owners. The Contractor shall be responsible for employing adequate safety measures and taking all other actions reasonably necessary to protect the life, health, and safety of employees, the public, and to protect adjacent and Port-owned property in connection with the performance of the Work.
- B. The Contractor shall have the sole responsibility for the safety, efficiency, and adequacy of the Contractor’s plan, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the Project Site, including safety of all persons and property in performance of the Work. This requirement shall apply continuously, and is not limited to normal working hours. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve Contractor of this responsibility.

1.02 REFERENCES

- A. The Contractor shall comply with the provisions found in the Port of Seattle Construction Safety & Health Manual, the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions and amendments thereto; the provisions of the Department of Safety & Health (DOSH) Washington Industrial Safety Act of 1973 (WISHA); and the requirements of the following chapters of the Washington Administrative Code:
 - 1. Chapter 296-24 WAC General Safety and Health Standards.
 - 2. Chapter 296-62 WAC General Occupational Health Standards.
 - 3. Chapter 296-155 WAC Safety Standards for Construction Work.
 - 4. Chapter 296-800 WAC Safety & Health Core Rules

5. ANSI/ASSE Standards
- B. In addition, the Contractor shall comply with the following requirements when they are applicable:
1. Local Building and Construction Codes.
 2. POS Fire Department Standards
 3. Latest FAA Advisory Circular regarding Operational Safety On Airports During Construction.
 4. United States Coast Guard
 5. Seattle Fire Department Codes
 6. NFPA 70E
 7. National Electrical Code

NOTE: In cases of conflict between different safety regulations, the more stringent regulation shall apply.

Seaport Projects: Delete 1.02.B.2 & 1.02.B.3. Airport Projects: Delete 1.02.B.4 & 1.02.B.5

1.03 DEFINITIONS

A. Manager, Construction Safety Services

An employee of the Port or designated consultant who is responsible for the day-to-day management of the Port of Seattle's Construction Safety Program, and such agents, including the Field Safety Manager, as authorized to act in his/her behalf.

B. Field Safety Manager

An employee of the Port or designated consultant who conducts and monitors jobsite inspections and verifies Contractor compliance with identified corrective actions.

1.04 SUBMITTALS

A. The Contractor shall submit the following information as found in paragraph 1.05 A

- B. The Contractor shall submit a site specific Chemical Exposure Plan prepared by a Certified Industrial Hygienist for any products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica, and processes involving floor sealers, traffic coatings, terrazzo sealers, or specialty paints. The plan shall include employee exposure control methods, isolation methods to prevent spread of chemicals outside the work area and safeguarding of the public.

1.05 CONTRACTOR RESPONSIBILITIES

A. SITE SPECIFIC SAFETY PLAN

1. The Contractor shall submit, for the Port's review and comment, a Site-Specific Safety Plan in connection with the Work. The submittal shall be made in accordance with Section 01 32 19, Pre-Construction Submittals. An outline of the matters to be address in the Safety Plan is set forth in Appendix A to this Division. The Port's review of, or comment on, the Safety Plan shall not, in any way, relieve the Contractor of any

responsibility or liability for the Safety Plan. Delay in submitting a written safety plan will not constitute grounds for a contract schedule extension or delay claim.

2. The Port will not issue a Notice to Proceed (NTP), until the Safety Plan has been received and accepted by the Engineer and Manager of Construction Safety Services.

B. GENERAL OBLIGATIONS

The Contractor is responsible for accident prevention and job site safety. This responsibility cannot be delegated to Subcontractors, suppliers, the Port, or other persons. To this end, the Contractor shall:

1. Promote a safe and healthy work environment.
2. Provide an accident prevention program.
3. Promote training programs to improve the skill and competency of all employees in the field of occupational safety and health.
4. Instruct all employees of safe work methods and practices when assigning work.
5. Ensure that employees have and use the proper protective equipment and tools for the job.
6. Ensure that all heavy equipment operators (i.e. cranes, loaders and forklifts) are properly qualified and trained on the specific piece of equipment in use.
7. Plan and execute all work to comply with the stated objectives and safety requirements contained in the contract provisions, Federal, State, local laws and regulations, and industry standards.
8. Cooperate fully with the Port and its Consultants and insurers (if applicable) in connection with all matters pertaining to safety.
9. Maintain an orientation program for new employees, including subcontractor employees, that includes at a minimum, a review of:
 - a) Potential hazards in the work areas
 - b) Required personal protective equipment and apparel
 - c) The following prohibited conduct shall result in the immediate removal from the project: gambling, fighting or horseplay, possession of firearms, alcohol or illegal use, possession or sale of a controlled substance or being under their influence.
 - d) Emergency procedures
10. Perform documented daily inspections of the project in the Contractor Daily Report. Review and direct immediate action to correct any substandard safety conditions or practices, including those of any Subcontractor, regardless of classification.
11. Hold a minimum of one weekly scheduled safety meetings with its employees. Such meetings shall include a discussion of all observed unsafe work practices or conditions, a review of the accident experience

and all corrective actions. The Contractor shall encourage safety suggestions from employees.

12. Hold a minimum of one monthly all-hands safety meeting with its employees, and subcontractor employees - subcontractors at any tier. An agenda shall be prepared and distributed for this meeting. The meeting shall include a safety update, and pertinent safety information for upcoming work. The Contractor shall encourage input and involvement from the subcontractors.
13. Ensure prompt medical treatment is administered to any injured employee.
14. Undertake a complete investigation of all accidents and implement corrective action to prevent a recurrence.
15. Prepare and implement a site safety plan as set forth in Paragraph 1.05. A hereof.
16. Comply with the Administrative Procedures set forth in Paragraph 1.08 hereof.
17. Provide the Engineer and Manager of Construction Safety Services with copies of all DOSH citations immediately upon receipt.
18. Ensure that all of its subcontractors, suppliers, etc., are provided with a copy of this specification and are informed of their obligations regarding safety.
19. Ensure that all Contractor and subcontractor personnel at any tier have completed a one and one-half (1 ½) hour Port of Seattle safety orientation to be held by the Port of Seattle at a time and location to be specified by the Port, prior to commencing work. The time expended and any associated costs such as travel time, parking, and other expenses are to be borne by the Contractor.

C. CONTRACTOR SAFETY REPRESENTATIVE

1. It is recognized that the responsibility for safety lies with the Contractor. Each Contractor shall appoint an individual(s) responsible for safety on each contract. This individual(s) must be employed in a supervisory position, empowered by their employer to take corrective action; be present on the project while work is being performed; and spend the amount of time necessary to ensure the Contractor's compliance with safety requirements.
2. A safety inspection shall be performed and documented for each shift worked, by the Contractor's safety representative.
3. The Contractor shall submit a resume of the experience and qualifications for the proposed Safety Representative(s) as part of the Safety Plan submittal. Please refer to part D. Definitions, subparagraphs 1 and 2 below. The Port will review the resumes and a personal interview may be required. The Port may reject anyone it deems "Not Qualified."

Add the following paragraph 4 when applicable. To determine applicability, consult the Manager of Construction Safety Services and Construction Manager.

4. [The Prime contractor shall provide three (3) of their site management personnel and three (3) - four (4) of their major Subcontractors shall

provide one (1) site management person, to attend a two (2) day Safety Management training, presented by the Port. The Port shall make the final determination on the attendees.]

D. FOREMAN SAFETY RESPONSIBILITIES:

1. Foremen are key individuals in an effective safety program. Their proactive efforts toward accident prevention on their daily assignments help determine the degree of safety that exists on the job. A foreman's safety responsibilities include the following as a minimum:
 - a) Inspect his/her assigned job areas to ensure that unsafe acts or conditions are identified and corrected
 - b) Ensure that safety requirements are adhered to and enforced
 - c) Provide and require the use of proper personnel protective equipment and suitable tools for the job
 - d) Set a good example for his/her crew in the matter of safety
 - e) Ensure that orderliness and good housekeeping are maintained
 - f) See that his/her assigned crew is properly instructed in the safe work practices when assigned to job tasks
 - g) Investigate all accidents that occur in areas under their direction to determine facts necessary for corrective actions
 - h) Promptly assist in the completion of accident reports per contract requirements
 - i) Conduct weekly toolbox safety meetings with personnel to discuss unsafe work practices and conditions identified
 - j) Review accident investigations and corrective actions implemented
 - k) Encourage personnel to make suggestions regarding safety and to pass these on to supervision
 - l) Ensure that prompt first aid is administered

E. DEFINITIONS

1. Fulltime Safety Professional qualifications include:
 - a) Shall have no other duties.
 - b) An individual possessing a minimum of five years progressive experience managing safety programs on large construction projects comparable to this contract in scope and complexity.
 - c) Be knowledgeable concerning all federal, state, and Port of Seattle regulations applicable to construction safety.
 - d) Possess "Competent Person" certification in construction safety disciplines related to the work performed and possess verifiable training. This individual shall also be responsible for identifying "Competent Persons" required by State and Federal safety standards for which they are not certified.

- e) Have successfully completed the OSHA 500 Safety and Health Course. This requirement may be waived in lieu of a safety and health degree or professional safety certification.
 - f) Training and current certification for CPR and First Aid is preferred.
 - g) Be capable of performing accident investigations and developing a concise report.
 - h) Is proficient in the development and presentation of “tool box” meetings and safety training.
2. Site Safety Officer qualifications include:
- a) An individual assigned to perform safety functions on any contract not requiring a Fulltime Safety Professional. This can be a collateral duty position held by a supervisor. Safety duties shall take priority over other collateral duties.
 - b) Possess a minimum 5 years progressive experience in their trade.
 - c) Be knowledgeable concerning all federal, state, and Port of Seattle regulations applicable to safety.
 - d) Have successfully completed the OSHA 30-hour Safety & Health Course.
 - e) Possess “Competent Person” certification in construction safety disciplines related to the work performed and possess verifiable training. This individual shall also be responsible for identifying “Competent Persons” required by State and Federal safety standards for which they are not certified.
 - f) Be trained in, and possess current certification for CPR and First Aid.
 - g) Possess verifiable training and be capable of performing accident investigations and developing a concise report.
 - h) Possess verifiable training in the development and presentation of “tool box” meetings and safety training.

For Port Construction Services small works contracts, replace OSHA 30-hour with OSHA 10-hour in 2 d above.

F. DETERMINATION

- 1. When the number of personnel on any shift is under 40 (including Subcontractor employees), the Contractor’s safety representative will meet the definition of “Site Safety Officer” as defined above for each shift.
- 2. For Contractors with a total of 40 or more personnel (including Subcontractor employees) on any shift, a Fulltime Safety Professional as defined above shall be required for each shift.
- 3. For each additional 75 employees (including Subcontractors employees) on any shift, a second Fulltime Safety Professional shall be required.

4. At the Port's discretion the requirements for Contractor safety personnel can be reviewed and action taken to decrease or increase the number of individuals.
5. The Contractor Safety Officer/Professional (s) shall be primarily responsible for ensuring Contractor's compliance with the safety requirements provided in this Division. Without limiting the generality of the foregoing, the Contractor Safety Officer/Professional (s) shall:
 - a) Review all subcontractor and sub-tier contractor's Site Specific Safety Programs and Job Hazard Analysis (JHA) for compliance with applicable POS Construction Safety, State and Federal Standards and ensure that they receive a copy and are briefed on Document 01 35 29 Safety Management.
 - b) Perform a site-specific safety orientation for all employees, subcontractors and sub tier contractors prior to beginning work. This is in addition to the Port's safety orientation.
 - c) Perform daily safety inspections of the Contractor and Subcontractor's project to evaluate the project for unsafe conditions and/or practices, and take the appropriate corrective action when required.
 - d) Immediately report all injuries of personnel, vehicles, "Near Miss" incidents and property damage to POS Manager, Construction Safety Services and insure immediate corrective action is taken. Assist in the preparation of all accident investigations and ensure reports are submitted within 24-hours.
 - e) Ensure meaningful, weekly safety meetings are held for all on-site employees. Provide the job foremen with appropriate training materials to conduct weekly "tool box" safety meetings and attend safety meetings to evaluate their effectiveness. Maintain documentation of topics discussed and attendees, with copies submitted to the Engineer or included with Contractors Daily Construction Report.
 - f) Be responsible for the control, availability, and use of necessary safety equipment, including personal protective equipment and apparel for the employees.
 - g) Shall attend a monthly safety committee meeting scheduled by the Manager of Construction Safety Services to discuss and resolve relevant issues related to safety and health on Port of Seattle projects.
6. Contractor Safety Officer/Professional (s) not performing their duties in accordance with this document, shall be replaced at the Port's discretion by an individual meeting the requirements of this section. In addition, the Contractor Safety Officer/Professional (s) may not be removed from this contract or replaced without the Port's advanced written approval. The Contractor shall notify the Engineer and Manager of Construction Safety Services when this person cannot be on duty while work is being

performed and shall submit the name(s) and qualifications of the individual assigned to perform said duties.

G. ACCIDENT PREVENTION

1. The Contractor has the responsibility to correct hazardous conditions and practices. When more than one Contractor is working within a given job site, any project management personnel shall have the authority to take action to prevent physical harm or significant property damage. If it is determined there is "Imminent Danger" the Contractor shall:
 - a) Take immediate action to remove workers from the hazard and stabilize or stop work until corrective actions can be implemented to eliminate the hazard.
 - b) Immediately identify and implement corrective action to eliminate the hazard.
 - c) Immediately notify the Engineer, and Manager of Construction Safety Services or others as necessary. The Engineer will notify the proper authorities if the damage cannot be promptly corrected and could develop into an emergency.
 - d) Each worker shall immediately report any condition suspected to be unsafe or unhealthy to their job foreman or safety representative. If there is no resolution of the concern at that level, the employee shall report the concern to the Engineer and Manager of Construction Safety Services.

H. ON SITE FIRST AID

1. This section is designed to assure that all employees in this state are afforded quick and effective first-aid attention in the event of an on the job injury. To achieve this purpose the presence of personnel trained in first-aid procedures at or near those places where employees are working is required. Compliance with the provisions of this section may require the presence of more than one first-aid trained person.
 - a) Each employer must have available at all worksites, where a crew is present, a person or persons holding a valid first-aid certificate.
 - b) All crew leaders, supervisors or persons in direct charge of one or more employees must have a valid first-aid certificate.
 - c) For the purposes of this section, a crew means a group of two or more employees working at any worksite.

Additionally, the Contractor shall:

- d) Post emergency procedures which shall include telephone numbers and locations of facilities including, but not limited to, hospitals, physicians, police, fire and emergency medical services, in conspicuous locations at the job site and at all telephone locations.

- e) Provide in a readily accessible location, first-aid supplies of sufficient size and number to handle common first-aid incidents.
- f) Identify personnel qualified to render first aid with suitable emblems affixed to the rear of their hard hats for identification.
- g) Regularly discuss actions to be taken during emergencies with the Contractor's supervisory personnel and at "tool box" safety meetings.

1.06 PORT OF SEATTLE'S RIGHTS

A. INSPECTIONS/INVESTIGATIONS

1. The Port may, in any reasonable manner, observe and inspect the Contractor's safety and accident prevention procedures for all activities and personnel working at the construction sites, including the Contractor, subcontractors, visitors, and materials or equipment suppliers. This specifically includes, but is not limited to, the right to attend all safety meetings.
2. The Port shall receive written copies of accident or incident reports completed by the Contractor within 24-hours of occurrence, using the accident investigation reports found in the Port of Seattle Construction Safety & Health Manual or contractor equivalent. This reporting shall include but not be limited to those reports prepared pursuant to OSHA and/or DOSH regulations.
3. The Port may, in any reasonable manner, observe or participate in any accident investigation conducted by the Contractor or anyone performing work for, on behalf of or under the Contractor. The Port may also, at its sole discretion and in any reasonable manner, undertake its own accident investigation.

B. CORRECTIVE ACTIONS/STOP-WORK

1. The Port shall have the right to require the Contractor to address unsafe working conditions, including taking corrective action when unsafe working conditions are observed (i.e., lack of good housekeeping practices, use of equipment in obviously poor condition, failure to adhere to statutory construction regulations, etc.).
2. The Port shall have the right to require the removal from the work site of any person, property or equipment that, in the Port's opinion, is deemed unsafe.
3. The Port shall have the right to require the Contractor to immediately cease any action and/or stop the Work (or any portion thereof) in the event that any condition exists that, in the Port's opinion, constitutes an imminent danger or serious harm.
4. The Port shall have the right to suspend the Work (or any portion thereof) pending the completion of any accident/incident investigation, whether undertaken by Contractor, the Port or others.

C. PORT'S ACTION/INACTION DOES NOT RELIEVE CONTRACTOR

1. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve the Contractor of its responsibility to comply strictly with this Division and all standards referenced in Section 1.02 of this document.
- D. PORT'S ACTION/INACTION NO BASIS FOR ADJUSTMENT
1. The Port's exercise of any rights under this Paragraph 1.06 shall not be a basis for any adjustment in the Contract Price or Time.
- E. PORT OF SEATTLE INCLUDES CONSULTANTS
1. As used in Document 01 35 29 the terms "Port of Seattle" and "Port" specifically includes the Port's designated consultants.
- 1.07 PORT MANDATED SAFETY REQUIREMENTS
- A. Prior to Notice to Proceed (NTP), the Contractor's Project Manager and Safety Representative shall meet with the Engineer and Manager of Construction Safety Services to review and discuss the safety requirements of this contract.
- B. SPECIFIC SAFETY PROVISIONS
1. In addition to Federal, State, and Local regulations pertaining to operations and safety, the Contractor shall adhere to the following Port mandated safety requirements:
 - a) Asbestos and Contractor Personnel Asbestos Training: Ensure that all Certified Asbestos workers have current certifications, and ensure that all other site workers, including subcontractors, have received the initial and annual Asbestos Awareness training prior to the start of work.
 - b) Entry into Confined Spaces: Work on this project may require entry into confined spaces as defined by WAC 296-809. The Contractor shall read and follow the requirements of the Port of Seattle's Confined Space Entry Program, as found in the Port of Seattle Construction Safety and Health Manual. The Contractor's Confined Space Entry Program must meet or exceed these requirements.
 - 1) The Contractor shall provide the Engineer a copy of its Confined Space Entry Program as part of the Contractor's Safety Plan Submittal. As part of this submittal, the Contractor shall complete the "Confined Space Entry Program Certificate" (Appendix B).
 - 2) Should the Contractor employ subcontractors to work in confined spaces it shall be the Contractor's responsibility to submit the required documentation for each subcontractor.
 - 3) No work shall be allowed to start in a confined space until the required submittals have been made. In the event the Contractor does not comply with these regulations, ACCESS WILL BE DENIED and the Engineer notified. Delays caused by failure to submit the required documentation shall not be considered a reason for extension of contract time.

- c) Electrical - Safe Clearance Procedures
 - 1) Entry into High Voltage Areas: Work on this project may require entry into manholes, vaults, electrical rooms or other High Voltage areas.
 - 2) In the event entry is required, the Contractor is obligated to identify any High Voltage areas that may be involved in the project and immediately notify the Engineer if they have not been properly identified. Before entry into a High Voltage work area the Contractor shall notify the Engineer and contact STIA Electrical Shop at (206) 787-5311(Airport) or the Seaport Electrical Shop at (206) 787-3350.
- d) Fire Prevention: The Contractor shall ensure that fire prevention measures on-site are in accordance with OSHA, DOSH, NFPA and POS standards. Approved safety cans shall be used for flammable and combustible liquids. Signs and fire extinguishers shall be provided where required.
- e) Traffic Control: Ensure compliance with Section 01 55 26 Traffic Control.
- f) Hazardous Materials: Ensure compliance with Section 01 57 23 Pollution Prevention Planning and Execution.
- g) Open Flame Devices: Prohibit the use of unapproved fuel-burning types of lanterns, torches, flares or other open-flame devices on Port property.
- h) Hot Work Permit:
 - 1) Seaport: Open Flame Welding and spark producing equipment and tasks require the Contractor to implement a formal "Hot Work Permit" Program outlined in the Port of Seattle Construction Safety and Health Manual. Cutting and Welding tasks also require the Contractor to secure a "Hot Work Permit" from the Seattle Fire Department in accordance with Supplementary Conditions 00 80 00 Article SC-04.12 Permits, Licenses, Fees and Notices.
 - 2) Airport: Open Flame Welding and spark producing equipment and tasks require the Contractor to secure a "Hot Work Permit" from the Port Of Seattle Fire Department in accordance with Supplementary Conditions 00 80 00 Article SC-04.12 Permits, Licenses, Fees and Notices
- i) Liquid propane storage and use below grade is prohibited.
- j) Excavating & Trenching: Coordination with the Engineer shall be required for work performed on the site.
- k) Construction activities that pose a potential risk of exposure to contaminated soil (such as excavations) shall be supervised by personnel who have both a current 40-hour Hazardous Waste certification, and an 8-hour Hazardous Waste Supervisor's certification. These individuals shall be able to identify the potential

need for upgrading the level of health and safety protection. All personnel working in direct contact with contaminated soil shall have a current 40-hour Hazardous Waste certification and medical monitoring, as required in Hazardous Waste Operations, Chapter 296-843 WAC and in accordance with OSHA regulations. The plan shall also include emergency procedures and medical treatment, fire protection, Job Hazard Analysis (JHA), and PPE requirements.

- l) The Contractor is responsible for soil sampling and air monitoring to determine hazards and exposures to their employees.
- m) Safety plan shall include guidelines for the protection of construction-related workers against occupational musculoskeletal injury risk factors arising from operations connected with the construction, maintenance and repair, and demolition of structures, using a hierarchy of controls. Manual Material Handling, Body Positioning and Dynamic Stretching shall be addressed. Contractors will need to consult with their Safety Professionals to determine which tasks require an ergonomics prevention program and which selection of controls are needed to minimize injury.
- n) As defined in WAC 296-155 – Part L, individuals involved in operating hoisting equipment, including but not limited to cranes, boom trucks, and forklifts so configured, shall possess recognized certification. Additionally, qualified riggers and signal persons shall also possess recognized certifications. Copies of the certification(s) shall be submitted in accordance with Section 01 32 19 Pre-Construction Submittals.
- o) Personal Protective Equipment Policy: To reduce the possibility of injuries, the Contractor shall implement a policy that requires 100% use of hardhats, safety glasses, and gloves for all personnel under their control. It is the responsibility of the Contractor to supply the proper personal protective equipment for the task.
- p) Protection of the Public: The Contractor shall submit a plan for the protection of the public on or adjacent to construction and demolition operations. This plan shall include, but not be limited to, barricades, fencing, and signage. "Public" is defined as anyone not associated with the project - general public, POS and tenant employees.
- q) At the Port's request, provide safety awareness training for Contractor supervisory personnel and Port management in one or more of the following: cranes & rigging, electrical, fall protection, trenching & excavation, steel erection, heavy equipment, public protection.
- r) AOA Operations: Ensure compliance with Section 01 35 13.13 Operational Safety on Airports during construction.
- s) Foreign Objects Debris (FOD): Ensure compliance with Section 01 35 13.13 Operational Safety on Airports During Construction.

For Port Construction Services small works contracts, remove 1.07.B.1.r above. Seaport Projects; Delete 1.07.B.1.s

C. DISCIPLINARY ACTION MATRIX:

1. Defining “The Plan”
 - a) The object of this matrix is to consistently and effectively control safety hazards such as unsafe acts, and unsafe conditions that lead to injuries of employees, the general public, or that cause property damage.
 - b) The matrix also provides a basis for the Contractor’s program by standardizing how safety infractions committed by those employees will be handled.
 - c) All employees of the Contractor, subcontractor, sub tier contractor, vendor, or tenant are covered under this matrix regardless of classification.
 - d) Damage to equipment or property due to unsafe act or using damaged equipment.
 - e) Listed are the minimum requirements for discipline. The Contractor has the right to incorporate more stringent procedures from their corporate policy into this matrix. The Contractor shall not submit two Disciplinary Action Programs.
 - f) Individuals observed by the Contractor’s management shall be disciplined under this matrix.
 - g) Individuals observed by the Port of Seattle management shall also be subject to disciplinary action. POS management shall immediately contact the Contractor’s management or provide written information to the Contractor’s management as to violation, time, date, employer, and employee.
 - h) The Contractor’s Safety Manager shall perform the act of documenting and distributing the “Written Violation Notice.”
2. Defining “Violation”
 - a) Violations are defined as:
 - b) “General Violations” are considered to be those infractions that may not cause serious injury or illness to an individual but are still violations of written safety policies and procedures. Examples include housekeeping, unregulated ACM incidents, property damage, mushroomed tools, etc. “General Violations” do not necessarily require a written warning unless they become classified as “Repeat Violations.”
 - c) “Serious Violations” are those violations that if left uncorrected could cause serious injury or illness to an individual. Examples include employees exposed to fall or impalement hazards or serious bodily harm.

- d) “Imminent Danger” are violations/situations that will most likely cause permanent disability or death to an individual. Examples can include falls, electrical, or trenching hazards and unsafe equipment.
- e) “Repeat Violations” are situations that arise as a result of a previously identified infraction not being abated in the time frame required or numerous violations of the same classification. “Repeat Violations” can also be defined as a situation where one supervisor has multiple employees working under their direction who are in violation of a written Federal, State, project, or company policy.
- f) Violations are not limited to the examples listed above.

NOTE: An “employee” may be removed from the project at any time for a safety violation that endangers his life or the life of a fellow employee.

3. Defining “Employee”

- a) As mentioned earlier, all employees of the Contractor, subcontractor, vendor, or tenant are included in this program.
- b) Job title classifications can include but are not limited to trades person, foreman, supervisor, superintendent, etc.
- c) Any person (s) directly reprimanded for their own actions or inactions, regardless of their position, shall be reprimanded as a “Worker.”

4. Defining the “Procedure”

- a) Individuals observed committing infractions of written Federal, State, site, or company safety policies shall be brought to the attention of the Contractor’s management.
- b) The contractor shall in a timely manner, notify the identified employee(s) that they are in violation of written safety rules or procedures and shall abate the hazard.
- c) In the event of “Imminent Danger or” a “Serious Violation”, the Contractor or POS shall immediately notify and remove the employee(s) from the hazardous situation.
- d) The Contractor shall provide timely written warning to the identified individual(s), as well as the direct supervisor and superintendent of that individual(s). The supervisor’s names shall be recorded on the “Written Violation Notice.”
- e) To discourage “Repeat Violations” or supervisor apathy, the supervision is subject to disciplinary action as stated in the matrix.
- f) The Contractor shall utilize the “Written Violation Notice” provided in this section.

5. Defining the “Results”

- a) Personnel (including supervisors) receiving a Written Violation Notice shall be retrained in the appropriate standard or procedures.

- Said training shall be documented in writing and submitted to the Engineer.
- b) Written Violation Notices received will remain in force for the duration of the project.
 - c) Removal from the project of an “employee” for a minimum of 3 working days.
 - d) Removal of an “employee” from any Port of Seattle project for one year.
 - e) Written notice sent to the appropriate corporate president.
 - f) Copies of all “written violation notices” are to be submitted to the Engineer with a copy forwarded to the Manager of Construction Safety Services within 24-hours of issuance of notice.

DISCIPLINARY ACTION MATRIX

FOCUS POINT /INCIDENT	1ST VIOLATION	2ND VIOLATION	3RD VIOLATION	NOTES
Worker	Verbal & Written Notice	3 Days Off	Removed From POS Projects For One Year	
Worker’s Direct Foremen	Written Notice	Written Notice	3 Days Off	3 Worker Lay-offs = Removal From POS Projects For One Year
Worker’s Direct Superintendent	Written Notice	Written Notice	Written Notice to Sub/Prime Superintendent and President of Sub/Company	3 Worker Lay-offs = 3 Days Off For Superintendent
Prime Contractor’s Superintendent	Written Notice	Written Notice	Written Notice to President of Prime Company	3 Worker Lay-offs = 3 Days Off For Superintendent*

*Document 01 35 19 - Safety Management, this individual may also be removed from the project.

DISCIPLINARY ACTION MATRIX

WRITTEN VIOLATION NOTICE

PROJECT NAME: _____ PROJECT #: _____

CONTRACTOR: _____

EMPLOYEE BEING REPRIMANDED _____

DATE: _____ TIME: _____

VIOLATION:

TASK BEING PERFORMED:

CORRECTIVE ACTION/TRAINING REQUIRED:

WITNESS: _____

FOREMAN: _____

SUPERINTENDANT: _____

GC SUPERINTENDANT: _____

FIRST NOTICE: _____ SECOND NOTICE: _____ THIRD NOTICE: _____

EMPLOYEE LAY-OFF OR REMOVAL REQUIRED (YES/NO): _____

WRITTEN NOTICE TO COMPANY PRESIDENT REQUIRED (YES/NO): _____

ISSUED BY: _____ COMPANY: _____

D. SAFETY PERFORMANCE

If the Contractor experiences ongoing safety concerns such as a Lost Work Day Case or Recordable Incident Rate greater than the Bureau of Labor Statistics National Average for Construction, experiences repeated violations of safety & health rules and regulations or “Imminent Danger” situations, or fails to abate violations in a timely manner, the Contractor shall be subject to the following action at the Ports discretion:

1. Removal and replacement of management personnel.
2. Submit a written Safety Recovery plan to the Engineer and Manager of Construction Safety Services detailing what changes will be made to their safety program and a timeline as to when the changes will be implemented.
3. Hiring an independent safety consultant who shall audit the Contractor’s procedures and operations. The consultant shall compile a plan detailing what changes the Contractor shall implement. This report shall be submitted to the Engineer, Construction Manager, and Manager of Construction Safety Services.
4. Notwithstanding 01 35 29 paragraph 1.05 (B)(9)(c), Disciplinary Action Matrix, above in 1.07 (C)(2), shall be used for determining the appropriate corrective action.
5. Conduct a “Safety Stand Down” (suspend all work or any portion thereof) in accordance with the provisions of the General Conditions 00 70 00, Article G-10-04 Port’s Right to Stop the Work for Contractor Non-Performance. Suspended work shall not be allowed to resume until the Contractor has completed the following actions for review and acceptance by the Engineer:
 - a) Hazardous conditions leading up to the Safety Stand Down shall be abated.
 - b) Training of such type and duration shall be conducted to educate personnel on the awareness of, identification of, and correction of hazards leading up to the stand down.
 - c) Document the completion of items a. and b. above.

E. TOUR GUIDELINES

1. It is imperative that the highest degree of protection is afforded to all individuals touring any Port construction site. The following guidelines have been prepared as general instructions for the organization, direction and safe conduct of such tours:
 - a) Escorted Visitors: While on the job site, non-construction personnel or groups shall be accompanied at all times by an authorized representative, the Engineer, the Contractor or other designee familiar with the job site.
 - b) Notification and Tours: Personnel tours including technical inspections need to be cleared through the Engineer, allowing maximum advance notice. The Engineer shall be consulted to coordinate the tour plan, identify specific rules, and to ensure necessary safety precautions are taken.

- c) Safety Enforcement: Before entering a job site, all visitors must be informed regarding the need for careful, orderly conduct and notified of any special hazards that may be encountered.
- d) Personal Protective Equipment: All visitors and tour groups must comply with proper dress, footwear, personal protective equipment or other safety requirements deemed appropriate.

1.08 CONTRACTOR ADMINISTRATIVE PROCEDURES

A. PROJECT SAFETY INSPECTIONS

- 1. Unsafe conditions or acts having the potential to cause bodily injury or property damage are classified as either “Imminent Danger” or “Serious.” In either case, action shall be taken immediately to correct the situation. Any item(s) that cannot be corrected immediately are required to be abated within 24-hours of notification. In the interim, other steps shall be taken to insure the safety of employees or the public.
- 2. The Construction Safety Inspection Report (CSIR) will be used by the Port Construction Safety Management as the field report for recording the Safety Manager’s observations in Section One(see Appendix D).

The following instructions apply to the use of this form:

- a) Contractor’s Corrective Action (Section Two): The Contractor shall note the action taken to abate the observation. If an item is abated immediately, it will be so noted in Section One by the Port Safety Manager.
- b) Date Corrected: The Contractor, upon completion, shall enter the date in the appropriate column.
- c) Submittal Procedure:
 - 1) Projects utilizing CMS will use this system to transmit the CSIR Form between the Port and the Contractor until the observation is satisfactorily resolved.
 - i. Email will be used on projects not utilizing CMS
 - 2) When corrective action has been completed, the Contractor’s Project Manager or Designee will electronically sign and date the form and return it to the Engineer.
 - 3) The Engineer will review the form and follow-up to ensure the “Contractor’s Corrective Action” has been addressed, verifying each item corrected.
 - 4) The Engineer will discuss the noted observations at the Weekly Contractor Progress Meeting.
 - 5) The completed CSIR form shall be returned to the Manager of Construction Safety Services within five working days.

B. ACCIDENT INVESTIGATION AND REPORTING PROCEDURES

- 1. All accidents and incidents occurring from operations or work performed under the contract shall be reported, verified, investigated, and analyzed as prescribed by the Port of Seattle Construction Safety & Health Manual.

Contractors and other individuals involved in the work shall instruct employees and other personnel to follow these procedures if someone is injured.

- a) Seek medical assistance for anyone injured. The injured person's supervisor will see that first-aid is administered.
- b) When a serious accident or emergency occurs/exists, secure the incident area tightly and quickly except for rescue and emergency personnel.
- c) Send individuals as required, to assist or direct any emergency personnel arriving on the site.
- d) The accident scene shall not be disturbed until released by the Incident Command or Manager of Construction Safety Services, except for circumstances where "Imminent Danger" exists to those performing any emergency services.
- e) Immediately notify the Engineer and Manager of Construction Safety Services (or designee) regarding any accident or injury requiring more than First Aid treatment, any third-party incident, or any equipment or property damage estimate in excess of \$1,000. Notify the Manager of Construction Safety Services of all other incidents including near miss incidents as soon as possible following the event.
- f) Washington State Department of Labor and Industries must be notified immediately by the Contractor in the event of an accident involving the death or hospital admission of any employee.
- g) Employees must report all injuries or occupational-related illnesses as soon as possible to their employer or immediate supervisor.
- h) A detailed written report, identifying causes and recommending corrective action, must be submitted to the Engineer and Manager, Construction Safety Services within 24 hours. No supervisor may decline to accept a report of an injury from a subordinate.
- i) Within 48-hours of a Recordable or Lost Work Day Case Injury, incident involving 3rd party, or property damage incident, the Contractor shall meet with the Engineer and Manager of Construction Safety Services. The meeting shall discuss the status of the injured employee, the root cause of the incident, corrective action implemented, the Job Hazard Analysis, and retraining of the employee and supervisor.
- j) Report all accident exposures and near miss incidents that occur on the job site. These records are to be maintained and submitted to the Engineer or other designated authority upon request and shall include but not be limited to:
 - 1) First-aid injuries not reported on the OSHA No. 300 Form.
 - 2) The Contractor's OSHA 300 Form.

- k) The above information shall be provided only to authorized personnel including the Engineer and Manager of Construction Safety Services.
- l) All questions from the media regarding any incident occurring on site shall be referred to the Port's Public Affairs Manager via the Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Document

APPENDIX A

SAMPLE CONTRACTOR’S SAFETY PLAN

The Contractor is responsible for reviewing the requirements found and referenced in this Document, the Contract, the Port of Seattle Construction Safety & Health Manual as a minimum, and incorporating any additional specific or unique safety requirements into their written plan. The Contractor’s Safety Plan shall include but not be limited to the following guidelines:

A. GENERAL PROVISIONS

1. **Compliance:** Provisions for accident investigations and reporting, formal incident review, reporting, corrective action and disciplinary action procedures meeting the minimum Port of Seattle requirements.
2. **Job Hazard Analysis (JHA):** The Contractor shall complete detailed, written Job Hazard Analysis for the work to be performed, identifying hazards that may exist or be created, outline the equipment to be used, and what procedures and/or safety equipment will be used to eliminate or reduce those hazards. The Contractor shall use the form provided in the Port of Seattle’s Construction Safety & Health Manual or contractor equivalent. Supplemental Daily Pre-Task Plans are strongly encouraged.
3. **Medical Treatment:** Provide medical treatment in compliance with Federal, State and local requirements. Names of individuals CPR and First Aid trained.
4. **Site Specific Emergency Procedures:** As related to injuries, weather or emergencies at an active POS facility including pre-determined sites for assembly and measures for accounting of employees shall be included. Emergency numbers shall be posted at the given work area(s):

Fire or Ambulance from a non-Port hard-line phone	911
Fire or Police from a Port hard-line phone	9911
Fire or Police Emergency (Airport)	(206) 787-5380
Fire (Seaport)	911
Police (Seaport)	(206) 787-5380
5. **DOSH/OSHA Requirements and Personal Protection:** Safety and health provisions for providing adequate lighting, ventilation, hearing conservation, CO monitoring, and housekeeping. A written Personal Protective Equipment Assessment for head, face, eye, hand and torso protection shall be included.
6. **Personnel Instruction:** The Contractor must identify the greatest number of employees to be working at any one time during peak construction periods, the company policies for initial safety indoctrination of all employees, and company plans for continued safety education for all employees, including: weekly safety meetings, POS Safety Orientation,

- Ergonomics, Asbestos Awareness training, and English as a second language.
7. **Responsibilities:** Acknowledgment that the Contractor is totally responsible for compliance with OSHA, DOSH, Port or other applicable rules and orders. Additionally, the plan will require a place of employment that is free of unsanitary or hazardous conditions that would harm an employee's health or safety.
 8. **Safety Inspections:** Detailed information concerning how safety inspections will be conducted, their frequency, and their documentation.
 9. **Safety Personnel:** State the name of the Contractor's Safety Representative(s), their experience and qualifications (i.e. Training in the OSHA 500 (or equivalent), 30-hour or 10-hour) Indicate their authority to take the appropriate measures to eliminate hazards or stop work until hazardous conditions are corrected.
 10. **Safety Requirements, Electrical:** Testing, inspection and repair of electrical equipment, GFCI Program, lockout/tagout procedures, how existing circuits will be located and the installation of electrical circuits in accordance with the National Electric Code or Port Mandated Requirements.
 11. **Safety Requirements, Equipment:** Operation, documented daily inspection, and maintenance for trucks and heavy equipment such as backhoes, dozers, motor graders, elevated work platforms, powered industrial trucks, and all hand and power tools.
 12. **Safety Requirements, Ladders:** Types of ladders for specific uses and their training requirements.
 13. **Site Layout:** A layout drawing of the site indicating access roads, fire and ambulance lanes, location of first aid stations, location of required alarm systems, location of offices, parking for private vehicles and equipment, and storage of all flammable and/or combustible liquids, gases, or other hazardous materials.
 14. **Storage:** Requirements for storage of flammable and combustible liquids or gases.
 15. **Field Sanitation:** Provisions for toilet and hand washing facilities, including the frequency at which they will be cleaned and maintained.

B. SPECIAL PROVISIONS

Depending on the type of construction, additional items must be incorporated into the Contractor's Safety Plan.

1. **Confined Space Entry:** Procedures for confined space entry and work operations in and around confined spaces (including elevator shafts) as well as emergency measures. These procedures must meet or exceed the Port of Seattle requirements found in the Port of Seattle Construction Safety & Health Manual. Prior to daily entry, prime/general contractor shall be notified.

- a) **Airport:** . When entry is to be made into a Permit Required Confined Space the Port of Seattle Fire Department Emergency Dispatch shall be contacted prior to entry and at completion of shift.
2. **Respiratory Protection Plan**
 - a) Submit a letter signed by the Contractor stating that all employees or agents required to wear a negative pressure or supplied air respirator have been medically evaluated in accordance with WAC 296-842.
 - b) Submit National Institute for Occupational Safety and Health (NIOSH) certification for all respiratory protective devices utilized on site, including a list of approved components (parts) for each type of respirator that may potentially be used on the project.
 - c) Submit a letter signed by the Contractor stating that respirator fit testing is current for all Contractor employees and agents who wear negative pressure or supplied air respirators. This fit testing shall be in accordance with quantitative procedures as detailed in WAC 296-842 and 296-62-07715.
 - d) Respiratory protection requirements for work impacting the following regulated materials (**edit list below as necessary**):
 - 1) Asbestos (see Section 02 82 13)
 - 2) Lead (see Section 02 83 19)
 - 3) Light ballasts and universal waste lamps (see Section 02 84 16)
 - 4) PCBs and PCB-containing materials (see Section 02 84 33)
 - 5) PCB caulk (see Section 02 84 33.13)
 - 6) Fugitive and silica dust (see Section 02 87 00)
3. **Steel Erection:** These requirements shall meet or exceed the guidelines of Chapter 296-155 WAC Part P, and shall include: pre-planning, hoisting operations, fall protection procedures, overhead protection and Site-Specific Erection Plan.
4. **Cranes:** Use of cranes or derricks and the testing and inspection thereof, including hooks, latches, wire rope, operator certification, boom stops, load charts, wind speed, warning devices, fire extinguishers, crane operation signals, suspended work platform pre-lift planning, and critical lift plans.
5. **Excavations:** Excavation plans must indicate sloping, documented daily inspections, shoring, barricading, excavation access, *fall protection*, and excavated material storage.
6. **Fall Protection:** How 100% protection will be maintained, identify the use of personal fall arrest equipment, fall protection systems, and fall protection work plans for heights 4-feet. NOTE: The *Monitor System is prohibited*.
7. **Formwork:** Submittal of formwork and false work drawings for review and approval to the Engineer.
8. **Hazard Communication Program:** Including SDS, their location, Master List of Chemicals, Personal Protective Equipment, Training, Labeling, and

- SDS review and special procedures for sealers, coatings or specialty paints.
9. **Interruption of Fire/Security Systems:** Plans shall include measures and/or procedures to provide interim fire and security protection to facilities or areas affected by interruptions. These include automatic detection devices and alarms, automatic sprinkler systems, fire pumps, fire hydrants, applicable water supplies and reservoirs.
 10. **Lock-out/Tag-out:** Procedures for lock-out/tag-out of energy sources during work operations. The Contractor shall include as part of the Lock-out/Tag-out program protocol for *Clearance Orders and Switching Orders* on electrical and mechanical systems.
 11. **Scaffolding:** Red/Yellow/Green “Use” tag system, planking, guardrails, toe boards, anchor points, fall protection, access points, and inspections of.
 12. **Fire Protection:** Including Hot Work Permits, Welding, shields, fire extinguishers, ventilation, PPE, fire watch and cylinder storage.
 13. **Work Adjacent To Occupied Spaces:** Procedures for ensuring occupants of spaces adjoining, above and below construction areas will be protected from hazards created by construction, including but not limited to, falling debris, equipment noise, and penetration of partitions, ceilings, and floors.
 14. **Competent Persons:** Where regulatory requirements (DOSH) specify the use of Competent Persons, the Contractor shall submit in writing the names of those persons. Their area of competency and applicable experience/training documentation.
 15. **Energized Electrical Work Plan:** Submit detailed procedures for working on and guarding of energized equipment or conducting system outages.
 16. **Seaport Safety:** Contractors shall submit a safety plan complying with all Federal, State, Corp of Engineers, Port of Seattle, and Coast Guard rules applicable to this type of construction.
 17. **Health Considerations:** The Contractor shall submit a plan that addresses safety & health procedures for working in contact with contaminated soils. This plan shall be revised and resubmitted in the event that conditions encountered during the work are different than those initially planned for. It shall also include:
 - a) Identification and evaluation of the hazards and risks associated with each work task.
 - b) The names and qualifications of each contractor’s representative(s) in charge of the work and present at the project when pipeline removal is performed.
 - c) Identification of supervisory personnel and alternative responsibilities for site safety/response operations.
 - d) Determine levels of personnel protection to be worn for various site operations.

- e) List equipment with adequate nomenclature by item that will be used at the job site and the date and location where the Engineer can inspect this equipment.
 - f) Establishment of emergency procedures, such as: escape routes, fire protection, signals for withdrawing work parties from the site, emergency communications, wind indicators, including facility notification.
 - g) Identification and arrangements with the nearest medical facility for emergency medical care of both routine-type injuries and toxicological problems. Submit the name, location, and telephone number of this facility.
18. **Conveyor Safety Policy:** To include procedures for deactivation of conveyor systems, lockout/tagout of systems, working around operating conveyors and required Port of Seattle conveyor safety training.
19. **STS Tunnel Access Procedures:** What procedures employees will follow if work requires access into the STS system.
20. **Demolition:** The Contractor shall submit a plan to include how they will safely demolish existing structures, ensure security, safe guard employees and the public from falling material, electrical hazards and air quality issues. An Engineering Survey performed and signed by a Qualified Person shall be included.
21. **Public Protection Plan:** The actions the Contractor will take to protect the public while performing construction or demolition on the project. The plan shall include, but not be limited to, barricades, fencing, and signage. "Public" is defined as anyone not associated with the project - general public, POS and tenant employees.

For Port Construction Services small works contracts, include section C and the following 4-page worksheet. Airport Projects: Delete Appendix A item B.16. Seaport Projects: Delete Appendix A items B.18 & B.19.

C. SITE SPECIFIC SAFETY PLAN WORKSHEET

- 1. The following worksheet is to be used for Port Construction Services On Call Contracts for each work authorization. Once a safety submittal has been made and accepted for the On Call contract, Contractor will submit for each work authorization the following worksheet including support documentation referenced within the worksheet prior to beginning work.

	JOB HAZARD ANALYSIS WORKSHEET			Site Specific Plan Addendum	
				Person in Charge* for Reporting Hazards and Injuries:	
Location/address:				Phone Number:	
Title of Job/Operation:		Date:		* requires OSHA 10 & complete documented daily inspections	
Analysis Made By:		Work Order #:		Emergency action plan	Call Fire Dept 787-5380 on airport grounds. 911 everywhere else. For large scale emergency meet at:
Analysis Reviewed By:		Contact person:			_____
Location of Master Prevention Program:					_____
Sequence of Basic Job Steps	Potential Hazards/Ergonomics		Recommended Safe Job Procedures and Required PPE		
Supervisor Signature:			Received by RE/CM:		

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 35 29 - Safety Management

Will the Scope of Work consist of the following tasks? (check all that apply)		(a) List Chemicals to be used on the project. Material Safety Data Sheets attached <input type="checkbox"/> Yes <input type="checkbox"/> No *Physical MSDS must be on-site.
Traffic control*	Confined Space Entry*	
Welding, Cutting, Grinding*	Heavy Equipment	
Trenching or Excavation*	Flammable or Combustible materials ^(a)	
Carpentry	Steel Erection*	
Painting, Staining, Sealant ^{*(a)}	Ladder or Scaffold work	
Demolition (Structural)*	Roofing	
Energized Electrical*	Regulated Materials	
Use of a Crane/Boom/Hoisting device*	Hazardous Materials	
Work from heights of 6' or greater*	Conveyors*	
* Requires additional paperwork – checklists, plans, permits, shut-down notice, etc.		(*) A Chemical Exposure Plan will be required for products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica and processes involving floor sealers, traffic coatings, terrazzo sealers or specialty paints.

Description of public protection measures ("Public" is defined as anyone not associated with the project - general public, POS, Tenant, and Airline Employees):

Employee Disciplinary for non-compliance with set forth safety policies and procedures will be consistent Port of Seattle's disciplinary action matrix as described within your site-specific safety plan and site-specific orientation.

Sign Up			
Print Name	Signature	Print Name	Signature

APPENDIX B

CONTRACTOR CONFINED SPACE ENTRY PROGRAM CERTIFICATE

I hereby certify that the attached Confined Space Entry Program meets or exceeds the requirements of DOSH standards WAC 296-809 and the Port Of Seattle's Confined Space Entry Program.

My employees will utilize the Port of Seattle (POS) confined space entry permit(s). They will complete all other sections of the permit that are appropriate for the confined space being entered.

My employees will be informed that they must coordinate their confined space entry procedures with other Contractors and POS employees working in or around the confined space. On Airport projects, if entering into a Permit Required Confined Space, we will first contact the Port of Seattle Fire Department, notifying them of the specific location and activity to be performed.

My employees, who will be acting as authorized entrants, attendants, entry supervisors, and air testers, have been trained in accordance with the DOSH procedures and will be made aware of all of the POS procedures for entering confined spaces.

After the confined space entry project is complete my employees will make the Engineer and Construction Safety aware of any new hazards confronted or created during entry operations. On Airport projects, my employees will contact the Port of Seattle Fire Department and advise them that operations have ceased.

A copy of finalized permit with all attachments will be provided to the Engineer at the end of each project.

Contractor's Name: _____

Contractor's Signature: _____

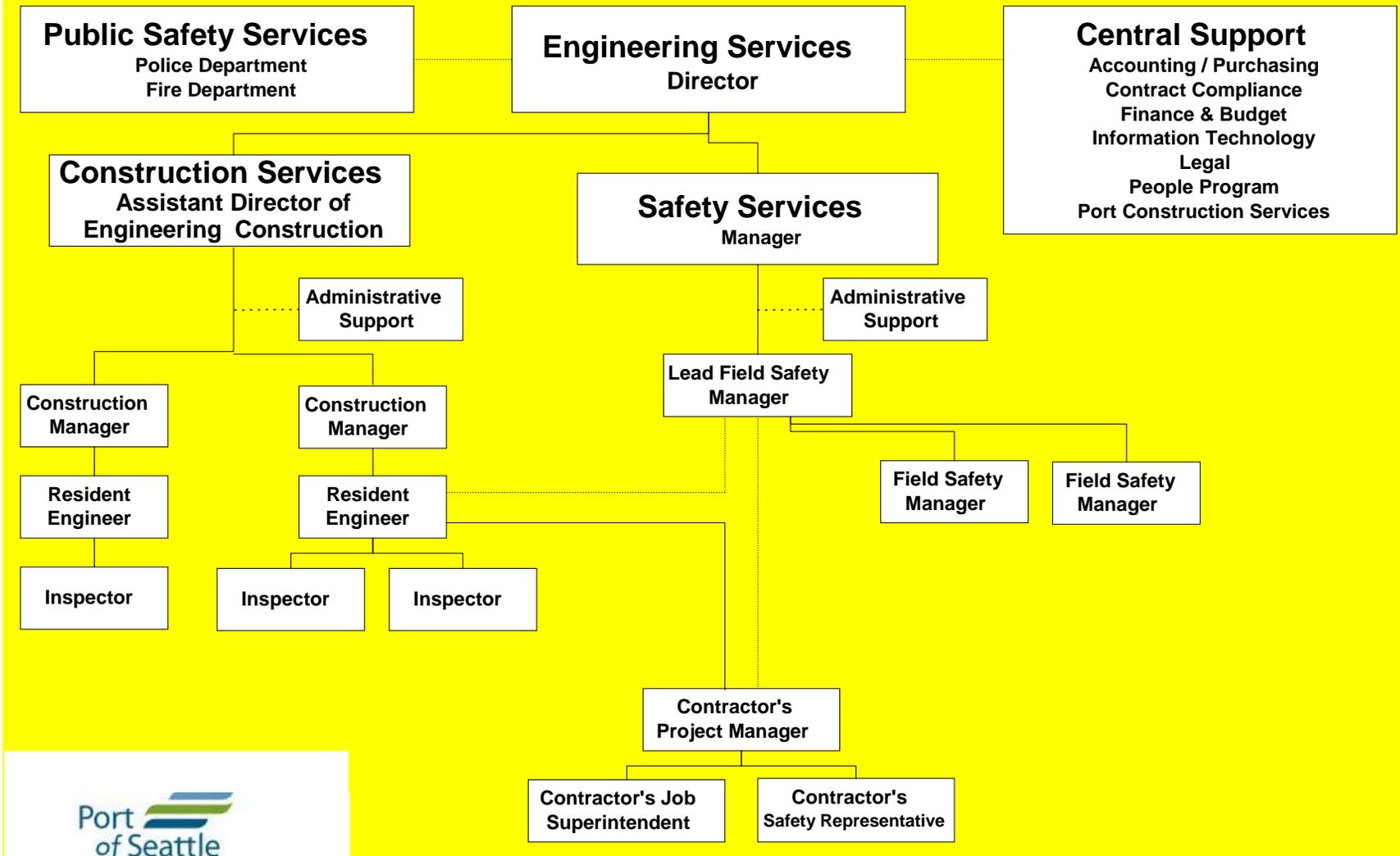
Company Name: _____ Date: _____

Port of Seattle Resident Engineer: _____

Date: _____

Appendix C

Construction Safety Program Organization Chart



APPENDIX D



Construction Safety Inspection Report

General	
CSIR Number:	
Date of Observation(s):	
Contractor Name:	
Accompanied By:	
CSIR Prepared By:	
Contractor Representative:	
Observation	
Item No:	
Prime/Subcontractor:	
Category:	
Safety Observation:	
Reference:	
Attachments	

Contractors Corrective Action Taken:	
Date Item Corrected:	
Inspector Comments:	
Inspector Date:	
Safety Comments:	
Safety Date:	

PART 1 GENERAL

1.01 CONTRACTOR FULLY RESPONSIBLE FOR SAFETY

- A. The Contractor assumes full and sole responsibility for and shall comply with all laws, regulations, ordinances, and governmental orders pertaining to safety in the performance of this Work. The Contractor shall conduct all operations for this project to offer the least possible obstruction and inconvenience to the Port, its tenants, the public and abutting property owners. The Contractor shall be responsible for employing adequate safety measures and taking all other actions reasonably necessary to protect the life, health, and safety of employees, the public, and to protect adjacent and Port-owned property in connection with the performance of the Work.
- B. The Contractor shall have the sole responsibility for the safety, efficiency, and adequacy of the Contractor's plan, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the Project Site, including safety of all persons and property in performance of the Work. This requirement shall apply continuously, and is not limited to normal working hours. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve Contractor of this responsibility.

1.02 REFERENCES

- A. The Contractor shall comply with the provisions found in the Port of Seattle Construction Safety & Health Manual, the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions and amendments thereto; the provisions of the Department of Safety & Health (DOSH) Washington Industrial Safety Act of 1973 (WISHA); and the requirements of the following chapters of the Washington Administrative Code:
 - 1. Chapter 296-24 WAC General Safety and Health Standards.
 - 2. Chapter 296-62 WAC Occupational Health Standards.
 - 3. Chapter 296-155 WAC Safety Standards for Construction Work.
 - 4. Chapter 296-800 WAC Core Safety & Health Standards
 - 5. ANSI/ASSE Standards
- B. In addition, the Contractor shall comply with the following requirements when they are applicable:
 - 1. Local Building and Construction Codes.
 - 2. POS Fire Department Standards
 - 3. Latest FAA Advisory Circular regarding Operational Safety On Airports During Construction.
 - 4. United States Coast Guard
 - 5. Seattle Fire Department Codes
 - 6. NFPA 70E
 - 7. National Electrical Code

NOTE: In cases of conflict between different safety regulations, the more stringent regulation shall apply.

1.03 DEFINITIONS

A. Manager, Construction Safety Services

An employee of the Port or designated consultant who is responsible for the day-to-day management of the Port of Seattle's Construction Safety Program, and such agents, including the Field Safety Manager, as authorized to act in his/her behalf.

B. Field Safety Manager

An employee of the Port or designated consultant who conducts and monitors jobsite inspections and verifies Contractor compliance with identified corrective actions.

C. Contractor

Normally the General Contractor hired by the Tenant. However, in the case where a Tenant directly hires more than one Contractor to be on site at one time, the responsibility of the Contractor shall apply to the Tenant as well as the contractors on site.

1.04 SUBMITTALS

A. The Contractor shall submit the following information as found in paragraph 1.05 A

B. The Contractor shall submit a site specific Chemical Exposure Plan prepared by a Certified Industrial Hygienist for any products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica, and processes involving floor sealers, traffic coatings, terrazzo sealers, or specialty paints. The plan shall include employee exposure control methods, isolation methods to prevent spread of chemicals outside the work area and safeguarding of the public.

1.05 CONTRACTOR RESPONSIBILITIES

A. SITE SPECIFIC SAFETY PLAN

1. The Contractor shall submit, for the Port's review and comment, a Site-Specific Safety Plan in connection with the Work. The submittal shall be made in accordance with Section 01 32 19, Pre-Construction Submittals. An outline of the matters to be address in the Safety Plan is set forth in Appendix A to this Division. The Port's review of, or comment on, the Safety Plan shall not, in any way, relieve the Contractor of any responsibility or liability for the Safety Plan. Delay in submitting a written safety plan will not constitute grounds for a contract schedule extension or delay claim.
2. The Port will not issue a Notice to Proceed (NTP), until the Safety Plan has been received and accepted by the TCI and Manager of Construction Safety Services.

B. GENERAL OBLIGATIONS

The Contractor is responsible for accident prevention and job site safety. This responsibility cannot be delegated to Subcontractors, suppliers, the Port, or other persons. To this end, the Contractor shall:

1. Promote a safe and healthy work environment.
2. Provide an accident prevention program.
3. Promote training programs to improve the skill and competency of all employees in the field of occupational safety and health.
4. Instruct all employees of safe work methods and practices when assigning work.
5. Ensure that employees have and use the proper protective equipment and tools for the job.
6. Ensure that all heavy equipment operators (i.e. cranes, loaders, and forklifts) are properly qualified and trained on the specific piece of equipment in use.
7. Plan and execute all work to comply with the stated objectives and safety requirements contained in the contract provisions, Federal, State, local laws and regulations, and industry standards.
8. Cooperate fully with the Port and its Consultants and insurers (if applicable) in connection with all matters pertaining to safety.
9. Maintain an orientation program for new employees, including subcontractor employees, that includes at a minimum, a review of:
 - a) Potential hazards in the work areas
 - b) Required personal protective equipment and apparel
 - c) The following prohibited conduct shall result in the immediate removal from the project: gambling, fighting or horseplay, possession of firearms, alcohol or illegal use, possession or sale of a controlled substance or being under their influence.
 - d) Emergency procedures
10. Perform documented daily inspections of the project in the Contractor Daily Report. Review and direct immediate action to correct any substandard safety conditions or practices, including those of any Subcontractor, regardless of classification.
11. Hold a minimum of one weekly scheduled safety meetings with its employees. Such meetings shall include a discussion of all observed unsafe work practices or conditions, a review of the accident experience and all corrective actions. The Contractor shall encourage safety suggestions from employees.
12. Hold a minimum of one monthly all-hands safety meeting with its employees, and subcontractor employees - subcontractors at any tier. An agenda shall be prepared and distributed for this meeting. The meeting shall include a safety update, and pertinent safety information for upcoming work. The Contractor shall encourage input and involvement from the subcontractors.

13. Ensure prompt medical treatment is administered to any injured employee.
14. Undertake a complete investigation of all accidents and implement corrective action to prevent a recurrence.
15. Prepare and implement a site safety plan as set forth in Paragraph 1.05. A hereof.
16. Comply with the Administrative Procedures set forth in Paragraph 1.08 hereof.
17. Provide the TCI and Manager of Construction Safety Services with copies of all DOSH citations immediately upon receipt.
18. Ensure that all of its subcontractors, suppliers, etc., are provided with a copy of this specification and are informed of their obligations regarding safety.
19. Ensure that all Contractor and subcontractor personnel at any tier have completed a one and one-half (1 ½) hour Port of Seattle safety orientation to be held by the Port of Seattle at a time and location to be specified by the Port, prior to commencing work. The time expended and any associated costs such as travel time, parking, and other expenses are to be born by the Contractor.

C. CONTRACTOR SAFETY REPRESENTATIVE

1. It is recognized that the responsibility for safety lies with the Contractor. Each Contractor shall appoint an individual (s) responsible for safety on each contract. This individual (s) must be employed in a supervisory position, empowered by their employer to take corrective action; be present on the project while work is being performed; and spend the amount of time necessary to ensure the Contractor's compliance with safety requirements.
2. A safety inspection shall be performed and documented for each shift worked, by the Contractor's safety representative.
3. The Contractor shall submit a resume of the experience and qualifications for the proposed Safety Representative(s) as part of the Safety Plan submittal. Please refer to part D. Definitions, subparagraphs 1 and 2 below. The Port will review the resumes and a personal interview may be required. The Port may reject anyone it deems "Not Qualified." It is the responsibility of the Tenant to enforce the determination.
4. [The Prime contractor shall provide three (3) of their site management personnel and three (3) - four (4) of their major Subcontractors shall provide one (1) site management person, to attend a two (2) day Safety Management training, presented by the Port. The Port shall make the final determination on the attendees.]

D. FOREMAN SAFETY RESPONSIBILITIES:

1. Foremen are key individuals in an effective safety program. Their proactive efforts toward accident prevention on their daily assignments help determine the degree of safety that exists on the job. A foreman's safety responsibilities include the following as a minimum:

- a) Inspect his/her assigned job areas to ensure that unsafe acts or conditions are identified and corrected
- b) Ensure that safety requirements are adhered to and enforced
- c) Provide and require the use of proper personnel protective equipment and suitable tools for the job
- d) Set a good example for his/her crew in the matter of safety
- e) Ensure that orderliness and good housekeeping are maintained
- f) See that his/her assigned crew is properly instructed in the safe work practices when assigned to job tasks
- g) Investigate all accidents that occur in areas under their direction to determine facts necessary for corrective actions
- h) Promptly assist in the completion of accident reports per contract requirements
- i) Conduct weekly toolbox safety meetings with personnel to discuss unsafe work practices and conditions identified
- j) Review accident investigations and corrective actions implemented
- k) Encourage personnel to make suggestions regarding safety and to pass these on to supervision
- l) Ensure that prompt first aid is administered

E. DEFINITIONS

- 1. Fulltime Safety Professional qualifications include:
 - a) Shall have no other duties.
 - b) An individual possessing a minimum of five years progressive experience managing safety programs on large construction projects comparable to this contract in scope and complexity.
 - c) Be knowledgeable concerning all federal, state, and Port of Seattle regulations applicable to construction safety.
 - d) Possess “Competent Person” certification in construction safety disciplines related to the work performed and possess verifiable training. This individual shall also be responsible for identifying “Competent Persons” required by State and Federal safety standards for which they are not certified.
 - e) Have successfully completed the OSHA 500 Safety and Health Course. This requirement may be waived in lieu of a safety and health degree or professional safety certification.
 - f) Training and current certification for CPR and First Aid is preferred.
 - g) Be capable of performing accident investigations and developing a concise report.

- h) Is proficient in the development and presentation of “tool box” meetings and safety training.
2. Site Safety Officer qualifications include:
- a) An individual assigned to perform safety functions on any contract not requiring a Fulltime Safety Professional. This can be a collateral duty position held by a supervisor. Safety duties shall take priority over other collateral duties.
 - b) Possess a minimum 5 years progressive experience in their trade.
 - c) Be knowledgeable concerning all federal, state, and Port of Seattle regulations applicable to safety.
 - d) Have successfully completed the OSHA 10-hour Safety & Health Course.
 - e) Possess “Competent Person” certification in construction safety disciplines related to the work performed and possess verifiable training. This individual shall also be responsible for identifying “Competent Persons” required by State and Federal safety standards for which they are not certified.
 - f) Be trained in, and possess current certification for CPR and First Aid.
 - g) Possess verifiable training and be capable of performing accident investigations and developing a concise report.
 - h) Possess verifiable training in the development and presentation of “tool box” meetings and safety training.

F. DETERMINATION

- 1. When the number of personnel on any shift is under 40 (including Subcontractor employees), the Contractor’s safety representative will meet the definition of “Site Safety Officer” as defined above for each shift.
- 2. For Contractors with a total of 40 or more personnel (including Subcontractor employees) on any shift, a Fulltime Safety Professional as defined above shall be required for each shift.
- 3. For each additional 75 employees (including Subcontractors employees) on any shift, a second Fulltime Safety Professional shall be required.
- 4. At the Port’s discretion the requirements for Contractor safety personnel can be reviewed and action taken to decrease or increase the number of individuals.
- 5. The Contractor Safety Officer/Professional (s) shall be primarily responsible for ensuring Contractor’s compliance with the safety requirements provided in this Document. Without limiting the generality of the foregoing, the Contractor Safety Officer/Professional (s) shall:
 - a) Review all subcontractor and sub-tier contractor’s Site Specific Safety Programs and Job Hazard Analysis (JHA) for compliance with applicable POS Construction Safety, State, and Federal

Standards and ensure that they receive a copy and are briefed on Document 01860 - Safety Management.

- b) Perform a site-specific safety orientation for all employees, subcontractors and sub tier contractors prior to beginning work. This is in addition to the Port's safety orientation.
 - c) Perform daily safety inspections of the Contractor and Subcontractor's project to evaluate the project for unsafe conditions and/or practices, and take the appropriate corrective action when required.
 - d) Immediately report all injuries of personnel, vehicles, "Near Miss" incidents, and property damage and insure immediate corrective action is taken. Assist in the preparation of all accident investigations and ensure reports are submitted within 24-hours.
 - e) Ensure meaningful, weekly safety meetings are held for all on-site employees. Provide the job foremen with appropriate training materials to conduct weekly "tool box" safety meetings and attend safety meetings to evaluate their effectiveness. Maintain documentation of topics discussed and attendees, with copies submitted to the TCI or included with Contractors Daily Construction Report.
 - f) Be responsible for the control, availability, and use of necessary safety equipment, including personal protective equipment and apparel for the employees.
 - g) Shall attend a monthly safety committee meeting scheduled by the Manager of Construction Safety Services to discuss and resolve relevant issues related to safety and health on Port of Seattle projects.
6. Contractor Safety Officer/Professional (s) not performing their duties in accordance with this document, shall be replaced at the Port's discretion by an individual meeting the requirements of this section. In addition, the Contractor Safety Officer/Professional (s) may not be removed from this contract or replaced without the Port's advanced written approval. The Contractor shall notify the TCI and Manager of Construction Safety Services when this person cannot be on duty while work is being performed and shall submit the name(s) and qualifications of the individual assigned to perform said duties. It is the responsibility of the Tenant to enforce this requirement.

G. ACCIDENT PREVENTION

- 1. The Contractor has the responsibility to correct hazardous conditions and practices. When more than one Contractor is working within a given job site, any project management personnel shall have the authority to take action to prevent physical harm or significant property damage. If it is determined there is "Imminent Danger" the Contractor shall:
 - a) Take immediate action to remove workers from the hazard and stabilize or stop work until corrective actions can be implemented to eliminate the hazard.

- b) Immediately identify and implement corrective action to eliminate the hazard.
- c) Immediately notify the TCI, and Manager of Construction Safety Services or others as necessary. The TCI will notify the proper authorities if the damage cannot be promptly corrected and could develop into an emergency.
- d) Each worker shall immediately report any condition suspected to be unsafe or unhealthy to his or her job foreman or safety representative. If there is no resolution of the concern at that level, the employee shall report the concern to the TCI and Manager of Construction Safety Services.

H. ON SITE FIRST AID

- 1. This section is designed to assure that all employees in this state are afforded quick and effective first-aid attention in the event of an on the job injury. To achieve this purpose the presence of personnel trained in first-aid procedures at or near those places where employees are working is required. Compliance with the provisions of this section may require the presence of more than one first-aid trained person.
 - a) Each employer must have available at all worksites, where a crew is present, a person or persons holding a valid first-aid certificate.
 - b) All crew leaders, supervisors or persons in direct charge of one or more employees must have a valid first-aid certificate.
 - c) For the purposes of this section, a crew means a group of two or more employees working at any worksite.

Additionally, the Contractor shall:

- d) Post emergency procedures which shall include telephone numbers and locations of facilities including, but not limited to, hospitals, physicians, police, fire and emergency medical services, in conspicuous locations at the job site and at all telephone locations.
- e) Provide in a readily accessible location, first-aid supplies of sufficient size and number to handle common first-aid incidents.
- f) Identify personnel qualified to render first aid with suitable emblems affixed to the rear of their hard hats for identification.
- g) Regularly discuss actions to be taken during emergencies with the Contractor's supervisory personnel and at "tool box" safety meetings.

1.06 PORT OF SEATTLE'S RIGHTS

A. INSPECTIONS/INVESTIGATIONS

1. The Port may, in any reasonable manner, observe and inspect the Contractor's safety and accident prevention procedures for all activities and personnel working at the construction sites, including the Contractor, subcontractors, visitors, and materials or equipment suppliers. This specifically includes, but is not limited to, the right to attend all safety meetings.
2. The Port shall receive written copies of accident or incident reports completed by the Contractor within 24-hours of occurrence, using the accident investigation reports found in the Port of Seattle Construction Safety & Health Manual. This reporting shall include but not be limited to those reports prepared pursuant to OSHA and/or DOSH regulations.
3. The Port may, in any reasonable manner, observe or participate in any accident investigation conducted by the Contractor or anyone performing work for, on behalf of, or under the Contractor. The Port may also, at its sole discretion and in any reasonable manner, undertake its own accident investigation.

B. CORRECTIVE ACTIONS/STOP-WORK

1. The Port shall have the right to require the Contractor to address unsafe working conditions, including taking corrective action when unsafe working conditions are observed (i.e., lack of good housekeeping practices, use of equipment in obviously poor condition, failure to adhere to statutory construction regulations, etc.).
2. The Port shall have the right to require the removal from the work site of any person, property, or equipment that, in the Port's opinion, is deemed unsafe.
3. The Port shall have the right to require the Contractor to immediately cease any action and/or stop the Work (or any portion thereof) in the event that any condition exists that, in the Port's opinion, constitutes an imminent danger or serious harm.
4. The Port shall have the right to suspend the Work (or any portion thereof) pending the completion of any accident/incident investigation, whether undertaken by Contractor, the Port or others.

C. PORT'S ACTION/INACTION DOES NOT RELIEVE CONTRACTOR

1. Nothing the Port may do, or fail to do, with respect to safety in the performance of the Work shall relieve the Contractor of its responsibility to comply strictly with this Division and all standards referenced in Section 1.02 of this document.

D. PORT'S ACTION/INACTION NO BASIS FOR ADJUSTMENT

1. The Port's exercise of any rights under this Paragraph 1.06 shall not be a basis for any adjustment in the Contract Price or Time.

E. PORT OF SEATTLE INCLUDES CONSULTANTS

1. As used in these requirements, the terms "Port of Seattle" and "Port" specifically includes the Port's designated consultants.

1.07 PORT MANDATED SAFETY REQUIREMENTS

- A. Prior to mobilization, the Contractor's Project Manager and Safety Representative shall meet with the TCI and Manager of Construction Safety Services to review and discuss the safety requirements of this contract.
- B. SPECIFIC SAFETY PROVISIONS
 - 1. In addition to Federal, State, and Local regulations pertaining to operations and safety, the Contractor shall adhere to the following Port mandated safety requirements:
 - a) Asbestos and Contractor Personnel Asbestos Training: Ensure that all workers have received the initial and annual Asbestos Awareness training prior to the start of work.
 - b) Entry into Confined Spaces: Work on this project may require entry into confined spaces as defined by WAC 296-809. The Contractor shall read and follow the requirements of the Port of Seattle's Confined Space Entry Program, as found in the Port of Seattle Construction Safety and Health Manual. The Contractor's Confined Space Entry Program must meet or exceed these requirements.
 - 1) The Contractor shall provide the TCI a copy of its Confined Space Entry Program as part of the Contractor's Safety Plan Submittal. As part of this submittal, the Contractor shall complete the "Confined Space Entry Program Certificate" (Appendix B).
 - 2) Should the Contractor employ subcontractors to work in confined spaces it shall be the Contractor's responsibility to submit the required documentation for each subcontractor.
 - 3) No work shall be allowed to start in a confined space until the required submittals have been made. In the event the Contractor does not comply with these regulations, ACCESS WILL BE DENIED and the TCI notified. Delays caused by failure to submit the required documentation shall not be considered a reason for extension of contract time.
 - c) Electrical - Safe Clearance Procedures
 - 1) Entry into High Voltage Areas: Work on this project may require entry into manholes, vaults, electrical rooms or other High Voltage areas.
 - 2) In the event entry is required, the Contractor is obligated to identify any High Voltage areas that may be involved in the project and immediately notify the TCI if they have not been properly identified. Before entry into a High Voltage work area the Contractor shall notify the TCI and contact STIA Electrical Shop at (206) 433-5311.
 - d) Fire Prevention: The Contractor shall ensure that fire prevention measures on-site are in accordance with OSHA, DOSH, and NFPA standards. Approved safety cans shall be used for flammable and combustible liquids. Signs and fire extinguishers shall be provided where required.

- e) Traffic Control: Ensure compliance with Section 01 55 26 - Traffic Control.
- f) Hazardous Materials: Ensure compliance with Section 01 57 23 - Pollution Prevention Planning and Execution.
- g) Open Flame Devices: Prohibit the use of unapproved fuel-burning types of lanterns, torches, flares or other open-flame devices on Port property.
- h) Hot Work Permit: Open Flame Welding and spark producing equipment and tasks require the Contractor to secure a “Hot Work Permit” from the Port Of Seattle Fire Department in accordance with Supplementary Conditions 00 80 00, Article SC-04.11 Permits, Licenses, Fees and Notices.
 - 1) Seaport: Open Flame Welding and spark producing equipment and tasks require the Contractor to implement a formal “Hot Work Permit” Program outlined in the Port of Seattle Construction Safety and Health Manual. Cutting and Welding tasks also require the Contractor to secure a “Hot Work Permit” from the Seattle Fire Department in accordance with Supplementary Conditions 00 80 00, Article SC-04.11 Permits, Licenses, Fees and Notices.
 - 2) Airport: Open Flame Welding and spark producing equipment and tasks require the Contractor to secure a “Hot Work Permit” from the Port Of Seattle Fire Department in accordance with Supplementary Conditions 00 80 00, Article SC-04.11 Permits, Licenses, Fees and Notices.
- i) Liquid propane storage and use below grade is prohibited.
- j) Excavating & Trenching: Coordination with the TCI shall be required for work performed on the site.
- k) Construction activities that pose a potential risk of exposure to contaminated soil (such as excavations) shall be supervised by personnel who have both a current 40-hour Hazardous Waste certification, and an 8-hour Hazardous Waste Supervisor’s certification. These individuals shall be able to identify the potential need for upgrading the level of health and safety protection. All personnel working in direct contact with contaminated soil shall have a current 40-hour Hazardous Waste certification and medical monitoring, as required in Standards For General Safety & Health, Chapter 296-843 WAC and in accordance with OSHA regulations. The plan shall also include emergency procedures and medical treatment, fire protection, Job Hazard Analysis (JHA), and PPE requirements.
- l) The Contractor is responsible for soil sampling and air monitoring to determine hazards and exposures to their employees.
- m) Safety plan shall include requirements for daily stretching and flexing of on-site personnel.

- n) Individuals who operate hoisting equipment, including but not limited to cranes, boom trucks, and forklifts so configured, shall possess certification from the National Commission for the Certification of Crane Operators (NCCCO). A copy of the certification (s) shall be submitted in accordance with Section 01 32 19 Pre-Construction Submittals.
- o) Personal Protective Equipment Policy: To reduce the possibility of injuries, the Contractor shall implement a policy that requires 100% use of hardhats, safety glasses, and gloves for all personnel under their control. It is the responsibility of the Contractor to supply the proper personal protective equipment for the task.
- p) Chemical Exposure Plan: The Contractor shall submit a Chemical Exposure Plan for any products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica, and processes involving floor sealers, traffic coatings, terrazzo sealers, or specialty paints. The plan shall include employee exposure control methods, isolation methods to prevent spread of chemicals outside the work area and safeguarding of the public.
- q) Protection of the Public: The Contractor shall submit a plan for the protection of the public on or adjacent to construction and demolition operations. This plan shall include, but not be limited to, barricades, fencing, and signage. "Public" is defined, as anyone not associated with the project - general public, POS and tenant employees.
- r) AOA Operations: Ensure compliance with Section 01 35 13.13 Operational Safety on Airports during construction.
- s) Foreign Objects Debris (FOD): Ensure compliance with Section 01 35 13.13 Operational Safety on Airports During Construction.

C. DISCIPLINARY ACTION MATRIX:

- 1. Defining "The Plan"
 - a) The object of this matrix is to consistently and effectively control safety hazards such as unsafe acts, and unsafe conditions that lead to injuries of employees, the general public, or that cause property damage.
 - b) The matrix also provides a basis for the Contractor's program by standardizing how safety infractions committed by those employees will be handled.
 - c) All employees of the Contractor, subcontractor, sub tier contractor, vendor, or tenant are covered under this matrix regardless of classification.
 - d) Damage to equipment or property due to unsafe act or using damaged equipment.
 - e) Listed are the minimum requirements for discipline. The Contractor has the right to incorporate more stringent procedures from their

corporate policy into this matrix. The Contractor shall not submit two Disciplinary Action Programs.

- f) Individuals observed by the Contractor's management shall be disciplined under this matrix.
- g) Individuals observed by the Port of Seattle management shall also be subject to disciplinary action. POS management shall immediately contact the Contractor's management or provide written information to the Contractor's management as to violation, time, date, employer, and employee.
- h) The Contractor's Safety Manager shall perform the act of documenting and distributing the "Written Violation Notice."

2. Defining "Violation"

- a) Violations are defined as:
- b) "General Violations" are considered to be those infractions that may not cause serious injury or illness to an individual but are still violations of written safety policies and procedures. Examples include housekeeping, unregulated ACM incidents, property damage, mushroomed tools, etc. "General Violations" do not necessarily require a written warning unless they become classified as "Repeat Violations."
- c) "Serious Violations" are those violations that if left uncorrected could cause serious injury or illness to an individual. Examples include employees exposed to fall or impalement hazards or serious bodily harm.
- d) "Imminent Danger" is violations/situations that will most likely cause permanent disability or death to an individual. Examples can include falls, electrical, or trenching hazards and unsafe equipment.
- e) "Repeat Violations" are situations that arise as a result of a previously identified infraction not being abated in the time frame required or numerous violations of the same classification. "Repeat Violations" can also be defined as a situation where one supervisor has multiple employees working under their direction who are in violation of a written Federal, State, project, or company policy.
- f) Violations are not limited to the examples listed above.

NOTE: An "employee" may be removed from the project at any time for a safety violation that endangers his life or the life of a fellow employee.

3. Defining "Employee"

- a) As mentioned earlier, all employees of the Contractor, subcontractor, vendor, or tenant are included in this program.
- b) Job title classifications can include but are not limited to trades person, foreman, supervisor, superintendent, etc.

- c) Any person (s) directly reprimanded for his or her own actions or inactions, regardless of their position, shall be reprimanded as a “Worker.”
4. Defining the “Procedure”
- a) Individuals observed committing infractions of written Federal, State, site, or company safety policies shall be brought to the attention of the Contractor’s management.
 - b) The contractor shall in a timely manner, notify the identified employee(s) that they are in violation of written safety rules or procedures and shall abate the hazard.
 - c) In the event of “Imminent Danger or” a “Serious Violation,” the Contractor or POS shall immediately notify and remove the employee(s) from the hazardous situation.
 - d) The Contractor shall provide timely written warning to the identified individual(s), as well as the direct supervisor and superintendent of that individual(s). The supervisor’s names shall be recorded on the “Written Violation Notice.”
 - e) To discourage “Repeat Violations” or supervisor apathy, the supervision is subject to disciplinary action as stated in the matrix.
 - f) The Contractor shall utilize the “Written Violation Notice” provided in this section.
5. Defining the “Results”
- a) Personnel (including supervisors) receiving a Written Violation Notice shall be retrained in the appropriate standard or procedures. Said training shall be documented in writing and submitted to the TCI.
 - b) Written Violation Notices received will remain in force for the duration of the project.
 - c) Removal from the project of an “employee” for a minimum of 3 working days.
 - d) Removal of an “employee” from any port of Seattle project for one year.
 - e) Written notice sent to the appropriate corporate president.
 - f) Copies of all “written violation notices” are to be submitted to the TCI with a copy forwarded to the Manager of Construction Safety Services within 24-hours of issuance of notice.

DISCIPLINARY ACTION MATRIX

FOCUS POINT /INCIDENT	1ST VIOLATION	2ND VIOLATION	3RD VIOLATION	NOTES
Worker	Verbal & Written Notice	3 Days Off	Removed From POS Projects For One Year	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 35 29 T -Tenant Safety Management

Worker's Direct Foremen	Written Notice	Written Notice	3 Days Off	3 Worker Lay-offs = Removal From POS Projects For One Year
Worker's Direct Superintendent	Written Notice	Written Notice	Written Notice to Sub/Prime Superintendent and President of Sub/Company	3 Worker Lay-offs = 3 Days Off For Superintendent
Prime Contractor's Superintendent	Written Notice	Written Notice	Written Notice to President of Prime Company	3 Worker Lay-offs = 3 Days Off For Superintendent*

*Document 01 35 29 - Safety Management this individual may also be removed from the project.

DISCIPLINARY ACTION MATRIX

WRITTEN VIOLATION NOTICE

PROJECT NAME: _____ PROJECT #: _____

CONTRACTOR: _____

EMPLOYEE BEING REPRIMANDED _____

DATE: _____ TIME: _____

VIOLATION:

TASK BEING PERFORMED:

CORRECTIVE ACTION/TRAINING REQUIRED:

WITNESS: _____

FOREMAN: _____

SUPERINTENDANT: _____ :

GC SUPERINTENDANT: _____

FIRST NOTICE: _____ SECOND NOTICE: _____ THIRD NOTICE: _____

EMPLOYEE LAY-OFF OR REMOVAL REQUIRED (YES/NO): _____

WRITTEN NOTICE TO COMPANY PRESIDENT REQUIRED (YES/NO): _____

ISSUED BY: _____ COMPANY: _____

D. SAFETY PERFORMANCE

If the Contractor experiences ongoing safety concerns such as a Lost Work Day Case or Recordable Incident Rate greater than the Bureau of Labor Statistics National Average for Construction, experiences repeated violations of safety & health rules and regulations or “Imminent Danger” situations, or fails to abate violations in a timely manner, the Contractor shall be subject to the following action at the Ports discretion:

1. Removal and replacement of management personnel.
2. Submit a written Safety Recovery plan to the TCI and Manager of Construction Safety Services detailing what changes will be made to their safety program and a timeline as to when the changes will be implemented.
3. Hiring an independent safety consultant who shall audit the Contractor’s procedures and operations. The consultant shall compile a plan detailing what changes the Contractor shall implement. This report shall be submitted to the TCI, Construction Manager, and Manager of Construction Safety Services.
4. Notwithstanding 01860 paragraph 1.05 (B)(9)(c), Disciplinary Action Matrix, above in 1.07 (C)(2), shall be used for determining the appropriate corrective action.
5. Conduct a “Safety Stand Down” (suspend all work or any portion thereof) in accordance with the provisions of the General Conditions, Article G-10-04. Suspended work shall not be allowed to resume until the Contractor has completed the following actions for review and acceptance by the TCI:
 - a) Hazardous conditions leading up to the Safety Stand Down shall be abated.
 - b) Training of such type and duration shall be conducted to educate personnel on the awareness of, identification of, and correction of hazards leading up to the stand down.
 - c) Document the completion of items a. and b. above.

It is the responsibility of the Tenant to enforce these requirements.

E. TOUR GUIDELINES

1. It is imperative that the highest degree of protection is afforded to all individuals touring any Port construction site. The following guidelines have been prepared as general instructions for the organization, direction and safe conduct of such tours:
 - a) Escorted Visitors: While on the job site, non-construction personnel or groups shall be accompanied at all times by an authorized representative, the TCI, the Contractor, or other designee familiar with the job site.
 - b) Notification and Tours: Personnel tours including technical inspections need to be cleared through the TCI, allowing maximum advance notice. The TCI shall be consulted to coordinate the tour plan, identify specific rules, and to ensure necessary safety precautions are taken.

- c) Safety Enforcement: Before entering a job site, all visitors must be informed regarding the need for careful, orderly conduct and notified of any special hazards that may be encountered.
- d) Personal Protective Equipment: All visitors and tour groups must comply with proper dress, footwear, personal protective equipment or other safety requirements deemed appropriate.

1.08 CONTRACTOR ADMINISTRATIVE PROCEDURES

A. PROJECT SAFETY INSPECTIONS

- 1. Unsafe conditions or acts having the potential to cause bodily injury or property damage are classified as either “Imminent Danger” or “Serious.” In either case, action shall be taken immediately to correct the situation. Any item(s) that cannot be corrected immediately are required to be abated within 24-hours of notification. In the interim, other steps shall be taken to insure the safety of employees or the public.
- 2. The Construction Safety Inspection Report (CSIR) will be used by the Port Construction Safety Management as the field report for recording the Safety Manager’s observations in Section One(see Appendix D).

The following instructions apply to the use of this form:

- a) Contractor’s Corrective Action (Section Two): The Contractor shall note the action taken to abate the observation. If an item is abated immediately, it will be so noted in Section One by the Port Safety Manager.
- b) Date Corrected: The Contractor, upon completion, shall enter the date in the appropriate column.
- c) Submittal Procedure:
 - 1) Projects utilizing CMS will use this system to transmit the CSIR Form between the Port and the Contractor until the observation is satisfactorily resolved.
 - i. Email will be used on projects not utilizing CMS
 - 2) When corrective action has been completed, the Contractor’s Project Manager or Designee will electronically sign and date the form and return it to the Engineer.
 - 3) The Engineer will review the form and follow-up to ensure the “Contractor’s Corrective Action” has been addressed, verifying each item corrected.
 - 4) The Engineer will discuss the noted observations at the Weekly Contractor Progress Meeting.
 - 5) The completed CSIR form shall be returned to the Manager of Construction Safety Services within five working days.

B. ACCIDENT INVESTIGATION AND REPORTING PROCEDURES

- 1. All accidents and incidents occurring from operations or work performed under the contract shall be reported, verified, investigated, and analyzed as prescribed by the Port of Seattle Construction Safety & Health Manual.

Contractors and other individuals involved in the work shall instruct employees and other personnel to follow these procedures if someone is injured.

- a) Seek medical assistance for anyone injured. The injured person's supervisor will see that first aid is administered.
- b) When a serious accident or emergency occurs/exists, secure the incident area tightly and quickly except for rescue and emergency personnel.
- c) Send individuals as required, to assist or direct any emergency personnel arriving on the site.
- d) The accident scene shall not be disturbed until released by the Incident Command or Manager of Construction Safety Services, except for circumstances where "Imminent Danger" exists to those performing any emergency services.
- e) Immediately notify the TCI and Manager of Construction Safety Services (or designee) regarding any accident or injury requiring more than First Aid treatment, any third-party incident, or any equipment or property damage estimate in excess of \$1,000. Notify the Manager of Construction Safety Services of all other incidents including near miss incidents as soon as possible following the event.
- f) Washington State Department of Labor and Industries must be notified immediately by the Contractor in the event of an accident involving the death or in-patient hospitalization of any employee.
- g) Employees must report all injuries or occupational-related illnesses as soon as possible to their employer or immediate supervisor.
- h) A detailed written report, identifying causes and recommending corrective action, must be submitted to the TCI and Manager, Construction Safety Services within 24 hours. No supervisor may decline to accept a report of an injury from a subordinate.
- i) Within 48-hours of a Recordable or Lost Work Day Case Injury, incident involving 3rd party, or property damage incident, the Contractor shall meet with the TCI and Manager of Construction Safety Services. The meeting shall discuss the status of the injured employee, the root cause of the incident, corrective action implemented, the Job Hazard Analysis, and retraining of the employee and supervisor.
- j) Report all accident exposures and near miss incidents that occur on the job site. These records are to be maintained and submitted to the TCI or other designated authority upon request and shall include but not be limited to:
 - 1) First-aid injuries not reported on the OSHA No. 300 Form.
 - 2) The Contractor's OSHA 300 Form.

- k) The above information shall be provided only to authorized personnel including the TCI and Manager of Construction Safety Services.
- l) All questions from the media regarding any incident occurring on site shall be referred to the Port's Public Affairs Manager via the TCI.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Document

APPENDIX A

SAMPLE CONTRACTOR’S SAFETY PLAN

The Contractor is responsible for reviewing the requirements found and referenced in this Document, the Contract, the Port of Seattle Construction Safety & Health Manual as a minimum, and incorporating any additional specific, or unique safety requirements into their written plan. The Contractor’s Safety Plan shall include but not be limited to the following guidelines:

A. GENERAL PROVISIONS

1. **Compliance:** Provisions for accident investigations and reporting, formal incident review, reporting, corrective action and disciplinary action procedures meeting the minimum Port of Seattle requirements.
2. **Job Hazard Analysis (JHA):** The Contractor shall complete detailed, written Job Hazard Analysis for the work to be performed, identifying hazards that may exist or be created, outline the equipment to be used, and what procedures and/or safety equipment will be used to eliminate or reduce those hazards. The Contractor shall use the form provided in the Port of Seattle’s Construction Safety & Health Manual.
3. **Medical Treatment:** Provide medical treatment in compliance with Federal, State and local requirements. Names of individuals CPR and First Aid trained.
4. **Site Specific Emergency Procedures:** As related to injuries, weather or emergencies at an active POS facility including pre-determined sites for assembly and measures for accounting of employees shall be included. Emergency numbers shall be posted at the given work area(s):

Fire or Ambulance from a non-Port hard-line phone	911
Fire or Police from a Port hard-line phone	9911
Fire or Police Emergency	(206) 433-5380

5. **DOSH/OSHA Requirements and Personal Protection:** Safety and health provisions for providing adequate lighting, ventilation, hearing conservation, CO monitoring, and housekeeping. A written Personal Protective Equipment Assessment for head, face, eye, and hand and torso protection shall be included.
6. **Personnel Instruction:** The Contractor must identify the greatest number of employees to be working at any one time during peak construction periods, the company policies for initial safety indoctrination of all employees, and company plans for continued safety education for all employees, including weekly safety meetings, POS Safety Orientation, Stretch & Flex, Asbestos Awareness training, and English as a second language.
7. **Responsibilities:** Acknowledgment that the Contractor is totally responsible for compliance with OSHA, DOSH, Port or other applicable

rules and orders. Additionally, the plan will require a place of employment that is free of unsanitary or hazardous conditions that would harm an employee's health or safety.

8. **Safety Inspections:** Detailed information concerning how safety inspections will be conducted, their frequency, and their documentation.
9. **Safety Personnel:** State the name of the Contractor's Safety Representative(s), their experience and qualifications (i.e. Training in the OSHA 500, 30-hour or 10-hour) Indicate their authority to take the appropriate measures to eliminate hazards or stop work until hazardous conditions are corrected.
10. **Safety Requirements, Electrical:** Testing, inspection and repair of electrical equipment, GFCI Program, lockout/tagout procedures, how existing circuits will be located, and the installation of electrical circuits in accordance with the National Electric Code or Port Mandated Requirements.
11. **Safety Requirements, Equipment:** Operation, inspection, and maintenance for trucks and heavy equipment such as backhoes, dozers, motor graders, elevated work platforms, powered industrial trucks, and all hand and power tools.
12. **Safety Requirements, Ladders:** Types of ladders for specific uses and their training requirements.
13. **Site Layout:** A layout drawing of the site indicating access roads, fire and ambulance lanes, location of first aid stations, location of required alarm systems, location of offices, parking for private vehicles and equipment, and storage of all flammable and/or combustible liquids, gases, or other hazardous materials.
14. **Storage:** Requirements for storage of flammable and combustible liquids or gases.
15. **Field Sanitation:** Provisions for toilet and hand washing facilities, including the frequency at which they will be cleaned and maintained.

B. SPECIAL PROVISIONS

Depending on the type of construction, additional items must be incorporated into the Contractor's Safety Plan.

1. **Confined Space Entry:** Procedures for confined space entry and work operations in and around confined spaces (including elevator shafts) as well as emergency measures. These procedures must meet or exceed the Port of Seattle requirements found in the Port of Seattle Construction Safety & Health Manual. When entry is to be made into a Permit Required Confined Space the Port of Seattle Fire Department shall be contacted prior to entry and at completion of shift.
2. **Respiratory Protection Plan**
 - a) Submit a letter signed by the Contractor stating that all employees or agents required to wear a negative pressure or supplied air respirator have been medically evaluated in accordance with WAC 296-842.

- b) Submit National Institute for Occupational Safety and Health (NIOSH) certification for all respiratory protective devices utilized on site, including a list of approved components (parts) for each type of respirator that may potentially be used on the project.
 - c) Submit a letter signed by the Contractor stating that respirator fit testing is current for all Contractor employees and agents who wear negative pressure or supplied air respirators. This fit testing shall be in accordance with quantitative procedures as detailed in WAC 296-842 and 296-62-07715.
 - d) Respiratory protection requirements for work impacting the following regulated materials (**edit list below as necessary**):
 - 1) Asbestos (see Section 02085)
 - 2) Lead (see Section 02080)
 - 3) Light ballasts and universal waste lamps (see Section 02 84 16)
 - 4) PCBs and PCB-containing materials (see Section 02 84 33)
 - 5) PCB caulk (see Section 02 84 33.13)
 - 6) Fugitive and silica dust (see Section 02083)
3. **Steel Erection:** These requirements shall meet or exceed the guidelines of Chapter 296-155 WAC Part P, and shall include pre-planning, hoisting operations, fall protection procedures, overhead protection, and Site-Specific Erection Plan.
4. **Cranes:** Use of cranes or derricks and the testing and inspection thereof, including hooks, latches, wire rope, operator certification, boom stops, load charts, wind speed, warning devices, fire extinguishers, crane operation signals, suspended work platform pre-lift planning, and critical lift plans.
5. **Excavations:** Excavation plans must indicate sloping, documented daily inspections, shoring, barricading, excavation access, fall protection, and excavated material storage.
6. **Fall Protection:** How 100% protection will be maintained, identify the use of personal fall arrest equipment, fall protection systems, and fall protection work plans for heights 4-feet. NOTE: The Monitor System is prohibited.
7. **Formwork:** Submittal of formwork and false work drawings for review and approval to the TCI.
8. **Hazard Communication Program:** Including SDS, their location, Master List of Chemicals, Personal Protective Equipment, Training, Labeling, and SDS review and special procedures for sealers, coatings or specialty paints.
9. **Interruption of Fire/Security Systems:** Plans shall include measures and/or procedures to provide interim fire and security protection to facilities or areas affected by interruptions. These include automatic detection devices and alarms, automatic sprinkler systems, fire pumps, fire hydrants, applicable water supplies and reservoirs.

10. **Lock-out/Tag-out:** Procedures for lock-out/tag-out of energy sources during work operations. The Contractor shall include as part of the Lock-out/Tag-out program protocol for Clearance Orders and Switching Orders on electrical and mechanical systems.
11. **Scaffolding:** “Use” tag system, planking, guardrails, toe boards, anchor points, fall protection, access points, and inspections of.
12. **Fire Protection:** Including Hot Work Permits, Welding, shields, fire extinguishers, ventilation, PPE, fire watch and cylinder storage.
13. **Work Adjacent To Occupied Spaces:** Procedures for ensuring occupants of spaces adjoining, above and below construction areas will be protected from hazards created by construction, including but not limited to, falling debris, equipment noise, and penetration of partitions, ceilings, and floors.
14. **Competent Persons:** Where regulatory requirements (DOSH) specify the use of Competent Persons, the Contractor shall submit in writing the names of those persons. Their area of competency and applicable experience/training documentation.
15. **Energized Electrical Work Plan:** Submit detailed procedures for working on and guarding of energized equipment or conducting system outages.
16. **Seaport Safety:** Contractors shall submit a safety plan complying with all Federal, State, Corp of Engineers, Port of Seattle, and Coast Guard rules applicable to this type of construction.
17. **Health Considerations:** The Contractor shall submit a plan that addresses safety & health procedures for working in contact with contaminated soils. This plan shall be revised and resubmitted in the event that conditions encountered during the work are different than those initially planned for. It shall also include:
 - a) Identification and evaluation of the hazards and risks associated with each work task.
 - b) The names and qualifications of each contractor’s representative(s) in charge of the work and present at the project when pipeline removal is performed.
 - c) Identification of supervisory personnel and alternative responsibilities for site safety/response operations.
 - d) Determine levels of personnel protection to be worn for various site operations.
 - e) List equipment with adequate nomenclature by item that will be used at the job site and the date and location where the TCI can inspect this equipment.
 - f) Establishment of emergency procedures, such as: escape routes, fire protection, signals for withdrawing work parties from the site, emergency communications, wind indicators, including facility notification.
 - g) Identification and arrangements with the nearest medical facility for emergency medical care of both routine-type injuries and

toxicological problems. Submit the name, location, and telephone number of this facility.

18. **Conveyor Safety Policy:** To include procedures for deactivation of conveyor systems, lockout/tagout of systems, working around operating conveyors and required Port of Seattle conveyor safety training.
19. **STS Tunnel Access Procedures:** What procedures employees will follow if work requires access into the STS system.
20. **Demolition:** The Contractor shall submit a plan to include how they will safely demolish existing structures, ensure security, safe guard employees and the public from falling material, electrical hazards and air quality issues. An Engineering Survey performed and signed by a Qualified Person shall be included.
21. **Public Protection Plan:** The actions the Contractor will take to protect the public while performing construction or demolition on the project. The plan shall include, but not be limited to, barricades, fencing, and signage. "Public" is defined, as anyone not associated with the project - general public, POS and tenant employees.

C. SITE SPECIFIC SAFETY PLAN WORKSHEET

1. The following worksheet is to be used for Port Construction Services On Call Contracts for each work authorization. Once a safety submittal has been made and accepted for the On Call contract, Contractor will submit for each work authorization the following worksheet including support documentation referenced within the worksheet prior to beginning work.

		JOB HAZARD ANALYSIS WORKSHEET		Site Specific Plan Addendum	
				Person in Charge* for Reporting Hazards and Injuries:	
Location/address:				Phone Number:	
Title of Job/Operation:		Date:		* requires OSHA 10 & complete documented daily inspections	
				Day of Safety Meetings:	
Analysis Made By:		Work Order #:		Emergency action plan Call Fire Dept 787-5380 on airport grounds. 911 everywhere else. For large scale emergency meet at:	
		Contact person:			
Analysis Reviewed By:		Phone Number:			
Location of Master Prevention Program:					
Sequence of Basic Job Steps		Potential Hazards/Ergonomics		Recommended Safe Job Procedures and Required PPE	
Supervisor Signature:				Received by RE/CM:	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 35 29 T -Tenant Safety Management

Will the Scope of Work consist of the following tasks? (check all that apply)		(a) List Chemicals to be used on the project. Material Safety Data Sheets attached <input type="checkbox"/> Yes <input type="checkbox"/> No *Physical MSDS must be on-site. (*) A Chemical Exposure Plan will be required for products containing isocyanates, methylene chloride, Hydrofluoric Acid, lead, silica and processes involving floor sealers, traffic coatings, terrazzo sealers or specialty paints.
Traffic control*	Confined Space Entry*	
Welding, Cutting, Grinding*	Heavy Equipment	
Trenching or Excavation*	Flammable or Combustible materials ^(a)	
Carpentry	Steel Erection*	
Painting, Staining, Sealant ^{*(a)}	Ladder or Scaffold work	
Demolition (Structural)*	Roofing	
Energized Electrical*	Regulated Materials	
Use of a Crane/Boom/Hoisting device*	Hazardous Materials	
Work from heights of 6' or greater*	Conveyors*	
* Requires additional paperwork – checklists, plans, permits, shut-down notice, etc.		

Description of public protection measures ("Public" is defined as anyone not associated with the project - general public, POS, Tenant, and Airline Employees):

Employee Disciplinary for non-compliance with set forth safety policies and procedures will be consistent Port of Seattle's disciplinary action matrix as described within your site-specific safety plan and site-specific orientation.

Sign Up			
Print Name	Signature	Print Name	Signature

APPENDIX B

CONTRACTOR CONFINED SPACE ENTRY PROGRAM CERTIFICATE

I hereby certify that the attached Confined Space Entry Program meets or exceeds the requirements of DOSH standards WAC 296-804 and the Port Of Seattle's Confined Space Entry Program.

My employees will utilize the Port of Seattle (POS) confined space entry permit(s). They will complete all other sections of the permit that are appropriate for the confined space being entered.

My employees will be informed that they must coordinate their confined space entry procedures with other Contractors and POS employees working in or around the confined space. If entering into a Permit Required Confined Space, we will first contact the Port of Seattle Fire Department, notifying them of the specific location and activity to be performed.

My employees, who will be acting as authorized entrants, attendants, entry supervisors, and air testers, have been trained in accordance with the DOSH procedures and will be made aware of all of the POS procedures for entering confined spaces.

After the confined space entry project is complete my employees will make the TCI and Construction Safety aware of any new hazards confronted or created during entry operations. My employees will contact the Port of Seattle Fire Department and advise them that operations have ceased.

A copy of finalized permit with all attachments will be provided to the TCI at the end of each project.

Contractor's Name: _____

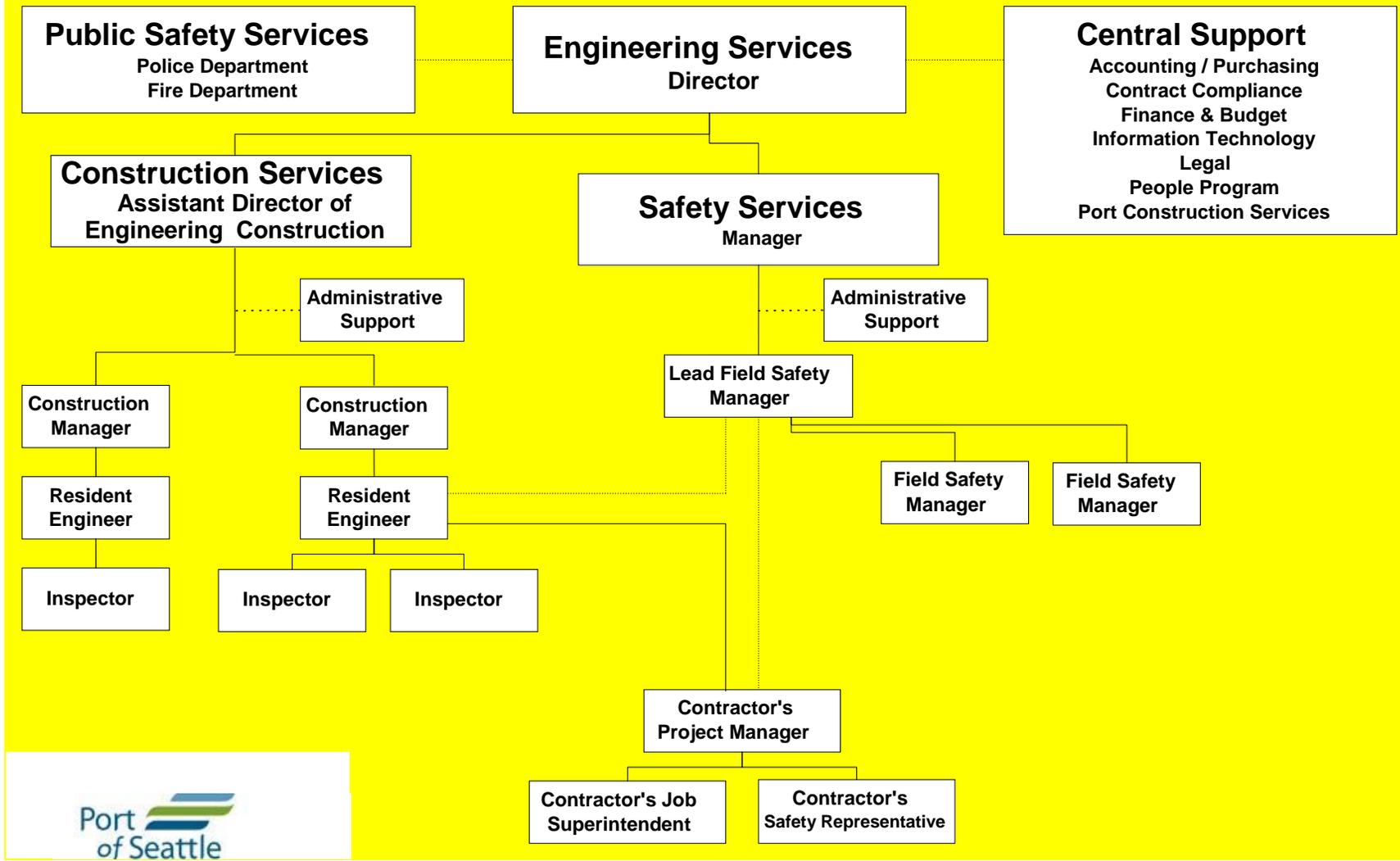
Contractor's Signature: _____

Company Name: _____ Date: _____

Port of Seattle TCI: _____

Date: _____

Appendix C Construction Safety Program Organization Chart





CSIR [Construction Safety Inspection Report]

CSIR DATE [Click here to enter a date.](#)

CONTRACTOR NAME

PROJECT NUMBER

PROJECT TITLE

ACCOMPANIED BY

SECTION ONE: To be completed by Port of Seattle, Construction Safety Management

CSIR PREPARED BY

TITLE

DATE [Click here to enter a date.](#)

ITEM NUMBER	SAFETY OBSERVATION	REFERENCE
001		
002		
003		
004		

SECTION TWO: To be completed by the Contractor Project Manager, except gray column

NOTE: All corrective actions shall be implemented within 48-hours, and the signed report returned immediately or within 5 working

**PROJECT MANAGER OR DESIGNEE
TYPE NAME TO ACKNOWLEDGE RECEIPT**

DATE [Click here to enter a date.](#)

ITEM NUMBER (FROM ABOVE)	CONTRACTOR'S CORRECTIVE ACTION TAKEN	DATE ITEM CORRECTED	POS INSPECTOR (POS USE ONLY)	FINAL SAFETY REVIEW (POS USE ONLY)
001		Click here to enter a date.		Choose an item.
002		Click here to enter a date.		Choose an item.
003		Click here to enter a date.		Choose an item.
004		Click here to enter a date.		Choose an item.



CSIR [Construction Safety Inspection Report]

SECTION THREE: To be completed by Port of Seattle, Construction Safety Management

CSIR PREPARED BY

TITLE

DATE

[Click here to enter a date.](#)

ITEM NUMBER	FINAL SAFETY REVIEW COMMENTS
001	
002	
003	
004	

READ THIS FIRST

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It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

PART 1 GENERAL

1.01 SUMMARY

- A. General: The list of environmental laws set forth in this section is provided pursuant to Section 39.04.120 of the Revised Code of Washington. The Contractor shall fully comply with the provisions of such laws as they may apply to the work.

1.02 LIST OF ENVIRONMENTAL STATUTES, ORDINANCES AND REGULATIONS

Ensure Environmental Group updates

- A. General: The following is a list of federal, State and local environmental statutes, ordinances and regulations which deal with the prevention of environmental pollution and the preservation of public natural resources that affect or may affect this Project. This list is not to be considered as all-inclusive, nor shall the absence of a law from this list be construed to relieve the Contractor from complying with such law, to the extent it is applicable to the Contractor.
- B. Federal
 - 1. Statutes:
 - a. National Environmental Policy Act: Establishes a Federal policy on the environment and requires the appropriate Federal agency, in any federally assisted or authorized project, to prepare an environmental impact statement for any "major action significantly affecting the quality of the human environment.
 - b. Clean Air Act: Establishes a Federal policy on air quality and directs each state to promulgate air quality laws and regulations to achieve the goals set forth in the Act.
 - c. Clean Water Act: Establishes a Federal policy on water quality and directs each state to promulgate water quality laws and regulations to achieve the goals set forth in the Act. In addition, the Act requires

a permit for discharge of pollutants and sets forth oil spill prevention provisions and penalties.

- d. Rivers and Harbors Act of 1899: Provides that discharge of refuse without a permit into navigable waters is prohibited.
- e. Port and Waterways Safety Act of 1972: Provides vessel design and construction standards to protect the marine environment.
- f. Resource Conservation and Recovery Act: Provides standards and requirements for the generation, transportation, treatment, storage and disposal of hazardous wastes.
- g. Comprehensive Environmental Response Compensation and Liability Act: Provides standards and procedures for the investigation and remedial activities to clean up hazardous substances which substances that have been discharged into the environment.
- h. Toxic Substances Control Act: Provides standards for the manufacture and distribution of chemicals and for the handling of PCBs.
- i. Endangered Species Act: Establishes protection for species which are listed as threatened or endangered.

2. Regulations and Guidelines:

- a. Environmental Protection Agency Regulations on National Primary and Secondary Ambient Air Quality Standards: Establishes national primary and secondary air quality standards for certain compounds pursuant to Section 109 of the Clean Air Act.
- b. Environmental Protection Agency Regulations Establishing Effluent Guidelines: Establishes national effluent limitations for discharges into navigable waters.
- c. Environmental Protection Agency Regulations on Discharge of Oil: Regulations promulgated pursuant to the Clean Water Act.
- d. Coast Guard Regulations on Oil Spills: Regulations promulgated pursuant to the Clean Water Act.
- e. Army Corps of Engineers Regulations on Navigable Waters: Establishes procedures for obtaining permits required by the Rivers and Harbors Act of 1899 and the Clean Water Act.
- f. Environmental Protection Agency Regulations on Discharge of Dredged or Fill Material Into Navigable Waters: Establishes guidelines for placing dredge or fill material into navigable waters pursuant to the Clean Water Act.
- g. Environmental Protection Agency Regulations for Hazardous Waste Management: Regulations promulgated pursuant to the Resource Conservation and Recovery Act.

C. State:

1. Statutes:

- a. State Environmental Policy Act: Establishes a State policy on the environment and requires the appropriate State or local agency to prepare an environmental impact statement for any "major action significantly affecting the quality of the environment" which the agency either undertakes directly or authorizes.
 - b. Shoreline Management Act: Requires a permit for development on State shorelines.
 - c. Clean Air Act: Provides that it is the policy of the State to secure and maintain such levels of air quality to protect health and comply with the Federal Clean Air Act.
 - d. Water Pollution Control Act: Establishes a State policy to maintain the highest possible standards for all water of the State, requires permits for the discharge of pollutants into the waters of the State of Washington and complies with the Federal Clean Water Act.
 - e. Washington Solid Waste Management Law: Establishes uniform State-wide program for handling solid wastes, which will prevent land, air and water pollution.
 - f. Washington Hazardous Waste Disposal Law: Establishes a statewide program for the regulation of the disposal of hazardous waste.
 - g. State Noise Control Act: Authorizes the Department of Ecology to establish maximum noise levels in order to protect against adverse effect of noise in the health, safety and welfare.
 - h. Model Toxics Control Act: State "Superfund" Law which Law that establishes how cleanups of hazardous waste will be managed and sets standards for performing cleanups.
 - i. Washington State Hydraulic Code: (Seaport Only) Establishes standards for development activities located at or below the Ordinary High Water Mark.
2. Regulations and Guidelines:
- a. Department of Ecology Guidelines for the Implementation of the State Environmental Protection Agency. State guidelines for the implementation of the State Environmental Policy Act.
 - b. Department of Ecology Shoreline Development Permit Regulations: State guidelines for the issuance of shoreline permits.
 - c. Air Pollution Regulations on Record keeping: Requires operators of stationary sources of air contaminants to maintain records of emissions and submit periodic reports.
 - d. Department of Ecology Regulations Relating to Minimum Functional Standards for Solid Waste Handling: Regulations promulgated pursuant to the State Solid Waste Act.
 - e. Department of Ecology Regulations for Waste Discharge Permits: Establishes standards and procedures for obtaining permits to

discharge pollutants in navigable waters pursuant to the federal and state Clean Water Acts.

- f. Department of Ecology Regulations on Dangerous Waste: Regulations promulgates pursuant to the state hazardous waste disposal statute.
- g. Department of Ecology Regulations Relating to Noise: Regulations establishing noise levels and noise performance standards for certain activities.
- h. Department of Ecology Model Toxics Control Act Cleanup Regulation: Establishing rules for reporting, listing, investigation and cleanup of hazardous waste sites.

D. Local:

- 1. Ordinances, Regulations and Orders
 - a. King County Environmental Policy Ordinances: Provisions for carrying out the County's responsibilities pursuant to the State Environmental Policy Act.
 - b. King County Shoreline Management Ordinance: Establishes procedures for obtaining a permit under the Shoreline Management Master Program.
 - c. King County Solid Waste Code: Establishes provisions for the disposal of solid waste.
 - d. King County Grading Ordinance: Requires permit for grading, landfills, gravel pits, dumping, quarrying and mining operations.
 - e. King County Zoning Code: Establishes zoning designations and uses within those designations.

Note to Designer: Use paragraph below for STIA projects only and delete Seaport project info.

- f. City of SeaTac codes and ordinances as agreed to within the City of SeaTac/Port of Seattle 1997 Interlocal Agreement as may be subsequently amended.
- g. Puget Sound Clean Air Agency Regulation I: A regulation to control the emission of air contaminants from all sources within the jurisdiction of the Puget Sound Air Clean Air Agency (King, Pierce, Snohomish and Kitsap Counties) in accordance with the Washington Clean Air Act.
- h. City of Burien codes and ordinances.
- i. City of Des Moines codes and ordinance.
- j. City of Tukwila codes and ordinances.

Note to Designer: Use below for Seaport projects only.

- k. Seattle Shoreline Development Ordinance: Establishes procedures for obtaining a permit under the Shoreline Management Act.
- l. Seattle-King County Noise Ordinances: Establishes noise levels for various activities in different areas of the city and county.
- m. Seattle Environmental Policy Executive Order: Provisions for carrying out the City's responsibilities pursuant to the State Environmental Policy Act.

E. Port of Seattle:

Note to Designer: Use paragraph below for STIA projects only and delete Seaport project info.

- a. Port of Seattle Sea-Tac International Airport National Pollutant Discharge Elimination System Waste Discharge Permit No. WA-002465-1.
- b. Port of Seattle -King County Waste Discharge Permit 7810-02.
- c. Sea-Tac International Airport Schedule of Rules No. 45.
- d. Logistics Staging Area Stormwater Pollution Prevention Plan – Current Edition.

1.03 REQUIRED SUBMITTALS

- A. Specific submittal requirements are called out in the applicable specification section.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

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NOTE TO CONSTRUCTION MANAGER: (For non-Airfield projects).

This Section is typically used for smaller, non-airfield, projects where the project does not warrant all of the additional effort of Section 01 45 29b, Contractor’s Quality Control Program with a Manual.

These types of projects do not usually use all technical specifications, but are smaller and more specific in scope. Examples would be conveyor projects, re-roofing projects, or elevator projects.

PART 1 GENERAL

1.01 DESCRIPTION

- A. Contractor Quality Control (QC) shall consist of plans, procedures, and organization necessary to provide materials, equipment, workmanship, fabrication, construction, and operations that comply with the requirements of the Contract Documents.

1.02 COORDINATION

- A. As part of the Preconstruction Meeting the Contractor shall discuss the Contractor’s Quality Control program. Items for discussion shall include:
 - 1. Identification of the Contractor’s QC Representative
 - 2. Persons responsible for shop drawing review
 - 3. Contractor’s QC Program and Reporting

1.03 SUBMITTALS

- A. Quality Control Plan

- B. Quality Control Reports
- C. Pre-Installation Meeting List

1.04 CONTRACTOR QUALITY CONTROL REQUIREMENTS

- A. The Contractor shall staff its QC program at a satisfactory level as required to perform the activities outlined in this Section with the QC Representative having complete authority to take action necessary to ensure conformance with the Contract Documents.
- B. Quality Control Plan: Submit a job specific quality control plan for approval by the Engineer fifteen (15) working days prior to the start of work on the job site. This pre-construction submittal shall include, as a minimum:
 - 1. Statement of company QC philosophy and policy.
 - 2. Company organization and designation of responsibility of QC activity at both corporate and job site level.
 - 3. Qualifications of QC personnel.
 - 4. Employee QC awareness and protocols.
 - 5. Procedure for incorporating all subcontractors' QC plans into Contractor QC plan.
 - 6. Description of routine daily and periodic QC activities.
 - 7. Description of examination, testing or inspection activities, including certifications and reports.
 - 8. Procedure for communicate and controlling design changes and revisions in the field.
 - 9. Submittal and shop drawing control procedures.
 - 10. Procedure for nonconformance reporting and disposition.
 - 11. Procedure for control at off-site fabrication or production shops.
 - 12. List of publications or references governing work on this job site.
 - 13. Exhibits of any QC forms or checklists routinely used.
 - 14. A line and grade survey controls plan.
- C. The Contractor's QC Representative must have prior experience as a Project Engineer, QC Representative, Superintendent, Architect, on site representative or inspector on a project of comparable complexity to this project.
- D. Reporting: Contractor's QC Representative shall maintain daily Quality Control (QC) Reports for each workday. QC Reports shall be factual records reporting test results and quality control activities. Submit QC Reports on accepted forms. The Contractor's QC Representative shall verify and sign all reports. Verification shall contain the statement that all supplies and materials incorporated in the Work are in compliance with the terms of the Contract Documents with noted variances.
- E. QC Control of On-Site Construction: Contractor's Quality Control program shall include the following phases of control and management for definable features of work:

1. Pre-installation and Preparation Phase: A Pre-installation Meeting will be held prior to beginning work on each definable feature.
2. In-Process Inspection Phase: The follow-up phase shall be performed continuously verify that quality standards are maintained throughout the project. Adjustment to control procedures may be required based upon the results of this phase and control testing. Report the results of the inspection in the daily Contractor QC report.
3. Punchlist Inspections: Punchlist Inspections will be scheduled by the Engineer after the QC Representative notifies the Port that the facility and its systems are complete and satisfactory.

NOTE TO CM: (Offsite or Factory Inspections)

During development of this section, discuss with the PM and project stakeholders (EOR, F&I, Maintenance, etc.) if there are specific items that require inspection at the factory prior to shipment. [This is supplementary to Special Inspection required for other Sections (e.g. structural steel special inspection)].

If so, include Paragraph F and list those products here. e.g. Electrical switchgear. EOR shall define the inspections or performance measures to be met, with stakeholder input, for each product.

F. Offsite or Factory Inspections

1. In addition to inspections or Special Inspection required by other Sections, Offsite or Factory Inspections by the Engineer (and/or other Owner's Representatives) are required to ensure that the products meet the Contract Documents prior to shipment to the project site.
2. The Contractor shall notify the Engineer, in writing, 21 days prior to the product's availability for inspection.
3. Offsite or Factory Inspections are required for the following products:
 - a. E.g. Switchgear
 - b. List other items

G. Pre-installation Meetings

1. Pre-installation meetings will be required for every specification section unless agreed otherwise with the Engineer. The Contractor should submit a list of pre-installation meetings which will be held during the project and an anticipated schedule for these meetings. This list shall be submitted for acceptance by the Engineer no later than 30 days after Contract Execution.
2. The Contractor shall conduct these meeting with the subcontractor, Port personnel, Contractor quality control and safety personnel, and any appropriate material suppliers at the beginning of each definable feature of the work. The purpose of the meetings is to review accepted submittals, sequence of field activities, contract details, and potential safety hazards to prevent problems in the field. Field work shall not commence prior to these meeting.
3. Meeting agenda shall cover:
 - a. Introduction of responsible parties.

- b. Discussion of submitted and accepted materials.
 - c. Status of material and equipment delivery.
 - d. Preview of areas where work will begin.
 - e. Brief outline of the construction procedures and interface with existing work.
 - f. Job hazard analysis.
 - g. Quality control tests scheduled for definable feature of work.
 - h. Checklist for quality control activities during the work.
- H. Control of Off-Site Fabrication/Construction: The Contractor's Quality Control program shall identify all off-site fabrication processes and its plan for monitoring the quality of fabricated materials prior to delivery to the project site. Coordinate inspections by Port representatives as requested.
- I. The Engineer will monitor the performance of the QC Representative. If the QC Representative fails to perform in accordance with the requirements of this specification, the QC Representative will be replaced at the Engineer's request.
- 1. The QC Representative's performance will be judged principally on the timeliness, accuracy and completeness of the QC's assessment of the condition of the elements of the work.
 - 2. Contract work will not be permitted to be performed without an acceptable QC Representative unless specifically authorized by the Engineer.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

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NOTE TO CONSTRUCTION MANAGER:

Use this specification when the Port is providing special inspection testing required as a condition of the permit.

PART 1 GENERAL

1.01 DESCRIPTION

- A. The Owner will employ an Independent Testing Agency or provide personnel to conduct tests of materials placed in their final locations in the project as specified by the permit. The Contractor shall assist the Owner’s Testing Agency or personnel by providing access to the Work or storage of the materials.
 - 1. Testing and inspection performed as a condition of the permit does not relieve the Contractor of responsibility for compliance with the Contract Documents.
- B. The Contractor shall provide and pay for the off-site testing required to confirm the quality of materials delivered to the project. Tests and inspections associated with permits obtained by the Contractor shall be provided and paid for by the Contractor.

1.02 COORDINATION

- A. As part of the Preconstruction Meeting the Contractor shall discuss the Contractor’s Quality Control program. Items for discussion shall include:
 - 1. Testing and administration processes for on-site and off-site fabrication processes
 - 2. Interrelationship of the Contractor and Port’s special testing contract administration

- B. The Contractor shall upon request of the Engineer provide the Port storage space for testing equipment and materials.

1.03 SUBMITTALS

- A. Schedule of Special Inspections

1.04 CONTRACTOR SPECIAL TESTING AND INSPECTION REQUIREMENTS

- A. The Contractor's Quality Control Representative shall be responsible for coordinating the required special inspections. The QC Representative shall:
 1. Prepare a schedule of the special inspections required.
 2. Notify the Port's special inspector a minimum 24 hours in advance of the requirement for special inspections. Testing that requires special equipment may require additional time for scheduling.
 3. Coordinate the work to assure obstructions, such as form work, are not put in place until the required special inspections have been performed.
 4. Monitor the correction of all discrepancies noted by the Special Inspector.
 5. Describe all special inspections and correction of discrepancies noted by the special inspector in the Daily Report.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

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NOTE TO DESIGNER: Write this section in conjunction with Section 01 11 00 - Summary of Work, direction regarding definition of Project Logistics. As currently written, this Section is for a typical on-site, Contractor supplied logistics area as opposed to a Port supplied on or off-site facility.

PART 1 GENERAL

1.01 SUMMARY

- A. Install, maintain, and operate all temporary facilities and controls as long as needed for the safe and proper completion of the Work.

Include B if work will be on AOA

- B. All Work will be in accordance with airfield requirements identified in Section 01 35 13.13, Operational Safety on Airports During Construction.

1.02 TEMPORARY ELECTRICITY UTILIZING PORT POWER

- A. Cost: Unless otherwise indicated by the Engineer, the Contractor shall provide and pay for all temporary power and associated services required from utility source. When required, a subpanel and revenue meter will need to be supplied and installed by the Contractor.
- B. The Contractor is required to submit an Application for Electrical Connection (01 50 00 A Application for Electrical Connection) in any location where the Port is providing power, including but not limited to, the Logistics Area, Terminal, Parking Garage, and Airfield. Included in the Application for Electrical Connection should be the following:
 - 1. Panel schedule in Port Standard Excel format.
 - 2. 30 day metered load data (7 day metered load data is acceptable for preliminary approval at preliminary design phase).

3. Load summary (existing load + 25% NEC Safety factor - removed load, if applicable, + new load = new total load).
 4. Layout showing location of panel, location of load, and conduit routing showing conduit type and size, wire size, and quantity. Include the size and type of power conditioner being provided, if applicable.
 5. One-line diagram if new panel is being added.
- C. The Contractor shall provide an engineered temporary electrical plan, as part of the submittals defined in Section 01 32 19 Pre Construction Submittals. Include in the plan all temporary lighting and power needs for the project. This plan shall include:
1. Power outlets for construction operations, with branch wiring and distribution boxes located as required. Outlets for temporary power distribution boxes shall be protected by an overcurrent protection device adequately rated for the distribution box to be use. It is not acceptable to connect temporary power equipment directly to the panelboard bussing. A temporary outlet must be installed, and removed upon project completion.
 2. Provide flexible cords from power distribution box as required. Where cords will pass through public areas, route cords such that they are unobtrusive and secure cords to structure.
 3. Provide main service disconnect and overcurrent protection at convenient location.
 4. When available the Contractor shall utilize existing outlets to power small tools and equipment rated below 6 Amps. Vacuums, core drilling equipment, and other high electrical draw tools shall not be used on the same circuit simultaneously. The Contractor is required to provide all overcurrent and GFCI protection.
- D. Welders connected to the Ports electrical system shall include a power conditioner unit. The Contractor shall connect only one welder, via power conditioner unit, to each electrical connection.
1. Contractor must provide an Application for Electrical Connection for temporary electrical power, along with backup, to obtain acceptance before connecting welders to the Port's electrical system.
 2. Based on the welder used, the Contractor shall connect the appropriately sized power conditioning unit. The conditioner shall comply with IEEE519 standards. The available power at the Airport Distribution Centers is 480V, three phase or single-phase. As appropriate, the Contractor shall provide 480V, 3-pole or single pole breakers at the Distribution Centers in order to obtain temporary power. Size breakers to match connected welder ampacity.
 3. The Contractor shall coordinate and provide SO cords and twist-lock receptacles on the welders and conditioning units so that it is only possible for welders to be connected to conditioning units and not directly to the Airport's electrical system.
 4. The Contractor shall utilize existing conduit/wire chases to route cables from the distribution centers up to the work area. As accepted by the

Engineer, the Contractor may drill holes through floors or walls in order to route welder cables to the work area. Penetrations through floors or fire walls shall be packed solid with saving (fireproofing material) so as to maintain fire rating of partitions (1 hour) or floors and ceilings (2 hours). All drilled holes shall be patched to maintain fire rating and finished to match surrounding materials after work is completed.

- E. The Contractor shall notify the Engineer a minimum of 7 days in advance of disconnecting from the Port's electrical system.

1.03 TEMPORARY ELECTRICITY UTILIZING GENERATORS

- A. The Contractor shall provide noise-suppressed generators where Port power is unavailable or not approved for use. All fuel-operated generators shall be located outside the building. No welders shall be connected to the Airport's electrical systems unless a power conditioner unit is accepted for use by the Engineer.

1.04 TEMPORARY LIGHTING

NOTE TO DESIGNER: Add temporary airfield light requirements and restrictions if needed.

- A. Provide and maintain fluorescent/LED lighting for construction operations to achieve minimum lighting levels required by the Safety and Health Core Rules (WAC 296-155-165).
- B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- C. Maintain lighting and provide routine repairs.
- D. In public areas the Contractor shall provide temporary lighting to maintain lighting levels present prior to beginning of work at all times during all Contractor operations.

1.05 TEMPORARY HEATING, COOLING, AND VENTILATING

- A. Provide and pay for heating, cooling and ventilating devices and heat as needed to maintain specified conditions for construction operations.
- B. Permanent equipment shall not be used for temporary heating, cooling, or ventilating purposes. Prior to operation of temporary equipment for heating, cooling, or ventilating purposes, verify that installation is accepted for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.
- C. Maintain minimum ambient temperature of 50 degrees F and maximum temperature as required by Washington State Labor and Industries in indoor areas where construction is in progress, unless indicated otherwise in the specifications.
- D. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gas.
- E. The Contractor shall construct dust-, vapor-, and smoke-proof enclosures to separate the work area from the central HVAC system and the public whenever welding, dust-, or vapor-generating activities are taking place and during any demolition activities. All outlets and paths for air to return to the central HVAC

system or public spaces shall be sealed with 6 mil visqueen to prevent recirculation of contaminated air. The Contractor shall provide temporary ventilation to remove objectionable vapors and dust from within the enclosure. The temporary ventilation shall not discharge within the terminal building.

- F. In order to mitigate grinding, sanding, and electric welding smoke when indoors, the Contractor shall furnish and use self-contained, mobile, high efficiency extraction arm filtration units such as Plymo Vent, Nederman, Miller, Lincoln, or accepted equal whenever and wherever welding operations are taking place. Light duty and small (below 100 sq ft) construction zone extraction units to be minimum 130 CFM, include cleanable ASHRAE MERV 13 filter, and extraction arm. Medium and Heavy Duty and normal access construction zone extraction units to be 500 CFM min, include cleanable ASHRAE MERV 13 - 100 sq ft of filter area min, extraction arm. Contractor required to monitor space below OSHA and ACGIH levels for welding processes. If levels are exceeded, Contractor to take additional steps to avoid creating an unsafe working environment. Contractor to provide respirators, dilution ventilation, or temporary exhaust to outdoors as necessary to comply.

Brazing and gas welding requires temporary exhaust vented directly to outdoors. Refer to drawings for routing, sizes, and design requirements. Contractor is required to monitor space below OSHA and ACGIH levels for welding processes. If levels are exceeded, Contractor shall take additional steps to avoid creating an unsafe working environment. Contractor will provide respirators or dilution ventilation as necessary to comply.

1. All welding, brazing or work that has the potential to create sparks requires a hot work permit issued by the Port Fire Department.

1.06 COMMUNICATIONS

- A. Cost: Unless otherwise indicated by the Engineer, the Contractor shall provide and pay for telephone and data services required for the project.
- B. The Contractor shall provide his own means of job site communication.
1. Mobile communications equipment (i.e., Radio) must be accepted in advance by the Engineer.
 2. Contractor shall submit the RF Application and Approval form (Section 01 50 00 B -RF Application and Approval Form and Section 01 50 00 C - RF Instructions) to the Engineer in accordance with Section 01 33 00 - Submittals.

1.07 TEMPORARY WATER

- A. Cost: Unless otherwise indicated by the Engineer, the Contractor shall provide and pay for all temporary water service required for construction operations.
1. No meter is required for connections smaller than 1 inch.
 2. Metering is only required when Port Fire Hydrants will be used.
- B. Drinking water for employees shall be provided in accordance with Washington State Department of Labor & Industries (L & I) Division of Occupational Safety and Health (DOSH) requirements.
- C. Construction water for inside terminal/ramp and buildings shall connect to the existing water system through existing branch piping, or as provided in the

Contract Documents. Provide temporary pipe insulation to prevent freezing for any piping exposed. Each connection shall utilize a lockable shutoff valve and a Reduced Pressure Backflow Preventer device (Washington State Department of Health approved; contact the Engineer for the list as necessary) and a calibrated water flow meter readable in cubic feet, to be provided and maintained by the Contractor. The Contractor shall be fully responsible for the security of the temporary water connection, including freeze protection. No Contractor shall use water from another Contractor's temporary water connection unless accepted in writing by the Port.

- D. Construction water for exterior landside and airfield projects may be supplied via existing Port of Seattle supply mains under the following conditions:
1. Each connection shall be made at an existing Port of Seattle fire hydrant.
 2. Only one 2 ½" side port of the Port of Seattle fire hydrants may be used for temporary water connection. The Contractor is responsible for ensuring the Fire Department has hydrant access, and no obstructions are in the way of the main 5" storz port of the hydrant.
 3. The Contractor shall provide and install a reduced pressure backflow preventer device (RPBD) and a water meter. The contractor shall swab the fittings to the fire hydrant in the presence of the Operating Engineer, who will test the chlorine used for the swab with chlorine strips. The Operating Engineer will also test the RPBD and record the water meter.
 4. The Port of Seattle Field Crew is responsible for turning Fire Hydrant valves. Contractor shall not operate the fire hydrant or foot valve at any time; contact the Engineer for assistance.
 5. Upon completion of temporary water connection related work, the Contractor shall provide a photo of the meter location and reading to the Engineer.
 6. The Port of Seattle reserves the right to test the water meter and operation of the reduced pressure backflow assembly at any time and require the Contractor to take necessary actions to maintain the integrity of the meter and backflow assembly at all times. The Contractor will be required to conduct water filling and usage operations in such a manner that do not endanger the Port of Seattle Water System at any time nor cause the Port to be in violation of Washington State Administrative Code (WAC) Section 246-290.
 7. Failure of the Contractor to follow these backflow prevention requirements will result in the removal or locking out of the Contractor's connection to the Port of Seattle water system. If the Contractor wishes to relocate the temporary connection to a new hydrant at any time, a new request must be submitted and the above outlined procedure repeated. Should the RPBD be disconnected during the duration of the hydrants use, the procedure for backflow testing shall be re-scheduled.
- E. The Port of Seattle shall receive a minimum 7-day notification prior to planned temporary water connection, and no later than Thursday at 8:00 AM for work the following week. The Contractor shall also notify the Engineer a minimum of 7 days in advance of disconnection of a temporary water connection.

Include Specification Section 22 11 16 in paragraph F, and Specification Section 01 57 13 in paragraph G, only if those sections are included in the technical specifications.

- F. Connections to potable Water Systems shall be made in accordance with the Port's disinfection requirements in accordance with Specification Section 22 11 16 Domestic Water Piping.
- G. Construction water shall be disposed of in accordance with Specification Section 01 57 13, Temporary Erosion and Sediment Control Planning and Execution.

1.08 TEMPORARY SANITARY FACILITIES

- A. Contractor personnel may use public restrooms throughout the Airport Terminal.
- B. When Airport Terminal restrooms are not available the Contractor must provide Temporary Sanitary Facilities as required by Washington State Labor and Industries.
- C. Concrete, grout, debris, or other related construction activities shall not be washed down the Ports sanitary system.

1.09 BARRIERS AND ENCLOSURES

NOTE TO DESIGNER: The following requirements apply to areas of high Public use and visibility, such as the Main Terminal Ticketing and Baggage Levels, Concourses, and Satellites. Enclosures not in Public view, such as baggage make-up area or Ramp Level, do not need to meet such stringent appearance requirements. Generally, no painting is required for non-Public view partitions. Safety requirements shall be met for all barriers and enclosures.

- A. General Requirements
 - 1. Provide temporary Pedestrian Barriers, Partition Enclosures, and Polyethylene Enclosures as required to separate work areas from Owner/Public occupied areas, to prevent penetration of dust and moisture into Owner/Public occupied areas, and to prevent damage to existing materials, equipment, structures and other facilities. Constantly secure barriers and enclosures in a manner to prevent unauthorized entry into construction areas. Shield security and other stationary cameras from welding arc flash with visual barriers at the welding location. Do not obstruct the camera view unnecessarily. Notify the Engineer prior to shielding any cameras in order to obtain clearance from the Security Department.
 - 2. All Barriers and Enclosures shall be fully installed and complete within 24 hours of initiating the installation. One week prior to installation, the floor area to be enclosed by a barrier or partition shall be clearly marked to indicate location and alignment. If more than 24 hours is required for large areas, provide a plan for phasing of the installation. Obtain acceptance from the Engineer prior to installation of any enclosure or barrier.
 - 3. Barriers and Enclosures shall be installed and maintained in straight lines and with 90-degree corners typically. In high traffic areas for improved visibility, the use of 45 degree corners may be required as directed by the

Engineer. Partition panels shall neatly adjoin existing walls where necessary. Existing finishes shall be protected prior to installation of partitions. Gaps between existing walls and enclosures shall be 1-1/2" maximum. Provide braces as necessary to support enclosure. Cut bracing flush with exposed painted surface of panels. All wood surfaces that are exposed to Public view shall be painted.

4. Existing floor and carpet areas beneath panels and within barrier and enclosure areas shall be protected with polyethylene sheeting, cardboard, carpet or other suitable material.
5. Panels shall be pre-painted prior to installation or painting shall occur immediately after installation between the hours of 2300 and 0400. Nails, screws and other fasteners shall be installed flush with the face of the partition. All wood, fasteners, hinges and other hardware exposed to Public view shall be painted.
6. Project information and directional signage attached to the Public side of enclosures shall be supplied and installed by the Port. If additional directional signage is needed the contractor shall bring it to the attention of the engineer.
7. No signage of any kind shall be affixed to the public side of the barrier or partition without prior approval from the Engineer. Unapproved signage may be removed and disposed of by the Port without notification to the Contractor.
8. A neat, clean, uniform appearance of all Barriers and Enclosures shall be maintained at all times. Scuffed, dirty or discolored panels shall be cleaned or repainted as directed by the Engineer at no cost to the Port.
9. Barriers and Enclosures may be reused for subsequent phases of work at different locations if they are in acceptable condition as determined by the Engineer. Panels shall not be reused if visible damage to exterior surfaces includes holes, dents or splintering. Contractor shall repaint panels as directed by the Engineer at each location. (Based on the phasing plans and the number of relocations expected, the Contractor shall be required to repaint barriers or partition enclosures [redacted] times during the course of the project.)
10. Paint for all Barriers and Enclosures, including exposed fasteners, hinges and other hardware, shall be Sherwin Williams Harmony Interior Acrylic Latex; or Kelly Moore with type and color to match or equal.
11. Provide electrical power outlets for any advertising, safety or exit signs to be relocated from their existing locations in or on walls to the surface of the construction barricades that would cover or otherwise block them.

B. Pedestrian Barriers

1. Pedestrian Barriers shall be constructed with integral base or other devices to resist an overturning moment created by the force of 50 pounds per lineal foot applied horizontally at the height of 3 feet 6 inches perpendicular to the partition for the full length of the partition.
2. Pedestrian Barriers shall be 3'-feet-6-inch minimum height constructed of 1/2-inch ACX fire retardant treated plywood fastened to either 3-5/8-inch -

18 GA light gage steel or 2"x4" fire retardant treated timber studs with continuous framing at top and bottom. Face of Barrier exposed to the Public shall be smooth (A side) and free from protrusions with edges.

3. Batten strips shall be securely fastened to the exterior face of barrier along the top edge and to neatly conceal all vertical joints and corners as shown in the sketches provided at the end of this section. Batten strips shall be 1/2-inch x 4-inches wide with exposed corners rounded or beveled at 45 degrees and shall be painted to match exposed face of barrier.
4. For Barriers with height of less than 6-feet-0 inch which enclose a vacant space such as the lower portion of a scaffold, provide fire retardant debris screen stretched horizontally over the enclosed space or as directed by the Engineer when no work is being performed within the space. Submit debris screen product and color for acceptance prior to installation.
5. When accepted by the Engineer, orange cones, stanchions, warning barrier fence or marker tape may be used as a temporary Pedestrian Barrier around the construction area where hazard exists to the public, airport facilities and staff, or Contractor personnel.

C. Partition Enclosures

1. Partition Enclosures shall be capable of resisting 5 psf applied over the entire surface of each side, separately. Where required or as shown on the plans, partitions shall be constructed to safely support dislocated or relocated functioning appurtenances such as telephones, advertising signs, fire extinguishers, and other similar items. The Contractor shall be responsible for the structural integrity and capacity of the partitions carrying the additional weight of these items.

NOTE TO DESIGNER: Estimated weight of back-lit advertising signs is from 150 to 300 lbs depending on the size. Project specific sign information to be included here, **including provisions for required electrical service.**

2. Reference attachment 01 50 00 E Elevation and 01 50 00 F Section Model for construction of Partition Enclosures.
3. Partition Enclosures shall be 8-feet-0-inch minimum height, constructed of 1/2-inch ACX fire retardant treated plywood fastened to either 3-5/8-inch - 18 GA light gage steel or 2"x4" fire retardant treated timber studs with continuous framing at top and bottom. Face of Enclosure exposed to the Public shall be smooth (A side) and free from protrusions with edges and corners eased and painted per the General Requirements of this section.
4. Batten strips shall be securely fastened to the exterior face of barrier along the top edge and to neatly conceal all vertical joints and corners as shown in the sketches provided at the end of this section. Batten strips shall be 1/2-inch x 4-inches wide with exposed corners rounded or beveled at 45 degrees and shall be painted to match exposed face of partition.
5. Double wide delivery doors shall be constructed of similar fire retardant materials and exposed finish used for partitions and shall be fully framed to eliminate warping. Doors shall remain flush with exposed partition face

when closed. Rollers may be used to support doors if necessary to prevent damage to flooring. All exposed hinges and hardware for doors shall be clean and painted to match exposed face of partition. Holes in doors for locks and chains shall be drilled or machine cut with edges eased and no larger than 5 inches in diameter. For adjacent doors, holes shall be the same diameter and occur at the same height.

6. All chains and locks used at delivery doors visible to the Public shall be clean and free from rust. Verify chain and lock arrangement with the Engineer to allow 24 hour access to enclosure areas for Contractor and authorized Port personnel. Delivery doors shall be secured when not in use.
7. Provide a 3-0 X 7-0 hollow metal door for general personnel access into the work space. The door shall be provided with a closure and lockset to keep the site secure during construction.

D. Polyethylene Enclosures

1. Polyethylene Enclosures: Enclosures constructed with polyethylene as described in the General Requirements that completely enclose the work area above the 8-foot-0-inch height enclosed by Partition Enclosures as shown in the sketch provided at the end of this section. Polyethylene Enclosure support framework shall be capable of supporting 1 psf applied over the entire surface of each side, separately.
2. Polyethylene sheeting for enclosures, wall, stationary objects, floors, ceilings and all other uses shall be white in color and at least 6-mil thickness. Exterior sheeting exposed to Public view shall be installed on the outside of the support framework to cover the framework. Sheeting shall be used in widths selected to minimize the frequency of joints. All polyethylene sheeting used shall be fire retardant and meet Port Fire Department requirements.
3. Joints between polyethylene sheets shall be securely taped. Tape shall be white in color and one type of tape shall be used for all enclosures. Sheeting and tape samples shall be submitted for acceptance by the Engineer prior to installation.
4. Polyethylene enclosures shall be neatly secured when not in use and care shall be taken to avoid loose sheeting and tape.
5. The use of polyethylene enclosures shall be minimized except as required in the General Requirements of this section or as directed by the Engineer.

1.10 FENCES

- A. Provide a 6-foot-high chain link fence with gates around the perimeter of the site for security during the entire length of construction or unless accepted otherwise by the Port.

NOTE TO DESIGNER: If temporary AOA fencing is required, see FAA requirements.

1.11 EXTERIOR ENCLOSURES

- A. Provide temporary weather tight closure of exterior openings to outside of the building to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Exterior enclosures shall be constructed with full height, insulated partitions having a minimum R Value of 12. Provide access doors with self-closing hardware and locks.

1.12 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic across landscaped areas.

1.13 SECURITY

NOTE TO DESIGNER: Check with POS, Police and Fire Department to determine project-specific fire or security requirements

- A. Provide security and facilities to protect the Work and Port's operations from unauthorized entry, vandalism, or theft.
- B. The construction site shall be closed to the public at all times. Construction site is defined as the temporary facilities and work areas inside partitions, enclosures, and cones and tape.
- C. Ensure the security of tenant facilities in the event construction activities endanger those facilities or commodities.
- D. Abide by special requests of security personnel, Port of Seattle Police and Fire Departments.
- E. Airport Security: See requirements summarized in paragraph, Airport Rules and Regulations, Section 01 35 13.13 - Operational Safety on Airports During Construction, and Section 01 14 13 - Airport Personnel Identification/Access Control and Security, of these specifications.

1.14 PROGRESS CLEANING AND WASTE REMOVAL

- A. In addition to the requirements of Section 01 74 00 - Cleaning:
 - 1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
4. Collect and remove waste materials, debris, and rubbish from site and dispose off-site in a legal manner.
5. Provide trash dumpster(s) for the packaging or waste material of all Port furnished items installed by the Port's vendors/installers.

1.15 STREET CLEANING AND DUST CONTROL

- A. See Specification Section 01 57 13 - Temporary Erosion and Sediment Control Planning and Execution

1.16 REMOVAL OF CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials, prior to Substantial Completion or as directed by the Engineer.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Removal of temporary facilities and controls, including but not limited to restoration of site and laydown area utilities to preconstruction conditions (capping, safing and incorporation of lockout/tag-out protocols), shall be an element of the final inspection and punchlist.

1.17 USE AND OCCUPANCY

- A. The Airport is an operating facility that must remain in full operation throughout the term of this Contract. Where facility operations conflict with those of the Contractor, the operations of the facility will take precedence over those of the Contractor. It shall be the sole responsibility of the Contractor to schedule and coordinate its activities with those of the facility to assure minimum disruption of facility operations.
- B. Contractor will be allowed space for the storage of materials and the pursuance of Work under this Contract in the areas as directed by the Engineer. The Contractor shall limit storage of materials, tools, and other items necessary to the Work, to areas within the construction barriers. Items stored outside the designated areas shall be prohibited without prior acceptance of the Engineer.
- C. The Contractor shall not use baggage carts provided by Smarte Carte or carts belonging to any Airport tenant to transport or store equipment and construction materials.
- D. Time Restrictions will apply to locations for delivery of materials, tools, equipment, and debris disposal into or out of the work areas. The following time restrictions for deliveries or pickups shall apply unless accepted otherwise by the Engineer.
 1. Service Tunnel Loading Dock: 2400 to 0500
 2. Deplane Drive 2400 to 0900
 3. North and South Satellites 2400 to 0500
 4. Arrivals/Lower Drive 1000 to 2400

NOTE TO DESIGNER: The following pertains to the City of SeaTac requirements. Revise if other City or local ordinances or requirements apply. Inside the City of Seattle, use Seattle’s Noise Ordinance and permit restrictions

1.18 NOISE CONTROLS

- A. At all times keep objectionable noise generation to a minimum by:
 - 1. Equipping air compressors with silencing packages.
 - 2. Equipping jackhammers with silencers on the air outlet.
 - 3. Equipment that can be electrically driven instead of gas or diesel is preferred. If noise levels on equipment cannot reasonably be brought down to criteria, listed as follows, either the equipment will not be allowed on the job or use time will have to be scheduled subject to acceptance of the Engineer.
 - 4. All construction vehicles and equipment on the project operating between 10:00 p.m. and 7:00 a.m. shall be equipped with an ambient noise sensing variable volume backup alarm system. The system shall be in compliance with Washington Administrative Code (WAC) 296-155-615.
- B. Objectionable noise received on neighboring (non-Port owned) properties is defined as any noise exceeding the noise limits of State Regulations (WAC 173-60-040) or City ordinance, as stated below, or as any noise causing a public nuisance in a residential area, as determined by the Port and community representatives, or by the nuisance provisions of local ordinances.
 - 1. The noise limitations established are as set forth in the following table after any applicable adjustments provided for herein are applied:

RECEIVING PROPERTY

NOISE SOURCE	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
Airport	50 dBA	65 dBA	70 dBA

- 2. Between the hours of 2200 and 0500 on weekdays and 2200 and 0900 on weekends the noise limitations above may be exceeded for any receiving property by no more than:
 - a. 5 (five) dBA for a total of 15 minutes in any one hour period; or
 - b. 10 (ten) dBA for a total of 5 minutes in any one hour period; or
 - c. 15 (fifteen) dBA for a total of 1.5 minutes in any one hour period.
- C. In addition to the noise controls specified, demolition and construction activities conducted within 1,000 feet of residential areas may have additional noise controls required.
- D. The Contractor’s operation shall at all times comply with all County and City requirements.
- E. For work conducted within Airport buildings, noise levels from work activities shall not exceed 80 dBA on the slow scale at the project boundary.

- F. The Contractor shall plan all work activities generating noise, such as saw cutting or core drilling, during periods of low airport activity.

1.19 SCAFFOLDING

NOTE TO DESIGNER: Include if scaffolding is required or shown on the plans. The appearance requirements for scaffolding apply primarily to areas of high Public Use and visibility, such as the Main Terminal Ticketing and Baggage Levels, Concourses, and Satellites

- A. The Contractor's attention is called to the fact that scaffolding or other support systems will be required. Tape, plastic, or cones shall not be used by themselves as protection. Scaffolding shall comply with the requirements of the Washington State Department of Labor and Industries. The Contractor shall be totally responsible for the structural integrity of any containment systems utilizing a scaffold system. The Contractor shall post a sign in each containment specifying the maximum number of persons or weight for which the system is designed or installed and shall be responsible for seeing that this weight is not exceeded. All scaffolding exposed to public view shall be clean and freshly painted.
- B. Any scaffolding used must be cleaned, completely free of debris, and painted Harmony Interior Acrylic Latex; or Kelly Moore with type and color to match; or equal unless directed otherwise by the Engineer. Contractor shall verify color prior to paint procurement.
- C. Follow all manufacturers' recommendations and all applicable regulations in the set-up, use and tear-down of all scaffolding used.
- D. The Contractor shall ensure that all scaffolding has adequate debris and safety barriers to protect the public below.
- E. The Contractor shall replace any existing lighting displayed or covered by ceiling mounted scaffolding with temporary lighting. The intent is to maintain, at a minimum, the existing lighting level.
- F. The Contractor shall submit a scaffolding plan with details, approved and stamped by a licensed Professional Engineer.

1.20 CONSTRUCTION EQUIPMENT

NOTE TO DESIGNER: Include if construction equipment will be used inside public buildings such as the Main Terminal, Concourses, and Satellites

- A. The Contractor shall submit a list of construction equipment or machinery that will be used to perform the Work. Construction machinery is a piece of equipment that will impose loads to the existing structure. (i.e., scissor lifts, man lift, etc.) The equipment list shall include the weights of the equipment and any axial loads or construction loads expected to perform the Work.
- B. Equipment (Vehicles) used inside the building, including the baggage make-up area, shall be powered either electrically or by propane. If propane vehicles are used, the vehicles shall not be left running when not used.
- C. Provide signage on the equipment identifying the Contractor and project(s) for which it is being used.

1.21 WASTE WATER CONTROL

NOTE TO DESIGNER: Use this paragraph for projects inside the terminal buildings that do not include Section 01 57 13 – Temporary Erosion and Sediment Control Planning and Execution

- A. Prevent discharge of any water/contaminated or otherwise from the site or work locations from any source, including runoff, from entering onto adjacent areas occupied or storage spaces or properties.

1.22 TEMPORARY OPENINGS

- A. Ensure that all temporary openings formed required for execution of the Work, are labeled with the project name and contact information of the responsible contact. At the completion of work at each location, ensure that the openings are closed and restored to match the adjacent surfaces. This will include temporary ceiling tiles removal.

1.23 TEMPORARY CEILING REMOVAL

- A. Where ceiling tile is required to be temporarily removed for construction purposes, the Contractor shall ensure the ceiling envelope is maintained. To maintain the ceiling envelope for limited durations, white fire retardant, flame resistant polyethylene of at least 6 mil thicknesses shall be used. The installation of the polyethylene sheeting shall be done in a neat manner. If tape is used, it shall be of matching color. The Contractor shall ensure that the sheeting is legibly labeled in indelible black ink with the following information; the date the ceiling tile was removed, the name of the General Contractor, and the POS Work Project number. The Contractor shall maintain a neat and clean appearance of the temporary ceilings. Unkempt, dirty or discolored sheeting shall be cleaned or reinstalled as directed by the Engineer at no cost to the Port.

1.24 MAINTENANCE OF OPERATIONS

- A. Public Safety Convenience: The Contractor shall conduct all operations with the least possible obstruction and inconvenience to the Port, its tenants and the public.
 - 1. Permit traffic (pedestrian and baggage) to pass through the work area with least possible inconvenience and delay.
 - 2. Maintain pedestrian traffic routes and existing roadways within, and adjacent to, the work area.
 - 3. Maintain existing signing and lighting systems in operation as the work proceeds unless noted otherwise on drawings.
 - 4. Maintain access to entrances, driveways, loading docks, buildings, etc. Unless noted otherwise on drawings. Coordinate any reduction in service at such locations with Engineer.
 - 5. Maintain all walkways, access ramps, entrances and related facilities that satisfy the requirements of the Americans with Disabilities Act (ADA) of 1990. If closure of such facilities is necessary, provide alternate temporary facilities that replace the temporarily closed facilities.
- B. Responsible Representative: The Contractor shall appoint one employee as the Contractor's responsible representative and point of contact. The appointed representative shall have authority to act on behalf of the Contractor and shall be available, on call, twenty-four hours a day, throughout the period of construction

for the Contract. A twenty-four hour telephone number shall be provided to the Engineer for use in case of an off-hour emergency. The Contractor shall provide immediate response to correct all deficiencies upon notification.

- C. Temporary Facilities: The Contractor shall provide temporary barriers, temporary enclosures or partitions sufficient to physically separate airport operations, including but not limited to pedestrians from the Work. The use of temporary scaffolding and other access equipment shall also be commensurate with facility operations.
- D. Traffic Control Devices: The Contractor shall provide and maintain controls as required to warn and protect the public, tenants and Port employees from injury or damage caused by the Contractor's operations. No work shall be performed on or adjacent to any vehicular or pedestrian roadway/walkway until all necessary signage and traffic control devices have been accepted and are in place. (Section 01 55 26 - Traffic Control).

NOTE TO ENGINEER: Include Part 2 if the Contractor will have access to the Contractor Parking Lot

PART 2 CONTRACTOR PARKING/SHUTTLE OPERATIONS

2.01 Contractor Parking

- A. Limited parking for construction workers is available within the Contractor Parking Lot (CPL) located at 19020 28th Avenue South, SeaTac WA, 98188 at no cost to the Contractor. Use of the CPL will be permitted on a first-come first-served basis.
- B. Access to the Contractor Parking Lot will be given at NTP. The Contractor shall coordinate with the Engineer for the number of parking passes required. All issued parking passes shall be returned to Engineer as a condition of Demobilization.
- C. Reference attachment 01 50 00 G CPL and Logistics Facilities for location and layout of the Contractor Parking Lot (CPL).
- D. The Contractor Parking Lot is to be used for parking of the Contractor's employees only. Construction trailers, equipment, material storage, laydown space, and stocking piling of earthwork are prohibited in the Contractor Parking Lot. All objects in the Contractor Parking Lot are subject to removal at the owners' expense.
- E. The Contractor shall be responsible for and bear all costs of transporting the employees between the Contractor Parking Lot and the project work site. The Port does not direct the Contractor regarding the means and methods of transporting the employees, nor does the Port preclude the Contractor from making any reasonable arrangement for getting the employees to the project work site, including but not limited to paying their employees to park in the Airport Parking Garage. The Contractor shall ensure that whatever transportation method is utilized, it is implemented in a manner that maximizes project efficiency, minimizes working traveling time between the Contractor Parking Lot and the project work site, and minimizes the impacts on public roadways and airport operations.
- F. Access cards are required to utilize the Contractor Parking Lot. The Contractor shall follow the steps outlined below to obtain, manage, and return the access cards:

1. The Contractor shall coordinate with the Engineer to determine the number of access cards required. If additional access cards are required the Contractor shall notify the Engineer.
 2. The Engineer will coordinate with Airport Landside Operations to obtain the requested access cards and will provide them to the Contractor.
 3. The Contractor is required to track which access card is issued to each employee. Each access card will have a unique card number that will support this effort.
 4. Upon completion of the work the Contractor shall collect all the issued access cards and return them to the Engineer. A portion of the issued access cards can be returned earlier to the Engineer if the Contractor so chooses.
- G. The Contractor shall be responsible for the costs to replace damaged, lost, stolen, or non-returned access cards. If an access card is damaged, lost or stolen the Contractor shall promptly notify the Engineer to arrange for a replacement card.
- H. Upon project completion, if all access cards are not returned, the Contractor will continue to be billed the daily rate for each lost or damaged access card until it is returned or the lost or damaged card fee is paid. Payment must be made at the Customer Service Window at the Seattle-Tacoma International Airport's onsite parking garage North Toll Plaza.
- I. Access card usage will be monitored by the Port. If the Port determines that the access card was used for non-work related purposes this will result in the loss of use of the Contractor Parking Lot for the responsible party.

2.02 Contractor Shuttle Operation

- A. The Port anticipates that shuttling of employees will likely only be needed on larger scale projects. Shall the Contractor choose to utilize shuttles for employee transport between the Contractor Parking Lot and the project work site, the following requirements must be satisfied:
1. The Contractor shall run an efficient shuttle operation and select appropriately sized shuttle vehicles.
 2. All shuttles shall be in good working condition, mechanically sound, and meet all applicable federal, state, and county environmental regulations. Contractor shall provide all fuel, oil, tires, other necessary products, and mechanical maintenance and repair. Contractor shall not perform any fueling, cleaning, or maintenance on Port of Seattle property unless approved in writing by the Port. Any maintenance performed on-site shall be subject to the requirements of Section 01 50 00, Temporary Facilities and Controls.
- B. All shuttles shall comply with the following:
1. Exterior: All headlights, tail lights, brake lights, signal lights, license plate lights, windshield wipers, horn, window raisers (if so equipped), doors and door locks, trunk locks (if so equipped), hood latch, door handles, mirrors, exhaust system, hubcaps, bumpers, fenders, body and tires shall be functioning safely and properly. There shall be no tears or rust holes in the vehicle body and no loose pieces such as fenders, bumpers, or trim

hanging from the vehicle body. There shall be no un-repaired body damage or any body condition that would create a safety problem or interfere with the operation of the vehicle. Shuttles shall be uniformly painted, contain no advertising, and be clearly marked to indicate that they are providing transportation for the Contractors construction workers. All shuttles must display signs of commercial design on both sides of the vehicle to identify the vehicle as belonging to the Contractor firm. The Contractor's name must appear in letters a minimum of two inches high. Magnetic signs are acceptable. The company name on the shuttle must match the company name on the driver's badge.

2. Interior: All shuttles shall be heated and contain seats that can withstand potential wear and tear from construction workers' tool belts. All shuttles shall be equipped with communication means between the shuttles and the Contractor's dispatching personnel. The rearview mirror, steering wheel, foot brakes, parking brakes, windows, interior lights and heating systems shall be functioning safely and properly. The seats, floor mats or carpet, seat belts (if so equipped), and door panels shall be clean and free of excessive wear.
3. Acceptable Operating Condition: Contractor shall keep the shuttles in proper working order. Contractor shall remove and repair or replace any vehicle that is not properly operating.
4. Acceptable Appearance: Contractor shall maintain the interior and exterior of all shuttles in a clean and attractive condition at all times, including repair of damage of any kind or character. Contractor shall remove any vehicle that the Port determines is unsightly. Contractor's employees or agents shall pick up trash in the shuttles throughout the day and properly dispose of it, and on a daily basis, sweep and/or vacuum the vehicle interiors as required, clean the glass as required, clean the grab bars as required, and clean the seats as required.
5. At the beginning and end of each scheduled shift the Contractor shall provide shuttle transportation for Contractor employees, subcontractors and suppliers between the designated loading/unloading area at the Contractor Parking Lot and the shuttle stop(s) located at the project site as approved by the Engineer. The location of shuttle stops is subject to change by the Port as necessary, depending on the particular construction projects in operation at any given time. Contractor is also responsible for transporting workers if they need to arrive or leave work prior to start or end of shift or otherwise return to the Contractor Parking Lot.
6. The Contractor shall have access to the airport by public and Port of Seattle roads as indicated on the drawings, or as otherwise designated by the Engineer.
7. Access to the Airport Operations Area (AOA) will be through Gate E-45 unless otherwise designated or approved by the Engineer. It may be used for the transportation of workers and deliveries in accordance with the requirements of Section 01 14 13 – Airport Personnel Identification/Access Control and Security, and Section 01 35.13.13 – Operational Safety on Airports During Construction. The Contractor shall be responsible for ensuring that the shuttle drivers do not allow the addition or removal of

people or items once the shuttle has departed the designated loading area at the Contractor Parking Lot and prior to arriving at the shuttle stop(s) located at the project site.

8. The Contractor shall be responsible for coordinating the start and finish times for all work shifts with shuttle operations for other projects in order to facilitate efficient staging of all shuttle operations at the Contractors Parking Lot and the projects shuttle stops. Contractor shall notify the Engineer of any schedule changes at least twenty-four (24) hours in advance whenever possible.
9. The Contractor shall cooperate and coordinate with other contractors' shuttle operations and the Port to ensure smooth and efficient operation of the construction shuttle operations for their specific project. Contractor shall comply with all direction provided by the Port regarding shuttle operations conducted at the Contractor Parking Lot, the Airport, and points in between.
10. The Contractor shall require its employees, subcontractors and suppliers to conduct themselves in a civil manner while utilizing the Contractors Parking Lot. While at the Airport, Contractor Parking Lot, or logistics site Contractor employees shall not use profanity, engage in any loud, boisterous, or otherwise offensive or disturbing speech or conduct, nor display any rudeness whatsoever to any person at the Airport.

NOTE TO ENGINEER: Include Paragraph Part 3 if the Contractor will have access to the Port's Logistics Area

PART 3 LOGISTICS (FIELD OFFICE/LAYDOWN AREA)

- 3.01 Space is available to the Contractor at the Port's Logistics site for field offices and laydown space. The use of this space is provided to the Contractor at no cost. The Contractor is responsible for all costs associated with permits and connecting to temporary utilities.
- 3.02 Reference attachment, 01 50 00 G CPL and Logistics Facilities, for location and layout of the Logistics Area.
- 3.03 The following space will be available to the Contractor from NTP to Physical Completion of the project:

NOTE TO ENGINEER: Work with Logistics Coordinator ([Logistics/CPL Coordination SharePoint Site](#)) to assign space as needed for the project. Remove the spaces listed below not assigned to the Contract

Lot	Space	Address	Area (SF)	Utilities Available			
				Power	Water	Sewer	Communication
Lot 1	A	2542 S 194th St SeaTac WA, 98188	8,772	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG1-2	Available	Available	CC-1.TRLR-A
Lot 1	B	2542 S 194th St SeaTac WA, 98188	6,300	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG1-3	Available	Available	CC-1.TRLR-B

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Lot 1	C	2542 S 194th St SeaTac WA, 98188	4,559	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG1-4	Available	Available	CC-1.TRLR-C
Lot 1	D	2542 S 194th St SeaTac WA, 98188	6,344	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG1-5	Available	Available	CC-1.TRLR-D
Lot 1	E	2542 S 194th St SeaTac WA, 98188	6,246	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG1-6	Available	Available	CC-1.TRLR-E
Lot 1	F	2542 S 194th St SeaTac WA, 98188	6,234	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG1-7	Available	Available	CC-1.TRLR-F
Lot 2	A	2624 S 194th St SeaTac WA, 98188	6,897	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG2-2	Available	Available	CC-2.TRLR-A
Lot 2	B	2624 S 194th St SeaTac WA, 98188	6,733	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG2-3	Available	Available	CC-2.TRLR-B
Lot 2	C	2624 S 194th St SeaTac WA, 98188	5,284	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG2-4	Available	Available	CC-2.TRLR-C
Lot 2	D	2624 S 194th St SeaTac WA, 98188	5,123	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG2-5	Available	Available	CC-2.TRLR-D
Lot 3	A	2708 S 194th St SeaTac WA, 98188	17,429	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG3-1	Available	Available	CC-3.TRLR-A1
				100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG3-2	Available	Available	CC-3.TRLR-A2
Lot 3	B	2708 S 194th St SeaTac WA, 98188	5,373	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG3-3	Available	Available	CC-3.TRLR-B
Lot 3	C	2708 S 194th St SeaTac WA, 98188	9,005	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG3-4	Available	Available	CC-3.TRLR-C
Lot 3	D	2708 S 194th St SeaTac WA, 98188	9,154	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG3-5	Available	Available	CC-3.TRLR-D
Lot 3	E	2708 S 194th St SeaTac WA, 98188	17,212	100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG3-6	Available	Available	CC-3.TRLR-E1
				100A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data Only
				SW3-LOG3-7	Available	Available	CC-3.TRLR-E2
Lot 4	A	2529 S 194th St SeaTac WA, 98188	6,370	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG4-1			CC-4.TRLR-A
Lot 4	B	2529 S 194th St SeaTac WA, 98188	5,894	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG4-2			CC-4.TRLR-B

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Lot 4	C	2529 S 194th St SeaTac WA, 98188	5,642	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-C
				SW3-LOG4-3			
Lot 4	D	2529 S 194th St SeaTac WA, 98188	5,390	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-D
				SW3-LOG4-4			
Lot 4	E	2529 S 194th St SeaTac WA, 98188	4,394	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-E
				SW3-LOG4-5			
Lot 4	F	2529 S 194th St SeaTac WA, 98188	4,595	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-F
				SW3-LOG4-6			
Lot 4	G	2529 S 194th St SeaTac WA, 98188	4,675	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-G
				SW3-LOG4-7			
Lot 4	H	2529 S 194th St SeaTac WA, 98188	8,316	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone CC-4.TRLR-H
				SW3-LOG4-8	Available	Available	
Lot 4	I	2529 S 194th St SeaTac WA, 98188	4,767	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-I
				SW3-LOG4-9			
Lot 4	J	2529 S 194th St SeaTac WA, 98188	4,768	100A	Not Available	Not Available	CenturyLink Data Only CC-4.TRLR-J
				SW3-LOG4-10			
Lot 4	K	2529 S 194th St SeaTac WA, 98188	8,332	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone CC-4.TRLR-K
				SW3-LOG4-11	Available	Available	
Lot 4	L	2529 S 194th St SeaTac WA, 98188	8,279	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone CC-4.TRLR-L
				SW3-LOG4-12	Available	Available	
Lot 4	M	2529 S 194th St SeaTac WA, 98188	7,286	Not Available	Not Available	Not Available	Not Available
Lot 5	A1	19332 24th Ave S SeaTac WA, 98188	6,274	100A	Not Available	Not Available	CenturyLink Data Only CC-5.TRLR-A1
				SW3-LOG5-1			
Lot 5	A2	19332 24th Ave S SeaTac WA, 98188	5,292	100A	Not Available	Not Available	CenturyLink Data Only CC-5.TRLR-A2
				SW3-LOG5-2			
Lot 5	A3	19332 24th Ave S SeaTac WA, 98188	5,053	100A	Not Available	Not Available	CenturyLink Data Only CC-5.TRLR-A3
				SW3-LOG5-3			
Lot 5	A4	19332 24th Ave S SeaTac WA, 98188	5,233	100A	Not Available	Not Available	CenturyLink Data Only CC-5.TRLR-A4
				SW3-LOG5-4			
Lot 5	B1	19332 24th Ave S SeaTac WA, 98188	5,407	100A	Not Available	Not Available	CenturyLink Data Only CC-5.TRLR-B1
				SW3-LOG5-5			
Lot 5	B2	19332 24th Ave S	5,389	100A	Not Available	Not Available	CenturyLink Data Only

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		SeaTac WA, 98188		SW3-LOG5-6		Available	CC-5.TRLR-B2
Lot 5	B3	19332 24th Ave S SeaTac WA, 98188	4,983	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-7			CC-5.TRLR-B3
Lot 5	B4	19332 24th Ave S SeaTac WA, 98188	5,311	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-8			CC-5.TRLR-B4
Lot 5	C1	19332 24th Ave S SeaTac WA, 98188	5,149	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-9			CC-5.TRLR-C1
Lot 5	C2	19332 24th Ave S SeaTac WA, 98188	5,348	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-10			CC-5.TRLR-C2
Lot 5	C3	19332 24th Ave S SeaTac WA, 98188	5,013	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-11			CC-5.TRLR-C3
Lot 5	C4	19332 24th Ave S SeaTac WA, 98188	5,322	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-12			CC-5.TRLR-C4
Lot 5	E	19332 24th Ave S SeaTac WA, 98188	8,769	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG5-13	Available	Available	CC-5.TRLR-E
Lot 5	F	19332 24th Ave S SeaTac WA, 98188	8,857	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG5-14	Available	Available	CC-5.TRLR-F
Lot 5	G	19332 24th Ave S SeaTac WA, 98188	8,758	150A	3/4" Stub-Up	4" Stub-Up	CenturyLink Data/Phone
				SW3-LOG5-15	Available	Available	CC-5.TRLR-G
Lot 5	H1	19332 24th Ave S SeaTac WA, 98188	2,074	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-16			CC-5.TRLR-H1
Lot 5	H2	19332 24th Ave S SeaTac WA, 98188	2,629	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-17			CC-5.TRLR-H2
Lot 5	H3	19332 24th Ave S SeaTac WA, 98188	2,439	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-18			CC-5.TRLR-H3
Lot 5	H4	19332 24th Ave S SeaTac WA, 98188	2,746	100A	Not Available	Not Available	CenturyLink Data Only
				SW3-LOG5-19			CC-5.TRLR-H4
Lot 5	I1	19332 24th Ave S SeaTac WA, 98188	2,921	Not Available	Not Available	Not Available	Not Available
Lot 5	I2	19332 24th Ave S SeaTac WA, 98188	3,271	Not Available	Not Available	Not Available	Not Available
Lot 5	I3	19332 24th Ave S	2,449	Not Available	Not Available	Not Available	Not Available

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 50 00 - Temporary Facilities and Controls

		SeaTac WA, 98188				Available	
Lot 5	I4	19332 24th Ave S SeaTac WA, 98188	2,485	Not Available	Not Available	Not Available	Not Available
Lot 6	A	17001 International Blvd SeaTac WA, 98188	8,620	100A, 200A	Not Available	Not Available	CenturyLink Data/Phone N/A
Lot 6	B	17001 International Blvd SeaTac WA, 98188	18,050	Multiple 100A	Not Available	Not Available	CenturyLink Data/Phone N/A
Lot 6	C	17001 International Blvd SeaTac WA, 98188	9,805	Multiple 100A	Not Available	Not Available	CenturyLink Data/Phone N/A

- A. The Contractor shall be responsible for all housekeeping and security within their assigned space in the Port’s Logistics Area and must keep all of their materials and equipment within their assigned area. The utility areas, as delineated, must remain clear at all times.
- B. Field offices and sheds in the Port’s Logistics Area shall be weather tight, with lighting, electrical outlets, heating, cooling and ventilation equipment. The Contractor shall be responsible for obtaining the required building and mechanical permits from the Airport Building Department. (Section 01 50 00 H ABD Construction Trailers Permit).
- C. Field offices, sheds, connex boxes, and other large equipment or storage items shall be marked with the Contractor’s name clearly identifying ownership.
- D. Removal of the field offices, sheds, and other equipment, including but not limited to restoration of the site and Logistics area utilities to pre-mobilization conditions (capping, safing and incorporation of lockout/tag-out protocols), shall be an element of Demobilization. (01 77 00 – Construction Project Closeout). Work shall not be deemed complete until accepted by the Engineer.
- E. The Contractor shall require its employees, subcontractors and suppliers to conduct themselves in a civil manner while utilizing the Logistics Area, the Contractor Parking Lot, or at other locations at the Airport. Contractor employees shall not use profanity, engage in any loud, boisterous, or otherwise offensive or disturbing speech or conduct, nor display any rudeness whatsoever to any person at the Airport.
- F. Lot Restrictions
 - 1. Stockpiling of earthwork material is prohibited in Lots 1 - 6.
 - 2. Chemical storage of any kind is prohibited in Lot 6.
 - 3. All equipment containing fuels or oils, stored for longer than 4 hours, shall have drip protection placed underneath.

3.04 Temporary Logistics Utilities

All costs associated with connecting, disconnecting, and permitting for electrical, water, communication, and sewer utilities are the responsibility of the Contractor. Cost of usage

for power, water, and sewer will be paid by the Port. The Contractor is responsible for all costs associated with communication and data.

A. Electrical

1. Power is provided by the Port through either a 100 amp, 150 amp, or 200 amp disconnect, depending upon the site assigned. The following steps are required to connect to the Port's Logistics electrical system.
 - a. The contractor shall submit an Application for Electrical Connection (Attachment 01 50 00 A Application for Electrical Connection) to the Engineer.
 - (1) Electrical Load Calculations, Site Plan, General Arrangement Drawings are required. 30 Day/7 Day metering recordings are not required for Logistics Site connections.
 - b. Once approved, the Contractor is required to obtain an electrical permit and make the connection to the Port's disconnect that is located within the assigned Logistics space.
 - c. The Contractor shall then have Labor and Industries inspect the connection and supply their sticker of approval.
 - d. The Contractor shall then inform the Engineer that the system is ready to be energized. The Port will perform a final inspection and remove the Port lock from the disconnect. It is then the responsibility of the Contractor to energize the system.
2. Before disconnecting power service, notify the Engineer 14 days in advance. De-energize the system and remove all Contractor installed equipment and material back to the disconnect. Secure and cap openings to the disconnect. Notify the Engineer for final inspection.

B. Water

1. Water, if available, is provided by a ¾" Stub-Up. The following steps are required to connect to the Ports Logistics water system.
 - a. The Contractor is required to submit a Facilities Water Activation Request (Attachment 01 50 00 D Facilities Water Activation Request) to the Engineer.
 - b. Once approved, the Contractor is required to make the connection to the ¾" Stub-Up that is located within the assigned Logistics Site. Before opening the valve, the connected system must be flushed and disinfected by the Contractor.
 - c. Disinfection Process: The Port Boiler Shop is required to observe the disinfection and flushing procedure. Coordinate all activities with the Engineer.
 - (1) The Contractor will install temporary valves at all ends of the new piping system for sterilizing, flushing and sampling activities.
 - (2) Flush the piping system and perform system pressure testing at 200 psig or 1-1/2 times the working pressure (whichever is greater).

- (3) Flush piping system from one end to the other end(s) of piping system to ensure the entire system is flushed out.
 - (4) Drain the new piping system and fill with water. Add sufficient chlorine (sodium hypochlorite, bleach solution or calcium hypochlorite) so that the system will achieve a minimum of 50 mg/L (ppm) chlorine concentration from one end of the piping system to the other end(s) of piping. Exercise all valves and movable parts of the system to ensure they all are sanitized. Port Boiler Shop will verify chlorine levels to begin sterilization.
 - (5) Sterilize for a minimum of 24 hours. Residual chlorine shall have a minimum of 25 mg/L. Port Boiler Shop will verify chlorine levels. Drain and flush the entire system, from one end of the piping system to the other end(s) of piping. Dispose of disinfecting water in an approved environmentally safe manner.
 - (6) The Port Boiler Shop will check residual chlorine levels at the end of the flushing activities. If chlorine level is above 1.5 mg/l, additional flushing is needed. If chlorine level is below 1.5 mg/l, (but above 0.3mg/L) non-routine purity sample(s) will be collected by the Port Boiler Shop and sent to the lab for analysis at the Port's expense. Sampling can only be conducted between Monday and Friday, 7:00 AM thru 11:59 AM. Allow 3 to 5 working days for results from purity test to be obtained.
 - (7) When samples have passed, the Contractor can then connect to Port's existing water system.
 - (8) The Point of Connection will be "swabbed" with (at least 5%) chlorinated water. Port Boiler Shop shall witness the swabbing and connection activities.
 - (9) If, in the opinion of the Port Boiler Shop representative, sanitary conditions are not maintained at the point of connection, the new piping system will be flushed and sterilized again.
 - (10) If the sample fails analysis, a second sample shall be taken and analyzed. Failure of the second sample will initiate re-chlorination and 24-hour "bake" time followed by flushing, testing etc.
- d. Before disconnecting water service notify the Engineer 14 days in advance. Close the valve and removal all Contractor installed equipment and material back to the Stub-Up. Notify the Engineer for final inspection.

C. Sewer

1. A sewer connection, if available, is provided by a 4" Stub-Up. The following steps are required to connect to the Port's Logistics sewer system.

- a. Obtain a Midway Sewer Side Sewer Permit prior to connecting to the sewer system. Information on the Side Sewer Permit can be found at: <http://www.midwaysewer.org>
 - b. Disconnecting from the sewer system requires a Midway Sewer Capping Permit. Information on the Midway Sewer Capping Permit can be found at: <http://www.midwaysewer.org>
- D. Communication and Data
- 1. Where available, telephone (copper) and data services are provided by CenturyLink. The contractor is responsible for arranging services by contacting CenturyLink Enterprise Business Accounts at (206) 733-5277. Notify the engineer when obtaining service from CenturyLink and connect to either the Port Demark Box or CenturyLink Utility Box, whichever is located within the assigned Contract space. Connections to the Ports Demark Box require coordination with Port ICT via the Engineer to activate service.
 - 2. Before disconnecting communication service notify the Engineer 14 days in advance. Disconnect and remove all Contractor installed equipment and material back to the Port Demark Box or CenturyLink Utility Box. Notify the Engineer for final inspection.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

SECTION 01 50 00A – APPLICATION FOR CONNECTION TO ELECTRICAL SYSTEM

PORT OF SEATTLE

SEA-TAC INTERNATIONAL AIRPORT

APPLICATION FOR CONNECTION TO **ELECTRICAL SYSTEM For Temp Construction Power**

No connections will be allowed without an approved 'Application for Connection' form.

1. PURPOSE of the 'Application for Connection'

The information provided via the 'Application for Connection' form allows AV Facilities & Infrastructure (AV/F&I) to work with the project teams to achieve the most effective point of connection for the proposed service/load while maintaining system integrity.

The 'Application for Connection' form provides:

- a. A formalized procedure for making connections to the existing electrical system
- b. The ability to assess the impacts of additional services/loads on the system
- c. The ability to identify the point of connection
- d. The ability to reserve the point of connection for the approved service/loads
- e. The ability to establish and maintain configuration control of the system and plan for the long-term system development to meet the needs of Sea-Tac International Airport

2. WHO's involved with the 'Application for Connection'

- a. The Contractor is responsible for:
 - The proposed Temp Power connection.
 - Obtaining the required information
 - The timely submission of the 'Application for Connection.

3. HOW to complete an 'Application for Connection'

- a. The 'Application for Connection' must be filled out in detail to include:
 - Complete details for project accounting purposes
 - Detailed description of the project scope
 - Detailed description of the proposed connections to the existing systems

Note: each panel requires its own Application for Connection form
- b. The 'Application for Connection' should include, but is not limited to the following information and/or attachments:
 - Electrical Load Calculations
 - Electrical Panel Schedule
 - General Arrangement Drawing
 - Electrical One-Line Diagram
 - Lighting Calculations
 - Voltage Drop Calculations
 - Conduit and Wire Schedule
 - Proposed Equipment and Luminaire Submittals
 - Pre-Design Electrical Load Study
 - 30 Day Meter Readings – Summary Sheet is OK
 - Spot Meter Readings – Summary Sheet is OK
 - Site Plan and Building Plan

It is understood and recognized that all of the information identified will not be available at the early stages of the project, **but by the later stages of the project the requested information is required.**

- c. The filled out 'Application for Connection' can be submitted via:
 - The Resident Engineer.

SECTION 01 50 00A – APPLICATION FOR CONNECTION TO ELECTRICAL SYSTEM
PORT OF SEATTLE
SEA-TAC INTERNATIONAL AIRPORT
APPLICATION FOR CONNECTION TO ELECTRICAL SYSTEM For Temp Construction Power
No connections will be allowed without an approved 'Application for Connection' form.

FOR PANEL:

Received: _____

Send Applications to: AVCommittees@portseattle.org

SECTION 1 (to be completed by POS Project Manager)									
Project/Tenant Information									
Date	CIP #	Project #			Activity	Phase			
Project Title									
Project Description									
Drawings to Design Review	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>					
Project Submitted to PEST	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Date				
Breaker Reservation	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Sticker #				
Airport Tenant Company									
Contact Person				Phone:		Fax:			
Address									
		Street Address	City	State	Zip Code				
Billing Address									
		Street Address	City	State	Zip Code				
Project Sponsor									
Location of Service									
POS Project Manager									

SECTION 2 (to be completed by consultant)									
Consultant Information									
Design Firm									
Design Project Manager				Phone:					
Lead Design Engineer				Phone:					
Indicate all documentation that will be included with this application, as applicable:									
<input type="checkbox"/> Electrical Load Calculations	<input type="checkbox"/> Conduit & Wire Schedule	<input type="checkbox"/> Pre-design Electrical Load Study							
<input type="checkbox"/> Lighting Calculations	<input type="checkbox"/> Electrical Panel Schedule	<input type="checkbox"/> 30 Day Meter Readings, Summary is OK							
<input type="checkbox"/> Voltage Drop Calculations	<input type="checkbox"/> General Arrangement Drawing	<input type="checkbox"/> Spot Meter Readings, Summary is OK							
<input type="checkbox"/> Electrical One-Line Diagram	<input type="checkbox"/> Proposed Equip & Luminaire Submittals	<input type="checkbox"/> Site Plan & Building Plan							
Connection Details									
1. Load Requirements									
	New	Replaced	Net						
Connected KVA:									
Demand KVA:									
Emergency KVA:									
2. Schedule Design Completion Date:									
3. Schedule Need Date for Power Connection									
4. Permanent Load	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>					
5. Temporary Load	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>	Disconnect Date/or Duration:				
6. Revenue Meter Requirement	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>					
7. Estimated Power Factor(.95 Port Standard)									
8. Power Factor Correction Added?	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>					
9. Are Harmonic Generating Loads Present?	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>					
<i>If Yes, Actions Taken to Prevent Harmonics Problems</i>									
10. Panel Serving Load									

RF Application and Approval Form

See Instruction Sheet to Complete Form

Applicant Information

Applicant Name			Application Date		
Last	First	Middle	Month	Day	Year
Job Title					
Company Name					
Address					
City		State		Zip Code	
Telephone		Fax		Email	
Signature of Applicant				Date	

Port of Seattle Approval (Port Use Only)

Port of Seattle Approval			Effective Date		
Last	First	Middle	Month	Day	Year
Job Title					
Port of Seattle Approval Organization					
Telephone		Fax		Email	
Signature of Approver				Date	

Exemptions and Exceptions (Port Use Only)

Exemption Requested		Exemption Granted		Date Approval/Denial
Yes	No	Yes	No	
Description of Exemption (Use Additional Page if Necessary)				

Description of Exceptions (Use Additional Page if Necessary)

FCC License Information

FCC Permit Authority Required				Yes	No 1
FCC Applicant Name			FCC Application Date		
Last	First	Middle	Month	Day	Year
Job Title					
Company Name					

Address

City		State		Zip Code	
Telephone		Fax		Email	
FCC Approval Date		FCC Granted Effective Date		Granted Valid End Date	
FCC License Type		Copy of FCC License Submitted		Copy of FCC Test Data Submitted	
Permanent	Temporary	Yes	No	Yes	No
Date Copy of FCC License Submitted			Date Copy of FCC Test Data Submitted		
Month	Day	Year	Month	Day	Year

EVIDENCE REQUIRED

FCC Test Data Applicant Information

Test Data Contact Name			Test Data FCC Submittal Date		
Last	First	Middle	Month	Day	Year
Job Title					
Company Name					
Address					
City		State		Zip Code	
Telephone		Fax		Email	
FCC Equipment Identifier			Compliant FCC Rules		
Summary of Test Data Results (Use Additional Page if Necessary)					

FCC Test Data Equipment Information

Installation and Operating Instructions

Type of Emission

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 50 00 B - RF Application and Approval Form - Application Number - [____]

Frequency Range

Range of Operating Power

Maximum Power Rating

DC Voltages and Current



Seattle-Tacoma International Airport

Instructions
for
RF Application and Approval From

General Information:

The Port of Seattle Seattle-Tacoma International Airport shall issue the RF Application Number once the completed application package is received.

The following submittals must accompany this application form.

- A copy of FCC license
- A copy of FCC test data results
- A set of technical data sheet for the RF equipment and systems
e.g. system specification
- A copy of RF emission test results
- A narrative description of the RF equipment installation location

For assistance with the RF application form and application process, please contact Julie Chen at 206-439-6650.

An incomplete application package is ground for immediate denial by the Port of Seattle Seattle-Tacoma International Airport.

Applicant Information:

All applicants must complete this section. Incomplete information is ground for denial.

All applicants must provide a single point of contact for this application. The point of contact shall be responsible for completing the following section:

- FCC license information
- FCC test data results information,
- FCC test data equipment information,
- RF services information,
- RF equipment installation information,
- RF equipment and services user information.

The name, job title, representing company name, address, telephone number, fax number, and email address of the point of contact must be provided. The point of contact must sign and date the application form.

If the applicant company is different from the company indicated in the FCC license information section, supporting documentation must be provided to indicate the delegation of responsibilities and the right to use the FCC license within the Airport premises from the licensed company.

Port of Seattle Approval:

Do not fill in this section. This section is for Port of Seattle use only.

Exemptions and Exceptions:

Do not fill in this section. This section is for Port of Seattle use only.

FCC License Information:

All applicants must complete this section. Incomplete information is ground for denial.

All applicants must submit a copy of the FCC authority permit/license as part of this application. If FCC authority permit/license is not required, the applicant must supply documentation to support this claim. In the case where a FCC license is still pending, the applicant must submit a copy of the pending application and indicate when the applicant will submit a copy of the approved FCC license.

Furthermore, the date when the application is filed, the FCC approval date, the effective dates must be clearly indicated in this section. If the FCC license and test data results have been previously submitted to the Port of Seattle Seattle-Tacoma International Airport, the date of the submittal must be indicated.

The name, job title, representing company name, address, telephone number, fax number, and email address of the FCC license applicant must be provided.

FCC Test Data Application Information:

All applicants must complete this section. Incomplete information is ground for denial.

All applicants must submit a copy of the FCC test data results as part of this application. The designated FCC equipment identifier, the FCC rules applied to, and a summary of the test data results must be included. If FCC test data is not required, the applicant must submit documentation to support this claim.

The name, job title, representing company name, address, telephone number, fax number, and email address responsible for the FCC test data result must be provided.

FCC Test Data Equipment Information:

All applicants must complete this section. Incomplete information is ground for denial.

Installation and Operating Instructions, Type of Emission, Frequency Range, Range of Operating Power, Maximum Power Rating, and DC Voltages and Current must be included.

Installation and operation instruction consists of installation and operational manual. If the manual(s) are not available, a draft copy of the manual(s) must be provided, and the published copy submitted at a later date. Please indicate clearly on the application form the final delivery date.

The type of emission including the necessary bandwidth must be indicated. For example, emission is K1D with a bandwidth of 714 K.

The operational frequency ranges must be clearly indicated. For example, 2.453 – 2.481 GHz.

The range of operating power is the output power of the system equipment.

The maximum power rating must be consistent with the FCC rules the equipment is tested to.

The DV voltages and current indicates the final amplification stage of the units operating at ## VDC and draws ## amps of current.

RF Equipment Installation Information:

All applicants must complete this section. Incomplete information is ground for denial.

All applicants must provide a single point of contact for installation. If the installation company is different from the company indicated in the applicant information section, supporting documentation must be provided to indicate the delegation of responsibilities.

The applicant must clearly indicate the proposed start and end dates for the installation. Furthermore, the proposed service cutover date must be included, and RF service information must be completed.

A narrative description of the installation locations must be provided, the number of installations stations/locations clearly indicated. The longitude, latitude, height and frequency range of each installation station/location must be provided.

The name, job title, representing company name, address, telephone number, fax number, and email address of the point of contact must be provided.

RF Service Information:

All applicants must complete this section. Incomplete information is ground for denial.

All applicants must provide a point of contact for RF service. If the RF service company is different from the company indicated in the applicant information section, supporting documentation must be provided to indicate the delegation of responsibilities.

Each application type of RF service provided must be clearly indicated – voice, data, two-way message, etc.

The applicant must clearly indicate the proposed start and end dates for the service provided. Furthermore, the sponsoring organization must be provided, including name of the sponsoring organization, address, and a central point of contact from the sponsoring organization. The name, job title, representing company name, address, telephone number, fax number, and email address of the point of contact must be provided. When no sponsoring organization is provided, the owner of the RF service must be provided.

RF Equipment & Service User Information:

All applicants must complete this section. Incomplete information is ground for denial.

All users of the RF equipment and service must be clearly identified. Please provide a central point of contact for each user. Use additional sheet when necessary.



Work Project Number #: _____ - _____ Activity: _____ Resource Cat/Type: _____

Airport Facilities–Water Activation Request

REQUESTS MUST BE APPROVED NO LATER THAN 7 DAYS PRIOR TO ACTIVATION

Date of Request:	Date of Activation: Start Time: _____ End Time: _____
Connection Number:	Connection Size:
Contractor Contact:	Phone No.:
Inspector:	Phone No.:
Contractor performing work:	Phone No:
Buildings & Area to be Activated (Accurate Description Required):	

APPROVALS

Boiler Shop: (Must be 1st contact prior to manager’s signature):

POS Water Manager (Facilities & Infrastructure):

POS Aviation Mechanical Utilities Manager (Maintenance):

Other:

FOR DEPARTMENT USE ONLY:

Comments:

PLEASE RETURN A COPY OF THE COMPLETED SIGNATURE FORM TO ALL SIGNEES

****RESULTS MAY TAKE UP TO 4 DAYS AFTER TEST SAMPLES SUBMITTED****

List of Appropriate Systems Contacts

Maintenance Domestic Water

Erik Knowles	787-4117	787-4902 fax
Dan Hytry	787-7231	787-4902 fax
Doug Sinclair	787-7839	787-4938 fax
James Jackson	390-7451	787-4938 fax
Tracy Jonassen	735-9840	787-7221 fax

Facilities and Infrastructure

Mike Smith	787-4815	787-5515 fax
Paul Shen	787-5870	787-5515 fax
Bob Romero	787-3290	787-5515 fax

Utilities Manager

Greg Whiting	787-5117	787-5515 fax
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Field Crew

Eric Schaefer	787-4047	787-5188 fax
Todd Hacke	787-6893	787-5188 fax

Fire Department

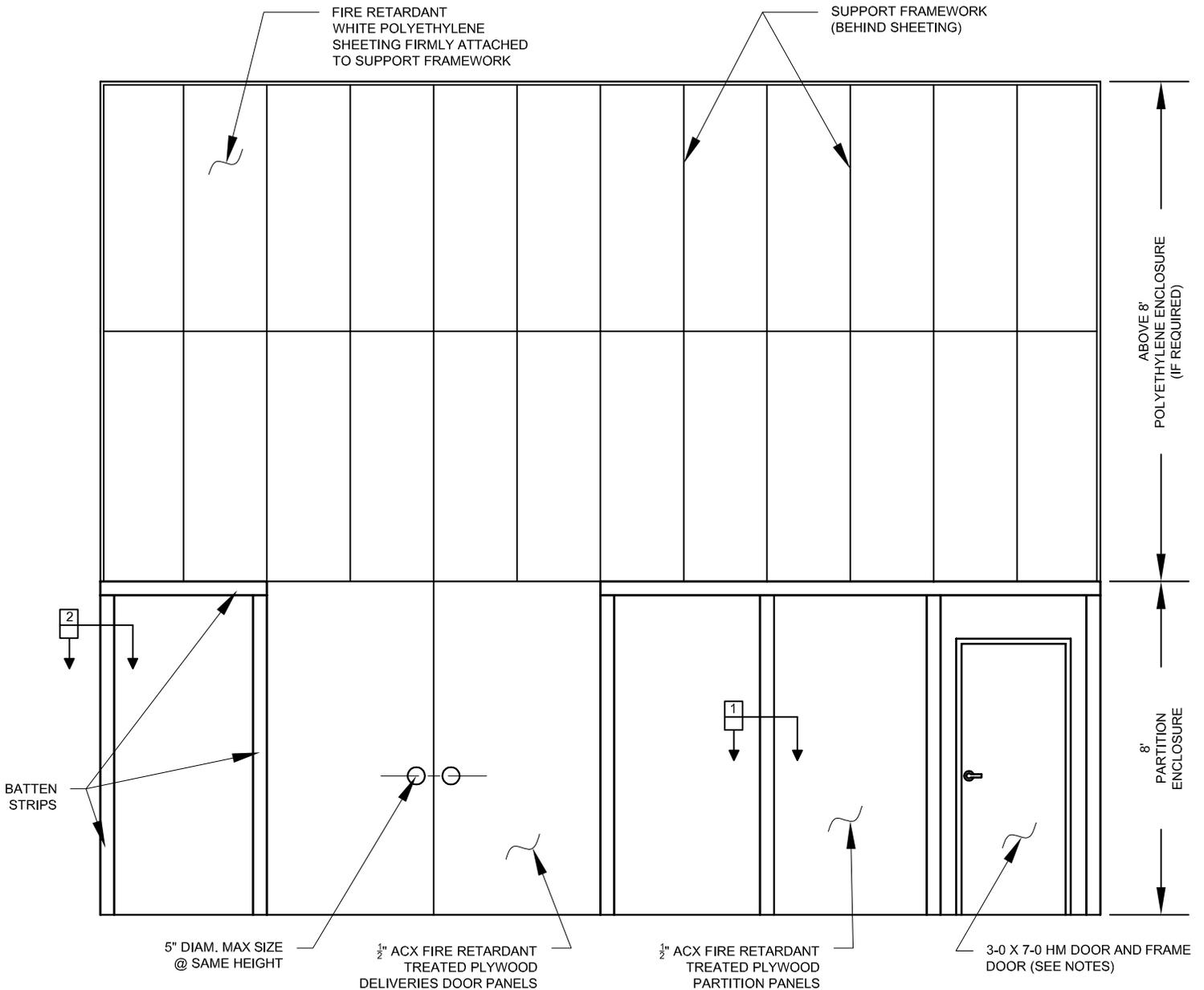
Jeff Nelson	787-6774	787-4908 fax
Adam Griffin	771-2917	787-4908 fax

Airport Operations

Nick Terrana	787-4903	787-4837 fax
	714-5075	cell
Andy Ramsay	787-5187	787-4837 fax
	437-6323	cell

DIVISION 1 - GENERAL REQUIRMENTS

Attachment 01 50 00 E Elevation



NOTES:

1. PAINT FOR ALL EXPOSED WOOD SURFACES, DOORS, FASTENERS, HINGES, AND OTHER HARDWARE SHALL BE LOW ODOR INTERIOR LATEX-SEMI-GLOSS, 2 COATS MINIMUM, COLOR-PORF WHITE.
2. ALL DOORS SHALL SWING INTO THE CONSTRUCTION WORK SPACE.
(IF OCCUPANCY IS GREATER THAN 49 PERSONS DOORS SHALL SWING OUTWARD.)
3. DOUBLE DOORS ARE FOR DELIVERIES ONLY AND ARE TO REMAIN LOCKED OTHERWISE.
3-0 X 7-0 HM DOOR IS FOR PERSONNEL ACCESS.
4. DOOR HARDWARE PROVIDE:
HINGES-1-1/2" PR 4-1/2"x4-1/2", CLOSER, LOCKSET (7-PIN STANLEY/BEST COMPATIBLE INTERCHANGEABLE SMALL FORMAT REMOVABLE CORE CYLINDERS). ACCEPTABLE MANUFACTURERS: STANLEY/BEST, SCHLAGE, FALCON OR APPROVED EQUAL .

ELEVATION

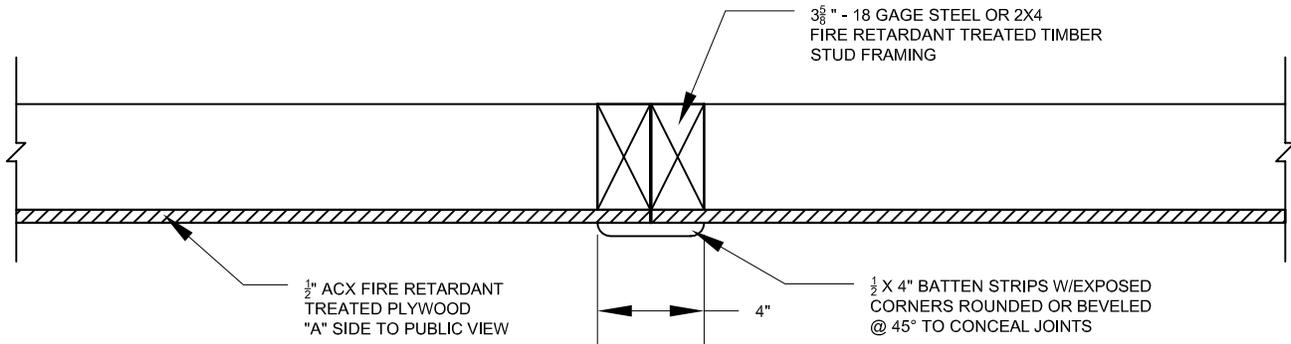
TYPICAL ENCLOSURE

(rev: 19 March 2014)



DIVISION 1 - GENERAL REQUIREMENTS

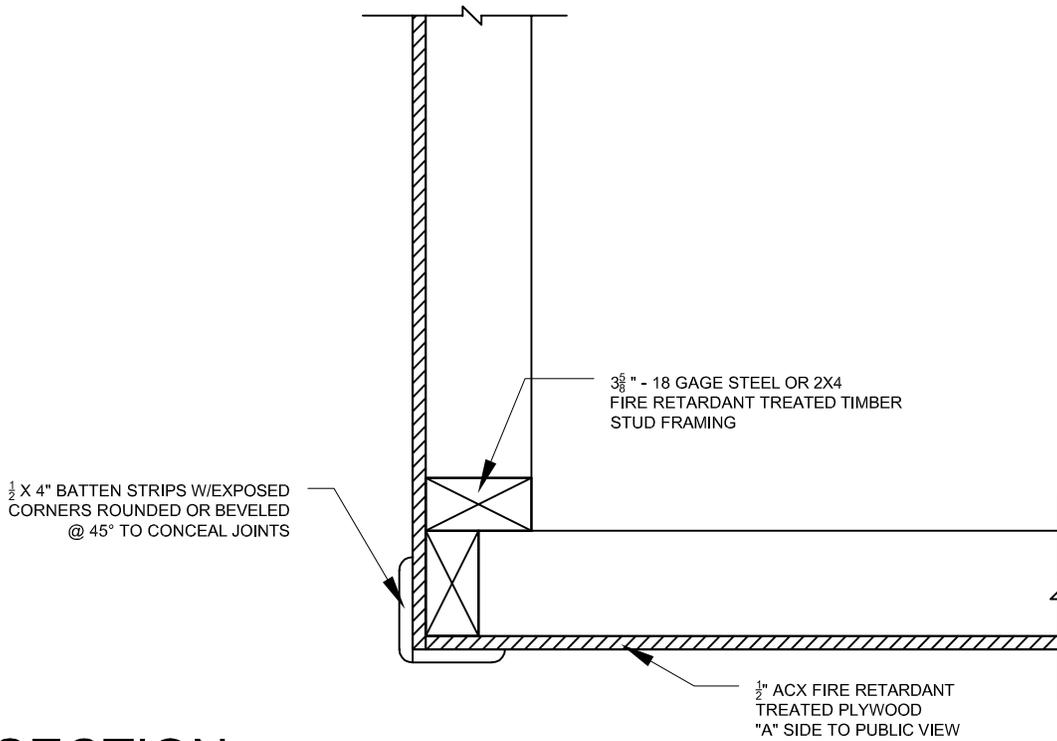
Attachment 01 50 00 F Section Model



SECTION

TYPICAL PARTITION JOINT
(rev: 04 NOVEMBER 2013)

1

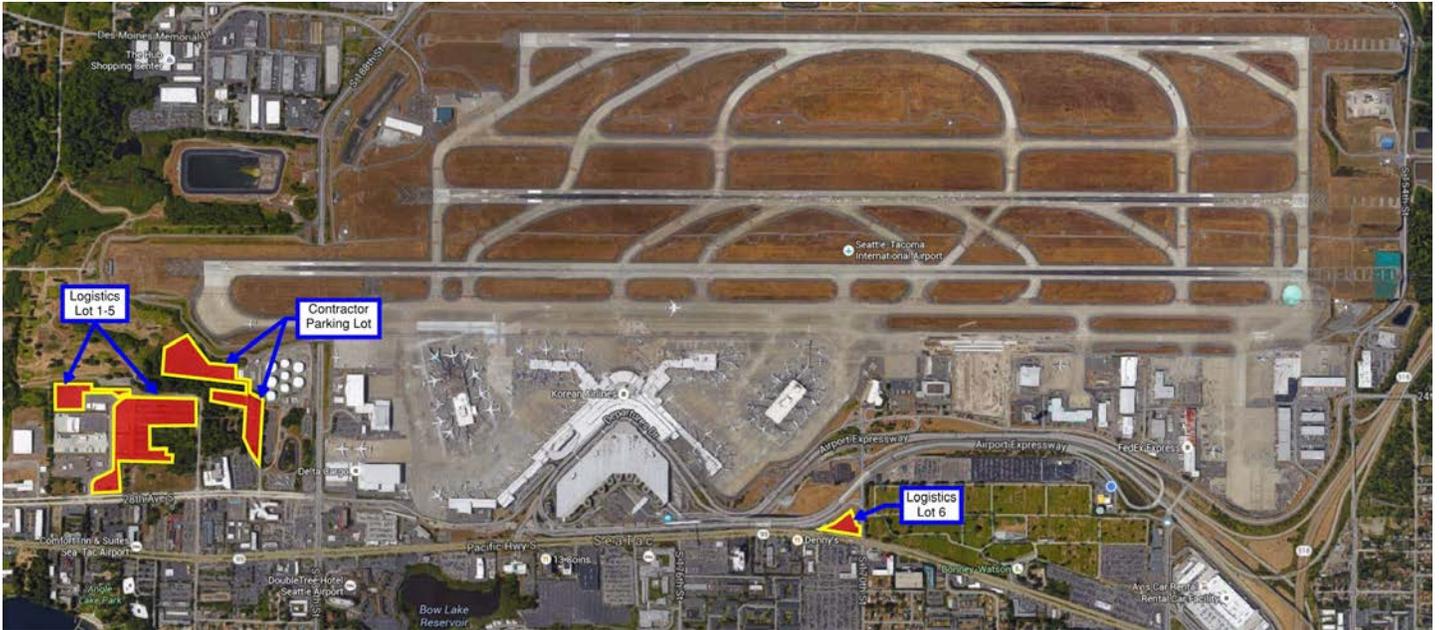


SECTION

TYPICAL PARTITION CORNER
(rev: 19 March 2014)

2

Attachment 01500G
Contractor Parking Lot (CPL) and Logistics Facilities



CONTRACTOR PARKING LOT

The Contractor Parking Lot is located at 19020 28th Avenue South, SeaTac WA, 98188. Access to the lot is via 28th Ave S and requires an access card.



LOGISTICS AREA - FIELD OFFICES AND LAYDOWN AREAS

The Port's Logistics Areas are located at the following locations:

17001 International Blvd SeaTac WA, 98188



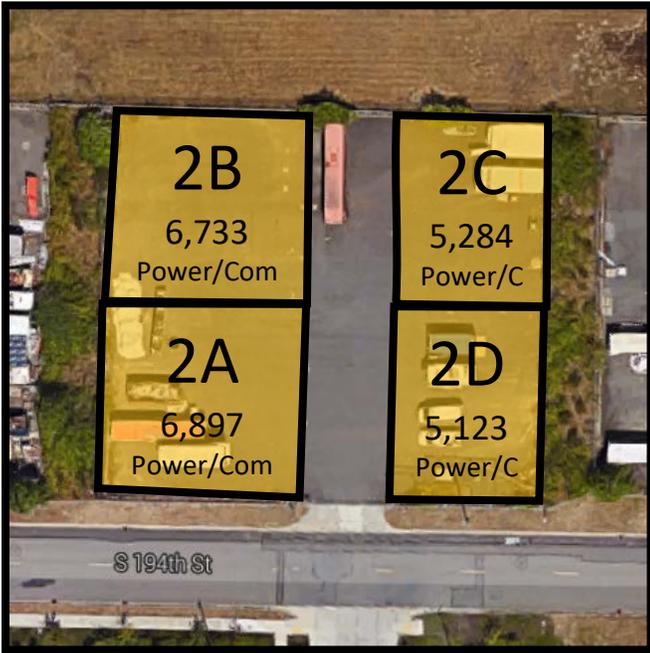
Port of Seattle South Logistics Area



Lot 1 - 2542 S 194th St SeaTac WA, 98188



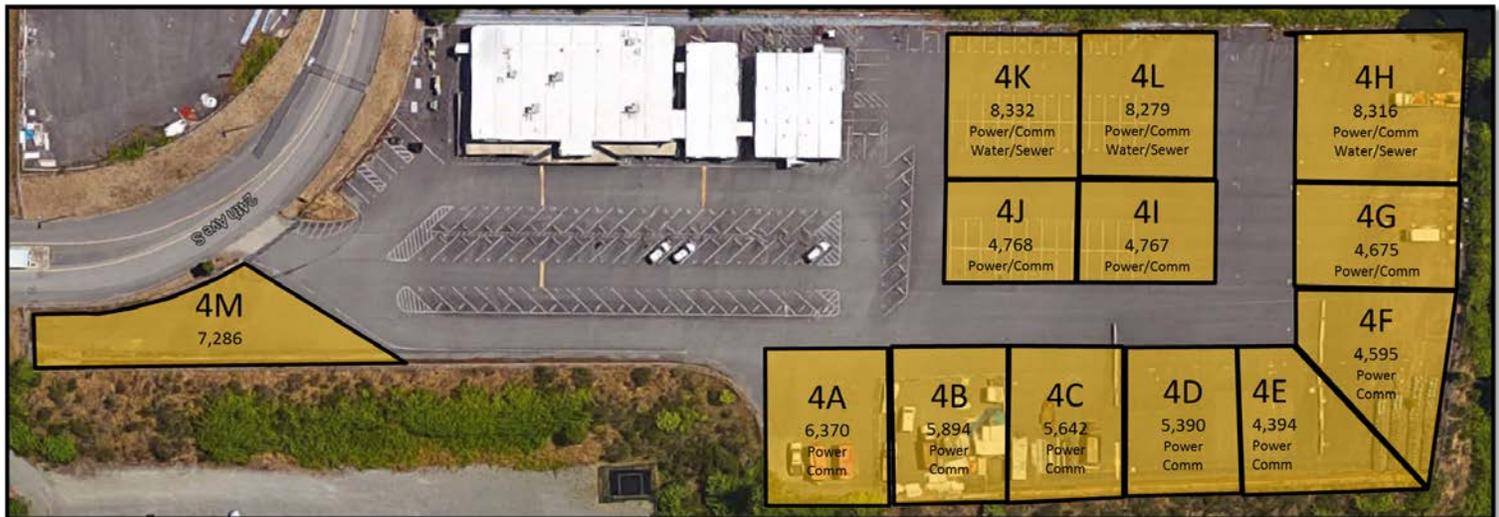
Lot 2 - 2624 S 194th St SeaTac WA, 98188



Lot 3 - 2708 S 194th St SeaTac WA, 98188



Lot 4 - 2529 S 194th St SeaTac WA, 98188



Lot 5 (A-C) - 19332 24th Ave S, SeaTac WA, 98188



Lot 5 (E-I) – 19332 24th Ave S, SeaTac WA, 98188



Lot 6 - 17001 International Blvd SeaTac WA, 98188

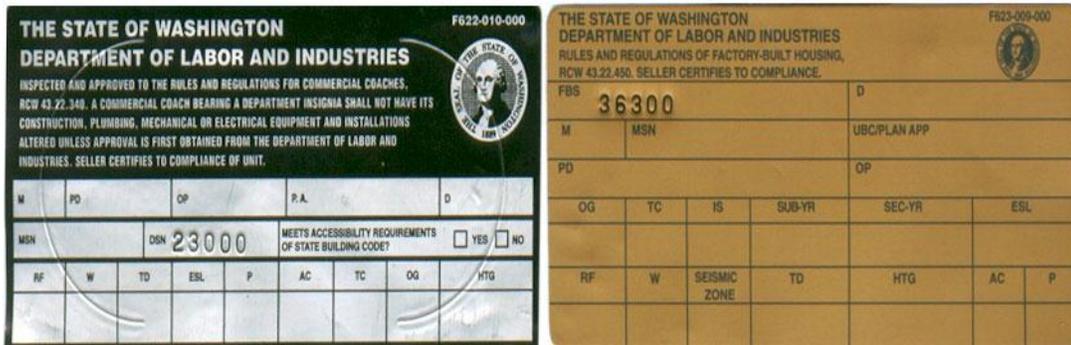


AIRPORT BUILDING DEPARTMENT (ABD)

Construction Trailers

A permit is required for any construction trailer or structure (See exemptions from permit below)

1. To begin the permit process, please complete a building permit application and, if applicable, a mechanical/plumbing permit application and submit to the Airport Building Department, with following:
 - a. 2 plot plans that show the location of the trailer relative to other buildings and structures and property lines.
 - b. 2 copies of trailer installation instructions which should include tie downs & skirting and access panel(s) to the under floor area.
 - c. 2 copies of drawings that indicate how access to and egress from the structure is provided.
 - i. For occupant loads 49 or less, a code compliant landing & stairway, or ramp is required.
 - ii. For occupant loads of 50 or more, a minimum of 2 exits are required. At least one of the two exits **shall** have a code compliant ramp (see attached typical ramp details).
 - iii. A minimum of one code compliant access ramp is required if the intended use of the trailer is **outside of general operational purposes traditionally conducted within a construction site trailer** (i.e. a ramp is required if the trailer will be used to hold owner’s meetings, preconstruction meetings, etc), **and/or the trailer is connected to plumbing utilities.**
2. The trailer/structure must bear a Washington State black or gold insignia similar to the images below:



<http://www.lni.wa.gov/TradesLicensing>

Construction Trailers Exempt from Permit:

Trailers located on associated construction site and:

1. The trailer has no sewer or water connection. Power connected from a temporary power pole is permitted.
2. The trailer is not intended to hold meetings where outside personnel will be attending (owner’s meetings, preconstruction meetings are examples of outside personnel).

Note: The trailer must be removed once the construction project is complete.

Trailers located off the construction site and:

1. Trailer will be in place less than 6 months.
2. The trailer has no sewer or water connection. Connecting power is permitted.
3. The trailer is not intended to hold meetings where outside personnel will be attending (owner’s meetings, preconstruction meetings are examples of outside personnel).

Note: A letter stipulating the time, duration, and use of the construction trailer must be provided to ABD for this exception to be granted.

CODE COMPLIANT STAIR REQUIREMENTS:

Handrails: Handrails are required for both the stairway (if used) and ramp. They need to be placed within 34" to 38" above the walking surface and have to be 1-¼" to 2" in diameter or provide equivalent gripping surface (a 2 x 4 on edge is not acceptable). The handrail must extend horizontally at least 12" beyond the top riser & one tread depth beyond the bottom riser.

Riser height and tread depth: Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the nosing of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's nosing.

Dimensional uniformity: Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3 /8 inch (9.5 mm) in any flight of stairs. The greatest winder tread depth at the walk-line within any flight of stairs shall not exceed the smallest by more than 3 /8 inch (9.5 mm).

Exception: Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of stair width. The nosing or leading edges of treads at such non uniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of not less than 1 inch (25 mm) but not more than 2 inches (51 mm).

Landings at doors: Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). Where a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

Thresholds: Thresholds at doorways shall not exceed 1/2 inch (19.1 mm) in height above the finished floor or landing. Raised thresholds and floor level changes greater than 1 /4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Guards: Guards shall be located along open-sided walking surfaces, stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side.

The guard height shall be a minimum of 42" and has to have intermediate pickets spaced such that a 4" diameter object does not go through the pickets/railing. In areas that are not open to the public, guards shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

CODE COMPLIANT RAMP REQUIREMENTS:

RAMPS

- Ramp surfaces are stable, firm, and slip resistant.
- Exposed exterior ramps and their approaches are constructed to prevent the accumulation of water on walking surfaces.
- Ramps used as part of means of egress have a maximum slope of 1:12.
- The maximum rise for any run is 30 inches.
- Ramp cross slopes are not steeper than 1:48.
- Ramps may not be less than the required exit width, with a minimum dimension of 36" between the handrails for interior ramps, and 44" for exterior ramps.
- Headroom at all parts of the means of egress is not less than 80 inches.

RAMP AND LANDING EDGE PROTECTION

- Any portion of the edge of a ramp with a slope greater than 1:20, or landing which is more than ½ inch above the adjacent grade or floor within 10 inches horizontally, requires edge protection.
- Edge protection is required on each side of ramp runs and at each side of ramp landings, by a curb or barrier or by extended floor surface. (An extended floor surface occurs when the surface of ramp or landing extends 12 inches minimum beyond the inside face of a railing.

Exceptions:

- Edge protection is not required on ramps not required to have handrails, provided they have flared sides complying with ICC/ANSI A117.1 2009 406.3 Sides of Curb Ramps.
- Edge protection is not required on sides of ramp serving an adjacent ramp run or stairway.
- Edge protection is not required on sides of ramp landings with vertical drop-off not more than ½ of an inch within 10 inches horizontally of the minimum landing area.

Edge protection options:

1. A curb or barrier is required that prevents passage of 4 inch sphere below the height of 4 inches.
2. Railings: When used, railings are required to have one of the following features:
 - a. An intermediate rail mounted 17-19 inches above the ramp or landing surface.
 - b. A guard complying with IBC 1013
 - c. The surface of the ramp or landing extends 12 inches beyond the inside face of the railing.

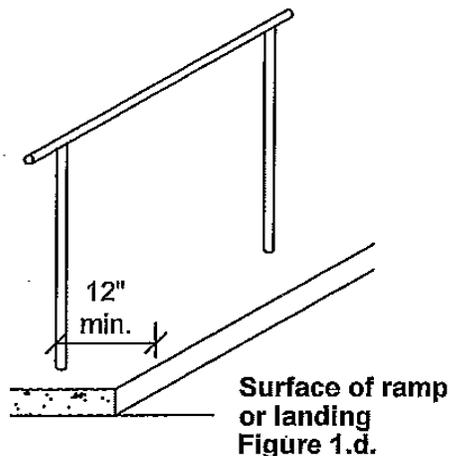
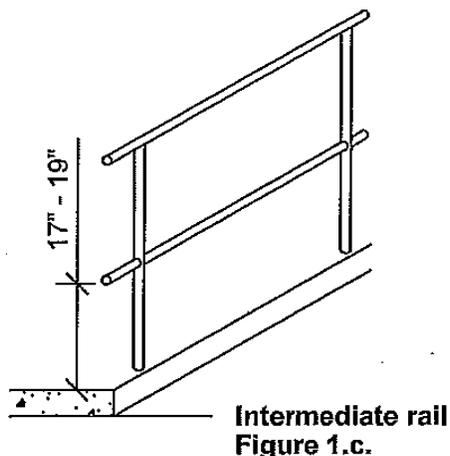
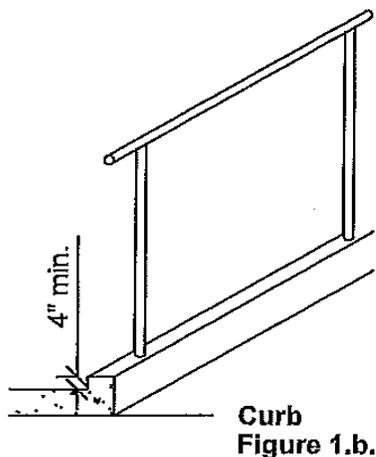
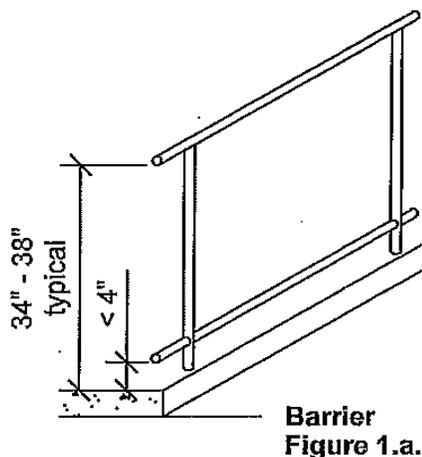
LANDINGS

- Ramp surfaces are stable, firm and slip resistant.
- Exposed exterior ramps and their approaches are constructed to prevent the accumulation of water on walking surfaces.
- Ramps within the accessible route of travel shall have landings at the top and bottom, points of turning, entrance, exits and doors and at least one intermediate landing for each 30 inches of rise with a minimum dimension of 60 inches in the direction of the ramp run.
- Ramps that change direction at landings shall have landings sized to provide a 60 inch turning space (60 X 60 inches) or a T-shaped intersection 60 inches long by 36 inches wide (36 inches wide at each arm of T)
- The minimum width of the landing is as wide as the widest ramp leading to the landing.
- Landings shall not slope more than 1:48.
- Maneuvering clearances for doors can overlap the landing area where doorways are adjacent to the ramp.

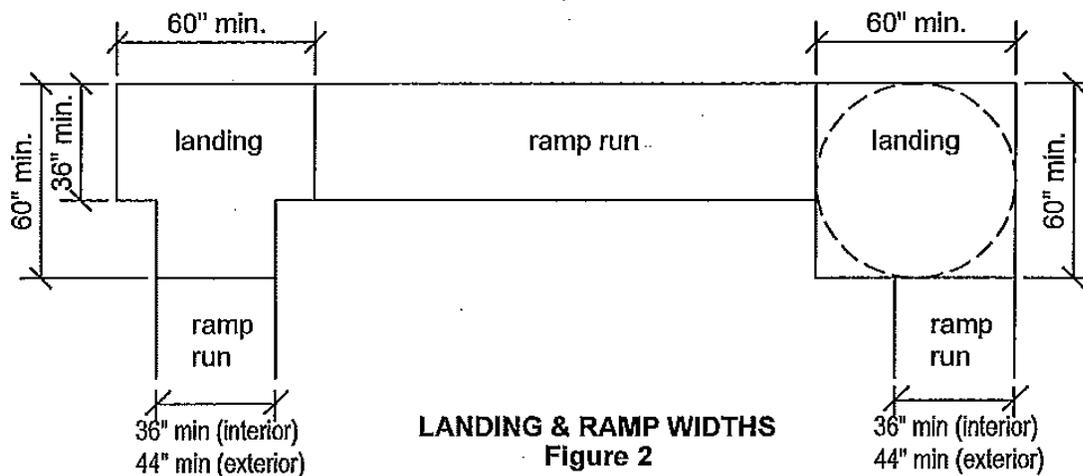
HANDRAIL AND GUARD REQUIREMENTS

- Ramps with a rise greater than 6 inches have handrails 34-38 inches in height.
- Handrails shall extend at least 12 inches beyond the top and bottom of any ramp run.
- Handrails are continuous except at points of access along the ramp.
- Provide guards for portions of landings or ramp that are more than 30 inches above adjacent grade.
- Guards shall be a minimum of 42 inches in height above the walking surface.

Typical Ramp & Edge Protection and Landing Details



EDGE PROTECTION
Figure 1



READ THIS FIRST

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

Choose applicable paragraphs.

A. Deliveries:

1. The Work includes the requirements for providing route and schedule information and coordination to lessen traffic impacts for all material and equipment deliveries specified herein.

B. Removals:

1. The Work includes the requirements for the hauling of the material designated for disposal. Also included are the administrative tasks to ensure proper documentation as to the quantity, date and source location of the material. Documentation shall include, but not be limited to, weight tickets from a Washington State certified scale, copies of test reports, permits, copies of correspondence from regulatory agencies, and a daily “job-site field report” prepared by the Contractor and signed by both the Engineer and the Contractor’s Superintendent.
2. The Work also includes the requirements for providing removal route and schedule information and coordination of removals to lessen traffic impacts as specified herein.

- C.** The work of this section includes the requirements for the hauling of fill borrow material to the project site.

1.02 QUALITY ASSURANCE

- A.** The work of this section shall be under the direction of Haul Route Supervisor who is well-trained and experienced in transportation of materials both with “on-highway” and “off-highway” equipment. The Supervisor shall be completely familiar with the accepted haul routes, origins and destinations of the materials specified herein. The Supervisor shall document all activities and answer all complaints regarding spillage, traffic violations, property damage claims, safety, equipment breakdowns and the terms and conditions of required bonds and permits. The

Haul Route Supervisor will be a full-time employee dedicated to this project. The responsibilities may be shared with other project personnel provided the above-stated qualifications are satisfied.

1.03 SUBMITTALS

- A. Before any specified material or equipment is delivered to, or removed from the job site the Contractor shall submit the following information. Submittals shall be in accordance with Section 01 33 00 -Submittals and Section 01 32 19 - Preconstruction Submittals.
 - 1. Submit the name of the Haul Route Supervisor (Preconstruction Submittal).
 - 2. Haul Route to the site and return. The Haul Route shall include and be consistent with the route shown on the drawings (Preconstruction Submittal).
 - 3. If applicable, copies of permits, agreements, or letter of understanding from regulatory agencies, towns, cities, or other governmental entities (Preconstruction Submittal).
 - 4. Haul Route Activities: For all haul activities provide documentation as to the quantity, date, and excavation location of the material on a daily basis. This shall be included in a "Job-Site Field Report" prepared by the Haul Route Supervisor and signed by the Engineer and the Contractor's superintendent.
 - 5. Project Completion: At project completion, provide:
 - a. Copies of test reports.
 - b. Copies of permits.
 - c. Copies of correspondence from regulatory agencies.
 - d. Vehicle log book(s).
 - e. All other submittals and documents as required by this section.

1.04 JOB CONDITIONS

- A. Removals: Prior to departure from the construction site each vehicle operator shall note the time and date on the dispatch ticket or vehicle logbook. Each stop with a loaded vehicle, other than for traffic controls, shall be entered into the logbook indicating the circumstances requiring the stop. The time the vehicle enters the disposal site property shall also be noted in the log.
- B. Once on the disposal project site the vehicle operator shall conform to the agreed upon operational procedure established by the (disposal) site operator and the Contractor. The procedure shall include but not be limited to, traffic control, turn-outs, turn-arounds, queue time, truck washing facilities, gate security, etc.
- C. Haul Route Requirements

A City of SeaTac Haul Permit (Class E ROW Use Permit) is required for projects that include: a) the frequent use of hauling involving an average of six loaded vehicles per hour during any eight hour period in one day, for two or more consecutive days, and b) any hazardous waste hauling (as defined by RCW 43.200.015 and RCW 70.105.10(5), (6) and (15).

1. City of SeaTac Haul Permit: A City of SeaTac Haul Permit is required. The Contractor shall obtain the permit and pay for all permit fees prior to the start of haul operations. The Contractor's operations shall meet the permit conditions at all times during haul operations. The permit conditions are as follows:

1. Haul Route to/from the site shall be via only the following:

Haul Route #1:

From International Boulevard Northbound
International Boulevard to S 170th Street
Left Turn onto S 170th Street Westbound
Right Turn onto Air Cargo Road Northbound
Left Turn onto S. 166th St. (Gate E-125)
Gate E-125 to Project Site (on Airfield)

Haul Route #2:

From International Boulevard Southbound
International Boulevard to S 170th Street
Right Turn onto S 170th Street Westbound
Left Turn onto S 166th St. (Gate E-125)
Gate E-125 to Project Site (on Airfield)

Haul Route #3:

From Eastbound SR518:
SR518 to Northern Airport Expressway
Exit at Air Cargo (Left Lane Exit)
Right Turn onto S 170th Street Westbound
Right Turn onto S 166th St (Gate E-125)
Gate E-125 to Project Site (on Airfield)

Haul Route #4:

From Westbound SR518:

SR518 to Northern Airport Expressway
 Exit at Air Cargo (Left Lane Exit)
 Right Turn onto Air Cargo Road Northbound
 Right Turn onto S 166th St (Gate E-125)
 Gate E-125 to Project Site (on Airfield)

All hauling vehicles shall exit using the same route used to access the site.

2. Haul Time: The haul operation shall be limited to the days and hours for specified haul route listed in Table 1. Weekends as listed in Table 1 shall be defined as Saturday. No haul operation will be allowed on Sunday.
3. Haul Frequency: The haul frequency shall not exceed the number of one way haul vehicles per hour averaged over the daily haul time, applicable to each route, as listed in Table 1. The haul frequency shown for haul routes #2 and #3 is the combined allowable total for those routes.

TABLE 1: HAUL ROUTE REQUIREMENTS

April - June 15 and September 1-October 31

Weekdays:

HAUL ROUTE:	HAUL TIME:	HAUL FREQUENCY:
1 & 2	8:30 AM - 3:30 PM	6
3 & 4	6:00 AM - 4:00 PM	25

Weekends:

HAUL ROUTE:	HAUL TIME:	HAUL FREQUENCY:
1 & 2	7:00 AM - 4:00 PM	6
3 & 4	7:00 AM - 4:00 PM	25

June 16 - August 31

Weekdays:

HAUL ROUTE:	HAUL TIME:	HAUL FREQUENCY:
1 & 2	6:00 AM - 3:30 PM	6
3 & 4	6:00 AM - 6:00 PM	25

Weekends:

HAUL ROUTE:	HAUL TIME:	HAUL FREQUENCY:
1 & 2	7:00 AM - 4:00 PM	6

3 & 4	7:00 AM - 4:00 PM	25
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- 4. Traffic Control: A traffic control plan incorporating all requirements of Section 01570 - Traffic Control, shall be developed by the Contractor and submitted to the City of SeaTac for each haul route. The plan shall provide flaggers, an off-duty police officer and all signage in accordance with the current edition of the Manual of Uniform Traffic Control Devices (MUTCD) and as required by the City of SeaTac.
- 5. Inspection: A City of SeaTac inspector will inspect traffic control measures and haul routes road condition on a daily basis at the discretion of the City of SeaTac, Cost for inspection shall be \$75.00 per hour not to exceed 1 hour each day traffic control measures are implemented.
- 6. Off-duty Police officer: An off-duty police officer shall be present at the site of the traffic control at each haul route at all times during the haul operation. The cost for an off-duty officer shall be \$ _____ per hour.
- 7. Road Impact Fee: To reimburse the City of SeaTac for reduction in design life of the pavement on the designated haul routes within the city limits due to the truck traffic generated by this project, a road impact fee of \$___ will be assessed.

1.05 ITEMS REQUIRING HAUL ROUTE SUBMITTALS

A. Material and Equipment Deliveries

1.

2.

B. Removals:

1.

2.

C. Import Embankment (Fill) Material

1.

2.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

Edit for appropriate project scope.

3.01 TRANSPORTATION OF WASTE MATERIALS

- A. Construction Site Loading: The material shall be loaded into the hauling vehicles under the direction of the Contractor's Supervisor specified in Article 1.04 of this Section. Prior to dispatching the Supervisor shall ensure that the proper entries have been entered into the vehicle logbook.
- B. Transportation of Waste Materials: After being dispatched the hauling vehicle shall proceed to the disposal site via the accepted haul route. All stops enroute, other than traffic controls, shall be entered into the logbook indicating, location, and odometer reading. Each loaded vehicle shall cross a certified scale and obtain weight tickets in triplicate which have been machine numbered, noting time and

date. One copy of the ticket will be given to the disposal site representative at the site, one copy will be given to the Engineer upon return to the construction site, and one copy shall be retained by the Contractor. The weight tickets will be used to establish quantities for payment and care shall be exercised to avoid loss or obliteration of the tickets.

- C. Disposal Site Unloading: Upon arriving at the disposal site the vehicle operator shall enter the date, time and odometer reading into log-book. Once on the disposal site the operator shall conform to the agreed upon operational procedure for unloading the material. After unloading the vehicle shall be washed, swept, or otherwise cleaned to the satisfaction of the Contractor and all regulatory agencies having jurisdiction.
- D. Return to Construction Site: On the return trip to the construction site the operator shall again cross a certified scale and obtain weight tickets in triplicate for the empty vehicle, indicating time and date. Empty weight tickets shall be delivered in the same manner as loaded weight tickets. Operators shall obtain an empty weight ticket for every load, except that no more than two empty weight tickets will be required for any one day that particular hauling unit is in service. Vehicle log-books shall be given to the hauling supervisor at the end of each day and will be a part of the summary of activities entered into the "job-site field report."
- E. Certified Scales: The certified scales utilized for the weighing of materials hauled to the disposal site shall be located within ten haul route miles of the disposal-site gate. The scales shall be currently certified by the Washington State Department of Agriculture division of Weights and Measures and operated by a "Certified Weightmaster."
- F. Dredged Spoils and Excavated Material
 - 1. When the material to be hauled is dredged spoils or other excavated natural materials from the construction site the following procedures shall apply:
 - a. Dredged material, once excavated shall be placed in upland stockpile and allowed to consolidate and reduce the water content. The material shall remain in stockpile for a minimum of seven days prior to loading in the hauling vehicles for disposal.
 - b. The Contractor may, at his option, load the dredged material direct into the hauling vehicle, however, vehicle beds which are to receive directly loaded dredged spoils shall be of the "bath tub" design or of such configuration that will prohibit water draining from the bed while the vehicle is traveling. Spillage, if any, whether from stockpile loading or direct loading shall be the sole responsibility of the Contractor who shall settle all claims and arrange for all clean-up and disposal.
 - c. Excavated materials may be direct loaded provided no leakage is observed. In the event of leakage excavated material shall be treated in the same manner as dredged spoils.

3.02 TRANSPORTATION OF IMPORT BORROW MATERIAL

- A. Borrow Site Loading

1. The material shall be loaded into the hauling vehicles under the direction of the Contractor's Haul Route Supervisor specified in Article 1.03 of this Section.
 2. The hauling vehicles shall maintain the minimum freeboard on all loads in accordance with RCW 46.61.655. Failure to maintain the required freeboard will result in the Contractor being required to cover all loads at no cost to the Port.
- B. Borrow Site Unloading
1. Upon arriving at the project site, the operator shall conform to the operational procedures for unloading the material. After unloading, the vehicle shall be washed, swept, or otherwise cleaned to minimize the transport of sediment from the work site. Refer to Section 01 50 00 - Temporary Facilities and Controls and Section 01 57 13 - Temporary Erosion and Sediment Control Planning and Execution.
- C. Documentation
- Documentation of haul activity shall include, but not be limited to:
1. Documentation as to the quantity, date and number of hauling vehicles
 2. Copies of test reports
 3. Copies of permits
 4. Copies of correspondence from regulatory agencies

PART 4 MEASUREMENT AND PAYMENT

Choose applicable paragraph or address measurement and payment in technical sections.

4.01 GENERAL

- A. "[]" will be measured by the net ton as determined by the certified weight tickets submitted to the Engineer.
- B. Payment will be made at the unit price stated in the Schedule of Unit Prices for "[]" per ton. Payment will be full compensation for providing all labor, equipment and materials necessary to transport the materials to the designated site and to provide all administrative and safety items associated with or reasonable inferable from the Contract requirements.

OR

- C. "[]" will not be measured separately.
- D. Payment will be made at the unit price stated in the Schedule of Prices for the applicable bid items. Payment for "[]" and [City of SeaTac] [Seattle] haul permit requirements and conditions shall be incidental to and included in cost of the applicable materials as identified in the Schedule of Prices.

End of Section

READ THIS FIRST

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PART 1 GENERAL

1.01 DESCRIPTION

- A. The Contractor shall provide flaggers, signs, and other traffic control devices not otherwise specified as being furnished by the Port. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the Contractor’s operations, which may occur on highways, roads, drives, or streets. No Work shall be done on or adjacent to the above locations until all necessary signs and traffic control devices are in place.
- B. These flaggers, signs, and other traffic control devices shall be used for the safety of the public, the Contractor’s employees, and Port’s personnel and to facilitate the movement of the traveling public. They may be used for the separation or merging of public and construction traffic when in accordance with a specific accepted traffic control plan.
- C. Upon failure of the Contractor to immediately provide flaggers; erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Engineer, the Port may, without further notice to the Contractor or the Surety, perform any of the above and deduct all of the costs from the Contractor’s payments.
- D. The Contractor shall be responsible for providing adequate flaggers, signs, and other traffic control devices for the protection of the Work and the public at all times regardless of whether or not the flaggers, signs, and other traffic control devices are ordered by the Engineer, furnished by the Port, or paid for by the Port or by any modifications made by the Contractor. The Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor’s operations or any negligence in connection therewith.
- E. **The Contractor shall advise the Engineer a minimum of two weeks prior to implementing any lane closures or diversions.**

1.02 CONFORMANCE TO ESTABLISHED STANDARDS

- A. Flagging, signs, and all other traffic control devices furnished or provided shall conform to the standards established in the latest adopted edition of the Manual on Uniform Traffic Control Devices (MUTCD) published by the U.S. Department of Transportation and the Modifications to the MUTCD for Streets and Highways for the State of Washington. Copies of the MUTCD may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Modifications to the MUTCD for Streets and Highways for the State of Washington may be obtained from the Department of Transportation, Olympia, Washington 98504.

PART 2 PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

- A. Post-mounted and wall-mounted traffic control and informational signs as specified herein.
- B. Manual and Automatic Traffic Control Signals: As approved by local jurisdictions.
- C. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- D. Flagger Equipment: As required by local jurisdictions.
- E. Manual on Uniform Control Devices (UCD) approved equipment.

2.02 FLAGGING, SIGNS, AND ALL OTHER TRAFFIC CONTROL DEVICES

- A. Traffic Control Labor
 - 1. The Contractor shall furnish all personnel for flagging, escorting, and for the setup and removal of all traffic control devices.
 - 2. Temporary traffic control devices and construction signs necessary to control traffic during construction operations.
 - 3. Flaggers and spotters shall have a current certification (flagging card) acceptable to the State Department of labor and Industries (WAC 296-155-305). Workers engaged in flagging or traffic control shall wear reflective vests and hard hats. During hours of darkness, white overalls or white or yellow rain gear shall also be worn. The vests and other apparel shall be in conformance with "High Visibility Apparel" requirements of the Standard Specifications. During hours of darkness, flagger stations shall be illuminated to ensure that flaggers can easily be seen without causing glare to the traveling public. The Contractor shall furnish the MUTCD standard Stop/Slow paddles (18 inches wide, letters 6 inches high and reflectorized) for the flagging operations.
 - 4. Where required by local authorities, the Contractor shall arrange and pay for Law Enforcement personnel to assist in traffic control.
- B. Construction Signs
 - 1. All signs required by the accepted traffic control plan(s) as well as any other appropriate signs prescribed by the Engineer will be furnished by the [Port] [Contractor]. The Contractor shall provide the posts or supports and erect and maintain the signs in a clean, neat, and presentable condition until the necessity for them has ceased. All non-applicable signs shall be removed or completely covered with either metal or plywood during periods when they are not needed. When the need for any of these signs has

ceased, the Contractor, upon acceptance of the Engineer, shall take down these signs, posts, or supports. All posts or supports shall be removed from the project and shall remain the property of the Contractor. (The Port-furnished signs shall be returned to the Engineer in good condition. All such signs lost, stolen, damaged, or destroyed shall be replaced by the Contractor in kind at the Contractor's expense or their value will be deducted from the Contractor's payments.)

2. Construction signs will be divided into two classes. Class A construction signs are those signs that remain in service throughout the construction or during a major phase of the Work. They are mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Sign and support installation for Class A signs shall be in accordance with the Contract Plans or the Standard Plans. Class B construction signs are those signs that are placed and removed daily, or are used for short durations which may extend for one or more days. They are mounted on portable or temporary mountings. If it is necessary to add weight to the signs for stability, only a bag of sand that will rupture on impact shall be used. The bag of sand shall: (1) be furnished by the Contractor, (2) have a maximum weight of 40 pounds, and (3) be suspended no more than 1 foot from the ground. In the event of disputes, the Engineer will determine if a construction sign is considered as a Class A or B construction sign.
3. When Class A or B construction signs are required, the Work to provide these signs shall be:
 - a. Furnishing, removing and disposing of the posts or supports for the signs;
 - b. (Initial acquisition from the Engineer and ultimate return to the Engineer of the required Port-furnished signs;)
 - c. Initial installation and subsequent removal of both Class A and B construction signs; and
 - d. All other incidentals necessary for providing Class A or B construction signs according to the accepted traffic control plan(s).
4. Signs, posts, or supports that are lost, stolen, damaged, destroyed, or those which the Engineer deems to be unacceptable, while their use is required on the project, shall be replaced by the Contractor without additional compensation.

C. No Passing Zones

1. The striping of no passing zones that are to be obliterated in excess of 150 feet by paving operations shall be replaced by "Do Not Pass" and "Pass With Care" signs. The signs shall be located not less than 2 feet outside the usable shoulder or less than 7 feet above the edge of pavement. The number of necessary signs will be specified in the Contract provisions. The Contractor shall provide posts and install the Port-furnished signs. The signs shall be maintained by the Contractor until construction operations are complete. When the project includes striping by the Contractor, the signs and posts shall be removed by the Contractor when the no passing zones are reestablished by striping. The signs shall be returned to the Port,

and the posts will become the property of the Contractor. When the Contractor is not responsible for striping, the posts and signs shall become the property of the Port and will be removed by Port forces when the no passing zones are reestablished by striping. Payment to perform the Work required for this subsection will be under the item "Construction Sign Class A."

D. Temporary Traffic Control Devices

1. The Work required for this item shall be furnishing barricades, flashers, cones, barrels, and other channelization devices, unless a pay item is in the bid proposal for a specific device and the Contract provisions specify payment in a different manner. The item "Temporary Traffic Control Devices" includes:
 - a. Initial delivery to the project site (or temporary storage) in good repair and in clean usable condition,
 - b. Repair or replacement when they are damaged and they are still needed on the project, and
 - c. Removal from the project site when they are no longer needed on the project.

E. One-Way Piloted Traffic Control Through Construction Zone

1. The construction sometimes requires that traffic be maintained on a portion of the roadway during the progress of the Work using one-way piloted traffic control. If this is the case, the Contractor's operation shall be confined to one-half the roadway, permitting traffic on the other half. If, in the opinion of the Engineer, one-way piloted traffic control is necessary, it shall be provided for as follows:

Choose one of the following as applicable:

- a. *[Port-Furnished One-Way Piloted Traffic Control.* The Port will furnish, without cost to the Contractor; two flaggers to control traffic at the ends of the pilot car control area and will furnish a pilot car and driver to lead the traffic through the area. All other necessary flaggers within the limits of the pilot car control area shall be furnished by the Contractor as provided in Paragraph "Traffic Control Labor". If the Port is to provide piloted traffic control, the Contract provisions will prescribe the extent of the Port-Furnished One-Way Piloted Traffic Control.]
 - b. *[Contractor-Furnished One-Way Piloted Traffic Control.* The Contractor shall furnish the pilot car(s) and driver(s) for the pilot car control area. Any necessary flaggers shall be furnished by the Contractor as provided in Paragraph "Traffic Control Labor".]
2. As conditions permit, the Contractor shall, at the end of each day, leave the Work area in such condition that it can be traveled without damage to the Work, without danger to traffic, and without one-way piloted traffic control. The Engineer will be the sole judge as to whether or not piloting can be dispensed with after working hours. If piloting is required after working hours due to carelessness or negligence on the part of the Contractor to

properly condition the Work at the end of the day, such piloting costs shall be borne by the Contractor. If the Port is furnishing the piloting, the costs charged to the Contractor will include the pilot car, the pilot car driver, and the two flaggers.

3. The Contractor shall be responsible for protection of the Work and traffic at all times regardless of flagging and pilot car services furnished [by the Port], and the Contractor shall be liable for damages and injuries suffered by reason of the Contractor's operations or any negligence in connection therewith.

PART 3 EXECUTION

3.01 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas. Prevent parking on or adjacent to access roads or in non-designated areas.

3.02 FLAGGERS

Edit/Include this paragraph as appropriate.

- A. Traffic Control Supervisor
 1. The Contractor shall designate an individual or individuals to perform the Traffic Control Supervisor's (TCS) duties for the project. The TCS shall be certified as a work site traffic control supervisor by one of the organizations listed below.
 - a. Advanced Traffic Safety Services Association (ATSSA)
 - b. Evergreen Safety Council (ESC)
 - c. Northwest Laborers Employees Training Trust (NWLETT)
 2. The TCS's duties shall include:
 - a. Discussing proposed traffic control measures and coordinating implementation of the Contractor-adopted traffic control plan(s) with the Engineer.
 - b. Coordinating all traffic control operation, including those of subcontractors, suppliers, and any adjacent construction or maintenance operation.
 - c. Coordinating the project's activities (such as ramp closures, road closures, and lane closures) with appropriate police, fire control agencies, city or county, Engineer, medical emergency agencies, school districts, and transit companies.
 - d. Inspecting traffic control devices for proper location, visibility, installation, message, cleanliness, and effect on the traveling public. Traffic control devices should be inspected each work shift except that Class A signs need to be checked only once a week. Traffic control devices left in place for 24 hours or more should also be inspected once during the non-working hours when they are initially

- set up (during daylight or darkness, whichever is opposite of the working hours).
- e. Reviewing nighttime lighting and its effect on the traveling public.
 - f. Preparing a daily traffic report which shall be submitted to the Engineer with the Contractor's Daily Report (CM03) to become a part of the project records. Include in the report such items as:
 - (1) When signs and traffic control devices are installed and removed,
 - (2) Locations of signs and traffic control devices,
 - (3) Revisions to the traffic control plan,
 - (4) Lighting utilized at night, and
 - (5) Observations of traffic conditions.
 - g. Ensuring that corrections are made if traffic control devices are not functioning as required. The TCS may make minor revisions to the traffic control plan to accommodate site conditions as long as the original intent of the traffic control plan is maintained and the revision has concurrence of the Engineer.
 - h. Overseeing all requirements of the Contract that contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.
 - i. Having the latest adopted edition of the MUTCD including the Modifications to the MUTCD for Streets and Highways for the State of Washington and applicable standards and specifications available at all times on the project.
 - j. Attending all project meetings where traffic management is discussed. Traffic control management shall be provided by the TCS on a 24-hour per day basis.
- 3. The Contractor shall maintain a 24-hour telephone number at which the TCS can be contacted. The Contractor shall make arrangements so that the TCS will be available on every working day, on call at all times, and available upon the Engineer's request at other than normal working hours. During non-work periods, the TCS shall be able to respond within a 45-minute time period after notification by the Engineer. The TCS shall have appropriate manpower, equipment, and material available at all times in order to expeditiously correct any deficiency in the traffic control system.
 - 4. The Contractor shall identify an alternate TCS that can assume the duties of the assigned or primary TCS in the event of that person's inability to perform. Such alternate TCSs shall be adequately trained and certified to the same degree as the primary TCS.
 - 5. A reflective vest and a hard hat shall be worn by the TCS.
 - 6. The Contractor shall provide a vehicle for every TCS. The vehicle used by the TCS shall be equipped with a roof or post-mounted flashing amber light visible for 360 degrees.

- 7. The TCS shall not act as a flagger except in an emergency or in relief for short periods of time. Possession of a current flagging card by the TCS is mandatory.
- B. Provide trained and equipped flaggers to regulate traffic when construction operations or traffic encroach on public traffic lanes.
- C. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.03 FLARES AND LIGHTS

If Work is on the airfield, consult PM for current policy

- A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.04 TRAFFIC CONTROL PLANS

- A. The traffic control plan or plans appearing in the Contract plans show a method of handling traffic. All flaggers are to be shown on the traffic control plan except for emergency situations. The Contractor shall designate and adopt in writing the specific traffic control plan or plans required for their method of performing the Work. If the Contractor's methods differ from the Contract traffic control plan(s), the Contractor shall propose modification of the traffic control plan(s) by showing the necessary construction signs, flaggers, and other traffic control devices required for the project. The Contractor's letter designating and adopting the specific traffic control plan(s) or any proposed modified plan(s) shall be submitted to the Engineer for acceptance at least ten calendar days in advance of the time the signs and other traffic control devices will be required.
- B. Contractor shall obtain any approvals of traffic control plans required by local jurisdictions.

3.05 HAUL ROUTES

- A. See Section 01 55 16 - Haul Routes for specific requirements in addition to the following general requirements.

OR

- B. Drawings indicate haul routes designated by authorities for use of construction traffic. Contractor shall secure any necessary Permits/Approvals.
- C. Confine construction traffic to designated haul routes.
- D. Provide traffic control at critical areas of haul routes to regulate traffic or to minimize interference with public traffic.

3.06 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- B. Install and operate manual or automatic traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations at all times.
- C. Relocate as Work progresses, to maintain effective traffic control.

3.07 REMOVAL

- A. Remove equipment and devices [when no longer required] [at Substantial Completion]. Restore surfaces to original condition. Remove post settings to a depth of (2) (_____) feet.

3.08 SUBMITTALS

- A. [Traffic Control Supervision Designation]
- B. Traffic Control Plan
- C. Haul Route Permits

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project. [If FHWA (WSDOT) funding involved in project, unit prices may be required.]

End of Section

READ THIS FIRST

Changes to this specification shall be approved by the Erosion Control / Stormwater Engineer.

This specification is for all Port of Seattle construction including Seaport and Airport projects. Designer to verify with Seaport Environmental or Aviation Environmental groups if there are additional environmental permit requirements.

The Design Engineer shall modify this specification to address project specific needs.

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any "Notes" boxes such as this one--you should remove these "Notes" sections as you go. Also, do a search for all bracket characters " [] " as they are used to show you areas containing options or project specific details (you can use Microsoft Word's Find feature {Ctrl-F} to jump to an open bracket " [" character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document's built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style "Numbered Material" and can be promoted (Tab) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the "Numbered Material" format.

PART 1 GENERAL

1.01 SUMMARY OF WORK

- A. This item shall consist of planning, installing, inspecting, maintaining, upgrading and removing temporary erosion and sediment control Best Management Practices (BMPs) as shown on the drawings, in the Contractor's Erosion and Sediment Control Plan (CESCP), or as ordered by the Engineer to prevent pollution of air and water, and control, respond to, and manage eroded sediment and turbid water during the life of the contract.
- B. This work shall apply to all areas associated with contract work including, but not limited to the following:
 - 1. Work areas

2. Equipment and material storage areas
3. Staging areas
4. Stockpiles
5. Access Roads

1.02 GOVERNING CODES, STANDARDS, AND REFERENCES

- A. The following rules, requirements and regulations specified may apply to this work:
1. Surface Water Design Manual, King County, Department of Natural Resources, (Current Edition).
 2. Washington State Department of Ecology Stormwater Management Manual for Western Washington, Vol. 2
<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>.
 3. Washington State Stormwater Quality Standards (WAC 173-201A).
 4. WAC 173 201 A, Water Quality Standards of the State of Washington.

Airport Construction Only – For Seaport Construction provide permit number if applicable.

5. National Pollution Discharge Elimination System (NPDES) Waste Discharge Permit No. WA 002465-1.
6. Port of Seattle Regulations for Airport Construction (current edition).
7. Sea-Tac International Airport Rules and Regulations (current edition).
8. Stormwater Pollution Prevention Plan, as required by the NPDES Permit No. WA 002465 1.

Seaport Project Only

9. Construction General NPDES Permit # _____ (May be required for Seaport projects. Each project over the trigger for land disturbing activity must apply for this permit. Typically the port acquires this permit and transfers to the contractor.)
10. Director's Rules based on the City of Seattle "Stormwater Code", SMC Chapters 22.800 through 22.808 Stormwater Pollution Prevention Plan (SWPPP)
11. City of Seattle Stormwater Code Manual – Seaport Projects
 - a. [15-2012 Requirements for Green Stormwater Infrastructure to the Maximum Extent Feasible for Single-Family Residential and Parcel-Based Projects, DWW-201.1](#)
 - b. [16-2012 Requirements for Green Stormwater Infrastructure to the Maximum Extent Feasible for Roadway, Trail, and Sidewalk Projects, DWW-201.2](#)
 - c. [15-2009 Volume I Source Control Technical Requirements Manual](#)

- d. [16-2009 Volume II Construction Stormwater Control Technical Requirements Manual](#)
- e. [17-2009 Volume III Stormwater Flow Control and Water Quality](#)
- f. [18-2009 Volume IV Stormwater Code Enforcement Manual](#)

1.03 SUBMITTALS

- A. As part of the required Preconstruction Submittals, Section 01 32 19 - Preconstruction Submittals and before NOTICE TO PROCEED is given, the Contractor shall submit the following:
 - 1. Contractor Erosion and Sediment Control Plan (CESCP)

Add or Remove items to make this section project specific.

- B. The following shall be submitted in accordance with Section 01 33 00 – Submittals:
 - 1. Oil Absorbent Pads
 - 2. Silt Fence
 - 3. Straw Wattle
 - 4. Erosion Control Matting
 - 5. Bonded Fiber Matrix
 - 6. Catch Basin Protection
 - 7. Temporary Piping
 - 8. CESCL Certification Cards
 - 9. CESCL Qualifications

PART 2 MATERIALS

2.01 PROJECT INFORMATION

2.02 PREPARATION FOR MATERIALS

2.03 FABRICATION, PRODUCTION, & SUPPLY OF MATERIALS

2.04 MATERIAL REQUIREMENTS

Add/remove items to make this section project specific

- A. GENERAL:
 - 1. All products used to construct the Contractor selected BMPs shall be suitable for such use and submitted to the Engineer for approval.
- B. OIL ABSORBENT PADS:
 - 1. Oil absorbent pads shall be made of white, 100 % polypropylene fabric that absorbs oil-based fluids and repels water-based fluids. Each pad shall be a minimum of 15x19 inches in size and absorb no less than 50 ounces of oil-based fluids.
- C. TESC – ASPHALT CURB & ASPHALT BERM:

1. Asphalt curb and asphalt berm shall be constructed as directed by the Engineer. The asphalt concrete shall meet the requirements of [Section [32 12 16 or 32 12 16.13 (for seaport)]– Bituminous Concrete Pavement.
- D. SILT FENCE:
1. Geotextile material shall meet the requirements of WSDOT Specification Section 9-33 Table 6. Geotextile material shall be backed by 2"x4" wire mesh and shall be attached to steel "T" posts using wire or zip ties. Dimensions and spacing shall be as detailed on the drawings.
- E. STRAW WATTLE:
1. Wattles shall consist of cylinders of biodegradable plant material, such as straw, coir, or compost encased within biodegradable or photodegradable netting. Wattles shall be a minimum of 5 inches in diameter, unless otherwise specified. Encasing material shall be clean, evenly woven, and free of debris or any contaminating material, such as preservative and free of cuts, tears or damage. Compost filler shall meet material requirements specified in WSDOT Section 9-14.4(8) Coarse Compost. Straw filler shall be 100% free of weed seeds.
- F. EROSION CONTROL BLANKET:
1. Erosion Control Blanket shall meet the requirements of WSDOT Specification Section 9-14, paragraph 9-14.5(2) "Erosion Control Blanket". Installation in ditches and swales shall be per WSDOT Standard Plan I-60.20-00 "Erosion Control Blanket Placement in Channel". Installation on slopes shall be per WSDOT Standard Plan I-60.10-00 "Erosion Control Blanket Placement on Slope".
- G. BONDED FIBER MATRIX SOIL STABILIZATION:
1. Bonded Fiber Matrix soil stabilization shall be labeled as such on the unopened bags furnished by the manufacturer. Bonded fiber matrix shall be installed with seed and fertilizer included in the homogenous mix. Seeding shall be as specified in Section 32 92 19.16 – Hydroseeding for Erosion Control and Landscaping.
- H. CATCH BASIN PROTECTION:
1. Catch basin protection shall be designed and installed for the purpose of preventing sediment from entering the storm system. Protection shall:
 2. Be constructed of non-woven geotextile fabric with sewn seams;
 3. Contain a built-in lifting strap;
 4. Have a built-in, high flow bypass;
 5. Be sized such that all water draining to the catch basin flows into the insert and does not flow directly into the storm.
 - a. Catch basin covers shall be 30 mil PVC liner material.
- I. TEMPORARY PIPING/CONNECTIONS:
1. Temporary piping shall meet the requirements of the storm drain pipe as specified in Section 33 41 13 – Pipe for Storm Drains and Culverts.

Temporary catch basin shall meet the requirements of Section 33 49 13 – Manholes, Catch Basins, Inlets and Inspection Holes.

- J. TEMPORARY PIPING PLUGS:
 - 1. Installation in Pipe/Structure to be Demolished/Abandoned. Plug shall be concrete as specified in Section 03 30 00 – Cast-in-Place Concrete.
 - 2. Installation in Pipe/Structure to Remain. Plug shall be a mechanical secured plug.
- K. STORMWATER STORAGE TANK:
 - 1. The tank shall be a fixed axle weir tank with a minimum 21,000 gallon.
- L. STORMWATER STORAGE TANK PADS:
 - 1. The stormwater storage tank pads shall be as detailed on the drawings.
- M. CONSTRUCTION LIMITS FENCING:
 - 1. Fencing material shall be standard size orange plastic mesh construction safety fence. Posts shall be steel “T” posts.
- N. ROCK CHECK DAMS:
 - 1. Rock check dams shall be constructed of quarry spalls per the details shown in the project drawings and as specified in Section 31 23 00 - Excavation and Embankment.
- O. STABILIZED CONSTRUCTION ENTRANCE
 - 1. Stabilized construction shall be constructed of stabilization geotextile fabric and quarry spalls as specified in Section 31 23 00 – Excavation and Embankment.
- P. WHEEL WASH
 - 1. The wheel wash shall be a high water pressure, low water volume system long enough to allow for at least two full tire rotations. Spray nozzles shall be directed at inner and outer side walls for all tires including duals, all treads from two directions, wheel wells and flaps, and truck sides up to the bottom of the windshield. For water line material and construction requirements shall be as specified in Section 33 10 00 – Water Distribution.
- Q. GEOTEXTILE FABRIC CHECK DAMS
 - 1. Geotextile check dam shall be a urethane foam core encased on Geotextile material. The minimum length of the unit shall be 7 feet. The foam core shall be a minimum of 8 inches in height, and have a minimum base width of 16 inches. The geotextile material shall overhang the foam by at least 6 inches at each end, and shall have apron type flaps that extend a minimum of 24 inches on each side of the foam core. The geotextile material shall meet the requirements for silt fence.
- R. PLASTIC SHEETING
 - 1. Plastic sheeting shall be clear, reinforced, and a minimum of 6 mil thick. Sandbags or other Engineer-approved material shall be used to secure the plastic sheeting in place. Black plastic may be used to cover stockpiles.

S. TEMPORARY ORGANIC MULCH

1. Temporary organic mulch shall consist of straw, wood chips, hog fuel, compost or other material approved by the Engineer.

2.05 MATERIAL HANDLING, DELIVERY, & STORAGE

2.06 DELIVERABLES

2.07 QUALITY ASSURANCE

PART 3 EXECUTION

3.01 PROJECT INFORMATION

A. GENERAL

1. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.
2. No discharge of water shall be allowed that increases volume, velocity, or peak flow rate of receiving water background conditions, or that does not meet state of Washington water quality standards.
3. The Contractor's Erosion and Sediment Control Plan (CESCP) required by this section shall be based upon the Temporary Erosion and Sediment Control (TESC) requirements of the contract but shall specifically phase, adjust, improve and incorporate the TESC requirements into the Contractor's specific schedule and plan for accomplishing the work. The CESCP shall be modified as changes are made to improve, upgrade and repair best management practices used by the Contractor and as the work progresses and TESC needs change.
4. The Contractor shall be wholly responsible for control of water onto and exiting the construction site and/or staging areas, including groundwater, stormwater, and process water. Stormwater from offsite shall be intercepted and conveyed around or through the project and shall not be combined with onsite construction stormwater.
5. Modifications to project hydraulic conveyances, detention facilities, and TESC plan sheets shall be stamped by a Professional Engineer (P.E.) licensed by the State of Washington. All other changes to the CESCP shall be signed by the CESCL.

B. PROJECT REQUIREMENTS

1. DESCRIPTION OF WORK

- a. In order to comply with the requirements of this section, the Contractor shall:
 - (1) Develop and submit a Contractor's Erosion and Sediment Control Plan (CESCP). The CESCP shall, at a minimum, include and address the following:
 - (a) Site Description and Drawings
 - (b) Contractor Erosion and Sediment Control Personnel
 - (c) Schedule and Sequencing

- (d) BMP Installation
 - (e) BMP Maintenance
 - (f) BMP Inspection
 - (g) Record keeping
 - (h) BMP Removal
 - (i) Emergency Response
 - (j) Construction Dewatering
 - (k) Fugitive Dust Planning
 - (l) Utilities Planning
 - (m) Education
- (2) Revise and modify the CЕССР during the life of the contract and maintain records.
 - (3) Install, maintain, and upgrade all erosion prevention, containment, and countermeasures BMPs during the life of the contract, and removal at the end of the project.
 - (4) Contain, cleanup and dispose of all sediment and convey turbid water to existing or proposed detention/treatment facilities.
 - (5) Perform other work shown on the project drawings, in the Contractor Erosion and Sediment Control Plan, or as directed by the Engineer.
 - (6) Inspect to verify compliance with the CЕССР requirements including BMPs; facilitate, participate in, and implement directed corrective actions resulting from inspections conducted by others including outside Agencies and Port employees/consultants.
 - (7) Educate all Contractor and sub-contractor staff in environmental compliance issues at weekly meetings and document attendance and content.

2. DEFINITION

- a. SWPPP: Stormwater Pollution Prevention Plan consisting of the following documents:
 - (1) Temporary Erosion and Sediment Control Plan sheets in the contract documents;
 - (2) Section 01 57 13 - Temporary Erosion and Sediment Control Planning and Execution;
 - (3) Section 01 57 23 - Pollution Prevention, Planning and Execution;
 - (4) Contractor's Erosion and Sediment Control Plan (CESCP), both submitted by the Contractor.

Item 5 is for Airport Construction Only

- (5) Construction Storm Water Monitoring Plan developed by the Port.
- b. BMP: Best Management Practice
- c. NPDES: National Pollutant Discharge Elimination System
- d. CЕСSCP: Contractor’s Erosion and Sediment Control Plan

Items e and f are for Airport Construction Only

- e. IWS: Industrial Waste System
- f. STIA: Sea-Tac International

3. PERMITS

Airport Construction Only – For Seaport Construction provide permit number if applicable.

- a. Work shall be conducted in accordance with NPDES permit No. WA- 002465-1.
- b. Work shall be conducted in accordance with Stormwater Pollution Prevention Plan, as required by the NPDES permit No. WA-002465-1.

When the project requires a Construction General NPDES Permit and the contractor is to be completely responsible for compliance, the Port will obtain the permit and contractor shall have to accept transfer of permit from the Port.

- c. The Contractor shall accept from the Owner complete transfer of Construction General NPDES Permit #_____. The Contractor shall submit a signed Notice of Transfer before Notice to Proceed. The form can be obtained at:
<http://www.ecy.wa.gov/biblio/ecy02087a.html>

4. ADMINISTRATIVE REQUIREMENTS

- a. The provisions of this section shall apply to the Contractor, subcontractors at all tiers, suppliers and all others who may have access to the work site by way of the contractor’s activities.
- b. Failure to install, maintain, and/or remove BMPs shown on the drawings, in the approved Contractor Erosion and Sediment Control Plan and specified herein, or by order of the Engineer; or failure to conduct project operations in accordance with Section 01 57 13 - Temporary Erosion and Sediment Control Planning and Execution

- will result in the suspension of the Contractor's operations by the Engineer in accordance with Section 00 70 00 - General Conditions.
- c. The Contractor shall be solely responsible for any damages, fines, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section.
 - d. Any damages, fines, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section will be deducted from payment due by Modification.
 - e. Any time and material costs incurred by the Port due to damages, fines, levies, or judgments incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section will be deducted from payment due by Modification.
 - f. The Contractor shall be solely responsible for any schedule impacts from damages, fines, levies, judgments, or stop work orders incurred as a result of Contractor, subcontractor, or supplier negligence in complying with the requirements of this section. The project schedule will not be changed to accommodate the time lost.

Add/remove items to make this section project specific

- g. Contractor shall not clear, grub, grade, demolish, or perform any earthwork after NOTICE TO PROCEED until the following has been installed per the project drawings, the approved Contractor Erosion and Sediment Control Plan, or as directed by the Engineer:
 - (1) Silt Fence or other perimeter controls are in place.
 - (2) Areas not to be disturbed are delineated with safety fence.
 - (3) Temporary ponds and ditches are installed and vegetated or covered.
 - (4) Permanent ponds used for sediment control during construction have been installed and vegetated or covered and modified with riser.
 - (5) Water flows from off site are tight lined and directed away from work area.
 - (6) All construction entrances are stabilized and tire wash systems in place and operational.
 - (7) Catch basin inserts are installed in all catch basins that receive drainage from the Work area and haul.
 - (8) Stormwater storage tanks are located onsite to provide for additional storage volume and/or treatment volume required for treatment by settlement.

- (9) Materials on hand, in quantities sufficient to cover all bare soil, divert all flows, contain all sediments, and prevent turbid discharges from the site during all stages of construction. These materials include, but are not limited to the following:
 - (a) Reinforced 6 mil plastic sheeting
 - (b) Straw bales
 - (c) 6" pipe
 - (d) 8" pipe
 - (e) Sand bags, filled
 - (f) Wire-backed silt fence
 - (g) Steel "T" posts

5. **AUTHORITY OF ENGINEER**

- a. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing, excavation, and fill operations, and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, wetlands or other areas of water impoundment.
- b. In the event that temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or are ordered by the Engineer, such work shall be performed by the Contractor at his/her own expense.
- c. The Engineer may increase or decrease the area of erodible earth material to be exposed at one time as determined by analysis of project conditions.
- d. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the situation is rectified.
- e. In the event that the Washington State Department of Ecology issues an Inspection Report, a Notice of Non-Compliance, Notice of Violation or Enforcement Action, the Engineer may stop all construction activities until it has been determined that the project is in compliance. The Engineer may require the Contractor to send additional staff to successfully complete Contractor Erosion and Sediment Control Lead (CESCL) training before construction activities may begin. The number of working days will not be changed to accommodate the work stoppage. All costs associated with work stoppages, mitigation of the event, and/or training shall be paid by the Contractor.
- f. In the event that the Contractor discharges storm water, ground water, or process water to storm drains, ditches, gutters or any

conveyance that discharges to a receiving water as defined by the Department of Ecology without prior approval of the Engineer, the Engineer may stop all construction activities and require additional Contractor staff training and may require that all parties involved in the unapproved discharge be removed from the project for a time determined by the Engineer. The project schedule will not be changed to accommodate the time lost. All costs associated with mitigation of the unauthorized discharge, work stoppages, training and/or removal of personnel from the project shall be paid by the Contractor.

6. COORDINATION MEETINGS

- a. The Contractor shall be available, at a minimum, for a weekly coordination meeting with the Engineer, other Port Staff and outside agency representatives to review the ongoing contract work for compliance with the provision of this specification.

3.02 PREPARATION FOR EXECUTION OF WORK

A. CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN (CESCP)

The following paragraph is used only for projects in the City of Seattle.

The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP). The contents of a construction SWPPP may vary with the amount of new or replaced impervious surface, acres of land disturbing activity and the classification of water. The SWPPP shall comply with the Director's Rules based on the City of Seattle "Stormwater Code", SMC Chapters 22.800 through 22.808. The "Stormwater Code" can be found at:

<http://www.seattle.gov/dpd/Codes/default.asp#construction>

In order to comply with these requirements, the Contractor shall include and address the following in the CESCP:

- 1. Site Description and Drawings
 - a. Included in the CESCP shall be a written description of the construction site, including location of staging areas, stockpile areas, material storage areas, natural and constructed drainage systems within the work area and staging areas, and proximity to other construction projects.
 - b. Drawings shall be included in the CESCP which show the location of the construction site, including location of staging areas, stockpile areas, material storage areas, natural and constructed drainage systems within the work area and staging areas, and proximity to other construction projects.
 - c. The drawings shall show locations of BMPs during each phase of construction as identified by the Contractor in the Project Schedule.
 - d. The drawings and written description shall detail temporary stormwater conveyance facilities and other measures proposed by

the Contractor to limit the contributing drainage areas to not exceed the capacity of each of the stormwater ponds.

Adjust qualifications depending on the complexity of the project. At a minimum, a CESCL is required.

2. Contractor Erosion and Sediment Control Personnel
 - a. The Contractor shall designate sufficient employees as the responsible representatives in charge of erosion and sedimentation control. These employees' responsibility will be the oversight of all water and air quality issues. One of these designees shall be onsite at all times when any work activity is taking place.
 - b. One of the designated employees responsible for erosion and sedimentation control as discussed above shall be the Contractor Erosion and Sediment Control Lead (CESCL) who is responsible for developing, maintaining and modifying the CESCOP for the life of the Contract and ensuring compliance with all requirements of this section.
 - c. The CESCL shall be qualified in the preparation of erosion and sediment control plans, in the installation, inspection, monitoring, maintenance of BMP's, and documentation required for NPDES permits as well as sensitive resource identification, water treatment, and restoration and stabilization of unstable slopes, shorelines, stream banks, and wetlands.
 - d. The CESCL shall have authority to direct all Contractor and sub-contractor personnel.
 - e. The CESCL shall have no other duties aside from developing, maintaining, modifying, inspecting, implementing the CESCOP and ensuring compliance with all requirements of this section, and, all other environmental regulations, or as directed by the Engineer.
 - f. Qualifications of the CESCL shall be as follows:
 - (1) Have successfully completed Contractor Erosion and Sediment Control Lead (CESCL) training given by a Washington State Department of Ecology-approved provider, and have five years experience in construction site erosion and sediment control regulatory requirements and BMPs, erosion and sediment control plan development, and stormwater/water quality monitoring, or
 - (2) Currently certified as a Certified Professional in Erosion and Sediment Control (CPESC) offered by CPESC, Inc. (www.cpesc.org) and have one year experience in state of Washington construction site erosion and sediment control regulatory requirements and BMPs, erosion and sediment control plan development and stormwater monitoring.
 - g. The CESCL shall also have done the following:

- (1) Coordinated, developed, and implemented erosion and sediment control plans for NPDES permit compliance in the State of Washington.
 - (2) Completed at least two erosion and sediment control plans for earthwork projects.
 - (3) Developed phased construction work schedules addressing all ground disturbing activities.
 - (4) Designed proper temporary and permanent erosion and sediment control measures (BMPs) during clearing, new road construction, existing road improvement, and for emergency situations.
 - (5) Designed excavation dewatering plans.
 - (6) Designed plans for dust abatement, embankment stabilization, and restoration
 - (7) The Contractor shall submit for approval all documentation listed above necessary to prove CESCL qualifications including but not limited to resumes, certificates, degrees, recommendation letters, and plan examples.
3. Duties and responsibilities of the CESCL shall include:
- a. Maintaining permit file on site at all times which includes the CESC, the SWPPP, and any associated permits and plans;
 - b. Directing BMP installation, inspection, maintenance, modification, and removal;
 - c. Availability 24 hours per day, 7 days per week by telephone;
 - d. Updating all drawings with changes made to the plan;
 - e. Keeping daily logs;
 - f. Prepare and submit for approval a Contractor Erosion and Sediment Control Plan (CESCP);
 - g. Immediately notify the Engineer should any point be identified where storm water runoff potentially leaves the site, is collected in a surface water conveyance system (i.e., road ditch, storm sewer), and enters receiving waters of the State;
 - h. If water sheet flows from the site, identify the point at which it becomes concentrated in a collection system.
 - i. Inspect CESCP requirements including BMPs as required to ensure adequacy; facilitate, participate in, and take corrective actions resulting from inspections performed by outside agencies, Port employees, and Port consultants.
 - j. Set up and maintain a construction stormwater monitoring plan that includes monitoring locations and procedures. At a minimum, the plan will include monitoring points everywhere construction stormwater discharges from the project.

- k. The CESCL shall have authority to act on behalf of the Contractor and shall be available, on call, 24 hours per day throughout the period of construction.
 - l. The CESCPC shall include the name, office and mobile telephone numbers, fax number, and address of the designated CESCL and all Contractor personnel responsible for erosion and sediment control.
 - m. In addition to the CESCL, the Contractor shall designate sufficient employees as Erosion and Sediment Control Inspectors who will be responsible for all erosion and sediment control, water quality, fugitive dust and other environmental compliance as directed by the CESCL. At a minimum, the Contractor's superintendent foremen, and lead persons shall be designated as Erosion and Sediment Control Inspectors. On matters concerning erosion control, the Erosion and Sediment Control Inspectors shall report to the CESCL.
 - n. The Erosion and Sediment Control Inspectors shall have successfully completed "Contractor Erosion and Sediment Control Lead" (CESCL) training given by a Washington State Department of Ecology-approved provider.
4. Schedule and Sequencing
- a. The CESCPC shall include:
 - (1) Schedules for accomplishment of temporary and permanent erosion control work, that include as a minimum all specific work items as are applicable for clearing and grubbing; grading; construction; paving; structures at watercourses, sawcutting, and dewatering, underground utilities; Stormwater conveyances, and seeding.
 - (2) Proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials;
 - (3) Estimated removal date of all temporary BMPs;
 - (4) Estimated date of final site stabilization.
 - (5) Dates of earthwork activities.
 - (6) Dates when construction activities temporarily or permanently cease on any portion of the site.
 - (7) Dates when any stabilization measures are installed.
 - (8) Dates when structural BMPs are initiated.
 - (9) Dates for all work performed within 200 feet of sensitive environmental areas including wetlands, streams and ponds.
 - b. Erosion control work activities consistent with the CESCPC shall be included in the Project Schedule for each work area and project activity as shown on the drawings.

5. BMP Installation
 - a. The CESCP shall include installation instructions and details for each BMP used during the life of the Project;
 - b. To prepare or modify Contractor's Erosion and Sediment Control Plans, use BMPs from the Washington State Department of Ecology, Stormwater Management Manual for Western Washington, Vol. 2, and (Current Version). May be downloaded at: <http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>
 - c. The CESCL shall certify that all BMP installers are trained in proper installation procedures.
6. BMP Maintenance
 - a. The CESCP shall include a description of the maintenance and inspection procedures to be used for the life of the project.
 - b. BMPs shall be maintained for the life of the project, the completion of a work phase and/or until removed by direction of the Engineer;
 - c. BMPs shall be maintained during all suspensions of work and all non-work periods;
 - d. BMPs shall be maintained and repaired as needed to assure continued performance of their intended function and in accordance with the approved CESCP;
 - e. Sediments removed during BMP maintenance shall be placed away from natural and constructed storm water conveyances and permanently stabilized.
 - f. All maintenance shall be completed within 24 hours of inspection
7. BMP Inspection
 - a. The Contractor shall inspect all TESC best management practices daily during workdays and anytime 0.5" of rainfall has occurred within 24 hours on weekends, holidays, and after hours. Rainfall amounts can be determined by calling (206) 787-4360 Airport Projects or contacting the National Weather Service for Sea-Tac International Airport rainfall.
 - b. Deficiencies identified during the inspection shall be corrected within 24 hours or as directed by the Engineer.
 - c. Note repairs or improvements needed, if any, and notify CESCL or site project superintendent to implement improvements;
 - d. Observe runoff leaving the site during storms, checking for turbid water;
 - e. Implement additional BMPs, if needed, to address site-specific erosion control;
 - f. Inspect streets surrounding site for dirt tracking;
 - g. Inspect for dust.

- h. The Contractor shall visually inspect all stormwater runoff that discharges from the project for petroleum or chemical sheen, or “rainbow”. Occurrences of sheen shall be reported immediately to the Engineer and shall follow procedures specified in Section 01 57 23 – Pollution Prevention, Planning & Execution.
 - i. The Contractor shall collect samples and test all stormwater runoff that discharges from the project for turbidity using a calibrated turbidimeter, and for pH using test strips that measure from pH 0 - 14. Turbidity that exceeds 25 NTUs or pH that is below 6.5 or above 8.5 shall be reported immediately to the Engineer.
8. Record keeping
- a. Reports summarizing the scope of inspections, the personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of the CESC, and actions taken as a result of these inspections shall be prepared and retained as a part of the CESC;
 - b. All inspection reports shall be kept on-site during the life of the project and available for review upon request of the Engineer.
 - c. Copies of all inspection records and updated CESC shall be submitted to the Engineer weekly.
 - d. The CESC shall include the Contractor’s inspection form which includes the following:
 - (1) All best management practices to be inspected and monitored for all work areas and work activities identified in the schedule for the life of the contract.
 - (2) Inspection time and date.
 - (3) Weather information including current conditions, total rainfall since last inspection and rainfall in the 24 hours prior to the current inspection.
 - (4) Locations of BMPs inspected.
 - (5) Locations of BMPs that need maintenance and reasons why.
 - (6) Locations of BMPs that failed to operate as designed or intended.
 - (7) Locations where additional or different BMPs are needed and reasons why.
 - e. A description of stormwater discharged from the site. The CESC shall note the presence of suspended sediment, turbid water, discoloration, and/or petroleum sheen.
 - f. Any water quality monitoring performed during inspection.
 - g. General comments and notes, including a description of any BMP repairs, maintenance or installations made as a result of the inspection.

- h. A statement that, in the judgment of the person conducting the site inspection, the site is either in compliance or out of compliance CЕСSCP. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance, as well as a schedule of implementation. If the site inspection indicates that the site is out of compliance, the CESCL shall notify the Engineer immediately.
 - i. Name, title, and signature of the CESCL conducting site inspection and the following statement: "I certify that this report is true, accurate, and complete, to the best of my knowledge and belief."
9. BMP Removal
- a. After cleaning and removal, the drainage system shall not be used for temporary construction stormwater conveyance or storage.
 - b. Sediment removed shall be placed away from drainage conveyances and permanently covered with hydro seed or other material as directed by the Engineer.
 - c. Stormwater ponds used to contain construction stormwater runoff shall be returned to elevations shown on the plans.
 - d. Temporary BMPs shall be removed upon permanent stabilization or as directed by the Engineer.
 - e. Areas disturbed during removal of temporary BMPs shall be permanently stabilized.
 - f. Permanent stabilization shall occur upon installation of:
 - (1) Concrete or asphalt pavement.
 - (2) On grades 3:1 and less, soil is covered by a minimum of 85% grass growth, as determined by the Engineer.
 - (3) On grades greater than 3:1 soil is covered by an approved erosion control blanket or bonded fiber matrix and a minimum of 85% grass growth, utilizing the "Line Intercept Method".
 - (4) All stormwater discharges from the project meet the following criteria:
 - (a) 0-25 NTUs.
 - (b) 6.5-8.5 pH.
 - (c) No visible sheen.
 - (d) No settleable solids.
 - (e) Washington State Stormwater Quality Standards (WAC 173-201A) at the receiving water, as determined by the Engineer.
10. Emergency Response

- a. The CЕСCP shall contain information on how the Contractor shall control and respond to turbid water discharges, sediment movement, and fugitive dust. At a minimum, the Contractor's employee responsible for, or first noticing, the discharges shall take appropriate immediate action to protect the work area, private property, and the environment (e.g., diking to prevent pollution of state waters). Appropriate action includes but is not limited to the following:
- (1) Hazard Assessment - assess the source, extent, and quantity of the discharge.
 - (2) Securement and Personal Protection - If the discharge cannot be safely and effectively controlled, then immediately notify the CESCL and the Engineer. If the discharge can be safely and effectively controlled, proceed immediately with action to protect the work area, private property, and the environment.
 - (3) Containment and Elimination of Source - Contain the discharge with silt fence, pipes, sand bags or a soil berm down slope from the affected area. Eliminate the source of the discharge by pumping turbid water to a controlled area, building berms, piping clean water away from the area or other means necessary.
 - (4) Cleanup - when containment is complete, remove sediment, stabilize, dispose of contaminated water and prevent future discharge.
 - (5) Notification - report all discharges immediately to the Engineer.

11. Construction Dewatering

Designer to verify specific discharge requirements and modify this section accordingly. In some cases, no construction stormwater discharge is allowed and alternative disposal methods, such as sanitary sewer or trucking off site need to be included.

- a. Storm water and construction dewatering operations shall not discharge to the Storm Drain System (SDS) unless free from pollutants. Before discharge, water shall be measured using a properly calibrated, approved turbidity meter. Discharged water shall not exceed 25 Nephelometric Turbidity Units (NTUs) and pH levels shall be between 6.5 and 8.5.
- b. ~~(For Airport Only, otherwise delete)~~ Storm water and construction dewatering water shall not be discharged to the Industrial Wastewater System (IWS) unless free from pollutants. Before discharge, water shall be measured using a properly calibrated, approved turbidity meter. Discharged water shall not exceed 200 Nephelometric Turbidity Units (NTUs) and pH levels shall be between 6.0 and 9.0. There shall be no discharge to any catch basin without specific approval of the Engineer.

- c. The CЕССР shall address how the Contractor plans to manage clean and polluted water during the life of the project. Specific procedures shall be developed and included in the CЕССР when work includes excavation within 10 feet of any water, sewer, or storm system. Procedures shall address, at a minimum, locating, protecting, and connecting to existing pipes, as well as response plans for broken pipes.
 - d. The Engineer shall be notified before any disposal, hauling, pumping, or treatment of water occurs. Notification shall include location of disposal and methods of treatment.
 - e. Water shall not be pumped into ditches, gutters, drainage conveyance, catch basins, or any area that drains to one of these unless it meets the specifications outlined in this section and with prior approval of the Engineer.
 - f. Chlorinated water used for disinfecting water pipes shall not be discharged to the storm drain system.
12. Fugitive Dust Planning:
- a. The CЕССР shall detail the Contractor proposed approach to fugitive dust management. The plan shall include the following:
 - (1) Identification of all fugitive dust sources for each work activity.
 - (2) Description of the fugitive dust control measures to be used for each source.
 - (3) Schedule, rate of application and calculations to identify how often, how much, and when the control method is to be used.
 - (4) Provisions for monitoring and recordkeeping.
 - (5) Contingency plan in case the first control plan does not work or is inadequate.
 - (6) Name and telephone number of the person responsible for fugitive dust control.
 - (7) Source and availability of fugitive dust control materials.
 - b. The Contractor shall provide whatever means is necessary to keep fugitive dust on site and at an absolute minimum during working hours, non-working hours and any shut-down periods.
 - c. The Contractor's methods for fugitive dust control will be continuously monitored and if the methods are not controlling fugitive dust to the satisfaction of the Port, the Contractor shall improve the methods or utilize new methods at no additional cost.
 - d. The Contractor shall maintain as many water trucks on a site during working and non-working hours as required to maintain the site free from fugitive dust.

- e. During time periods of no construction activity, water trucks must be ready with on-site Contractor's personnel available to respond immediately to a dust or debris problem as identified by the Engineer.
- f. At no time shall there be more than a 10 minute response time to calls concerning fugitive dust/debris problems during work hours and a 90 minute response at all other times on a 24 hour basis.

B. UTILITIES PLANNING:

The CESCOP shall identify when and how all underground utility work will be conducted so that water quality compliance is maintained. At a minimum, the Contractor shall:

- 1. Have all shut off valves located and have procured the means to shut off valves within 10 minutes of a water line break.
- 2. Before cutting into an existing water line, the Contractor shall verify to the Engineer that the water line is not pressurized.
- 3. The Contractor shall not cut into an existing storm drain or connect new stormwater conveyance systems into existing systems until it has been verified to the Engineer there will be no discharge of non-compliant water during and after cutting and connection operations.
- 4. The Contractor shall grout all holes, seams, cracks, joints, cast iron rings and grates within 24 hours of installation of each item.
- 5. Storm systems to be demolished in place shall be first blocked at the point of connection to existing section to prevent contamination of existing storm system.
- 6. Chlorinated water shall be discharged to sanitary sewer or removed from the site.
- 7. Air plugs shall not be utilized for more than 24 hours and shall be in new condition with no leaks and monitored daily for proper air pressure.
- 8. Mechanical plugs shall not be utilized for more than 5 calendar days and shall be used according to the manufacturer's instructions and engineering parameters. The Contractor shall submit instructions and engineering documentation before use.
- 9. When a plug needs to remain in place longer than 5 days, the Contractor shall utilize grout. The grout shall be installed so that the length is one and a half times the diameter of the pipe.

C. EDUCATION:

The Contractor shall provide narrative in the CESCOP on how they will educate all personnel including subcontractors. At a minimum, the Contractor shall:

- 1. Train staff through regularly scheduled meetings to discuss environmental protection subjects as related to this project. This may be added to any existing weekly meetings (such as safety meetings).

2. Training shall emphasize water quality compliance, BMP installation and maintenance, sensitive areas, emergency response, spill prevention, and inspections.
3. Minutes of the meetings detailing attendees and subjects discussed shall be kept and submitted to the Engineer weekly.
4. Prior to commencing work, all Contractor and subcontractor personnel at any tier shall complete a Port of Seattle Environmental Compliance Orientation given with the required Safety Orientation.

3.03 EXECUTION OF WORK

A. CONSTRUCTION REQUIREMENTS

Remove anything that doesn't apply to work.

1. Saw cutting
 - a. Saw cut slurry and cuttings shall be vacuumed during cutting operations;
 - b. Saw cut slurry and cuttings shall not remain on permanent concrete or asphalt pavement overnight;
 - c. Saw cut slurry and cuttings shall not drain to SDS, IWS, or any other natural or constructed drainage conveyance;
 - d. Collected slurry and cuttings are the responsibility of the Contractor and shall be disposed of off site in a manner that does not violate groundwater or surface water quality standards.
2. Soil and Construction Debris Stockpiles
 - a. Soils and construction debris, including broken concrete and asphalt paving, shall be stockpiled within the work site or off site.
 - b. Stockpiles shall be covered with plastic and secured from blowing wind and/or jet blast.
 - c. Plastic shall be a minimum thickness of 6 mil.
 - d. Materials to be stockpiled on pavement shall be placed on plastic and contained within a bermed area.
 - e. Clean storm water runoff from the plastic covering shall be directed away from bare soil using pipes, sandbags, or other temporary diversion devices.
3. Construction Roads, Entrances, and Exits
 - a. Before leaving project site, all trucks and equipment shall be inspected for mud and debris. All mud and debris shall be removed as per Section 01 50 00 - Temporary Facilities and Controls.
 - b. At no time shall mud, debris, or visible sediment be allowed outside of the project boundaries and on any Port-owned and public roads.
 - c. Mud and debris shall be removed from pavement by vacuum sweeping and shoveling and transported to a controlled sediment disposal area identified in the CESC.

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- d. If the mud and debris are contaminated by fuels, grease, metals or other pollutants, they shall be disposed of in accordance with Section 01 57 23 - Pollution Prevention, Planning and Execution.
 - e. Use of water to wash concrete or asphalt pavement shall be allowed only after sediment has been removed by vacuum sweeping and shoveling, and a Road Wash Plan has been submitted and accepted by the Engineer.
 - f. (For airport projects only, otherwise delete) Water used to wash pavement shall not drain into the SDS, IWS or any other natural or constructed storm water conveyance and shall be removed from Port property and disposed of off-site in accordance with local, state, and federal regulations.
 - g. Power brooms shall not be utilized without prior approval by the Engineer.
 - h. Contractor shall have sufficient working vacuum sweepers on site at all times work is being performed. All sweepers shall have on-board water spray systems that shall be operating at all times.
 - i. Vacuum sweepers shall be dedicated to this project and shall not be utilized by any other contract, nor be hired out to another contractor.
 - j. At least one driver shall be assigned to a vacuum sweeper and shall do no other work.
 - k. Coverage shall be provided during lunch breaks, and during unfilling activities.
 - l. If, in the Engineer's opinion, the Contractor does not adequately manage the tracking of sediment, the Port may subcontract out the control of sediment tracking at the Contractor's expense.
4. Catch Basin Protection
- a. All catch basins within the project limits, and outside the project limits but within the project drainage basin, including haul roads, shall be protected
 - b. Catch basin protection shall be installed where shown in the project drawings, in all storm drainage structures within the work area, or as otherwise directed by the Engineer.
5. Concrete Truck and Equipment Washing
- a. Concrete truck chutes, concrete pumps, hand tools, screeds, floats, trowels, rollers and all other tools shall be washed out only into Washington State Department of Ecology (WDOE)-approved covered steel containers or formed areas awaiting concrete or asphalt pavement.
 - b. All contained concrete waste shall be disposed of offsite in a manner that does not violate groundwater or surface water quality standards.

- c. All water used for washing, is defined by the WDOE as “process water” and shall be collected and disposed of in a manner that complies with all locate, state and federal regulations.
- 6. Wheel Washes
 - a. All haul vehicles exiting the work site to public roads shall pass through a wheel wash system to control sediment tracking. Any required modification, alteration or improvement needed on the existing wheel wash systems or supplemental vehicle washing for the successful control of dirt, debris or sediment tracking beyond the wheel wash, either on Port haul roads or public roads, for the duration of the contract shall be the responsibility of the Contractor.
 - b. No modifications of the wheel wash system will be allowed that would alter the design of a contained operation with recycled wash water with no release of sediment laden wash water. The sediment shall be contained and disposed of at an appropriate disposal facility off Port Property.
 - c. The wash water is “process water” and shall not be released on site or to the storm drain system and shall be disposed of in accordance with all water quality regulations
- 7. Silt Fence
 - a. Silt fence shall be constructed at the locations shown in the project drawings, in the approved Contractor Erosion and Sediment Control Plan, or otherwise directed by the Engineer.
 - b. The geotextile shall be attached to the up-slope side of the posts and the wire mesh using staples, wire rings, or in accordance to the manufacturer’s recommendations.
 - c. Where seams are required to join two sections of fence material, the seams shall be taped together, wrapped three times around a 2” steel post and the post driven into the ground. All rips, tears, holes, and other damage to silt fences shall be repaired within 24 hours of locating the damage.
 - d. When sediments deposits reach approximately one-third the height of the silt fence, the deposits shall be removed and disposed of outside Port property.
- 8. Straw Wattle
 - a. The installation of straw wattles shall be per WSDOT Standard Plan I-30.30-00 “Wattle Installation on Slope”, or as directed by the Engineer.
- 9. Bonded Fiber Matrix Soil Stabilization
 - a. The installation of Bonded Fiber Matrix Soil Stabilization shall be applied at a minimum rate of 3,000 pounds per acre and provide a minimum of 95% soil cover. Seed and fertilizer shall be included.
- 10. Temporary Organic Mulch

- a. Temporary organic mulch shall be applied at a minimum rate of 1.5 tons per acre.
- 11. Swale Construction
 - a. Grass-lined swales shall be constructed to the lines and grades shown on the drawings. The swale includes excavating, grading, placement of topsoil, placement of erosion control blanket, and hydroseeding as detailed on the drawings. Excavated material from the swale construction shall be considered Excess Soil as defined in Section 31 23 00 – Excavation and Embankment.
- 12. Temporary Piping/Connections
 - a. The Contractor shall install temporary piping, catch basins and connections to the existing storm drain system in locations shown on the drawings. At the completion of the work, the piping shall be removed and the temporary connections plugged.
- 13. Temporary Pipe Plugging
 - a. The locations of piping to be temporarily plugged are indicated on the drawings. At the completion of the work, the plugs shall be removed.
- 14. Construction Stormwater
 - a. The Contractor shall construct stormwater tank pads in the size, location and as detailed on the drawings.
 - b. The Contractor shall install stormwater storage tanks, as specified, in the locations and quantities shown on the drawings.
 - c. The Contractor is responsible for conveying construction stormwater within each work area to the stormwater storage tank area shown on the drawings.
 - d. Temporary piping, structures and pump facilities required for the conveyance are the responsibility of the Contractor.
 - e. The construction stormwater shall be held in the storage tanks until hauled and disposed of by the Contractor on a Force Account basis.
 - f. The storage tank facilities including pads, access roads, ramps, temporary structures and piping shall be removed at the completion of the work or as directed by the Engineer
- 15. Surface Roughening:
 - a. All soil shall be roughened, loose and friable, by ripping or with equipment tracks before being permanently stabilized.

3.04 DELIVERABLES

3.05 QUALITY ASSURANCE

PART 4 MEASUREMENT AND PAYMENT

Replace all of Part 4 language with following only if the entire project is LUMP SUM:

No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Lump Sum price bid for the Project.

4.01 MEASUREMENT

- A. Measurement for “TESC – Plan and Execution” will be as a unit.
- B. Measurement for “TESC – Bonded Fiber Matrix Soil Stabilization” and “TESC- Temporary Organic Mulch” will be per square yard.
- C. Measurement for “TESC – Silt Fence”, “TESC – Straw Wattle”, “TESC – Asphalt Curb”, “TESC – Grass Lined Swale” will be per linear foot.
- D. Measurement for “TESC – Catch Basin Protection”, “TESC – Temporary Piping/Connections”, “TESC – Temporary Pipe Plug”, “TESC – Construction Roads, Entrances and Exits” and “TESC – Stormwater Storage Tank Pad” will be per each.
- E. Measurement for “TESC – Stormwater Storage Tank” shall be per each per month.
- F. Measurement for “TESC – CESCL” shall be per day.
- G. Measurement for “TESC – Force Account” and “TESC – Construction Stormwater Hauling” will be on a Force Account basis in accordance with Document 00 70 00 – General Conditions. An estimated amount has been entered in the Schedule of Unit Prices.

4.02 PAYMENT

- A. Payment for “TESC – Plan and Execution” will be made at the contract lump sum price as stated in the Schedule of Unit Prices and shall be full compensation for furnishing all labor, equipment, materials and tools to develop, implement and maintain the temporary erosion and sedimentation control plan including implementation of temporary stormwater conveyance facilities either as shown on the drawings or as required to complete the work, dust control, operation, maintenance and modification of wheel wash systems, construction of the stormwater tank pad areas as detailed on the drawings, control of sediment tracking, providing and operating vacuum sweepers and water trucks, and other measures as required as detailed on the drawings and specified herein through the duration of the contract, with the exception of those items measured and paid for separately. Payments will be made as follows:
 - 1. Upon acceptance of the Contractor’s Erosion and Sediment Control Plan (CESCP) 20%.
 - 2. After NTP and before Substantial Completion, 60% will be prorated and paid monthly for compliance with the CESCP. Non-compliance will result in withholding of payment for the month of the non-compliance.
 - 3. At final payment, 20% for a clean and stabilized site.
- B. Payment for “TESC – Silt Fence” will be made at the contract unit price per linear foot as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials and tools necessary to complete the

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installation of the silt fence as detailed on the drawings or as directed by the Engineer and specified herein. The unit price shall include all maintenance, the removal of silt fencing, and restoration of the area at the completion of the work.

- C. Payment for “TESC – Catch Basin Protection” will be made at the contract unit price per each as stated in the Schedule of Unit Prices – A and shall be full compensation for all labor, equipment, tools, and materials to install inlet protection or filter on catch basins as shown on the drawings and specified herein. The unit price shall include all maintenance, removal and disposal of sediment material and the removal of the protection at the completion of the work.
- D. Payment for “TESC – Straw Wattle” will be made at the contract unit price per linear foot as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials, and tools necessary to install the straw wattles as directed by the Engineer. The unit price shall include all maintenance, removal and disposal of the material at the completion and the restoration of the area at the completion of the work.
- E. Payment for “TESC – Asphalt Curb” will be made at the contract unit price linear foot as stated in the Schedule of Unit Prices – A and B and shall be full compensation for all labor, materials, tools, and equipment necessary to complete the work to install the asphalt curb or berm as shown on the drawings or directed by the Engineer and specified herein, and remove and dispose of the material at the completion of the work.
- F. Payment for “TESC – Bonded Fiber Matrix Soil Stabilization” will be made at the contract unit price per square yard as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials, and tools including site preparation, and installation of the material as described in this section and as detailed on the drawings. The unit price shall be full compensation for multiple applications, in areas as required by the Engineer as the work progresses. The minimum application will be 500 square yards. The unit price shall include mobilization/demobilization for each application required.
- G. Payment for “TESC – Temporary Organic Mulch” will be made at the contract unit price per square yard as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials, and tools including site preparation, and installation of the material as described in this section and as detailed on the drawings. The unit price shall be full compensation for multiple applications, in areas as required by the Engineer as the work progresses. The unit price shall include mobilization/demobilization for each application required.
- H. Payment for “TESC – Temporary Piping/Connections” will be made at the contract unit price per each as stated in the Schedules of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials, and tools to install the temporary piping of various sizes as shown on the drawings and described in this section, including the site preparation, excavation, hauling and disposal of material, required maintenance, including sediment removal, and removal of the piping and restoration of the area at the completion of the work or as directed by the Engineer. This item shall also include bends, anchors, supports, etc. necessary for a complete and operational system.
- I. Payment for “TESC – Temporary Pipe Plug” will be made at the contract unit price per each as stated in the Schedules of Unit Prices – A and shall be full

compensation for furnishing all labor, equipment, materials, and tools to furnish, install, maintain and remove the specified temporary pipe plug in location shown on the drawings or as directed by the Engineer.

- J. Payment for “TESC – Construction Roads, Entrances and Exits” will be made at the contract unit price per each as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, materials, equipment, tools to construct the construction entrance, regardless of size, including site prep, grading, furnishing and the installation of quarry spalls, crushed aggregate base, asphalt concrete, piping, as required to construct and maintain the entrances as shown on the drawing and specified herein. The unit price shall include maintenance, removal of the temporary improvement and restoration of the area at the completion of the work.
- K. Payment for “TESC – Grass Lined Swale” will be made at the contract unit price per linear foot as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, equipment, materials, and tools to construct the swale as detailed on the drawings, including the required site preparation, excavation, hauling and disposal of excavated material off Port Property, erosion control blanket, seeding and all incidentals to complete the work and the removal the swale and restoration of the area at the completion of work.
- L. Payment for “TESC – Stormwater Storage Tank Pad” will be made at the contract unit price per each as stated in the Schedule of Unit Prices – A and shall be full compensation for furnishing all labor, tools, equipment and material to construct the pad as detailed on the drawings including all excavation, crushed aggregate base, piping, grading, asphalt concrete pavement, maintenance of the pads, removal and restoration of the site at the completion of work or as directed by the Engineer.
- M. Payment for “TESC – Stormwater Storage Tank” will be made at the contract unit price per each per month as stated in the Schedule of Unit Prices – A, and shall be full compensation for furnishing the specified storage tank. The unit price per each per month shall include the cost of mobilization/demobilization, cleaning, hauling and all incidentals for the number of storage tanks required by the Engineer for a minimum of one month through the maximum for the duration of the contract.
- N. Payment for “TESC – CESCL” will be made at the contract unit price per day as stated in the Schedule of Unit Prices – A and shall be full compensation for developing, maintaining, modifying, inspecting, implementing the CESSCP and ensuring compliance with all requirements of this section, the STIA NPDES Permit No. WA-002465-1, all other environmental regulations, or as directed by the Engineer.
- O. Payment for “TESC – Construction Stormwater Hauling” as stated in the Schedule of Unit Prices – A will be made on a Force Account basis in accordance with Document 00 70 00 –General Conditions and shall be full compensation to transfer construction stormwater from the stormwater storage tanks to trucks for hauling and disposal in an existing stormwater pond.

Item of Work "TESC – Force Account" will be added to the Schedule of Unit Prices in Specification Section 00 41 00 – Bid Form. The Unit Price and Amount will be set by the Designer along with the Erosion Control / Stormwater Engineer.

- P. Payment for "TESC – Force Account" as stated in the Schedule of Unit Prices – A and B will be made on a Force Account basis in accordance with Document 00 70 00 –General Conditionsand shall be full compensation to complete only temporary erosion control measures that are not part of the contract work, not covered under existing bid items and are at the specific direction of the Engineer.

Payment will be made under:

Schedule of Unit Prices

TESC – Plan and Execution –	Lump Sum
TESC – Silt Fence –	per linear foot
TESC – Catch Basin Protection –	per each
TESC – Straw Wattle –	per linear foot
TESC – Asphalt Curb –	per linear foot
TESC – Bonded Fiber Matrix Soil Stabilization –	per square yard
TESC – Temporary Organic Mulch –	per square yard
TESC – Temporary Piping/Connections –	per each
TESC – Temporary Pipe Plug –	per each
TESC – Construction Roads, Entrances, and Exits –	per each
TESC – Grass Lined Swale –	per linear foot
TESC – Stormwater Storage Tank Pad –	per each
TESC – Stormwater Storage Tank –	per each per month
TESC – CESCL –	per day
TESC – Construction Stormwater Hauling –	Force Account
TESC – Force Account –	Force Account

End of Section

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

PART 1 GENERAL

1.01 SUMMARY

- A. This section consists of planning for and implementing the temporary measures indicated herein, shown on the Contract Documents, or as ordered by the Engineer to prevent pollution of soil and water, and control, respond to, and dispose of potential pollutants or hazardous materials during the life of the Contract.
- B. This work shall apply to all areas associated with Work including, but not limited to the following work areas:
 - 1. Jobsite
 - 2. Equipment and material storage areas
 - 3. Staging/Laydown areas
 - 4. Stockpiles

1.02 DESCRIPTION OF WORK

- A. In order to comply with this specification the Contractor shall:
 - 1. Develop and submit a site specific Pollution Prevention Plan
 - 2. Revise the Pollution Prevention Plan during the life of the Contract
 - 3. Install, maintain, and remove all spill prevention, containment, countermeasures, and pollution prevention Best Management Practices during the life of the Contract
 - 4. Contain, cleanup and dispose of all hazardous materials or potential pollutants
 - 5. Perform other work shown on the Contract Documents or as directed by the Engineer
 - 6. Maintain any required Contractor pollution liability insurance including insurance liability for the transportation of hazardous materials for the duration of the Contract

7. Maintain a proper Hazardous Material Endorsement for any driver that is transporting hazardous material in a vehicle that requires the driver to maintain a valid and current Commercial Driver's License in the State of Washington

1.03 POLLUTION PREVENTION PLAN

- A. The Contractor shall develop and submit to the Port a site specific Pollution Prevention Plan. The Pollution Prevention Plan must be a site-specific document that outlines the administrative, operational, and structural Best Management Practices that will be implemented on the project. Approved BMPs may be found in the Stormwater Management Manual for Western Washington, Department of Ecology, August 2001, or current edition.
- B. The Pollution Prevention Plan must, at a minimum, include the following:
 1. Site specific description and drawings
 2. Contractor pollution prevention contact personnel
 3. Known or potential hazardous materials inventory list
 4. Safety Data Sheets (SDSs) for hazardous materials identified on the inventory list
 5. Hazardous material containers labeling system
 6. Hazardous material container storage and handling procedures
 7. Hazardous material spill prevention planning and execution
 8. Hazardous material spill control and response planning and execution
 9. Hazardous material cleanup and disposal planning and execution
 10. Subcontractor's acknowledgment

1.04 SUBMITTALS

- A. As part of the required Preconstruction Submittals, Section 01 32 19 - Preconstruction Submittals, and before Notice to Proceed is issued, the Contractor shall submit the following information:
 1. Pollution Prevention Plan and the required contents
 2. Insurance Endorsements verifying liability coverage for job-site work and any transportation of hazardous materials to or away from the jobsite.
 3. Copy of a completed MCS-90 Certificate if required under the Motor Carrier Act of 1980 for transportation of hazardous material which verifies compliance with the financial responsibility requirements of the Act;
 4. A list of all drivers who will be hauling hazardous material in a vehicle that requires the driver to maintain a Commercial Driver's License in the State of Washington under RCW 46.25.080. These drivers must show evidence of a proper Hazardous Material Endorsement in accordance with Washington RCW 46.25.070 and 46.25.085.

1.05 DEFINITIONS

- A. Absorbent: Any material capable of absorbing oils, water-based materials, solvents, acids, and other hazardous materials. Absorbent materials include: pads, kitty litter, floor dry, and other commercially available materials.
- B. Best Management Practice (BMP): The variety of administrative, operational, and structural measures that will be implemented to prevent and reduce the amount of contaminants in stormwater and the environment. (Example: Providing secondary containment for liquid storage is a BMP).
- C. Container: Any portable device, in which a material is stored, transported, treated, disposed of, or otherwise handled.
- D. Daily Report: The report (form CM03) that the Contractor shall submit daily to include Contractor daily activities.
- E. Dangerous Waste: Solid wastes designated by the State of Washington Under Chapter 173-303 WAC and regulated as Dangerous Waste, Extremely Hazardous Waste, or Mixed Waste. (The State of Washington is authorized to implement Federal Hazardous Waste Regulations - see also Hazardous Waste Definition)
- F. Hazardous Material: A substance or material, including a hazardous substance, hazardous waste, marine pollutant, including but not limited to: diesel, gasoline, petroleum products, solvents, paints, acids, lubricants, curing compounds, form release agents, adhesives, sealants, and epoxies. (See also Hazardous Waste definition)
- G. Hazardous Material Storage Area: The area used by the Contractor to store hazardous material.
- H. Hazardous Material Container Labeling System: The system used by the Contractor for identifying the secondary containers used to store hazardous materials or wastes. Acceptable methods include: Department of Transportation (DOT), Hazardous Material Information System (HMIS); National Fire Protection Association Fire Diamond (NFPA Hazard Rating).
- I. Hazardous Waste: Solid wastes designated by 40 CFR Part 261, and regulated as hazardous or mixed waste by the United States EPA.
- J. Safety Data Sheet (SDSs): Written or printed material available for each chemical that includes information on: the physical properties, hazards to personnel, fire and explosion potential, safe handling recommendations, health effects, fire-fighting techniques, and reactivity and disposal.
- K. Secondary Container: Any container, other than the original container that is used for transferring, holding, storing or otherwise containing hazardous materials or wastes.
- L. Secondary Containment: A device designed, installed, or operated to prevent any migration of wastes or accumulated liquid to the soil, ground water, or surface water. The device must, at minimum, hold 110 percent of the volume of the largest container being stored. The device must have the strength to contain a spill and be made of materials that will not be degraded by the wastes or accumulated liquids it is intended to contain.
- M. Sorbent: A material used to soak up free liquids by either adsorption or absorption, or both.

- N. Storm Drainage System (SDS): Consists of any drain, inlet, catch basin, slot drain, pipe, gully, fissure, ditch, or other form of conveyance that collects and transports stormwater.

1.06 REFERENCES

- A. The following rules, requirements and regulations specified may apply to this work:
 - 1. Washington State Dangerous Waste Regulations: Chapter 173-303 WAC, February 1998 Edition.
 - 2. National Pollution Discharge Elimination System Waste Discharge Permit No. WA-002465-1 (Seattle-Tacoma International Airport)
 - 3. Part C - Hazardous Communication: Chapter 296-62-054 WAC, "Right to Know"
 - 4. Port of Seattle Regulations for Airport Construction, (Current Edition).
 - 5. Puget Sound Stormwater Management Plan, Puget Sound Water Quality Action Team; 1998.
 - 6. Title 40 Code of Federal Regulation Subchapter I - Solid Wastes 261, 262, 263, 265, 268, 273, 279, 370 (Federal Hazardous Waste Regulations)
 - 7. Sea-Tac International Airport Rules and Regulations (Current Edition).
 - 8. Sea-Tac Airport Stormwater Pollution Prevention Plan, as required by NPDES permit No. WA-002465-1.
 - 9. Seattle-Tacoma International Airport Spill Prevention Control and Countermeasure (SPCC) Plan: January 2003. Kennedy/Jenks Consultants.
 - 10. Stormwater Management Manual for Western Washington, Department of Ecology; August 2001 (or Current Version)
 - 11. Surface Water Design Manual, King County Public Works, September 1998
 - 12. WAC 173-201 A, Water Quality Standards of the State of Washington.
 - 13. Revised Code of Washington - 46.25.085, 46.25.080, 46.25.070, 46.48.170, 4.24.314

1.07 PERMITS

- A. Work shall be conducted in accordance with STIA NPDES permit No. WA-002465-1 (Airport)
- B. Work shall be conducted in accordance with all applicable NPDES permit including but not limited to the Port of Seattle's Phase 1 Municipal Permit (Seaport).

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 SITE DESCRIPTION AND DRAWINGS

- A. A written site description shall be included in the Pollution Prevention Plan that addresses the following:
 - 1. Physical description and location of the construction site and staging areas;

2. Construction activities that will involve the use of hazardous materials or generate hazardous waste;
 3. Location of material storage areas and project staging areas;
 4. Designated fueling areas;
 5. Proximity to any natural or manmade drainage conveyance including ditches, catch basins, ponds, wetlands, and pipes;
 6. Public areas relating to construction project;
 7. Proximity to other construction sites;
- B. Drawings shall be included in the Pollution Prevention Plan that show the construction site(s), location of fueling areas, equipment storage areas, catch basins and other man-made and natural drainage conveyances within the work area and storage areas. The drawings may be hand drawn sketches but must include the appropriate spatial information.

3.02 CONTRACTOR POLLUTION PREVENTION CONTACT PERSONNEL

- A. The Contractor shall identify in the Pollution Prevention Plan at least one project personnel that will be available 24 hours a day to administer and respond to hazardous materials management requirement of the Contract and provide the following information:
1. Contact Name
 2. Contact Phone Number
 3. Contact E-mail Address
 4. Contact Fax Number
 5. Contact Address
- B. Duties
1. Maintain permit file on site at all times which includes the Pollution Prevention Plan, Contractor Erosion and Sediment Control Plan and any associated permits and plans;
 2. Direct BMP installation, inspection, maintenance, modification and removal;
 3. Available 24 hours per day, 7 days per week by telephone;
 4. Update all drawings with changes made to the Pollution Prevention Plan;
 5. Maintain daily logs;
 6. Immediately notify the fire department (911) of any hazardous material spill.
 7. Inspect for Pollution Prevention Plan requirements including BMPs as required to ensure adequacy, facilitate, participate in, and take corrective actions resulting from inspections performed by outside agencies, Port employees and Port consultants.
- C. Qualifications
1. The Pollution Prevention Plan Inspector shall have the following experience:

- a. Prevention, control and clean-up of construction caused pollution from petroleum, hazardous materials and construction wastes.
- b. Knowledge of basic hazard and risk assessment techniques.
- c. An understanding of basic hazardous materials terms.
- d. Ability to perform basic control, containment or confinement operations within the capabilities of the resources and personnel protective equipment available.
- e. Installation, inspection, maintenance and removal of Pollution Prevention BMPs.

3.03 HAZARDOUS MATERIAL INVENTORY LIST

- A. A complete list of all known or potential hazardous materials or waste to be used or generated during all phases of the construction project shall be included in the Pollution Prevention Plan.

3.04 SAFETY DATA SHEETS (SDSs)

- A. SDSs shall be included in the Pollution Prevention Plan for all materials on the Hazardous Material Inventory List.
- B. For all hazardous materials not submitted in the original Hazardous Material Inventory List, the Contractor shall provide to the Engineer a completed Form A-3 and SDS prior to bringing the material on site and submit a revised inventory list (or plan if required) within 7 days.
 1. Hazardous materials shall be permitted on the work site only with prior written acknowledgement of receipt of Form A-3 and SDS by the Engineer.

3.05 HAZARDOUS MATERIAL CONTAINERS LABELING SYSTEM

- A. The Pollution Prevention Plan shall address and the Contractor shall implement the following:
 1. Identification of container with a legible label containing the materials product name, as was written on the material's original container label.
 2. Include the name of the material's manufacturer, as was written on the chemicals original container label.
 3. Include appropriate hazard warnings, which identify the chemicals associated risks to health, flammability, or reactivity.
 4. Contractor shall mark each container with the Contract project number and company owner of the container.
 5. The mark shall be permanent, easily identifiable and placed with care to prevent defacing of the marker through abrasion, chemical reaction, or other means that would hinder marker identification.
 6. At all times during the Work, the Contractor shall assure that proper and identifiable labels are attached to all hazardous materials and secondary containment

3.06 HAZARDOUS MATERIAL CONTAINER STORAGE AND HANDLING

- A. Solid Chemicals, chemical solutions, paints, petroleum products, solvents, acids, caustics solutions, and any waste materials, including used batteries, shall be stored in a manner that will prevent the inadvertent entry of these materials into waters of the state, including groundwater. Storage shall be in a manner that will prevent spills due to overfilling, tipping, or rupture. In addition, the Pollution Prevention Plan shall address and the Contractor shall implement the following specific requirements:
1. All liquid products must be stored on durable, impervious surfaces and within a berm or other means of secondary containment capable of containing 110% of the largest single container volume in the storage area.
 2. Waste liquids shall be stored under cover, such as tarps or roofed structures, in addition to secondary containment. Any waste storage areas, whether for waste oil or hazardous waste, shall be clearly designated as such and kept segregated from products to be used on the site.
 3. In the event that the Contract Document Drawings designate a hazardous material storage area, the Contractor shall be restricted to storing hazardous materials or waste specific to the Project work to the area designated in the Contract Document Drawings.
 4. All hazardous materials and waste containers shall be stored with the container lid secured, to prevent spills or leaking.
 5. Upon completion of a specific task for which hazardous material(s) were used, the Contractor shall document in the Daily Report (Form CM03), the amount of hazardous material removed from the site, and the product and manufacturer name(s) of such material(s).

3.07 HAZARDOUS MATERIAL SPILL PREVENTION

- A. The Pollution Prevention Plan shall address and the Contractor shall implement the following:
1. Hazardous Material Transfer
 - a. All hazardous materials shall be transferred from primary to secondary containers using secondary containment with spill kits in close proximity.
 2. Vehicle and Equipment Fueling-
 - a. All equipment fueling operations shall utilize pumps and funnels and absorbent pads and / or drip pans;
 - b. Fueling shall not take place within 100 feet of any natural or manmade drainage conveyance including ditches, catch basins, ponds, wetlands, and pipes;
 - c. Fueling shall be restricted to designated fueling areas as shown on the Contract Documents or as submitted and accepted by the Engineer as a part of the Pollution Prevention Plan;
 - d. A spill kit will be located within 100 feet of the fueling operation.
 - e. Vehicle and Equipment Maintenance

- f. Engine, transmission, and hydraulic oil may be added, as needed utilizing funnels and drip pans;
 - g. Absorbent pads shall be placed to prevent fluid contact with soil;
 - h. No fresh or used engine fluids will be stored on the project site;
 - i. No vehicle maintenance other than emergency repair shall be performed on the project site.
3. Small Engine Fueling and Maintenance
- a. All small engine fueling operations shall utilize funnels.
 - b. Absorbent pads shall be placed to prevent fluid contact with soil.
 - c. Fueling shall not take place within 100 feet of any natural or manmade drainage area.
 - d. Contractor shall not drain and replace engine fluids on Port property.
 - e. These fluids may be added, as needed utilizing funnels.
 - f. Fluid addition shall be done over drip pans.
 - g. Absorbent pads shall be placed to prevent fluid contact with soil.
4. Equipment Storage
- a. Drip pans and absorbent pads shall be placed under all equipment that is unused for more than 4 hours, overnights, weekends, and holidays.
5. Spill Response Kits
- a. Spill kits shall be stored at designated locations on the project site and at the hazardous material storage areas and in close proximity to any fueling operation.
 - b. Spill Kits shall, at a minimum, contain the following:
 - (1) 1-spill response procedures sheet
 - (2) 12-oil absorbent pads
 - (3) 12-water-based absorbent pads
 - (4) 1-roll of Visqueen
 - (5) 5-gallons of loose absorbent material i.e. kitty litter or floor sweep
 - (6) 24-heavy duty garbage bags
 - (7) 1-shovel
 - (8) 1-broom
 - (9) 10-copies spill report form

3.08 HAZARDOUS MATERIAL SPILL CONTROL AND RESPONSE

- A. The Plan shall contain information on how the Contractor shall control and respond to hazardous material spills. At a minimum, the Contractor's employee responsible

for the spill must take appropriate immediate action to protect human health and the environment (e.g., diking to prevent contamination of state waters).

1. Hazard Assessment - assess the source, extent, and quantity of the spill.
2. Containment and personal protection - If the spill cannot be safely and effectively controlled, then evacuate the area and immediately notify outside response services (go to Step 5). If the spill can be safely and effectively controlled, secure the area and proceed immediately with spill control (impacts to waters of the state should be given the highest priority after human health and safety)
3. Containment and elimination of Source - Contain the spill with absorbent materials or a soil berm around the affected area. Eliminate the source of the spill by closing valves, sealing leaks, providing containment, or deactivating pumps.
 - a. Spill control measures may include damming the spill, covering floor drains, catch basins, or preventing the contaminant from entering water systems. Contaminants include turbidity as well as chemicals.
4. Cleanup - when containment is complete, clean or remove the spill with absorbents or by pumping and containerizing the material for off-site disposal.
5. Notification - Report all spills immediately to the Port of Seattle Fire Department:
 - a. Port Phone: 911
 - b. External Phone: (206) 787-5380
 - c. Provide the Following Information:
 - (1) Time spill occurred or was discovered
 - (2) Location of the spill and equipment involved
 - (3) Estimated amount of spill
 - (4) Measures taken to contain the spill and secure the area
 - d. Report all spills immediately to the Engineer.

3.09 HAZARDOUS MATERIAL CLEANUP AND DISPOSAL

- A. The Plan shall contain information on how the Contractor shall characterize, cleanup and remove all hazardous material and waste generated from Contractor operations. At a minimum, the Plan shall include or communicate the following:
 1. For the purposes of this section, clean shall be defined as the Work site being free of all hazardous material(s), waste(s) container(s), containment device(s), scrap material(s), used spill pads or absorbent pads, or any other hazardous material debris resulting from the Contractor activities.
 2. The Port of Seattle will retain title to all hazardous waste presently on site, encountered during demolition, removal, and excavation. This does not include hazardous materials generated by the Contractor, such as used motor oils, paints, lubricants, cleaners, spilled materials, etc. Contractor will be the generator and owner of these wastes and shall clean and dispose of

such waste according to the Contract Documents and follow local, State, and Federal regulations. The Port of Seattle will be shown as the hazardous waste generator and will sign all hazardous waste manifests for non-Contractor generated hazardous wastes. Nothing contained within these Contract Documents shall be construed or interpreted as requiring the Contractor to assume the status of owner or generator of hazardous waste substances for non-Contractor generated hazardous wastes.

3. Hazardous material(s) and waste(s) shall be disposed in a fully permitted disposal facility with the approvals necessary to accept the waste materials that are disposed. Use of the Port of Seattle's EPA Identification Number for disposal purposes must be coordinated with the Engineer and all documentation such as manifests, land disposal restriction forms, and profiles must be delivered to the Engineer if the Port of Seattle's EPA Identification number is being used for disposal on the project.
4. Handling of any contaminated soils shall be coordinated with the Engineer. Contaminated soil stockpiles must be on a plastic liner, covered with plastic and labeled. Unknown contaminated soils must be characterized. Use of the Airport Environmental Soil Stockpile Facility is prohibited unless authorized by the Engineer.
5. Contaminated materials, such as absorbent materials, rags, containers, gloves, shall be collected and placed into labeled containers.
6. Any unanticipated hazardous materials, waste, or contaminated soils encountered during construction that are not generated by the Contractor shall be immediately brought to the Engineer's attention for determination of appropriate action. Contractor shall not disturb such hazardous materials or contaminated soils until directed by the Engineer.

3.10 SUBCONTRACTOR ACKNOWLEDGEMENT

- A. The requirements of the Pollution Prevention Plan are the responsibility of the Contractor and compliance must be communicated at all tiers of the Contract. The Contractor must provide a written acknowledgement from all subcontractors that they have read, understand, and will comply with the requirements of the Pollution Prevention Plan. This written acknowledgement must be included in the Pollution Prevention Plan as part of the preconstruction submittal. The subcontractor acknowledgement section of the Pollution Prevention Plan must be updated as needed throughout the life of the Contract.

3.11 EDUCATION

- A. The Contractor shall provide narrative in the Pollution Prevention Plan on how they will educate all personnel including subcontractors. At a minimum, the Contractor shall train staff through regularly scheduled meetings to discuss environmental protection subjects as related to this project. This may be added to any existing weekly meetings (such as safety meetings). Training content shall emphasize sensitive areas, emergency response, spill prevention and inspections. Keep minutes of the meetings detailing attendees and subjects discussed. Submit the minutes to the Engineer monthly.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

Based upon unit cost Bid Item "Pollution Prevention Planning and Execution", payments will be made as follows:

- A. Upon receipt of the Pollution Prevention Plan 25%
- B. After NTP and before Substantial Completion, 50% will be pro rated and paid monthly for compliance with the Pollution Prevention Plan. Non-compliance will result in withholding of payment for the month of non-compliance.
- C. At Final Payment, 25% for a clean site.

OR

- A. No separate measurement or payment will be made for the work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Lump Sum price bid for the Project.

End of Section

PART 1 GENERAL

1.01 SUMMARY OF WORK

- A. This item shall consist of the management of all construction water including collection, conveyance and treatment of onsite stormwater and groundwater, diversion of offsite water away from the project sites, and collection and offsite disposal of process water.
- B. The Contractor shall be solely responsible for design, installation, operation and maintenance of all collection, conveyance and treatment systems and shall modify as needed to meet the requirements of this Section. The Contractor shall take full responsibility for fines imposed due to exceeding the discharge limits.
- C. The minimum treatment system effluent performance requirements shall include oil/water separation, turbidity reduction, solids removal and pH treatment as required to meet the minimum effluent performance requirements listed in this Section.
- D. Any treatment system used shall be approved for use by the Washington State Department of Ecology (Ecology).
- E. All components of the construction water management system shall meet the requirements of the Ecology Chemical Treatment Assessment Protocol (CTAPE) and the Stormwater Management Manual for Western Washington (SWMM). At a minimum, the following shall apply:
 - A. BMP C250 Construction Stormwater Chemical Treatment
 - B. BMP C251 Construction Stormwater Filtration
 - C. BMP C252 High pH Neutralization Using CO₂
 - D. BMP C253 pH Controls for High pH Water

1.02 DESCRIPTION OF WORK

- A. In order to comply with the requirements of this section, the Contractor shall:
 - 1. Develop and submit a Construction Water Management Plan (CWMP).
 - 2. Install temporary structures, modifications, sumps, piping, by-passes, connections, and pumps to contain and convey stormwater to the treatment facility prior to treatment.
 - 3. Provide any pre-treatment of water using oil/water separation, pH adjustment, or other approved methods as required prior to treatment.
 - 4. Treat stormwater with an approved, Contractor-designed, furnished and installed, Construction Water Treatment and Monitoring System.
 - 5. The operating treatment capacity shall be as specified on the drawings.
 - 6. Discharge all treated water at the location shown on the drawings or as directed by the Engineer.
 - 7. Perform all required monitoring, testing and recordkeeping.
 - 8. Remove all temporary system components and restore the Port's stormwater facilities to their original condition.
 - 9. Clean all Port storm conveyances, structures, vaults and facilities to the satisfaction of the Engineer.

1.03 SUBMITTALS

- A. As part of the required Preconstruction Submittals, Section 01 32 19-, the Contractor shall submit the following:
 - 1. Construction Water Management Plan.
- 1.04 PERMITS
- A. Work shall be conducted in accordance with STIA NPDES permit number WA-002465-1.
 - B. Work shall be conducted in accordance with Stormwater Pollution Prevention Plan, as required by the STIA NPDES permit number WA-002465-1.

PART 2 PRODUCTS

2.01 PRIMARY WATER TREATMENT EQUIPMENT

- A. The Contractor shall be solely responsible for the water treatment system design, operation, and maintenance, including full responsibility for fines imposed due to exceeding the discharge effluent limits.
- B. The Contractor shall provide a water treatment and monitoring system with the treatment and storage capacity to manage stormwater without causing construction delays.
- C. Contractor shall keep on hand, or have immediate access to, spare equipment and/or materials for any breakdown(s).
- D. The materials and equipment used for the water treatment system shall be no older than 3 years and suitable for the Work and be maintained in good condition.
- E. Contractor shall provide and maintain at all times an ultrasonic totalizing flow meter to record effluent discharge. The flow meter shall display instantaneous flow and record cumulative flow. The Engineer reserves the right to install a redundant flow meter in series with the Contractor meter.
- F. Contractor shall choose the type and size of equipment and components needed to accomplish the functions designated.
- G. Contractor shall construct the treatment system with sampling ports and the necessary valves as required to collect water treatment samples.
- H. The Contractor shall maintain dedicated redundant pumps at the treatment facility to provide immediate back-up pumping capacity at the designed treatment and discharge rates.

2.02 WATER TREATMENT SYSTEM CONTROL

- A. Unattended treatment plant operation shall not occur.
- B. The Contractor shall provide a notification system to alert the Operator if system experiences conditions that will potentially cause the treatment system to shut down.
- C. Contractor shall provide high-level alarms on the tanks to prevent overflow conditions. Alarms may cause automatic actions to relieve the condition or may warn the Operator. Contractor shall also set a dedicated overflow level alarm at an elevation as directed by Engineer and notify Port immediately when the alarm is activated.

- D. Contractor shall design the control system to accomplish the functions designated. The control system is subject to review and approval by the Engineer.
- E. If an upset condition occurs which may result in a release or non-conformance with the discharge requirements, Contractor shall immediately suspend operation and notify the Engineer.

2.03 STORMWATER STORAGE TANK

- A. Storage tanks shall consist of a weir tank with a capacity adequate to contain the volume determined in the Contractor's analysis. The Port reserves the right to limit the maximum height for tanks and the available location for tank placement. Coordinate with the Engineer for tank placement.

2.04 PUMPING

- A. The Contractor is responsible for all pumping and shall identify structures utilized as sumps for pumping locations. These shall be augmented with other on-site pumps utilized for collection of standing water and continuous dewatering of excavations.
- B. Pumps shall be sized to provide the minimum conveyance capacity as determined in treatment facility sizing calculations.

2.05 TEMPORARY PIPING

- A. Temporary above ground piping shall be PVC/Woven Synthetic Fibers, EPDM, Ductile Iron, or HDPE Pressure Pipe meeting AWWA C901/C906.
- B. All above ground piping and fittings shall be sized and pressure rated for their application, water tight, free of leaks or tears, and maintained in working condition.

PART 3 EXECUTION

3.01 GENERAL

- A. Design and modifications to conveyances, pumps, sumps, detention facilities and any hydraulic calculations necessary for implementation of this Section shall be stamped by a Professional Engineer licensed in the State of Washington.
- B. Damage to any portion of the Construction Water Management System caused by Contractor operations, weather or negligence shall be repaired immediately at sole cost to the Contractor.
- C. The system shall be designed to handle the specified maximum peak influent flow rates, treat the water to the minimum specified effluent performance criteria, and discharge the treated water at the specified maximum peak effluent flow rates determined in the treatment sizing calculations.
- D. The Contractor shall install elevation gauges in detention facilities.
- E. The Contractor shall initiate treatment system operation and pumping immediately after 0.1 inches of rainfall has fallen in the previous 24 hours unless otherwise approved by the Engineer.
- F. All system components that require fueling shall be maintained with a minimum of 50% fuel in their tanks.

- G. Contractor shall provide all utilities and power required for treatment and water management activities.

3.02 CONSTRUCTION WATER MANAGEMENT PLAN (CWMP)

- A. The Contractor shall prepare a CWMP that describes and includes the management of construction stormwater and non-construction stormwater. The plan shall include procedure outlines for start-up, normal operations, process monitoring sampling and analysis, monitoring and control of residual flocculent, control philosophy, alarm conditions and responses, freeze protection, normal shutdown, and decommissioning.
- B. This plan shall describe the management of construction stormwater and by what means non-construction stormwater is segregated from the project site. This consists of planning/phasing, installing, onsite collection, conveyance, plugs, pumps, treatment as required, discharge of water and/or collection, infiltration, and disposal of all construction water collected or related to construction activities or as ordered by the Engineer to prevent pollution of water, and control, respond to, and manage turbid water and pH during the life of the Contract.
- C. In addition, the CWMP shall include and address, at a minimum, the following:
 - 1. Site Description and Site Drawings
 - a. Provide a detailed project description including phasing and schedule for major work activities.
 - 2. Construction Water Management Description and Drawings
 - a. Contractor shall provide sufficient detail to show that all site water is managed per the requirements of this Section and to the satisfaction of the Engineer.
 - b. Installation layout drawing for treatment systems.
 - 3. Design Calculations
 - a. Contractor shall provide product information and/or supporting calculations indicating that their selected pumps and hoses will meet the pump conveyance requirements.
 - b. Contractor shall provide calculations demonstrating that their Construction Water Treatment System can meet or exceed the minimum specified operating capacity.
 - c. Contractor shall provide design calculations for any additional conveyance utilized in their Construction Water Management Plan or that represent a change to Construction Water Management approach.
 - d. All Contractor calculations shall be approved and stamped by a Professional Engineer licensed in the State of Washington.
 - 4. CTAPE Documentation
 - a. CTAPE documentation shall meet Department of Ecology requirements.
 - 5. Treatment System Operations Manual

- a. The treatment system operations manual shall meet Department of Ecology requirements, remain onsite and submitted to the Port.
- 6. Construction Water Management Personnel
 - a. Treatment systems shall only be operated by Constructing Water Treatment Operators (Operators) trained and certified by Ecology requirements.
 - b. Operators shall have no other duties other than those specified in this section and shall be onsite at all times the system is operating.
 - c. Operators shall have a minimum of three (3) years full time documented experience operating Ecology-approved treatment systems.
 - d. Operators shall be Ecology-certified and current Contractor Erosion and Sediment Control Leads (CESCL).
 - e. Contractor shall submit resumes and certification documentation.

3.03 EFFLUENT DISCHARGE PERFORMANCE CRITERIA

- A. All discharge from the project site shall be treated to meet the minimum effluent performance criteria for oil/water separation, pH, and turbidity as described in Table 1 of this Section.

Measurement Parameter for Treated Water (flow-through)	Monitoring Location	Frequency of Sampling Flow Through Treatment	Frequency of Sampling Batch Treatment	Minimum Performance Criteria
Turbidity	Pre-treatment in detention facility	Every 15 minutes	1 per batch	<500 NTU
Turbidity	Post-treatment Effluent	Every 15 minutes ¹	1 per batch	5 NTU Maximum daily average ²
pH	Post-treatment Effluent	Every 15 minutes ¹	1 per batch	6.5-8.5
Total Petroleum Hydrocarbon	Detention Facility	4 times per operating day	1 per batch	No visual Sheen. If visual sheen then 5 mg/L. ³
Flow	Post-treatment Effluent	Every 15 minutes ¹	1 per batch	Report, including maximum discharge rate

TABLE 1- EFFLUENT DISCHARGE PERFORMANCE CRITERIA

3.04 SAMPLING AND CHEMICAL ANALYSIS

- A. Sampling and laboratory analysis of effluent discharges shall be performed by the Contractor per Table 1 in this Section.
- B. The Contractor shall be responsible for all additional sampling and analysis necessary to monitor system performance and verify compliance with this Section.
- C. Residual flocculent testing shall be completed daily

3.05 RECORDKEEPING

- A. Daily treatment logs shall be submitted to the Engineer as part of the Contractor Daily Report.
- B. At a minimum, the daily treatment logs shall include:
 - 1. CTAPE reporting and record keeping requirements
 - 2. Cumulative inflow volumes using ultrasonic totalizing meter
 - 3. Cumulative discharge volumes using ultrasonic totalizing meter
 - 4. Total hours of system operation
 - 5. Total hours of discharge
 - 6. System maintenance items
 - 7. Test data as specified in this Section
 - 8. Documentation of analysis conducted in Section 3.03
- C. The Contractor shall submit a monthly summary report to the Engineer by the 7th of each month. The report shall summarize the following results for the previous month:
 - 1. Minimum and maximum average daily turbidity
 - 2. Minimum and maximum pH
 - 3. Visual sheen and any required test results for TPH.
 - 4. Minimum, maximum and average daily flow
 - 5. Total monthly flow
 - 6. Residual flocculent test results.
 - 7. Electronic format of all records.
- D. Reports of non-conformances or upset conditions including releases shall be documented in the Contractor Daily Report.
- E. Reports of changes in system configuration or operation due to changing conditions shall be documented in the Contractor Daily Report.
- F. All records shall be kept in hard copy and electronic format suitable to the Engineer.

3.06 SYSTEM REMOVAL AND CLEANING

- A. The Contractor shall clean, flush, jet and vactor out all sediment accumulated in Port conveyances including, but not limited to, storm pipes, manholes, vaults,

ponds and ditches. The cleaning operation shall not flush sediment laden water or debris into the active downstream storm system.

3.07 EMERGENCY RESPONSE

- A. The Contractor shall be available 24 hours per day, seven days per week to respond to system emergencies.
- B. The Contractor shall respond to system emergencies within one hour of notification by the Engineer.

3.08 DISPOSAL OF OTHER RESIDUALS

- A. Contractor shall manage oil and sediment/sludge produced by the treatment system for disposal with excavated soil ensuring that they meet all transportation laws and regulations and the receiving landfill requirements.
- B. Contractor shall manage any spent filtration media with excavated soil

3.09 STORMWATER STORAGE

- A. It is the responsibility of the Contractor to verify the adequacy of the existing, specified facilities for use with their proposed water treatment system. The Contractor shall supplement the storage of the existing facilities as required with stormwater storage tanks.
- B. The Contractor shall install additional stormwater storage tanks, within the allowable stormwater storage and treatment area as required.
- C. The Contractor is responsible for conveying construction stormwater within each work area to the specified stormwater storage and treatment area.
- D. Temporary piping, structures and pump facilities required for the conveyance are the responsibility of the Contractor.
- E. The construction stormwater shall be held in the specified storage until treated, hauled and disposed of by the Contractor.
- F. Contractor furnished storage and treatment facilities including pads, access roads, ramps, temporary structures and piping shall be removed at the completion of the work or as directed by the Engineer.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

No separate measurement or payment will be made for the work required by this Section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Lump Sum price bid for the Project.

End of Section

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NOTE TO DESIGNER: This section is only required on unit price contracts

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Mobilization shall consist of preconstruction expenses and costs of preparatory work and operations performed by the Contractor which occur before 10% of the Executed Contract Price is earned from other Bid Items. Items which are not to be included in the item of mobilization are:
 - 1. Any portion of the Work covered by a specific Bid Item or incidental work which is to be included in a Bid Item or Items.
 - 2. Profit, interest on bond money, overhead or management costs.
- B. Demobilization shall consist of post-construction expenses and work that occurs after 95% of the Executed Contract Price is earned.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Based on the Lump Sum Bid Item price for “Mobilization/Demobilization”, partial payments will be made as follows:
 - 1. **When the Contractor and Engineer agree** 10% of the Executed Contract Price is earned, excluding mobilization and amounts paid for materials on hand, 60% of the amount bid for “Mobilization” will be paid.
 - 2. **When the Contractor and Engineer agree** 95% of the Executed Contract Price is earned from other Bid Items, excluding mobilization and amounts paid for materials on hand, the remaining amount bid for “Mobilization/Demobilization” will be paid.

End of Section

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Port Surveying (Manager of Survey and Mapping, and/or Survey Crew Manager) MUST be consulted in drafting this section

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surveys provided by the Port
- B. Contractor Survey Requirements. All work must be performed by a surveyor registered in the State of Washington.

Include the following for the Airport Projects only

- C. Elevation Datum: Airport datum is the National Geodetic Vertical Datum of 1929.

Include the following for Seaport Projects only

- C. All elevations indicated on drawings refer to National Ocean Survey Mean Lower Low Water (MLLW) Datum unless otherwise noted for Seaport projects.

1.02 SURVEYS PROVIDED BY THE PORT

- A. The Port will provide those and only those services listed below:
 - 1. Establish primary survey control points.
 - 2. Layout phasing and barricade lines (Outside of the Terminal).
 - 3. Layout erosion control points.
 - 4. Layout demolition limits.
 - 5. Slope stakes for fill or excavation areas.
 - 6. Cross-section for quantities.
 - 7. Sub-grade limits will be staked with initial set of cut or slope stakes.
 - 8. Sub-grade hubs prior to rock placement.
 - 9. Hubs for base course rock.
 - 10. Finish rock hubs.

11. Provide storm sewer manhole and catch basin centerline and offset.
12. Provide sanitary sewer manhole and clean-out centerline and offset.
13. Provide I.W.S. manhole and catch basin centerline and offsets.
14. Provide main and lateral sewer line offsets.
15. Provide electrical and communication vault, manhole, handhole centerline and offset.
16. Provide electrical and communication trenching centerline and offsets.
17. Provide lighting for runway and taxiway centerline and offsets.
18. Electrical signage locations.
19. Provide water vaults, manhole, valve centerline and offset.
20. Provide main and lateral water line centerline and offsets.
21. Mark asphalt paving limits.
22. Line and grade hubs for concrete placement.
23. Mark saw cuts for concrete.
24. Lay out paint stripes.
25. Assist Contractor with utility locations.
26. Check hubs and stakes set by Contractor before paving operations.
27. As-builts of utilities and paved areas. The Port Survey must locate and as-build all new underground utilities prior to placement of cover.
28. Other surveys as directed by the Resident Engineer.

The following is applicable to Seaport Projects only. Delete if this specification is for the Airport Project.

29. Provide soundings.
- B. All other survey work needed for construction is the sole responsibility of the Contractor.
- C. The Contractor and Port will agree on the staking requirement and frequency for each of the selected tasks from the checklist.

Discuss with CM and Port Surveying and specify who is to provide as-built surveys, (1) Port or (2) Contractor, or use the default paragraph D below.

- D. All surveys for the purposes of completing as-built drawings are the responsibility of the Contractor. The Contractor may use Port Survey as-built data for underground utilities.

1.03 REQUIRED CONTRACTOR SUPPORT

- A. The Contractor shall provide sufficient space and safe facilities to enable the Engineer to set control points and perform other work required by this specification.
- B. Requests for setting primary control points shall be made at least 2 weeks prior to the need. Delays due to Contractor failure to give timely notice to the Port for surveying services are at the sole risk and expense of the Contractor.
- C. Requests for Port Survey to verify and as-build the underground utilities must be made at least 48 hours prior to placement of cover.

- D. If the Contractor encounters any underground utilities that are not shown on the existing conditions drawings, or known utilities that are not in the location that is shown on the existing conditions drawings, the Contractor must notify the Engineer immediately. The Engineer will work with Port Survey to determine whether and how this variation will be surveyed and recorded by Port Survey.

1.04 PRESERVATION OF STAKES AND MARKS

- A. All primary controls shall be set once by the Engineer or others and shall be carefully preserved by the Contractor. The Contractor will be back charged for the replacement costs of stakes and marks set by the Port Survey, and damaged or destroyed by the Contractor's operation. .
- B. Major survey control points will not be removed by the Contractor without the approval of the Port Surveyor. The Contractor will be responsible to remove survey stakes and markings before beneficial occupancy of the area.

1.05 CONTRACTOR SURVEYS

- A. The Contractor shall establish such additional lines, grades and controls as are needed for construction.
- B. All work performed shall be in conformance with the lines, grades and dimensions indicated on the drawings. If a discrepancy is noted between the drawings, the same shall immediately be brought to the Engineer's attention. Where tolerances are stated, the work performed shall be within those tolerances. The Engineer will determine if the work conforms to such lines, grades and dimensions and his determination shall be final.
- C. The Contractor assumes full responsibility for detailed dimensions and elevations measured from primary control points.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION - Not used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

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Review applicability of this section with the Construction Manager or Engineer.

PART 1 GENERAL

1.01 DESCRIPTION

A. Definition

1. Cutting and patching refers to the modification, removal or repair of nominally completed or previously existing work in order to accommodate construction of the Work in this Contract. Cutting and Patching may include uncovering other work for access, inspection, obtain samples for testing or for similar purposes and is defined to include Cutting and Patching during the fabricating, erecting, and installing process for individual units of work. Drilling to install fasteners and similar operations are not included in this section. The work in this section does not include regulated materials work.

B. General Work

1. The Contractor represents that it has carefully reviewed all demolition, removal, modification, cutting, patching, and re-installation or replacement requirements of the Work and has included in its bid the cost for all such requirements described in this section.
2. Any existing, materials, structures, facility components or finishes that require cutting and or patching to complete the Work shall be repaired or reinstalled to equal or better condition as the adjacent finishes, to ensure a smooth and seamless transition, color matching or similar finish. Remove and replace work judged by the Engineer to be visually unsatisfactory at no additional cost.
3. The extent of the repair or reinstallation of the existing work shall be limited to areas affected by the Work. Costs to repair damage created by the Contractor during inspections, temporary removal or in the course of completing the Work shall be the burden of the Contractor.

C. Coordination with Subcontractors

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 73 29 - Cutting and Patching/Removal and Re-Installation

1. The Contractor represents that the Subcontractors have been advised to review all demolition, removal, modification, cutting, patching, and re-installation or replacement requirements of the Work and that the Subcontractor has included in their bid the cost for all such requirements described in this section. The Contractor shall coordinate any cutting and patching described herein. If the Subcontractor refuses or fails to adhere to this section, the Contractor shall not be relieved of the requirements of this section.
2. The Contractor shall be responsible for cutting, patching, drilling, disconnecting electrical/mechanical services, disconnecting and capping utility lines at present locations, connections to new locations and modification in piping runs and electrical devices, including control access and signal, or such other work as may be required to complete the Work.
3. The Contractor shall remove and replace any and all temporary mechanical, electrical, access control and signal items installed to complete the Work whether shown on the drawings or not and shall restore all original systems or functions to equal or better condition existing prior to the Work.

1.02 ITEMS TO BE CUT AND PATCHED

- A. The items anticipated to be patched and repaired, removed and reinstalled as part of this Work may include but is not limited to:
 1. Utility components; i.e. water, steam, condensate, waste lines, HVAC supply and return lines, etc.
 2. Concrete slabs
 3. Concrete beams
 4. Fireproofing
 5. Metal trim
 6. Roofing
 7. Exterior finishes
 8. GWB wall, surrounds and soffit surfaces
 9. Ceiling systems; i.e. acoustical, gypsum board, metal, lay-in, etc.
 10. Terrazzo Flooring
 11. Painted finishes
 12. Carpet, plywood deck, and framing
 13. Plastic laminate wall surface systems
 14. Signage/Signage bands
 15. Mechanical Systems
 16. Fire protection devices; i.e. pull boxes, alarms, sprinkler systems, fire extinguisher cabinets, etc.
 17. Electrical components; i.e. distribution panels, junction boxes, lighting, conduit, etc.

- 18. Communication Systems
- 19. Security Systems

1.03 QUALITY CONTROL

- A. Requirements for Structural Work:
 - 1. Notify the Engineer immediately if work concerning structural integrity is involved.
- B. Operational and Safety Limitations:
 - 1. Do not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in a manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.

PART 2 PRODUCT

2.01 MATERIALS

- A. Except as otherwise indicated or approved by the Engineer, provide materials for cutting and patching that will result in equal or better quality than the work being cut and patched in terms of performance characteristics, including visual effect where applicable. Comply with the requirements and use materials identical, including texture and color, with original where feasible and where recognized that satisfactory results can be produced thereby. Re-install undamaged materials temporarily removed in their original locations where feasible or indicated unless noted otherwise.
 - 1. Primary Products: Those required for original installation.
 - 2. Product Substitution: For any proposed change in materials, submit request for substitution.

PART 3 EXECUTION

3.01 GENERAL

- A. Execute cutting, fitting, and patching, to complete the Work and to:
 - 1. Gain access in order to install components associated with this work.
 - 2. Fit the several parts together to integrate with other work.
 - 3. Uncover work to install ill-timed work.
 - 4. Remove and replace defective and non-conforming work.
 - 5. Remove samples of installed work for testing.
 - 6. Provide openings in elements of work for penetrations of mechanical, electrical, signal and access control work.

3.02 EXAMINATION

- A. Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing work, assess conditions affecting performance of work.
- C. Beginning of cutting and patching means acceptance of existing conditions.

3.03 PREPARATION

- A. Temporary support: Provide adequate temporary support for work to be cut to prevent failure or deleterious movement of materials to remain. Do not endanger other work.
- B. Protection from weather: In accordance with Section 01 50 00 - Temporary Facilities and Controls, provide protection from elements for areas that may be exposed by uncovering work.

3.04 CUTTING AND PATCHING/REMOVAL AND RE-INSTALLATION

- A. General - Employ skilled tradespeople to perform cutting and patching. If possible, employ original installer or fabricator to perform cutting and patching for visually exposed surfaces.
 - 1. Cut work by methods least likely to damage work to be retained and work adjoining. Review proposed procedure with the original installer where possible and comply with their recommendations.
 - 2. Cut rigid materials using saws, grinding tools or core drill. Pneumatic or percussion tools not allowed without prior approval of the Engineer.
 - 3. Use drilled-in inserts only where shown or approved by the Engineer.
 - 4. Core drill inside corners of cuts in terrazzo and concrete to avoid over cuts. Do not use power-driven impact tools to finish cuts.
 - 5. Fit Work airtight to pipes, sleeves, ducts, conduits, structural elements and other penetrations through surfaces.
 - 6. At penetrations of fire-rated material provide proper thickness of the construction element to maintain the required fire rating.
- B. Condition removed materials to be reinstalled.
 - 1. Clean, straighten and refinish materials to match existing surroundings.
 - 2. Store and protect materials against damage as a result of weather, vandalism or neglect.
- C. Patching
 - 1. Execute patching to complement adjacent work. Inspect and test patched areas to demonstrate integrity of the work.
 - 2. Fit products together to integrate with other work.
 - 3. Restore work with new products in accordance with requirements of Contract Documents.
 - 4. Restore exposed finishes of patched areas and, where necessary extend finish restoration onto retained work adjoining in a manner that will eliminate evidence of patching.
 - 5. If a portion of a painted surface is patched and repaired, repaint entire surface to nearest natural break in wall surface, or as directed by Engineer, or as delineated on drawings for repaint.

6. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
 7. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.
 8. Where wall systems (metal studs, gypsum wall boards, insulation, etc.) are removed for Work, reinstall wall system using new material of same size, quality, and quantity to match existing. Paint all exposed surfaces to match existing.
 9. Where the fireproofing materials are removed for work, reinstall fireproofing materials to match existing conditions and current code requirements.
- D. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Engineer's review; do no work until acceptance by the Engineer.

3.05 CUTTING AND PATCHING FOR WORK BY SUBCONTRACTORS

- A. Cutting and patching for all subcontracted work including but not limited to mechanical, electrical, plumbing and communication Work shall be included in the cost for such Work identified in the technical specification sections.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The costs for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

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PART 1 GENERAL

1.01 SUMMARY

Throughout the construction period, maintain the project site where Work is carried out in a standard of cleanliness to include progress and closeout cleaning, dust control throughout construction.

1.02 QUALITY ASSURANCE

- A. Inspection: Conduct daily inspections (and more often if necessary) to verify that requirements of cleanliness are being met.
- B. Codes and Standards: In addition to the standard described in this section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT

- A. Provide all required personnel, equipment, and materials needed to maintain specified standard of cleanliness.

PART 3 EXECUTION

3.01 PROGRESS CLEANING

- A. Site:
 - 1. At all times, and as may specifically be requested by the Engineer, the Contractor shall cleanup and remove all refuse resulting from the Work in order that the Project site remains free from an accumulation of construction debris. Upon failure to do so within 24 hours after request by the Engineer, such cleanup work may be done by the Port and the cost thereof shall be charged to the Contractor and deducted from the Contract Sum.
 - 2. Project sites adjacent to public areas shall at all times be maintained in a condition suitable for public viewing and ensure public safety is not compromised in any way. The Engineer’s right to require or perform any necessary cleanup to maintain this condition as stated above applies.

3. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of materials.
4. Provide adequate storage for all items, awaiting removal from the job site, observing all requirements for fire prevention and protection of the ecology.

3.02 DUST CONTROL

- A. Maintain continuous cleaning and wetting procedures to control dust pollution at project site and haul routes as required by governing authorities and the Contract Documents. Use power sweepers for street cleaning, if necessary.
- B. Schedule cleaning so that resultant dust and contaminants will not fall on wet or newly coated surfaces.
- C. See additional requirements in related sections.

3.03 CLOSEOUT CLEANING

- A. Cleaning: Provide final cleaning of Work prior to Final Inspection. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to condition expected from normal commercial building cleaning and maintenance program. Comply with manufacturer's recommendations. Complete following cleaning operations:
 1. In addition to removal of debris and cleaning specified in other sections, clean interior and exterior exposed-to-view surfaces.
 2. Remove grease, mastic, adhesives, dust dirt, stains, fingerprints, labels, and other foreign matter from sight exposed interior and exterior surfaces.
 3. Clean transparent and glossy materials to a polished condition; remove foreign substances. Polish reflective surfaces to a clear shine.
 4. Remove temporary protection and labels not required to remain.
 5. Vacuum clean carpeted and similar soft surfaces.
 6. Clean, wax, and polish resilient and hard-surfaces floor as specified.
 7. Clean equipment and fixtures to sanitary condition.
 8. Clean surfaces of equipment; remove excess lubrication.
 9. Clean plumbing fixtures to a sanitary condition.
 10. Clean light fixtures and lamps.
 11. Clean permanent filters of ventilating equipment and replace disposable filters when units have been operated during construction; in addition, clean ducts, blowers, and coils when units have been operated without filters during construction.
 12. Clean mechanical and electrical equipment and spaces, including tops of pipes, ducts, equipment, etc.
 13. Clean all exterior surfaces of structures.
 14. Remove waste, foreign matter, and debris from roofs, gutters, area ways, and drainage systems.

15. Hose-clean exterior paved surfaces; rake clean other surfaces of grounds.
16. Remove waste, debris, and surplus materials from site. Clean grounds; remove stains, spills, and foreign substances from paved areas and sweep clean. Rake clean other exterior surfaces.
17. Maintain cleaning until Physical Completion.
18. Re-clean areas or equipment, after final inspection, if dirtied as result of Contractor's Work in preparing for final inspection or completion of punchlist.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

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PART 1 GENERAL

1.01 SUMMARY

- A. This section includes construction waste management requirements.

1.02 DEFINITIONS

- A. Co-mingled or Off-site Separation: Collecting all material types into a single bin or mixed collection system and separating the waste materials into recyclable material types at an off-site facility.
- B. Construction, Demolition and Land-Clearing (CDL) Waste: Includes all non-hazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition, and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage. This also includes uncontaminated soils that are designated as geotechnically unsuitable or excess excavation.
- C. Hazardous/Dangerous Waste: As defined by Chapter 70.105.010 Revised Code of Washington and 40 Code of Federal Register 261 and by Washington Administrative Code 173-303.
- D. Proper Disposal: As defined by the jurisdiction receiving the waste.
- E. Recyclable Materials: Products and materials that can be recovered and remanufactured into new products.
- F. Recycling: The process of sorting, cleaning, treating and reconstituting materials for the purpose of using the material in the manufacture of a new product. Can be conducted on-site (as in the grinding of concrete).
- G. Recycling Facility: An operation that is permitted to accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
- H. Salvage for Reuse: Existing usable product or material that can be saved and reused in some manner on the project site or other projects off-site.

- I. Salvage for Resale: Existing usable product or material that can be saved and removed intact (as is) from the project site to another site for resale to others without remanufacturing.
 - J. Source-Separated Materials: Materials that are sorted at the site into separate containers for the purpose of reuse or recycling.
 - K. Sources Separation: Sorting the recovered materials into specific material types with no, or a minimum amount of, contamination on site.
 - L. Time-Based Separation: Collecting waste during each phase of construction or deconstruction that results in primarily one major type of recovered material. The material is removed before it becomes mixed with the material from the next phase of construction.
 - M. Garbage: Product or material typically considered to be trash or debris that is unable to be salvaged for resale, salvaged and reused, returned, or recycled.
- 1.03 SUBMITTALS
- A. Waste Management Plan
 - B. Waste Management Final Report
- 1.04 PERFORMANCE GOALS
- A. General: Divert CDL waste to the maximum extent practicable from the landfill by one or a combination of the following activities:
 - 1. Salvage
 - 2. Reuse
 - 3. Source separated CDL recycling
 - 4. Co-mingled CDL recycling
 - B. CDL waste materials that can be salvaged, resold, reused or recycled, include, but are not limited to the following:
 - 1. Clean dimensional wood, pallet wood, plywood, OSB, and particleboard
 - 2. Asphalt
 - 3. Concrete and concrete masonry units
 - 4. Brick
 - 5. Ferrous and non-ferrous metals
 - 6. Gypsum products
 - 7. Acoustical ceiling tile
 - 8. Glass, both window and bottle
 - 9. Plastics, including plastic film
 - 10. Carpet and pad
 - 11. Cardboard packaging
 - 12. Insulation

13. Field office waste paper, aluminum cans, glass, plastic, and cardboard
- C. Hazardous/Dangerous Wastes, contaminated soils and other hazardous materials such as paints, solvents, adhesives, batteries, and fluorescent light bulbs and ballasts shall be disposed of at applicable permitted facilities.
- 1.05 WASTE MANAGEMENT PLAN
- A. Per the requirements of Section 01 32 19, Preconstruction Submittals, submit to the Engineer a Waste Management Plan narrative in accordance with these specifications. Use the Waste Management Plan Form attached at the end of this Section or other format as accepted by the Engineer (Attachment A).
 - B. The Waste Management Plan shall include the following:
 1. Name of designated Recycling Coordinator
 2. A list of waste materials that will be salvaged for resale, salvaged for reuse, recycled, and disposed.
 3. Identify waste handling methods to be used, including one or more of the following:
 - a. Method 1 – Contractor or subcontractor(s) hauls recyclable materials to an accepted recycling facility.
 - b. Method 2 - Contracting with diversion/recycling hauler to haul recyclable material to an accepted recycling or material recovery facility.
 - c. Method 3 – Recyclable material reuse on-site.
 - d. Method 4 – Recyclable material salvage for resale.
 4. Identification of each recycling or material recovery facility to be utilized, including name, address and types of materials being recycled at each facility
 5. Description of the method to be employed in collecting, and handling, waste materials.
 6. Description of methods to communicate Waste Management Plan to personnel and subcontractors.
- 1.06 WASTE MANAGEMENT FINAL REPORT
- A. Use the Waste Management Final Report Form attached at the end of this section or other format as accepted by the Engineer (Attachment B). The Waste Management Final Report shall list the following for the project:
 1. A record of each waste material type and quantity recycled, reused, salvaged, or disposed from the Project. Include total quantity of waste material removed from the site and hauled to a landfill.
 2. Percentage of total waste material generated that was recycled, reused, or salvaged.
 - B. Quantities shall be reported by weight (tons) unless otherwise accepted by the Engineer.

- C. Submit copies of manifests, weight tickets, recycling/disposal receipts or invoices, which validate the calculations or a signed certification of completeness and accuracy of the final quantities reported.

1.07 QUALITY ASSURANCE

- A. Regulatory Requirements: The Contractor shall maintain compliance with all applicable Federal, State, or Local laws that apply to Construction Waste Management and material salvage, reuse, recycling and disposal.

[Verify information below about King County’s Construction and Demolition Recycling Program, including website address, to ensure it is current.]

- B. Disposal Sites, Recyclers and Waste Materials Processors: All facilities utilized for management of any materials covered under this specification must maintain all necessary permits as required by federal, state and local jurisdictions.
- C. For a comprehensive list of recycling facilities in King County, and other Contractor resources, contact King County’s Construction and Demolition Recycling Program:

<http://your.kingcounty.gov/solidwaste/greenbuilding/construction-demolition.asp>

PART 2 NOT USED

PART 3 EXECUTION

3.01 SOURCE-SEPARATED CDL RECYCLING

- A. Provide individual containers for separate types of CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.02 CO-MINGLED CDL RECYCLING

- A. Provide containers for co-mingled CDL waste to be recycled, clearly labeled with a list of acceptable and unacceptable materials.

3.03 LANDFILL

- A. Provide containers for CDL waste that is to be disposed of in a landfill clearly labeled as such.

3.04 REMOVAL OF CDL WASTE FROM PROJECT SITE

- A. Transport CDL waste off Owner’s property and legally dispose of them.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Payment for “Construction Waste Management” will be made at the Contract lump sum price as stated in the Schedule of Unit Prices and shall be full compensation for furnishing all labor, equipment, materials and tools to develop and submit the Waste Management Plan and Waste Management Final Report. Payments will be made as follows:
 1. Upon acceptance of the Contractor’s Waste Management Plan, 25%. (See Attachment A)
 2. Upon acceptance of the Contractor’s Waste Management Final Report, 75%. (See Attachment B)

OR if Not Lump Sum use:

4.02 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices.

End of Section

**Attachment A
WASTE MANAGEMENT PLAN**

Company:

Project:

Designated Recycling Coordinator:

Waste Management Goals:

This project will recycle or salvage for reuse CDL waste generated on-site to the maximum extent practicable.

Communication Plan:

Expected Project Waste, Disposal Facility, Collection Strategy, and Handling:

The following charts identify waste materials expected on this project, disposal facility details, collection strategies (e.g. source-separate, co-mingle), and waste handling methods

Deconstruction/Demolition Phase

Waste Material	Facility (name, address)	Collection Strategy	Waste Handling Method

Construction Phase

Waste Material	Facility (name, address)	Collection Strategy	Waste Handling Method

Attachment B WASTE MANAGEMENT FINAL REPORT

Project:
Contractor:
Submittal Date:

*Instructions: Please fill in the details for all of the disposed materials.
 Cells highlighted in Green are required. Most cells have pulldown menus with valid values.
 New rows can be added in the table below by selecting a row, right-clicking and selecting insert.*

MATERIAL TYPE(S)	UNITS	DATE	DISPOSED IN LANDFILL	DIVERTED FROM LANDFILL				RECYCLING OR MATERIAL RECOVERY FACILITY	NOTES
				Recycled	Salvaged	On-Site Reuse	Off-Site Reuse		
Co-Mingled/Mixed CDL									
Acoustical Ceiling Tile									
Asphalt									
Brick									
Cardboard									
Carpet and pad									
Concrete									
Field office waste									
Glass									
Gypsum									
Insulation									
Metals									
Plastic									
Type D (Clean) Soil									
Wood									

Total Weight:

% of Waste Diverted

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PART 1 GENERAL

1.01 DESCRIPTION

- A. Construction Project Closeout requires completing physical and administrative portions of the Work as identified in General Conditions.
- B. The Contractor shall ensure that all procedures and actions identified in this section and elsewhere in the Contract Documents necessary to fully complete the Work are accomplished in a timely and effective manner. Lack of compliance with the closeout requirements may result in Contract time delays. The Contractor is expected to take the lead role in assembly of documents, execution of the Work and coordinating the startup and closeout process.
- C. Refer to the attached closeout checklist, which identifies major closeout actions and milestones to be accomplished.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

APPENDIX A: CONSTRUCTION PROJECT CLOSEOUT CHECKLIST

ITEM:	Specification Reference(s): (As Applicable)	COMPLETION DATE:
Partial/Substantial Completion		
1. Request Punchlist Inspection (provide Contractor's Punchlist)	General Conditions	
2. Submitted draft O & M Documents (Accepted or Accepted as Noted)	Section 01 78 23.13 – Operations and Maintenance Documents	
3. Completed Punchlist Inspection	General Conditions	
4. Completed Training of Port personnel	Section 01 79 00 – Training, Technical Sections	
5. Certificate of Occupancy issued by permit agency	General Conditions	
6. Completed commissioning activities	Section 01 91 00 – Commissioning, Technical Sections	
7. Submitted draft warranties and special warranties and bonds (if required)	Section 01 78 36 – Warranties and Bonds	
8. Perform final cleaning of project site	Section 01 74 00 – Cleaning	
Certificate of Substantial Completion Issued		
Physical Completion		
9. Punchlist Backcheck Accepted	General Conditions	
10. Perform final cleaning of project site	Section 01 74 00 – Cleaning	
11. Demobilization complete	General Conditions	
12. Project As-built (redlines) documents Accepted	Section 01 78 29 – As-Built Redline Documents	
13. O&M Documentation Accepted	Section 01 78 23.13 – Operations and Maintenance Data	
14. Submitted Construction Waste Management Final Report	Section 01 74 19 – Construction Waste Management	
15. Submitted final warranties and special warranties and bonds (if required)	Section 01 78 36 – Warranties and Bonds	
Certificate of Physical Completion Issued		
Closeout Administrative Requirements		
16. All Regulated Materials Project Record Documents Accepted		

DIVISION 1 - GENERAL REQUIREMENTS
Section 01 77 00 - Construction Project Closeout

ITEM:	Specification Reference(s): (As Applicable)	COMPLETION DATE:
17. All temporary locks, keys or other items loaned/signed out by the Contractor, subcontractors, suppliers and vendors have been returned (if applicable)	Section 01 14 13 – Airport ID Access Control; or Section 01 14 14 – Seaport ID Access	
18. All I.D. badges, including subcontractors, suppliers and vendors have been returned (if applicable)	Section 01 14 13 – Airport ID Access Control; or Section 01 14 14 – Seaport ID Access	
19. Notices of Substantial and Physical Completion issued	General Conditions	
20. Reconciliation of any Allowances, or Not-to-Exceed Change Orders completed	General Conditions	
21. All open cost items resolved	General Conditions	
22. Final progress payment requested 100%	Section 01 20 00 – Measurement and Payment Procedures	
23. Complete all items on the Contractor’s Public Works Closeout Checklist.	Section 01 77 20 – Public Works Project Closeout	

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PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. The Contractor shall ensure that all procedures and actions identified in this section and elsewhere in the Contract Documents necessary to fully complete the Public Works Project Closeout are accomplished in a timely and effective manner. Lack of compliance with the closeout requirements will result in delays to release of all responsibilities within the contract and retainage.
- B. Refer to the attached Typical Public Works Project Timeline, which identifies the major closeout actions and milestones to be accomplished.
- C. All Milestones identified in Section 01 77 00 Construction Project Closeout must be completed before achieving the Public Works Project Closeout Checklist identified herein.

1.02 CLOSEOUT ADMINISTRATIVE REQUIREMENTS

- A. To achieve Final Acceptance, the Closeout Administrative Requirements must be achieved, as per the General Conditions.

1.03 RELEASE OF RETAINAGE TO CONTRACTOR

- A. The Contractor must request release of retainage from the Port.
- B. Refer to General Conditions for release of retainage requirements

1.04 POST-FINAL ACCEPTANCE INSURANCE REQUIREMENTS

- A. Refer to General Conditions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and

included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

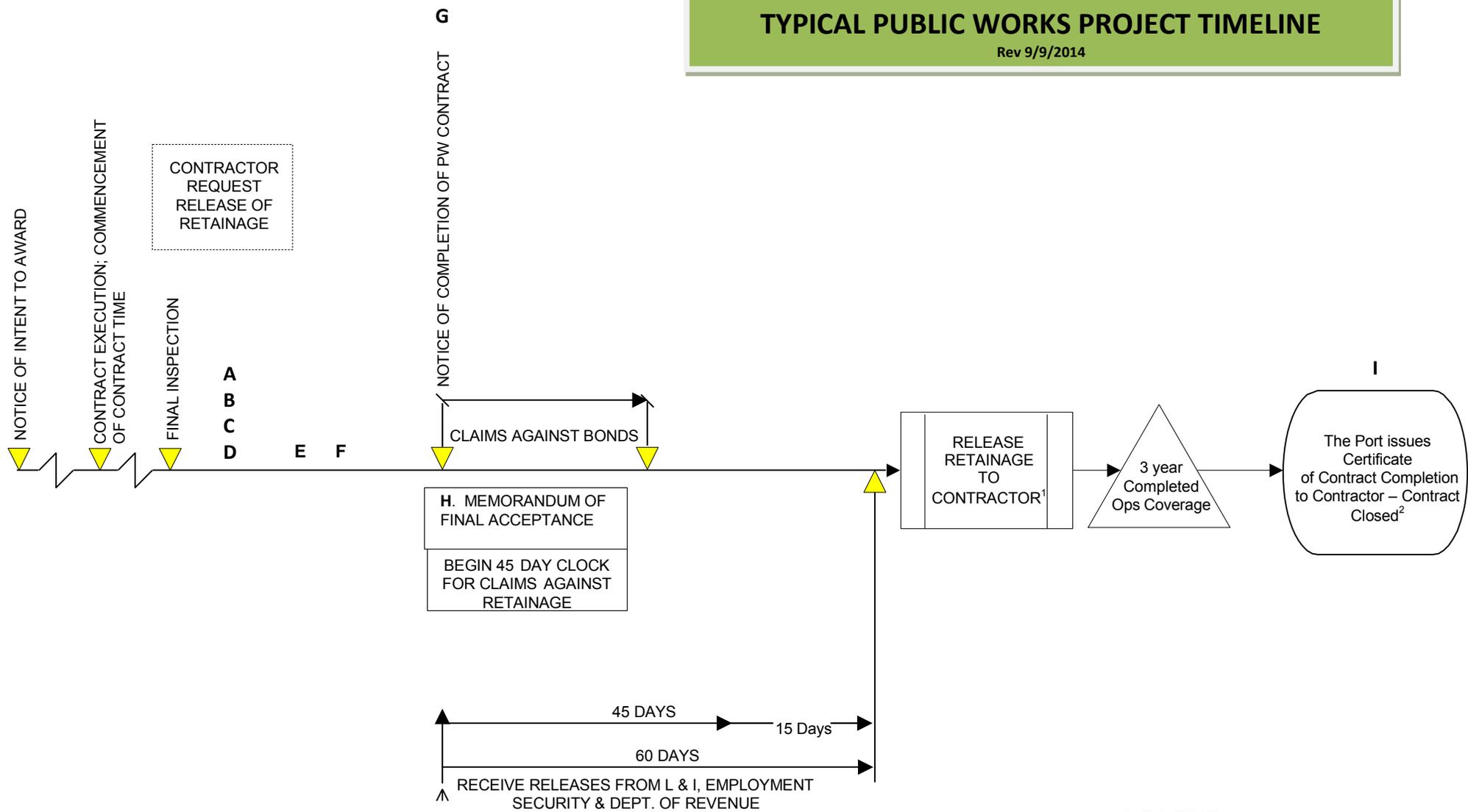
APPENDIX A

PUBLIC WORKS PROJECT CLOSEOUT CHECKLIST

ITEM:	BY:	DATE:
1. Receive Release of Claims from Contractor and verification that all Subcontractors Industrial Insurance is in good standing		
2. Contractor submits Affidavit of Wages Paid for Contractor and all subcontractors		
3. Memorandum of Final Acceptance issued		
4. Notice of Completion of Public Works Contract sent to state agencies and Contractor		
5. Port receives releases from L&I, Employment Security and Department of Revenue		
6. Release retainage or retainage bond		

TYPICAL PUBLIC WORKS PROJECT TIMELINE

Rev 9/9/2014



NOTES:

¹ As long as 60 days have transpired from the date of the “Memorandum of Final Acceptance” , any claims previously made in writing and identified by the Contractor, a Subcontractor, or material supplier as unsettled at the time of application for Final Payment are resolved and no valid claims against retainage have been tendered.

² Port of Seattle Certificate of Contract Completion will be issued after the 3 year completed operations insurance coverage period. The completed operations period is from substantial completion date plus 3 years.

LEGEND

- A EEO/EPI/WMBE/DBE DOCUMENTS
- B ALL CLAIMS SETTLED
- C FINAL PAYMENT
- D RE COMPLETION MEMO
- E RECEIVE CONTRACTOR RELEASE OF CLAIMS
- F RECEIVE ALL AFFIDAVITS OF WAGES PAID
- G NOTICE OF COMPLETION OF PUBLIC WORKS CONTRACT
- H MEMORANDUM OF FINAL ACCEPTANCE
- I POS CERTIFICATE OF CONTRACT COMPLETION

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O&M Data requirements are identified by package. Contact PM if technical specifications do not identify package types.

PART 1 GENERAL

1.01 SUMMARY

- A. Submit a complete and concise description of the product, system, or piece of equipment, stressing and enhancing the importance of system interactions, troubleshooting, and long-term preventive maintenance and operation.
- B. This section identifies the requirements for the formatting and compilation of all operation and maintenance (O&M) documentation for this project and equipment labeling by posting condensed operating instructions as identified in the technical specifications. Unless otherwise directed by the Engineer, the Contractor shall prepare and compile O&M documentation as defined in this section.
- C. This section also includes requirements for the Contractor’s input to the Port Computerized Maintenance Management System (CMMS) form listing equipment installed as part of the Work.
 - 1. Attachment A contains the project’s CMMS form

1.02 SUBMITTALS/APPROVALS

- A. O&M Documentation and the CMMS form shall be submitted in accordance with Section 01 33 00.
 - 1. CMMS forms shall be submitted as a PDF within the O&M submittals along with the Excel source file.
 - 2. Port acceptance of draft O&M is required prior to training of Port personnel, Partial Substantial or Substantial Completion. Submit draft documentation 60 days prior to the anticipated scheduled Punchlist Inspection date.
 - a. For Partial Substantial Completion, the O&M and index shall be complete for the respective elements being turned over to the Port.

Partial manuals shall be clearly labeled on the cover sheet as “PARTIAL O&M MANUAL.”

3. Port acceptance of the final O&M is required for Physical Completion and shall be submitted prior to Final Inspection. If changes are required to Final Document, the Contractor shall incorporate revisions and resubmit a full electronic copy of the manual. All changes shall be submitted with a transmittal identifying all changes.
 - a. Final documentation shall contain “Partial” O&M documentation.

1.03 OPERATING AND MAINTENANCE DOCUMENTATION

- A. The O&M documentation shall be electronic utilizing Microsoft Word or searchable Adobe PDF format. The electronic data shall have software search features and interactive capabilities in the format prescribed within this section.
 1. PDF versions originating from scanned documentation shall be generated from legible documents, indexed, formatted and fully text searchable.
 2. Contractor is responsible for obtaining written releases dealing with copyright restrictions.
- B. The electronic documentation shall be titled as follows :

Fill out C to provide project’s WP Number and Contract Name consistent with the project documents: Draft O&M Manual WPU00013 Contract Name and Final O&M Manual WPU00013 Contract Name.

1. Draft O&M Manual [WPXXXXXX ContractName]
2. Final O&M Manual [WPXXXXXX ContractName]

1.04 CMMS FORMS

- A. An electronic (Excel) file will be provided to the Contractor by the Engineer after Contract Execution. The Contractor is responsible to ensure the form is accurately and fully completed.
 1. The file name shall be titled: *WPXXXXXX CMMS FORM [FINAL or DRAFT]*

1.05 OPERATIONS AND MAINTENANCE (O&M) DOCUMENTATION FORMAT

- A. The O&M documentation shall be organized to include four sections:
 1. Title page
 - a. The title page shall identify Port information including the Port project number and formal Port project name, Contractor information and the anticipated substantial completion date and warranty start date(s). See Appendix A.
 2. Table of Contents
 - a. The table of contents shall identify product, system or piece of equipment by the CSI section within the technical specifications and shall be hyperlinked to the manual content.
 3. Computerized Maintenance Management System (CMMS): provide a PDF of the Excel file within the O&M Documentation.

4. Technical Content of all the product, system(s) or equipment organized by technical specification Construction Specifications Institute (CSI) section number and title. It is comprised of two sections:
 - a. Summary Information on products, systems and equipment
 - b. Data Package information (see Parts 1.06B and 1.07).

1.06 TECHNICAL CONTENT

A. Summary Information on Products, Systems and Equipment.

1. Contractor, distributor and manufacturer support information:
 - a. Provide the name, address, and telephone number of each Subcontractor who installed the product, system or equipment.
 - b. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site.
 - c. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.
 - d. Include the 24-hour emergency support numbers.
2. Equipment information: All equipment information identified in the CMMS form shall be included in the O&M documentation on the first applicable product page and include the CMMS equipment identification number and description as provided in the CMMS form. All equipment identification numbers shall be in bold-type face in a contrasting color from the balance of the font on the page. Red is a typical contrasting color. Include the following:
 - a. Equipment or system photo as installed within the project with description and design intent.
 - b. Special outside agency permits including Washington State Labor & Industries.
 - c. Copies of condensed operating instructions posted on equipment.
3. Submittal and Product Data: Include accepted submittal data, cut sheets and appropriate shop drawings. If submittal was not required for acceptance, descriptive product data shall be included.
 - a. Include all building material and finishes. Provide specific information, lot numbers, local distributors and suppliers with their company names, addresses, and phones numbers. List all information needed to identify, maintain, and replace/duplicate any finish materials, equipment or features installed in this project. Examples include:
 - (1) Material or finish designation.
 - (2) Manufacturer's name, model number, make, size, local vendor and supplier.
 - (3) Proportions of mixes. (Example: terrazzo)

- (4) Color formula list for each project specific paint color used.
- b. Highlight the submittal/product data pertinent to the Contract within manufacturer’s boiler plate information documentation.
- c. Clearly mark the work product, system or piece of equipment and eliminate or strikeout advertisement and other data that does not specifically relate to the Work.
- 4. Warranty Information: List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or Contract in order to keep warranties in force.
- 5. Start Up and Testing/Balancing Information:
 - a. Testing and Performance Data: Include completed pre-functional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms.
 - b. Copy of the start-up report.
 - c. Completed pre-commissioning and pre-functional checklists with all data and documentation.
 - d. Completed functional test and calibration results.
- B. Data Packages. The type of data depends upon the complexity of the product, system, or equipment. Data Package data is categorized into three (3) kinds of information: Operating Instructions, Preventive Maintenance, and Corrective Maintenance. See as identified in Table 1 and described below in Part 1.07 for the kinds of information included in the data packages.
 - 1. Data Package 1: typically used for architectural items requiring simple but specific maintenance and replacement; for example, acoustical ceiling, floor tile or carpeting system.
 - 2. Data Package 2: used for an item that has motors or adjustable electronics; for example, an item having a motor and some sequence of operation such as a refrigerated drinking fountain or adjustable photosensor.
 - 3. Data Package 3: used for an complex piece of equipment, having an extensive sequence of operation, a complex troubleshooting sequence and one requiring frequent operator attention; at least for start-up and shut-down.

TABLE 1		Data Packages		
Technical Data Content		1	2	3
Operating Instruction				
	Safety Precautions	X	X	X
	Operator prestart			X
	Startup, shutdown, and post-shutdown procedures			X
	Normal operations		X	X
	Emergency operations			X
	Operator service requirements			X

TABLE 1		Data Packages		
Technical Data Content		1	2	3
	Environmental conditions		X	X
	Parts identification		X	X
	Testing equipment and special tool information			X
Preventive Maintenance (PM) Plan & Schedule				
	Manufacturer’s PM recommendation		X	X
	Calibration recommendations		X	X
	Cleaning recommendations	X	X	X
	Lubrication data		X	X
Corrective Maintenance (Repair)				
	Troubleshooting guides and diagnostic techniques			X
	Wiring diagrams and control diagrams			X
	Maintenance and repair procedures	X	X	X
	Removal and replacement instructions		X	X
	Spare parts and supply lists	X	X	X
	Corrective Maintenance Work Hours			X
Video O&M Documentation				
	O&M Videos		X	X

1.07 DATA PACKAGE TECHNICAL INFORMATION

- A. Operating Instructions: Include specific instructions, procedures, and illustrations for the following as required by installed products, systems and equipment:
 1. Safety Precautions: List personnel hazards and equipment or product safety precautions for all operating conditions. Include Safety Data Sheets.
 2. Operator Prestart: Include procedures required to install, set up, and prepare each system for use.
 3. Startup, Shutdown, and Post-Shutdown Procedures: Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.
 4. Normal Operations: Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.
 5. Emergency Operations: Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment or harm personnel. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

6. Operator Service Requirement: Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.
 7. Environmental Conditions: Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to operate.
 8. Parts Identification: Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog.
 9. Testing Equipment and Special Tool Information: Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.
- B. Preventive Maintenance Plan and Schedule: Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair for installed products, and the model and features of each system and piece of equipment.
1. Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance.
 2. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.
 3. Cleaning Recommendations: Provide environmentally preferable cleaning recommendations.
 4. Lubrication Data: Include preventive maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":
 - a. A table showing recommended lubricants for specific temperature ranges and applications.
 - b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
 - c. A Lubrication Schedule showing service interval frequency.

- C. Corrective Maintenance (Repair): Include manufacturer's recommended procedures and instructions for correcting problems and making repairs as required for installed products, and model and features of each system and pieces of equipment. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.
 - 1. Troubleshooting Guides and Diagnostic Techniques: Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.
 - 2. Wiring Diagrams and Control Diagrams: Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.
 - a. Maintenance and Repair Procedures: Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.
 - 3. Maintenance and Repair Procedures: Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.
 - 4. Removal and Replacement Instructions: Include step-by-step procedures and a list of required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.
 - 5. Spare Parts and Supply Lists: Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. List spare parts and supplies that have a long lead-time to obtain. Corrective Maintenance Work-Hours: Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft.
 - 6. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.
 - 7. Video O&M Documentation: Include reference to training videos as identified by the technical specifications. See Section 01 79 00 – Training for video and audio technical requirements. Video titles shall be coordinated with the table of contents for the respective section
 - a. Example: *Section [XXXXXX] Training Video for [specific equipment] provided separately.*

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 78 23.13 – Aviation Operations and Maintenance Documentation

1.08 EQUIPMENT OPERATING INSTRUCTIONS: POSTING CONDENSED INSTRUCTIONS

- A. Condensed operating instructions shall be clearly laminated and secured adjacent to or inside the equipment where it can be easily read by operating personnel performing the steps listed. The writing shall not fade in sunlight and shall be secured to prevent easy removal, peeling and degradation if exposed to the weather.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. Separate measurement or payment will be made for the Work required in this section. The cost for this portion of the Work will be included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the project.

APPENDIX A: Title Page for Operations and Maintenance Documentation

POS Project Number	
Project Name	
Port Project Manager	
Port Resident Engineer	
Prime Contractor Name	
Prime Contractor Project Number	
Primary Contact Name	
Primary Contact Number	
Emergency Contact Number	
Anticipated Substantial Completion Date	
Phased Warranty Yes/No	If yes, list all anticipated dates:
Anticipated Warranty Date(s)	

End of Section

	B	C	D	E	F	G	H	I	J	K
1	CMMS Data Form		Project #:							
2			Project Name							
3			Contact Information:							
4										
5										
6	To be Completed by Architect Engineer at 90% Design Only				To be Completed by Contractor Only					
7	Port of Seattle Equipment ID Number	Equipment Description (Maximo Asset Description)	Equipment Location (*see location hierarchy list below)	Room #, Gate #, Other (if applicable) *see below	Model Number	Serial Number	Manufacturer Name & Website	Install or Purchase Date	End of Equipment Warranty Date	Extended Warranty Date (If Applicable)
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30			* Locations Guide for CMMS Data sheet							
31			➤ Terminal							
32			➤ Concourse (A,B,C,D, N or S), Central Terminal, Ticketing or Esplanade							
33			➤ Level (main, baggage, mezzanine, 2 nd floor, pent house, bridge, roof)							
34			➤ (if applicable) room #, gate #, ticket position, other							
35			➤ Airfield							
36			➤ Runway							
37			➤ Taxiway							
38			➤ Ramp							
39			➤ Cargo							
40			➤ Other							
41			➤ Landside							
42			➤ Parking							
43			➤ Roadways							
44			➤ Other (specify building or address)							

	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG
1																						
2																						
3																						
4																						
5																						
6	To be Completed by F&I Only (with asset plan)								To be Completed by Maintenance Shops prior to Maximo input													
7	Estimated Equipment Value	Expected Equipment Life Span (Years)	System	Sub System	Sub System Type	Level	Quadrant	Profile ID / Classification ?	Maximo Classification	PeopleSoft Asset ID #	Maximo Asset ID#	Asset Type	Custodian	Work Group	GL Account	GL Fund	GL Ogr	GL Program	GL Subclass	Failure Class	Priority	Purchase Project # (or expense)
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
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43																						
44																						

POSDEPARTMENT	POSPURCHASEDATE	PURCHASEPRICE	AS_ORGID
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POS

**Instructions for
CMMS DATA FORM**

The completed form is to be submitted to POS in electronic format and will only be acceptable as an Excel (.xls) file type

The Port of Seattle uses a Computerized Maintenance Management System (CMMS) called MAXIMO to schedule periodic maintenance. The completed Data Form for CMMS input will aid in providing accurate data on a piece of equipment or system to ensure timely commencement of periodic maintenance. Items* (see bottom of page for specific types) to include:

- Items with equipment numbers on the contract drawings
- Items with extended warranties
- Equipment critical to operation of the airport
- Equipment that needs periodic maintenance or inspections (O&M manual)
- Equipment funded with grant funds (specify grant)

Project # & Name	# & name of POS Project provided by POS PM
-----------------------------	--

POS Equipment ID Number Equipment Description Equipment Location Room #, Gate #, Other	Filled out at 90% design by POS A/E with PM oversight; Sent out as part of the Bid Package.
---	--

Information for items highlighted in green below are filled in by the contractor, plus update of yellow items above (oversite by Construction Management).

Contact Information:	Name, telephone number, and e-mail address of the person in the General Contractor's office with whom POS Maintenance can discuss information submitted on the form.
Equipment Information	
Model Number	Alphanumeric as recognized by the equipment manufacturer
Serial Number	Alphanumeric as recognized by the equipment manufacturer
MANUFACTURER Information - Name & Website	
Manufacturer Name	If extended warranty is administered by the Manufacturer, include the word (WARRANTY), with parenthesis, after the company name.
Telephone Number	Toll free or local phone number (XXX) XXX-XXXX
Street, City, State & Zip	Physical address - not a PO Box
Website Address	Company website that will provide information on upgrades, spares and manufacturer corporate information.
Install or Purchase Date	Date DA/MO/YEAR on which equipment is purchased or installed.
End of Equipment Warranty Date	Date DA/MO/YEAR on which Warranty expires based on start date identified above.
Extended Equipment Warranty Date (if applicable)	Date DA/MO/YEAR on which <i>Extended</i> Warranty expires based on start date identified above (if applicable).
Estimated Equipment Value	Complete assembly/unit replacement in today's dollars.
Expected Equipment Life Span (Years)	Estimated # of years before the piece of equipment will need to be replaced if maintained properly.

For a blank electronic copy, or if you have any questions filling out this form, please contact one of the following people:

- | | |
|----------------------------------|--|
| Deb Sorensen 206-787-7252 | Sorensen.D@portseattle.org |
| Doug Bean 206-787-5584 | Bean.D@portseattle.org |
| Beth Britz 206-787-3556 | Britz.B@portseattle.org |
| Arland Fagerstrom 206-787-7807 | Fagerstrom.A@portseattle.org |
| Doug Sinclair 206-512-7235 | Sinclair.D@portseattle.org |

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Tab) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

O&M Data requirements are part of the commissioning specification from the perspective of quality and adequacy of project closeout documentation. Coordinate this Section with 01 91 00 - Commissioning, 01 79 00 -Training and other Technical Specifications. Review with Engineer, Project Manager, F&I, Maintenance, Facilities and Shareholders to tailor this section to the needs and requirements of the specific project.

PART 1 GENERAL

1.01 SUMMARY

- A. This section identifies the requirements for Posting of Condensed Operating Instructions and the format and general content requirements for the compilation of all operation and maintenance documentation for this project. Additional special O&M documentation requirements may exist in other divisions and sections of the specification.

1.02 POSTING OF CONDENSED OPERATING INSTRUCTIONS:

- A. Instructions shall be clearly laminated and secured adjacent to or inside the equipment where it can be easily read by operating personnel performing the steps listed. The writing shall not fade in sunlight and shall be secured to prevent easy removal, peeling and degradation if exposed to the weather.

1.03 OPERATING AND MAINTENANCE MANUALS

- A. Computerized Maintenance Management System (CMMS) Input Form shall be completed by the Contractor and submitted for approval at least sixty (60) days prior to Substantial Completion or with the draft O&M submittal.
- B. Quantity: One electronic and two copies of the draft and final manuals addressing all work within this project.
 - 1. The electronic data shall have software search features and interactive capabilities, format, and index shall be defined by the Contractor and approved by the Engineer.
 - a. Provide electronic O&M in Microsoft Office or Adobe PDF format.

- b. PDF versions originating from scanned documentation shall be generated from legible documents, formatted and fully text searchable.
- C. Draft manuals: Contractor shall submit draft manuals at least sixty (60) calendar days prior to the scheduled project Final Inspection. The Engineer shall review with Commissioning Agent, Design Team or Owner and return the draft submittals to the Contractor in accordance with Section 01 33 00 - Submittals.
- D. Final manuals, incorporating all comments made, Contractor shall submit a final electronic draft to the Engineer seven (7) calendar days prior to the Pre-Final Inspection. Port will respond with approval or revision requests within fifteen (15) days. Upon approval of the final manuals by the Engineer after review with Commissioning Agent or Port stakeholders, the Contractor shall resubmit two O&M manuals and one electronic copy incorporating all required changes prior to Final Inspection. If changes are required to final manuals, the Contractor shall provide copies of the revision for each hard copy (if sheets within a bound manual or portion thereof are updated replace full bound copy) and one revised full electronic O&M manual. All changes shall be submitted with a transmittal identifying all changes. Contractor is responsible for obtaining written releases dealing with copyright restrictions.
- E. Binders shall be 8 1/2" x 11" loose-leaf, clearly labeled on the spine. Maximum 3-inch binders do not overload binders. O&M library shall consist of a series of three-D-ring binders. Covers shall be hard durable materials with cleanable plastic covers, and metal lockable hinge.
- F. Covers: label with project number, name of project, Port of Seattle, Designer, Prime Contractor and the year project completed. The binder spine shall be labeled with the project number, name of project and the specification sections contained within the binder.

1.04 FORMAT OF MANUALS

- A. Each document shall contain a title page and table of contents provide a main tab for the Computerized Maintenance Management System (CMMS) Input Form; Material Safety Data Sheets (MSDS); and, each specification section.
 - 1. Computerized Maintenance Management System (CMMS) Section: In addition to a hard copy for the manuals, the CMMS input form shall be a live electronic Excel spreadsheet and provided by the Engineer to the Contractor.
 - a. PDF or other format is not acceptable for this document.
 - b. Include information in Manual 1 as defined below.
 - 2. Material Safety Data Sheets – Provide a complete set. Information should be presented with summary including a cross reference to specification and equipment identification numbers.
 - a. Include information in Manual 1 as defined below.
 - 3. Specification Sections: Behind the section number tab, there shall be the equipment ID tag and sub-tab for each piece of major equipment (or group, if small or numerous) within the specification. These sub-tabs shall be similar to the specification number tabs but a different color. Behind each

equipment name tab shall be the following sections, in the given order, divided by a double weight colored sheet labeled with the typed title of the section:

- a. Contact Information: The name, address and telephone number of the manufacturer and installing contractor and the 24-hour number for emergency service for all equipment in this section, identified by equipment. Emergency numbers and System/Equipment identification shall be typed in bold for ease of emergency identification, and the completed Computerized Maintenance Management System (CMMS) input form will be included.
- b. Submittal and Product Data: All approved submittal data, cut sheets and appropriate shop drawings. If submittal was not required for approval, descriptive product data shall be included. A copy of the start-up report will be included. Eliminate advertisement documentation and other data that does not specifically relate to this project system or equipment.
- c. Preventative Maintenance Instructions
 - (1) This section shall include condensed typewritten excerpts from the manufacturer’s “best practice” written instructions for regular or periodic maintenance prepared by the equipment manufacturer or supplier for all systems, equipment, or items listed within the specification, with recommended break-down inspections, replacement parts, and servicing.
 - (2) This section shall include condensed instructions for start-up, shut-down, emergency operation, safety precautions, unusual features, troubleshooting suggestions and wiring and control diagrams. Where control sequences are clearly covered in controls section of the O&M manuals, it is not to be duplicated here. These instructions shall be provided for each major piece of equipment identified within the technical specifications.

B. Information Compilation

1. Manual Group I - Building Structural, Exterior and Interior Materials and Systems Operations and Maintenance Instructions :
 - a. Includes all building material and finishes. State specific identifying information, lot numbers, local distributors and suppliers with their company names, addresses, and phones numbers. List installing contractors or vendors with their company names, addresses, and phones numbers. Manual shall contain all information needed to identify, maintain, and replace/duplicate any finish materials, equipment or features installed in this project, presented and arranged in a logical manner, indexed and tabbed in accordance with the respective specification sections, for efficient use by the Port’s personnel. The information provided shall include, but not limited to, the following:

- (1) Material, piece of equipment, or finish designation.
 - (2) Manufacturer’s name, model number, make, size, local vendor and supplier.
 - (3) Proportions of mixes.
 - (4) Color formula list for each paint color used.
 - (5) Finish numbers or designations.
 - (6) Cleaning, safety, and manufacturer’s “best practice” operational and maintenance instructions including all requirements for personal protective equipment.
 - (7) Local subcontractor and supplier’s name, address, phone number, and reference order number.
 - (8) State and local permits associated with the work.
 - (9) All first time pressure vessel permits
 - (10) All water backflow-preventer inspection reports and certifications
 - (11) All procedures and test results on domestic water pipe pressurization and sanitizing
 - (12) Equipment operating parts list and reorder information.
 - (13) Equipment shop repair manual.
 - (14) Recommended spare parts inventory.
 - (15) All warranties required by the general and technical specifications, placed in appropriate specification section division.
 - (16) Electronic copies shall be software acceptable to the Engineer.
2. Manual Group II - Equipment and Mechanical Operation and Maintenance Instructions:
- a. These shall be the written manufacturer’s data with the model and features of this installation clearly marked and edited to omit reference to products or data not applicable to this installation. This section shall include manufacture and design data on the following:
 - (1) Equipment and/or system photo as installed within this project with description and design intent.
 - (2) Cleaning, safety, and manufacturer’s “best practice” operational and maintenance instructions
 - (3) Completed pre-commissioning and pre-functional checklists with all data and documentation.
 - (4) State and local permits associated with the work.
 - (5) All first time pressure vessel permits

- (6) All water backflow-preventer inspection reports and certifications
- (7) All procedures and test results on domestic water pipe pressurization and sanitizing
- (8) Completed functional test results.
- (9) Elevator, escalator, conveyance and other equipment documentation and manuals that requires special outside agency permits.
- (10) For HVAC systems, final air & water testing, adjusting, and balancing (TAB) report.
- (11) All starting, normal shutdown, emergency shutdown, manual operation, seasonal changeover and normal operating procedures and data, including any special limitations.
- (12) Copy of posted condensed operating instructions.
- (13) O&M and installation instructions that were shipped with the unit.
- (14) Required operator certifications to safely operate equipment or systems
- (15) Safety issues with operating, maintaining and servicing equipment such as noise, fumes, gases such as Freon or FS-6, Asbestos Containing Material (ACM) or other regulated material, including all requirements for personal protective equipment.
- (16) Annual breakdown service procedures and schedules.
- (17) Troubleshooting procedures and guide.
- (18) Specific manufacturer's breakdown shop repair manual.
- (19) Parts list, edited to omit reference to items that do not apply to this installation, including local sources of supply.
- (20) Manufacturer recommended spare parts for servicing and maintaining equipment and local source of supply. Provide warehouse lead-time for delivery.
- (21) List of specialty tools required to service or maintain equipment and local source of supply.
- (22) Equipment performance data, ratings and curves. If the equipment includes a pump or fan, the appropriate pump or fan curve upon which the equipment was selected as well as the impeller or volute selection installed. If the curve was generated specifically for the project using a computer program selection, include along with the curve a reference to the program and it's revision status.
- (23) Warranty that clearly lists conditions to be maintained to keep warranty in effect.

- (a) Contractor/Labor warranty (including phone numbers)
- (b) Part/system/equipment specific warranties (including complete list of components)
- (c) Specifically what is NOT covered by warranty
- (24) Single-line system/equipment diagrams/shop drawings
- (25) Electronic software and imprinted copy ladder logic. Editing software and documentation shall be executed on maintenance hardware (laptops).
- (26) Service contracts issued or/extended warranty

If DDC Control System associated with project include the next section:

- (27) Controls Operations and Maintenance Manual shall contain:
 - (a) As-built set of control drawings (refer to Submittal section above for details).
 - (b) As-built sequence of operations for each piece of equipment.
 - (c) Points list and all their attributes.
 - (d) Color print screens of geographic layout of equipment/system software.
 - (e) Valve schedule.
 - (f) Schedules and set points after testing and acceptance of the system.
 - (g) Two electronic copies on CD of the entire program for the facility.
 - (h) Maintenance instructions, including calibration requirements and methods by type.
 - (i) Control equipment component submittals, and parts lists.
 - (j) Copies of all checkout tests and calibrations performed by the Contractor or manufacturer (not commissioning tests).
 - (k) Drawings for each piece of equipment and components, including the sequence of operation.
 - (l) Specifications: The component or system specification section copied and inserted complete with all addenda.
3. Manual Group III – Electrical and Communication Operation and Maintenance Instructions:

- a. These shall be the written manufacturer's data with the model and features of this installation clearly marked and edited to omit reference to products or data not applicable to this installation. This section shall include manufacture and design data on the following:
- (1) Equipment and/or system photo as installed within this project with description and design intent.
 - (2) Cleaning, safety, and manufacturer's "best practice" operational and maintenance instructions
 - (3) Completed pre-commissioning and pre-functional checklists with all data and documentation.
 - (4) Completed functional test and equipment calibration results.
 - (5) Short circuit study results.
 - (6) Variable Frequency Drive and non-linear electric load test reports as required in Division 15.
 - (7) Settings of breakers, relays, timers, electric equipment thermostats, and any other field control devices.
 - (8) Software and firmware necessary to configure any electrical equipment.
 - (9) State and local permits associated with the work.
 - (10) All starting, normal shutdown, emergency shutdown, manual operation, seasonal changeover and normal operating procedures, settings, and data, including any special limitations.
 - (11) Copy of posted condensed operating instructions.
 - (12) O&M and installation instructions that were shipped with the unit.
 - (13) A list of required operator certifications to safely operate equipment or systems
 - (14) Safety issues with operating, maintaining and servicing equipment such as noise, fumes, gases such as Freon or FS-6, Asbestos Containing Material (ACM) or other regulated material, including all requirements for personal protective equipment.
 - (15) Annual breakdown service procedures and schedules.
 - (16) Troubleshooting procedures and guide.
 - (17) Specific manufacturer's breakdown shop repair manual.
 - (18) Parts list, edited to omit reference to items that do not apply to this installation, including local sources of supply.
 - (19) Manufacturer recommended spare parts for servicing and maintaining equipment and local source of supply. Provide warehouse lead-time for delivery.

- (20) List of specialty tools required to service or maintain equipment and local source of supply.
- (21) Equipment performance data, ratings and curves.
- (22) Warranty that clearly lists conditions to be maintained to keep warranty in effect.
 - (a) Contractor/Labor warranty (including phone numbers)
 - (b) Part/system/equipment specific warranties (including complete list of components)
 - (c) Specifically what is NOT covered
- (23) Single-line system/equipment diagrams/shop drawings. Two electronic copies on CD of the entire program for the facility.
- (24) Equipment, panel, & board schedules
- (25) Logic diagrams. If PLC or other special programming required, provide editing software and documentation to be executed on maintenance hardware (laptops).
- (26) Material Safety Data Sheets (MSDS)
- (27) Service contracts issued or/extended warranty

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Throughout the progress of the Work the Contractor shall maintain accurate set of As-built Redline Drawings (including shop and Contractor bidder-design drawings).
- B. As-Built (Redline) Drawings will be used by the Port at a future time as the basis of revision to the CAD drawing files and therefore must clearly communicate the changes in graphics and text to the CAD operator performing the drawing revisions.

1.02 QUALITY ASSURANCE

- A. The responsibility for maintenance of changes to the As-Built Redline Drawings shall be assigned to one person on the Contractor’s staff.
- B. As-Built Redline Drawings:
 - 1. Shall be kept accurate and current per the requirements of paragraph 3.01, Maintenance of As-Built Record Documents.
 - 2. Thoroughly coordinate all changes by making red-line entries on an ongoing basis on a single set of full size Contract and Working Documents maintained at the job site. Accuracy shall be such that future users of information showing the as-built condition of the Work may reasonably rely on the information shown.
 - 3. As-Built Redline Drawings Kick-off Meeting
 - a. Convene a meeting with the Engineer prior to making entries in the As-Built Redline Drawings set to clarify level and style of information requirements.
 - b. Attendees should include the Contractor's field manager, the Contractor's staff member responsible for making the entries, the Engineer and Inspector(s) responsible for monthly review of the As-built Redline Drawings.

4. Inspection and Quality of As-Built Redline Drawings
 - a. A checklist is appended to this Section: (Appendix # 1-- Red-Lines Quality Checklist). This checklist will be used by Port personnel reviewing the Red-Lines for currency and quality prior to the Engineer's acceptance of the Progress Payment requests. The checklist will serve to define Contract requirements for quality and content of entries.

1.03 SUBMITTALS

- A. Progress Submittals:
 1. The Engineer's acceptance of the current status of changes to the As-Built Redline will be a prerequisite to the Engineer's acceptance of requests for each Progress Payment. Appropriate payment may be withheld if documents are not up to date at the time of the Progress Payment request(s).
- B. Substantial Completion :
 1. At the time of Substantial Completion, provide a hard-copy and an electronic copy of the As-Built Redline Drawings including shop drawings and bidder-design drawings to the Engineer.
- C. Final As-Built Redline Drawings Submittal:
 1. After acceptance of the final As-Built Redline Drawings by the Engineer, and within 14 days after Physical Completion of all or a part of the work, and prior to Final Payment request, submit an electronic PDF file and hard copy.

PART 2 PRODUCTS - Not used

PART 3 EXECUTION

3.01 MAINTENANCE OF AS-BUILT PROJECT RECORDS

- A. During construction of the Work, the Contractor shall use all means necessary to maintain a record of changes to the Contract documents completely protected from deterioration and from loss and damage.
- B. As-Built Redline Drawings
 1. All change directives in the Work generated by Change Orders (CO), Design Bulletins (DB), Construction Bulletins (CB), Requests for Information (RFIs) and accepted substitutions shall be recorded on the Contract Documents.
 2. The Contractor shall revise (1) set of full size Contract Documents by red-line process to show the as-built conditions during the course of the project. Identify documents with the title RED-LINES.
 - a. Define an accepted method for protecting the project As-Built Redline Drawings for the duration of the Contract.
 - b. Do not use the As-Built Redline Drawings for any purpose except entry of new data and for review by the Engineer.
 - c. Maintain and protect the drawings at the site of Work.

3. Changes shall show the actual Work with the same level of accuracy and completeness as the original Contract Documents. As-built Redline Drawings should include changes in location, identification and sizes of material, equipment, utilities and elements of the project and reflect the correct scale, grade, elevations, dimensions and coordinates of changes.
 - a. Use an erasable red-colored pencil (not ink or indelible pencil) to clearly indicate the changed graphics or text. The change directive (CO/RFI/DB/CB) number should be identified on the drawing with the “clouded” changes. It is not necessary to describe the directive, when, why or who authorized the change.
 - b. Distinguish between annotations intended to be copied exactly by a future drafter creating As-Built Redline Drawings files and information that is supplemental and not meant to be copied. Examples of supplemental information would include notes to the drafter and information purely for the Contractor’s information in monitoring the change. A suggested approach is to make all markings not to be copied by a CAD operator in a color other than red, reserving red for information to be copied exactly.
 - c. Do not include markings or reference to documents that do not generate a graphic or text change.
 4. Complex or complicated changes can be noted in the As-built Redline Drawings with a cloud and reference to the directive attached to the drawing sheet or the back of the sheet preceding it.
 5. Include changes or modifications that result from final inspection.
- C. Shop drawings and Contractor bidder-design drawings shall be maintained accurate and current and show, as a minimum, the following information:
1. Changes from approved detail drawings prepared and/or furnished by the Contractor; including but not limited to shop drawings, installation plans and dimensions of equipment.
 2. The actual bidder-design work by the Contractor to meet performance specifications, such as HVAC controls, Fire Alarm, Sprinkler systems and Data Management systems, to the same level of detail as the submitted and approved bidder-design drawings.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

Appendix #1: Red-Lines Quality Checklist

CHECK ITEM	EXAMPLE/COMMENT
Check that supplementary information is coded in such a way that it will not be transferred to the final record documents	<p>Example: lines or notes not to be copied might be marked in a different color.</p> <p>An example of supplementary information might be references to dates or meetings or field conversations that the Contractor may want recorded on the Red-Lines for record purposes but that are not relevant to the physical as-built condition.</p>
Check that the changes are marked exactly as they should be indicated in revised drawings	<p>An example of unacceptability would be a relocated light fixture shown by a circle around the item with an arrow leader pointing to the new location.</p> <p>Correctly it should be drawn in the final location in which it was actually installed exactly as a drafter would be intended to draw it with all circuits or connections included and previous circuits and connections shown deleted.</p>
Check that a drafter could access the information from which the change was constructed	The change should be clouded or otherwise identified with a reference to the actual change directive from which it was constructed (CB, FA, FD, RFI, etc.) - this may not necessarily be the official Change Order. The traditional practice of attaching the directive to the back of the preceding sheet is recommended.
Check that the original information superseded by a sketch attachment to the change directive is clearly identified	It is not necessary for the Contractor to redraw what is clearly shown and dimensioned on the sketch. However it should be clear what information the sketch replaces.
Check that the Contractor is keeping some kind of log or checklist of changes pending completion of the installation or construction in the cases where the Contractor does not record the change until the work is completed	This is important when the practice adopted is to not mark the changes until the work is completed to assure accurate "as-built" information. Without the checklist, the Contractor can easily lose track and it will be more difficult for the Port Inspector to check the status.
In the case of Item 5 above, check the Contractor's method for verifying that the change directive does reflect the in-place (As built) work	If the work is not constructed exactly per the sketch accompanying the change directive, the variation should be noted in a way that would be clear to a drafter.

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PART 1 GENERAL

1.01 DESCRIPTION

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by Contract Documents, including manufacturers' standard warranties on products and special warranties.

Include specific equipment warranties and any special warranties (ie, landscaping) in the applicable technical section and reference here in paragraph 1.02.

- 1. Refer to General Conditions for terms of Contractor's overall warranty of the Work.
 - 2. Specific requirements for Work and products, and installations that are specified to be warranted are included in the technical specifications.
 - 3. Certifications and other commitments and agreements for continuing services to the Port are specified elsewhere in Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on Work that incorporates products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

1.02 WARRANTY REQUIREMENTS

- A. Replacement Cost: Upon determination that Work covered by warranty has failed, replace or rebuild Work to an acceptable condition complying with requirements of Contract Documents. Contractor is responsible for cost of replacing or rebuilding defective Work regardless of whether the Port has benefited from use of Work through a portion of its anticipated useful service life.
- B. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

- C. Reinstatement of Warranty: When Work covered by warranty has failed and corrected by replacement or rebuilding, reinstate warranty by written endorsement. The reinstated warranty shall be equal in all respects to the original warranty duration and coverage.
- D. The Port's Recourse: Written warranties made to the Port are in addition to implied warranties, and shall not limit duties, obligations, rights, and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Port can enforce such other duties, obligations, rights, or remedies.
 - 1. Port reserves right to reject warranties and to limit product selections to products with warranties not in conflict with requirements of Contract Documents.
 - 2. Port reserves right to refuse to accept Work for project where a special warranty, certification, or similar commitment is required on such Work or part of Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.03 BOND REQUIREMENTS

Call out bond requirements (i.e., landscaping) if required by the specific project.

1.04 SUBMITTALS

- A. Submit written warranties to the Engineer 60 days prior to the Pre-Final Inspection with the draft Operation and Maintenance Data. Warranty start dates commence on the date of the Certification of Substantial Completion or Physical Completion, whichever comes first.
- B. Forms for special warranties are included at end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier, or manufacturer. Submit draft to the Engineer for acceptance prior to final submission.
 - 1. Refer to technical specification for submittal of special warranties.
- C. Include final executed sets of all required warranties in the final Operation and Maintenance data submission.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

PART 4 MEASUREMENT AND PAYMENT

- 4.01 No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price] bid for the Project.

End of Section

SAMPLE

SPECIAL LIMITED PROJECT WARRANTY FOR

WHEREAS, _____

(Contractor),

Address _____

Telephone (____) ____ - ____ ext. _____ has performed _____

(Work) on the following project: _____

Address _____

For the Port of Seattle

and, WHEREAS, the Contractor has agreed to warrant said Work _____

NOW, THEREFORE, the Contractor hereby warrants said Work in accordance with the terms hereof, complying with the terms of the Contract with the Port dated _____, that _____

WARRANTY PERIOD _____, STARTING _____, TERMINATING _____.

IN WITNESS THEREOF, this instrument has been duly executed this ____ day of _____, 20__, for

Contractor _____ as its _____
(typed name) (position)

Name of Firm _____

Address _____

And has been countersigned in accordance with terms and conditions, for the Manufacturer

_____ as its _____
(typed name) (position)

Name of Firm _____

Address _____

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. The Contract Management System (CMS) is a web-based system developed by the Port to manage Contract documents. The CMS will be used to generate and capture electronic Contract Documents, route them to the appropriate individuals, file them, and then allow for easy retrieval. The CMS shall be used for all Contract communications between the Port and the Contractor. CMS shall not be used for Electronic Payroll Information (EPI) or any type of payroll submittals.

PART 2 PRODUCTS

2.01 CONTRACT MANAGEMENT SYSTEM

- A. The Port will provide the Contractor with one user login for the Port’s CMS located at <https://docmgt.portseattle.org> at no cost to the Contractor. Access to the CMS web site will be provided by way of a Port provided password and user name. The login will be subject to the terms and conditions of use as described in the Contract Documents and may be revoked by the Port at any time.
- B. Additional logins may be provided at the Port’s discretion. Each login will be subject to the same terms and conditions of use as the Contractor’s initial login and will similarly be subject to revocation by the Port at any time. Coordination of the integration process will be the responsibility of the Contractor.

2.02 MINIMUM REQUIREMENTS

- A. In order to utilize the CMS, the Contractor shall use equipment and software that meets the following minimal requirements:
 - 1. Hardware:
 - a. i5 compatible processor or higher IBM-compatible PC
 - b. 16 GB free space on hard drive
 - c. 4 GB of RAM
 - d. Require VGA or higher-resolution monitor at least 1,024x768 pixel resolution

- e. DSL link to the Internet
- 2. Software:
 - a. Operating System: Windows 7
 - b. Browser: Internet Explorer 10.0
 - c. PDF Reader for viewing attachments only.
 - d. PDF Editor for markups and/or editing of attachments.
 - e. MS Office 2007 or 2010 Professional
- 3. Scanner:
 - a. Flatbed scanner + ADF (automatic document feeder)
 - b. TWAIN Compliant drivers
 - c. Minimum 200-page Automatic Document Feeder
 - d. Scanning speed: Portrait 56 ppm simplex / 92 ipm duplex
 - e. Scanning resolution: 100 dpi - 400 dpi Optical; up to 600 dpi Interpolated
 - f. Paper size: Check 2.8" x 6.7" to ledger 11" x 17"
 - g. Capable of color scanning
- 4. Printer:
 - a. Inkjet or Laser printer
 - b. Paper size: Check 2.8" x 6.7" to ledger 11" x 17"
 - c. Capable of color printing

PART 3 EXECUTION

3.01 SETUP AND TRAINING

- A. Setup
 - 1. Prior to use, the Contractor shall be required to have at least two (2) project personnel attend and complete a training session conducted by the Port as specified below.
 - 2. Following successful completion of the training session the Contractor will be provided with login with accompanying user name and password.
- B. Training
 - 1. The Port of Seattle will provide up to eight (8) hours of on the job training. Training shall be coordinated through the Engineer and will provide sufficient indoctrination to the system to allow the Contractor to access the system and use the basic features thereof.
 - 2. Additional training may be requested by the Contractor to cover topics or information not included in the initial training session. These requests will be considered by the Engineer based on availability of training personnel.
 - 3. Additional training may be requested by the Contractor for personnel in excess of the initial training allowed above. Such additional training

requests will be considered by the Engineer based on availability of training personnel and the size of previously scheduled sessions.

3.02 SYSTEM USE

A. System Use

1. The Contractor shall use the Port's Web-based CMS specified herein for all project communications, including but not limited to letters, daily reports, weekly reports, written notice of change, requests for change order, cost proposals, submittals, substitution requests, requests for information, pay applications, etc. CMS shall not be used for Electronic Payroll Information (EPI) or any type of payroll submittals.
2. Any information not transmitted via CMS will not be considered official documentation, unless specifically allowed as an exception by the Engineer based on extenuating circumstances. All information transmitted via CMS shall be in electronic format. The Contractor is required to scan all documents into a legible electronic form and will initiate workflows in CMS following the Ports standard protocols for format and system use. The scanned documents (such as pdf's) shall be submitted to the Port in a searchable format. The Contractor shall use Optical Character Recognition (OCR) software to convert all pdf documents produced, or received from subcontractors and supplier, to a searchable format prior to submitting to the Port. Workflows not initiated using the proper formatting protocols will not be accepted by the Port. Protocols will be covered in the Contractor training held at the beginning of the project.
3. The Port may, from time to time, require hard paper copies of certain documents, including Pay Estimates and Contracts, to be signed by the Contractor. In these cases, the Port will provide the Contractor with hard copies of the signed documents, and will incorporate signed documents into the system for reference purposes. In the event the Contractor feels a certain document should be maintained in hard-copy form in addition to electronic form, the Contractor may submit such a request to the Engineer through CMS. Documents accepted for hard copy in this fashion shall be prepared by the Port at the sole expense of the Contractor.
4. The Contractor may request specific forms or reports be incorporated into the system for use in fulfilling the Contractor's requirements. Upon acceptance, the Port shall make reasonable efforts to prepare said form(s) or report(s) based on the Contractor's requirements at the sole expense of the Contractor.

3.03 CONTACT PERSONNEL

- A. The Contractor shall designate one employee who shall serve as their primary contact in connection with the use of CMS for the Contract. The Contractor may change its primary contact by providing notice to the Engineer.
- B. The Contractor shall further designate a back-up contact that shall serve as primary contact in the event the primary contact is unavailable.
- C. The Contractor shall provide 24-hour availability telephone numbers for the primary and back-up contacts.

3.04 TERMS OF USE

- A. Use And Protection Of Passwords
 - 1. The Contractor shall use each password in furtherance of Contract work and shall use the password for no other purpose. The Contractor assumes all risks associated with the failure to adequately protect such password. The Contractor further agrees:
 - a. To prohibit the disclosure of any password to any person not authorized by the Contractor to use the password.
 - b. To protect all passwords in a secure manner that will prevent unauthorized use.
 - c. That any Contractor access or information developed as a result of utilizing CMS by way of the password(s) shall be attributed to the Contractor, and that the Port and other users may rely upon such attribution.
- B. Restrictions On Use
 - 1. The Contractor shall make every reasonable effort to ensure that:
 - a. Computer codes, files, and programs which may interrupt, destroy, or cause damage shall not be uploaded into CMS.
 - b. Computer codes, files, and programs which interfere with the proper working of CMS or its use by others shall not be allowed access.

3.05 REVOCATION OF LICENSE

- A. The Port may, at any time during the Contract, choose to revoke the Contractor's login or any such additional logins. Such revocation may occur based on misuse, misconduct, termination of the Contract, or other such reasons as deemed justified by the Engineer. Such revocation may occur with or without prior notice to the Contractor or affected user(s).

3.06 DOWNTIME AND SYSTEM AVAILABILITY

- A. Any interruptions in service based on Internet conditions, connection media, or the unavailability of servers for maintenance, repairs, or replacement shall not warrant additional compensation to the Contractor. The Port will not be liable for the unavailability of the system for any period of time nor will it be responsible for the inability of the Contractor to access the system or any of its components.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the work will be considered incidental to and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

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PART 1 GENERAL

1.01 SUMMARY

- A. Prior to Substantial Completion, the Port’s operating and maintenance staff shall receive orientation and training on all modes, functions, operations and maintenance of all products, systems or equipment as identified in the technical specifications.
- B. Video requirements for operations and maintenance procedures for specific products, systems or equipment are as identified in the technical specifications. The time and place of the instruction period shall be coordinated by the Contractor with the Engineer.

1.02 REQUIREMENTS/QUALIFICATIONS

- A. The Training Plan and Syllabus developed by the Contractor shall detail the content of the training and shall be submitted for acceptance by the Engineer prior to the scheduling of any training.
- B. Training sessions shall be repeated to cover three (3) Port operational and maintenance shifts: first, second and third shifts.
- C. The Engineer can require additional training if the instruction is not deemed adequate for safe turnover and operations by Port personnel.

RE shall confirm with PM, Maintenance and F&I if project warrants the use of Port professional videographers. If yes, include paragraph E and delete D; otherwise include D and delete E.

- D. For Training Sessions, Contractor shall provide high definition video resolution in mp4 format file. Audio must be of a quality to be easily understood.

[OR]

- E. For Training Sessions, Video recordings will be conducted by the Port.
- F. As agreed to by the Engineer, manufacturer’s standard training videos will be accepted where project conditions do not warrant special instructions.

1.03 SUBMITTALS

- A. This training plan and syllabus shall be submitted to Engineer no less than thirty (30) days prior to the proposed training date(s).
- B. Training Plan and Syllabus: The Contractor shall submit for review and approval the Training Plan and Syllabus detailing the content as shown below in 3.02.A.
- C. Include all training materials and aides as part of the O&M manuals.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 GENERAL

- A. The appropriate trade or manufacturer's representative shall provide the instructions on each major piece of equipment. This person may be the start-up technician for the piece of equipment, the installing Contractor or manufacturer's representative.
- B. Trainers shall have practical building operating expertise with an in-depth knowledge of all modes of operation of the specific piece of equipment installed in this project. More than one party may be required to execute the training.

3.02 TRAINING PLAN, PROCESS AND CONTENT

A. Training Plan

- 1. For each piece of equipment or system, the plan will cover the following elements:
 - a. Equipment (included in training)
 - b. Intended audience
 - c. Location of training (offsite/factory, classroom, field)
 - d. Proposed dates and times
 - (1) Training more than a one hour drive from SeaTac Airport or Seaport requires approved scheduling a minimum of 60 days in advance.
 - e. Objectives
 - f. Detailed outline including system overview
 - g. Subjects covered (description, duration of discussion, special methods, etc.)
 - h. Duration of training on each subject
 - i. Instructor for each subject
 - j. Instructor qualifications
 - k. Methods (classroom lecture, site walk-through, operational demonstrations, written handouts, etc.)
 - l. Questionnaire/Testing and evaluation of Port staff for understanding of systems and equipment, safety features, and functional operation.

- m. Identify required certifications for operating or maintaining equipment.
- B. Training Process and Content:
 - 1. The Contractor shall conduct a site walk-through with Port personnel and the completed as-built drawings.
 - 2. During any demonstration, should the system fail to perform in accordance with the requirements of the O&M manual or sequence of operations, the system will be repaired or adjusted as necessary and the demonstration repeated.
 - 3. Training content shall:
 - a. Utilize the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and recommended spare parts inventory.
 - b. Include start-up, operation in all modes possible, including manual, safety, shut-down and any emergency procedures and routine preventative/annual maintenance for all pieces of equipment.
 - c. Discuss of relevant health and safety issues and concerns.
 - d. Discuss maintenance associated with maintaining warranties and guarantees.
 - e. Discuss Common troubleshooting and maintenance issues, problems and solutions.
 - f. Discuss of any peculiarities of equipment installation or operation.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required in this section. The cost for this portion of the work will be considered incidental to, and included in the payments made for the applicable bid items in Lump Sum price bid for the Project.

End of Section

PART 1 GENERAL

1.01 SUMMARY

- A. The intent of Commissioning is to verify systems and equipment are being delivered to the Port fully functioning in accordance with Contract Documents.
- B. Commissioning activities will be provided by the Contractor utilizing the attached Port's checklists and as described in Divisions 2 through 48.
- C. Where 01 91 00.13 - Commissioning specifications or requirements conflict with Divisions 2 through 48 or other requirements, the Divisions 2 through 48 requirements shall take precedence.

1.02 TERMS AND DEFINITIONS

- A. Commissioning: The process certifying that mechanical, electrical, communications, and control and life safety systems, equipment, subsystems or systems, function together properly to meet performance requirements and design intent as shown in a composite manner in the Contract Documents.
- B. Systems: Group of components and equipment functioning as a unit or performing a common function. (IE: Chilled Water System: consisting of piping, valves, fittings, controls, chillers, expansion tanks, air relief, chemical treatment, pumps, etc.)
- C. Functional Testing: That full range of checks and tests carried out to determine if all components, sub-systems, systems, and interfaces between systems function in accordance with the contract documents. In this context, "function" includes all modes and sequences of control operation, all interlocks and conditional control responses, and all specified responses to abnormal emergency conditions.
- D. Acceptable Performance: A component or system shall meet specified design parameters and criteria under actual load conditions for duration of time as indicated within the functional test criteria as determined by technical specifications and manufacturer's literature.

1.03 COMMISSIONING TEAM

- A. The commissioning team shall consist of the Port's representatives, Contractor, Subcontractors, Manufacturers, and the project Designers in accordance with their contractual arrangements with the Port. The Port's operating staff will be included during specific elements of the commissioning process.

1.04 CONTRACTOR

- A. Execute the testing procedures in accordance with the commissioning checklists.
- B. A Contractor's representative shall be present during all commissioning activities performed by itself or one of its Subcontractors.
- C. The Contractor will schedule and execute the commissioning activities.

1.05 DUTIES OF THE CONTRACTOR

- A. Contractor solely responsible for the operations, testing, and results during the commissioning process for systems and equipment to perform in accordance with the Contract Documents.
- B. Subcontractor installing equipment and systems shall execute the commissioning activities on their respective Work.
- C. Include Commissioning activities and durations within the master schedule.
- D. Coordinate all phasing and/or sequencing requirements to integrate the commissioning activities and durations within the master schedule.

1.06 ACCEPTANCE PROCEDURES

- A. The Contractor shall verify that all checklists have been completed and equipment and systems functional testing successfully met or exceeded the established acceptance criteria.
- B. The Contractor shall provide all acceptance test results, checklists and associated documentation to the Engineer for review and acceptance.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 GENERAL

- A. Contractor shall operate equipment and systems, and conduct all tests in presence of the Engineer and/or a designated Port Representative(s) to demonstrate compliance with Divisions 2 through 48.
 - 1. Testing shall be conducted under design operating conditions as defined within the specifications and in the commissioning activities and approved by the Engineer.
- B. All elements of systems shall be tested to demonstrate that total systems satisfy all requirements of the technical specifications. Testing shall be accomplished on hierarchical basis. Each piece of equipment will be tested for proper operation, followed by each subsystem, followed by entire system, followed by interfaces to other major systems.
- C. Contractor or their subcontractor shall provide all special testing materials and test equipment.

3.02 PRE-COMMISSIONING WORK

- A. Attend a commissioning scoping meeting and other meetings necessary to facilitate the commissioning process. One representative of the Contractor cognizant of respective aspects of their work shall attend commissioning meetings. Other trades shall attend the commissioning meetings when their portions of the work are being tested. The Owner's personnel will administer the meetings. Meeting location will be determined.
- B. Normal start-up services required to bring system into a fully operational state. This includes cleaning, filling, purging, leak testing, motor rotation check, control sequences of operation, full and part load performance, and similar conditions.
- C. Completion of controls installation, calibration, programming, and testing is critical for efficient and successful commissioning process.

3.03 EXECUTING CHECKLIST REVIEW, TESTING AND ACCEPTANCE PROCEDURES

A. CHECKLISTS

1. Utilize the following checklists with an “X” on this project:

Checklist Title	Checklist Title
Chilled Water Piping	Heating Hot Water Piping
Chilled Water Pump	Lighting and Lighting Control
Direct Digital Control (DDC)	Panels
Domestic Water Heater	Plumbing Fixture
Ductwork	Plumbing Piping
Emergency Lighting	Steam and Condensate Piping
Exhaust Fan	Steam System Condensate Pump
Fan-Coil with Hydronic Coils	TAB Plan Review
Heat Exchanger	Variable Air Volume with Hot Water Reheat

B. FUNCTIONAL TESTING AND ACCEPTANCE PROCEDURES

1. Start up and test of systems shall be by skilled technicians. Make these same technicians available to assist the Owner's personnel in completing the commissioning process as it relates to each system and their technical specialty.
2. Coordinate work schedules and time required for commissioning activities, with the Port. Ensure that qualified technicians are available and present during agreed upon schedules and for sufficient duration to complete necessary tests, adjustments, and problem resolutions.

C. System Issues and Discrepancies: Additional technician time and Port personnel time may be required to resolve issues and discrepancies. Make additional technician time available for subsequent commissioning periods until required system performance is obtained.

1. Complete corrective work to permit completion of commissioning activities.
2. If deadlines pass without resolution of the problems, the Port reserves its right to obtain supplementary services and equipment to resolve problems.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the work required by this section. The cost for this portion of the work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].**

End of Section

Chilled Water Piping Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup and initial checkout, preparatory to functional testing.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENT
Section 01 91 00.13a – Chilled Water Piping Construction Checklist

Associated Checklists					
Chilled Water Pump(s)	<input type="checkbox"/>	Heat Exchanger	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Flushing and cleaning plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Water treatment report	<input type="checkbox"/>	
Welder Certification	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Piping		
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings, valves and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>
Flushing and cleaning plan submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>
Piping system properly flushed and cleaned and temporary piping removed	<input type="checkbox"/>	<input type="checkbox"/>
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>
Chemical treatment system or plan installed	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENT
Section 01 91 00.13a – Chilled Water Piping Construction Checklist

Installation Checks				
Check if Acceptable; Provide comment if unacceptable	<input type="checkbox"/>	NA	<input type="checkbox"/>	Comment
ASME pressure vessel data sheet or certification tag posted and inspection complete for each expansion tank	<input type="checkbox"/>	<input type="checkbox"/>		
Expansion tanks verified to not be air bound and system completely full of water. System completed purged of air	<input type="checkbox"/>	<input type="checkbox"/>		
Air vents and bleeds at high points of systems functional	<input type="checkbox"/>	<input type="checkbox"/>		
Valves				
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>		
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>		
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>		
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>		
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>		
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>		
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>		
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>		
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>		
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>		
Sensors and Gages				
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>		
Piping gages, BAS and associated panel temperature and pressure readouts match	<input type="checkbox"/>	<input type="checkbox"/>		
TAB				
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>		

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated in accordance with Specification Section 01 91 00. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** _____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

DIVISION 1 – GENERAL REQUIREMENT
Section 01 91 00.13a – Chilled Water Piping Construction Checklist

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Chilled Water Pump Construction Checklist

Project:	
Date:	
Pump tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup and initial checkout, preparatory to functional testing.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- If this form is not used for documenting, one of similar rigor shall be used.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13b – Chilled Water Pump Construction Checklist

Pump 1 Information					
Make		Model Number			
Serial Number		GPM		Head	
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	
Comments:					

Pump 2 Information					
Make		Model Number			
Serial Number		GPM		Head	
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	
Comments:					

Associated Checklists					
Chilled Water Piping	<input type="checkbox"/>	DDC	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Pump alignment report	<input type="checkbox"/>	
Vibration testing report	<input type="checkbox"/>	
Comments:		

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13b – Chilled Water Pump Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
General			
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment label permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump lubricated	<input type="checkbox"/>	<input type="checkbox"/>	
Pump drive properly aligned	<input type="checkbox"/>	<input type="checkbox"/>	
Pump turns freely	<input type="checkbox"/>	<input type="checkbox"/>	
Drive guard or shield is properly installed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump foundation is level within manufacturer's tolerances	<input type="checkbox"/>	<input type="checkbox"/>	
Pumps in place and properly anchored	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes are supported independently of the pump	<input type="checkbox"/>	<input type="checkbox"/>	
Vibration isolation devices installed and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Seismic anchoring installed and functional where applicable	<input type="checkbox"/>	<input type="checkbox"/>	
Isolation valves and piping specialties installed	<input type="checkbox"/>	<input type="checkbox"/>	
Shaft seal is leak free	<input type="checkbox"/>	<input type="checkbox"/>	
Pump detail checked against the drawings and all devices gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation installed per requirements; pumps for cold water insulated to avoid condensation yet allow for service	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical and Controls			
Power disconnect is located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>	
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>	
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Operation of HOA switch checked in all positions	<input type="checkbox"/>	<input type="checkbox"/>	
Proper safeties in control when HOA switch in hand position	<input type="checkbox"/>	<input type="checkbox"/>	
Installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Rotates in the correct direction (for VFD, check Inverter and Bypass modes)	<input type="checkbox"/>	<input type="checkbox"/>	
VFD			
Installation per manufacturer's requirements and start up instructions completed	<input type="checkbox"/>	<input type="checkbox"/>	
Drive location not subject to excessive moisture or dirt	<input type="checkbox"/>	<input type="checkbox"/>	
Drive location not subject to excessive temperatures	<input type="checkbox"/>	<input type="checkbox"/>	
Drive size matches motor size	<input type="checkbox"/>	<input type="checkbox"/>	
Drive mounted on house keeping pad (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	
Cooling air flow path clean and unobstructed	<input type="checkbox"/>	<input type="checkbox"/>	
Permanent label affixed and UL stamp approved	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13b – Chilled Water Pump Construction Checklist

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Unit is programmed	<input type="checkbox"/>	<input type="checkbox"/>
Minimum and maximum speed set	<input type="checkbox"/>	<input type="checkbox"/>
VFD powered (wired to controlled equipment)	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Drive min and max speed set to _____ Hz min and 60 Hz max	<input type="checkbox"/>	<input type="checkbox"/>
Input of motor FLA represents 100% to 105% of motor FLA rating	<input type="checkbox"/>	<input type="checkbox"/>
Upper frequency limit set at 100%, unless explained otherwise	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Piping gages, DDC and associated panel temperature and pressure readouts match	<input type="checkbox"/>	<input type="checkbox"/>
Pressure and Temperature gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** _____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or DDC Value	Instrument Measured Value	Final Gage or DDC Value	Pass Y / N

Comments:

Direct Digital Control (DDC) Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13c – Direct Digital Control (DDC) Construction Checklist

Equipment Verification.

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Sequences and list of all control strategies	<input type="checkbox"/>	
Completed control drawings	<input type="checkbox"/>	
List of all control parameters, settings and setpoints	<input type="checkbox"/>	
Point-to-point checks	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Terminal Interface and Sub-Panel Checks		
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>
Equipment labels affixed	<input type="checkbox"/>	<input type="checkbox"/>
Layout and location of control panels match drawings	<input type="checkbox"/>	<input type="checkbox"/>
Areas or equipment panels served clear in control drawings	<input type="checkbox"/>	<input type="checkbox"/>
Wiring labeled inside panels (to controlled components)	<input type="checkbox"/>	<input type="checkbox"/>
Controlled components labeled/tagged	<input type="checkbox"/>	<input type="checkbox"/>
DDC connection made to labeled terminal(s) as shown on drawings	<input type="checkbox"/>	<input type="checkbox"/>
Control wiring routed in conduits where specified	<input type="checkbox"/>	<input type="checkbox"/>
110 volt AC power available to panel	<input type="checkbox"/>	<input type="checkbox"/>
Compressed air available to panel (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>
Battery backup in place and operable	<input type="checkbox"/>	<input type="checkbox"/>
Surge suppression in place and operable	<input type="checkbox"/>	<input type="checkbox"/>
Panels properly grounded	<input type="checkbox"/>	<input type="checkbox"/>
Environmental conditions according to manufacturer's requirements	<input type="checkbox"/>	<input type="checkbox"/>
System date and time correct	<input type="checkbox"/>	<input type="checkbox"/>
Siemens Equipment Panels / Boxes Labeled "Siemens DDC"	<input type="checkbox"/>	<input type="checkbox"/>
DDC graphics updated	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Domestic Water Heater Construction Checklist

Project:	
Date:	
Tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Plumbing Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to functional testing.

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13d – Domestic Water Heater Construction Checklist

Domestic Water Heater Information					
Make			Model Number		
Serial Number			Gallons		
Recovery Rate			GPM		Delta T
Fuel	Gas	<input type="checkbox"/>	Electric	<input type="checkbox"/>	Steam
Recirculating Pump Information					
Make			Model Number		
Serial Number			GPM		Head
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	Amps
Comments:					

Associated Checklists					
Plumbing Piping	<input type="checkbox"/>	Plumbing Fixtures	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
General			
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Manufacturers recommended spare parts are provided	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment label permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump lubricated	<input type="checkbox"/>	<input type="checkbox"/>	
Pump turns freely	<input type="checkbox"/>	<input type="checkbox"/>	
Pumps in place and properly supported	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes are supported independently of the pump	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13d – Domestic Water Heater Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable		NA	Comment
Seismic anchoring installed and functional where applicable (non-short circuiting)	<input type="checkbox"/>	<input type="checkbox"/>	
Isolation valves and piping specialties installed	<input type="checkbox"/>	<input type="checkbox"/>	
Pressure / temperature relief valves installed per specification	<input type="checkbox"/>	<input type="checkbox"/>	
Shaft seal is leak free	<input type="checkbox"/>	<input type="checkbox"/>	
Pump detail checked against the drawings and all devices, gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation installed per requirements	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical and Controls			
Power disconnect is located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>	
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>	
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Pump rotates in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature and pressure gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, DDC and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>	

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Ductwork Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

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Mechanical Contractor	Date	Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13e – Ductwork Construction Checklist

Requested documentation submitted	Rec'd	Comments
Ductwork Construction Details	<input type="checkbox"/>	
Submittal/Shop Drawing Information	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Comments:		

Note: This form should be completed [weekly]
[DUCT LEAKAGE TESTING REQUIREMENTS MUST BE COORDINATED WITH CONTRACT DOCUMENTS AND EDITED TO MATCH]

Support: Ductwork is supported properly.

Seal: All ductwork openings are sealed with plastic or a metal cap to keep out dust, dirt, and debris.
All ductwork connections are fastened and sealed with high quality duct sealer.

Clean: All ductwork is free of dust, dirt, and debris.

Conflicts: Were any conflicts or potential conflicts with the work of other trades discovered?
 If so, describe in section 3.

Drawings Updated: The installed system is shown on the as-built drawings.

1. Medium Pressure Ductwork Installation

Date	Description of Work Performed/ Drawing Reference	Items (see descriptions above)				Drawings Updated?	Percent Complete	Initial
		Support	Seal	Clean	Conflicts			
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		

3. Conflicts (attach sheets as necessary)

Date	Description of Conflict	Suggested Resolution	Resolved
			Yes / No

4. Pressure Testing (required to document the conditions of the test)

Medium Pressure	Low Pressure
The operating pressure of this system is _____ inches	The operating pressure of this system is _____ inches
The <u>test pressure</u> of this system is the <u>maximum of</u> : Med Pressure Ductwork: 2" + operating pressure = 2" + _____ = _____ inches	The <u>test pressure</u> of this system is the <u>maximum of</u> : Low Pressure Ductwork: 1" + operating pressure = 1" + _____ = _____ inches
The <u>maximum leakage rate</u> is: 0.01 x _____ cfm (section air flow rate) = _____ cfm	The <u>maximum leakage rate</u> is: 0.01 x _____ cfm (section air flow rate) = _____ cfm

Complete Table 1 during the actual pressure testing.
 Test 2 is only to be completed if the first test detects excessive leakage.

Table 1: Leakage and Pressure Readings

Time (min)	Medium Pressure				Low Pressure			
	Test 1		Test 2		Test 1		Test 2	
	Pressure inches	Leakage cfm						
Begin								
1								
2								
3								
5								
7								
10								
End								

Required Test Pressure (from previous page):

Primary: _____ inches Secondary: _____ inches

Maximum allowable leakage rate (from previous page):

Primary: _____ cfm Secondary: _____ cfm

Primary

Test 1:
 Start Time: _____
 End Time: _____
 Date: _____
 Initials: _____

Test 2:
 Start Time: _____
 End Time: _____
 Date: _____
 Initials: _____

Secondary

Test 1:
 Start Time: _____
 End Time: _____
 Date: _____
 Initials: _____

Test 2:
 Start Time: _____
 End Time: _____
 Date: _____
 Initials: _____

5. Calibration Information

Data on the unit used to measure the leakage of air needs to be recorded to document its calibration and accuracy information if questions arise after the testing. The accuracy of the unit should be **[+/- 7.5%]** of expected leakage rate (for example if the leakage rate is not to exceed 200 cfm, then the unit must have an accuracy of 15 cfm).

Manufacturer: _____

Model: _____

Range: _____

Accuracy: _____

Last calibration date: _____

(include copy of calibration report)

Exhaust Fan Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13f – Exhaust Fan Construction Checklist

Exhaust Fan Information					
Make		Model Number			
Serial Number		Capacity CFM min		CFM max	
Total Air PD (In WC)		Sound Power Level @ 63, 250, & 1KHz			
Volts/Phase		Function		Service Area	
Comments:					

Associated Checklists					
Ductwork	<input type="checkbox"/>	DDC	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
General		
Cabinet and general installation	<input type="checkbox"/>	<input type="checkbox"/>
Permanent labels affixed	<input type="checkbox"/>	<input type="checkbox"/>
Casing condition good: no dents, leaks, door gaskets installed	<input type="checkbox"/>	<input type="checkbox"/>
Access doors close tightly – no leaks	<input type="checkbox"/>	<input type="checkbox"/>
Mountings checked and shipping bolts removed	<input type="checkbox"/>	<input type="checkbox"/>
Connection between duct and unit tight and in good condition	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13f – Exhaust Fan Construction Checklist

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Vibration isolation equipment installed & released from shipping locks	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance access acceptable	<input type="checkbox"/>	<input type="checkbox"/>
Sound attenuation installed	<input type="checkbox"/>	<input type="checkbox"/>
Thermal insulation properly installed and according to specification	<input type="checkbox"/>	<input type="checkbox"/>
Instrumentation installed according to specification (thermometers, pressure gages, flow meters, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Clean up of equipment completed per contract documents	<input type="checkbox"/>	<input type="checkbox"/>
Filters installed and replacement type and efficiency permanently affixed to housing--construction filters removed	<input type="checkbox"/>	<input type="checkbox"/>
Fans and Dampers		
Exhaust fan and motor aligned	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan belt tension & condition good	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan protective shrouds for belts in place and secure	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan area clean	<input type="checkbox"/>	<input type="checkbox"/>
Exhaust fan and motor lube lines installed and lubed	<input type="checkbox"/>	<input type="checkbox"/>
Filters clean and tight fitting	<input type="checkbox"/>	<input type="checkbox"/>
Filter pressure differential measuring device installed and functional (magnahelic, inclined manometer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Smoke and fire dampers installed properly per contract docs (proper location, access doors, appropriate ratings verified)	<input type="checkbox"/>	<input type="checkbox"/>
All dampers close tightly	<input type="checkbox"/>	<input type="checkbox"/>
All damper actuators installed	<input type="checkbox"/>	<input type="checkbox"/>
Ducts		
Sound attenuators installed	<input type="checkbox"/>	<input type="checkbox"/>
Duct joint sealant properly installed	<input type="checkbox"/>	<input type="checkbox"/>
No apparent severe duct restrictions	<input type="checkbox"/>	<input type="checkbox"/>
Turning vanes in square elbows as per drawings	<input type="checkbox"/>	<input type="checkbox"/>
Pressure leakage tests completed	<input type="checkbox"/>	<input type="checkbox"/>
Branch duct control dampers operable	<input type="checkbox"/>	<input type="checkbox"/>
Ducts cleaned as per specifications	<input type="checkbox"/>	<input type="checkbox"/>
Balancing dampers installed as per drawings and TAB's site visit	<input type="checkbox"/>	<input type="checkbox"/>
Electrical and Controls		
Power disconnects located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13f – Exhaust Fan Construction Checklist

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>
Smoke detectors in place	<input type="checkbox"/>	<input type="checkbox"/>
VFD		
Installation per manufacturer's requirements and start up instructions completed	<input type="checkbox"/>	<input type="checkbox"/>
Drive location not subject to excessive moisture or dirt	<input type="checkbox"/>	<input type="checkbox"/>
Drive location not subject to excessive temperatures	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate Volts vs. Hz curve is being used	<input type="checkbox"/>	<input type="checkbox"/>
Drive size matches motor size	<input type="checkbox"/>	<input type="checkbox"/>
Drive mounted on house keeping pad or a stand (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>
Cooling air flow path clean and unobstructed	<input type="checkbox"/>	<input type="checkbox"/>
Permanent label affixed and UL stamp approved	<input type="checkbox"/>	<input type="checkbox"/>
Operation checked in HAND, OFF, and AUTO. As applicable operation also checked in BYPASS	<input type="checkbox"/>	<input type="checkbox"/>
VFD powered (wired to controlled equipment)	<input type="checkbox"/>	<input type="checkbox"/>
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>
Drive min and max speed set to _____ Hz min and 60 Hz max	<input type="checkbox"/>	<input type="checkbox"/>
Checked the input voltage with drive disconnected	<input type="checkbox"/>	<input type="checkbox"/>
Input of motor FLA represents 100% to 105% of motor FLA rating	<input type="checkbox"/>	<input type="checkbox"/>
Upper frequency limit set at 100%, unless explained otherwise	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>
Piping gages, DDC and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Operational Checks		
Check if acceptable, provide comment if unacceptable	NA	Comments
Fan rotation correct (If VFD, check rotation in bypass and VFD Inverter mode)	<input type="checkbox"/>	<input type="checkbox"/>
Fan has no unusual noise or vibration	<input type="checkbox"/>	<input type="checkbox"/>
All dampers (OSA, RA, EA, etc.) stroke fully without binding and spans calibrated and BAS reading site verified	<input type="checkbox"/>	<input type="checkbox"/>
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13f – Exhaust Fan Construction Checklist

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Emergency Lighting and Control Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Electrical Contractor	Date	Controls Contractor	Date
		General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13g – Emergency Lighting and Control Construction Checklist

Associated Checklists			
Panels	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:			

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory Test Results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks – Emergency Battery Ballast			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
Emergency Lighting			
Devices installed per manufacturer's instructions and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Devices installed agrees with shop drawings and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Verify mounting, location and clearances are per plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>	

Operational Checks – Emergency Battery Ballast			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
Specified sequences of operation and operating schedules have been provided with all variations documented	<input type="checkbox"/>	<input type="checkbox"/>	
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>	
Verify correct operation based on specified sequence of operation	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13g – Emergency Lighting and Control Construction Checklist

Installation Checks – Emergency Lighting Control Unit		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Emergency Lighting		
Devices installed per manufacturer’s instructions and specifications	<input type="checkbox"/>	<input type="checkbox"/>
Devices installed agrees with shop drawings and specifications	<input type="checkbox"/>	<input type="checkbox"/>
Verify mounting, location and clearances are per plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>

Operational Checks – Emergency Lighting Control Unit		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Specified sequences of operation and operating schedules have been provided with all variations documented	<input type="checkbox"/>	<input type="checkbox"/>
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>
Verify correct operation based on specified sequence of operation	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Fan-Coil with Hydronic Coils Construction Checklist

Project:	
Date:	
VAV tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ List attached.

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 .00.13h – Fan-Coil with Hydronic Coils Construction Checklist

Fan Coil Unit Information				
Make		Model Number		
Serial Number		Function	Service Area	
Fan HP		Fan V/Ph		
GPM		MBH Cooling		
Comments:				

Associated Checklists					
Chilled Water Piping	<input type="checkbox"/>	Heating Hot Water Piping	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Ductwork	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
General			
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>	
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Permanent labels affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Casing condition good: no dents, leaks, door gaskets installed	<input type="checkbox"/>	<input type="checkbox"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	
Access doors close tightly - no leaks	<input type="checkbox"/>	<input type="checkbox"/>	
Connection between duct and unit tight and in good condition	<input type="checkbox"/>	<input type="checkbox"/>	
Vibration isolation equipment installed & released from shipping locks	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 .00.13h – Fan-Coil with Hydronic Coils Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
Maintenance access acceptable for unit and components	<input type="checkbox"/>	<input type="checkbox"/>	
Sound attenuation installed	<input type="checkbox"/>	<input type="checkbox"/>	
Thermal insulation properly installed and according to specification	<input type="checkbox"/>	<input type="checkbox"/>	
Clean up of equipment completed per contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that inlet conditions are OK: Smooth, round, straight duct for at least 3 duct diameters when possible and 2 diameters minimum for velocity pressure sensor and 3 to 5 diameters for single point electronic sensors, else airflow straighteners	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that outlet conditions are OK, per manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
Valves, Piping and Coils			
Pipe fittings complete and pipes properly supported	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly insulated	<input type="checkbox"/>	<input type="checkbox"/>	
Strainers in place and clean; blowdown installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping system properly flushed	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent around fittings	<input type="checkbox"/>	<input type="checkbox"/>	
All coils are clean and fins are in good condition	<input type="checkbox"/>	<input type="checkbox"/>	
Valves properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors calibrated	<input type="checkbox"/>	<input type="checkbox"/>	
P/T plugs and isolation valves installed per drawings	<input type="checkbox"/>	<input type="checkbox"/>	
Low Point Drains Installed	<input type="checkbox"/>	<input type="checkbox"/>	
Fans and Dampers			
Fan and motor alignment correct	<input type="checkbox"/>	<input type="checkbox"/>	
Fan area clean	<input type="checkbox"/>	<input type="checkbox"/>	
Fan and motor properly lubricated	<input type="checkbox"/>	<input type="checkbox"/>	
Smoke and fire dampers installed properly per contract docs (proper location, access doors, appropriate ratings verified)	<input type="checkbox"/>	<input type="checkbox"/>	
All dampers open fully	<input type="checkbox"/>	<input type="checkbox"/>	
All dampers close tightly	<input type="checkbox"/>	<input type="checkbox"/>	
All damper actuators installed	<input type="checkbox"/>	<input type="checkbox"/>	
Ducts			
Duct joint sealant properly installed	<input type="checkbox"/>	<input type="checkbox"/>	
No apparent severe duct restrictions	<input type="checkbox"/>	<input type="checkbox"/>	
Turning vanes in square elbows as per drawings	<input type="checkbox"/>	<input type="checkbox"/>	
Branch duct control dampers operable	<input type="checkbox"/>	<input type="checkbox"/>	
Ducts cleaned as per specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Balancing dampers installed as per drawings and TAB's site visit	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical and Controls			
Power disconnects in place and labeled	<input type="checkbox"/>	<input type="checkbox"/>	
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 .00.13h – Fan-Coil with Hydronic Coils Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA		Comment
Proper grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties in place and operable	<input type="checkbox"/>	<input type="checkbox"/>	
Overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Filter			
Filter installed correctly	<input type="checkbox"/>	<input type="checkbox"/>	
Access acceptable for filter removal and replacement	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, DDC and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>	
TAB			
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>	

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Heat Exchanger Construction Checklist

Project:	
Date:	
Pump tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ List attached.

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- If this form is not used for documenting, one of similar rigor shall be used.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13i – Heat Exchanger Construction Checklist

Heat Exchanger Information					
Make		Model Number			
Serial Number		Function		Service Area	
GPM Fluid 1		GPM Fluid 2			
MBH Fluid 1		MBH Fluid 2			
Temp In/Out Fluid 1		Temp In/Out Fluid 1			
Comments:					

Associated Checklists					
Chilled Water Piping	<input type="checkbox"/>	Heating Hot Water Piping	<input type="checkbox"/>	Chilled Water Pump	<input type="checkbox"/>
Heating Hot Water Pump	<input type="checkbox"/>	DDC	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if acceptable, provide comment if unacceptable	NA	Comment	
General			
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>	
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>	
Verified that valves for equipment isolation have been provided per the drawings and specs	<input type="checkbox"/>	<input type="checkbox"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13i – Heat Exchanger Construction Checklist

Installation Checks			
Check if acceptable, provide comment if unacceptable	<input type="checkbox"/>	NA	Comment
Piping, fittings, valves and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment label permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes are supported independently of the heat exchanger	<input type="checkbox"/>	<input type="checkbox"/>	
Provisions in place for expansion compensation	<input type="checkbox"/>	<input type="checkbox"/>	
Piping, fittings and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
In-line equipment labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>	
Heat Exchanger pressure tested per manufacturers recommendations.	<input type="checkbox"/>	<input type="checkbox"/>	
Heat Exchanger properly flushed and cleaned per manufacturers recommendations (report attached)	<input type="checkbox"/>	<input type="checkbox"/>	
Heat exchanger detail checked against the drawings and all devices gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>	
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>	
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>	
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>	
Chemical treatment system or plan installed	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	
Air vents and bleeds at high points of systems functional	<input type="checkbox"/>	<input type="checkbox"/>	
Isolation valves and balancing valves installed	<input type="checkbox"/>	<input type="checkbox"/>	
Adequate clearances provided around the unit for maintenance, removal of tubes, etc..	<input type="checkbox"/>	<input type="checkbox"/>	
Valves			
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>	
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>	
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>	
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>	
Unions installed to allow for easy removal of control valves	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13i – Heat Exchanger Construction Checklist

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Piping gages, DDC and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** _____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Heating Hot Water Piping Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13j – Heating Hot Water Piping Construction Checklist

Associated Checklists					
Heating Hot Water Pump(s)	<input type="checkbox"/>	Heat Exchanger	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Flushing and cleaning plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Water treatment report	<input type="checkbox"/>	
Welder Certification	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
Piping		
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings, valves and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>
Flushing and cleaning plan submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>
Piping system properly flushed and cleaned and temporary piping removed	<input type="checkbox"/>	<input type="checkbox"/>
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>
Chemical treatment system or plan installed	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13j – Heating Hot Water Piping Construction Checklist

Installation Checks		
Check if acceptable, provide comment if unacceptable	NA	Comment
ASME pressure vessel data sheet or certification tag posted and inspection complete for each expansion tank	<input type="checkbox"/>	<input type="checkbox"/>
Expansion tanks verified to not be air bound and system completely full of water. System completed purged of air.	<input type="checkbox"/>	<input type="checkbox"/>
Air vents and bleeds at high points of systems functional	<input type="checkbox"/>	<input type="checkbox"/>
Provisions in place for expansion compensation	<input type="checkbox"/>	<input type="checkbox"/>
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>
Valves		
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>
Unions installed to allow for easy removal of control valves	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** _____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13j – Heating Hot Water Piping Construction Checklist

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Lighting and Lighting Control Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Electrical Contractor	Date	Controls Contractor	Date
		General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13k – Lighting and Lighting Control Construction Checklist

Associated Checklists			
Panels	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:			

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory Test Results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
Lighting			
Devices installed per manufacturer's instructions and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Devices installed agrees with shop drawings and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Verify mounting, location and clearances are per plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Lighting control system installed per plans, specifications and manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
Switches, dimmers and occupancy sensors installed at correct height and have correct cover / escutcheon plate	<input type="checkbox"/>	<input type="checkbox"/>	
All zone circuits and inputs are correctly wired, circuits labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Communications interconnection / interface is connected	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13k – Lighting and Lighting Control Construction Checklist

Operational Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Specified sequences of operation and operating schedules have been provided with all variations documented	<input type="checkbox"/>	<input type="checkbox"/>
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>
Occupancy sensors – sensitivity settings are correct.	<input type="checkbox"/>	<input type="checkbox"/>
Occupancy sensors – Aiming is correct to function per plans.	<input type="checkbox"/>	<input type="checkbox"/>
Occupancy sensors – auto on/manual on and auto off settings are per plans. Auto off time delay setting is per plans.	<input type="checkbox"/>	<input type="checkbox"/>
Daylight Harvesting photocells – dimming/switching occurs at ambient light level per plans.		
Daylight Harvesting photocells – verify correct deadband operation and time delay function.		

Comments:

Panel Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

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Electrical Contractor	Date	General Contractor	Date

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- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
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Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13m – Panel Construction Checklist

Panel Schedule (Add as required)

Panel Information			
Panel Tag		Panel Location	
System (Circle one)	Power / Lighting	208 - 120 / 480 - 277	Normal / Emergency
Manufacturer		Model Number	
Serial Number		Short Circuit Capacity	
Volts/Phase Rating		Amperage Rating	
Service Area			
Comments:			

Associated Checklists					
Grounding	<input type="checkbox"/>	Lighting	<input type="checkbox"/>	Low Voltage Transformer	<input type="checkbox"/>
Low Voltage MCC	<input type="checkbox"/>	Low Voltage Switchgear	<input type="checkbox"/>	Unit Substation	<input type="checkbox"/>
Unit Substation Transformer	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Field test reports	<input type="checkbox"/>	
Comments:		

Distribution Panel Enclosure/Cabinetry		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Equipment installed per manufacturer's instructions and specifications	<input type="checkbox"/>	<input type="checkbox"/>
Equipment installed agrees with shop drawings and specifications	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13m – Panel Construction Checklist

Verify mounting, location and clearances are per plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Inspect for physical, electrical and mechanical condition of equipment and cabinet - no damage evident	<input type="checkbox"/>	<input type="checkbox"/>	
Inspect panels and doors for proper fit and alignment	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment labels permanently affixed, compliant with Port standards	<input type="checkbox"/>	<input type="checkbox"/>	
Panel is clean and clear of dust or dirt	<input type="checkbox"/>	<input type="checkbox"/>	
Verify correct circuit breaker sizes and types per the specifications and manufacturer's drawings	<input type="checkbox"/>	<input type="checkbox"/>	
Verify door-in-door panel cover.	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Circuit Breakers 208/120 VAC Panels			
Installed per manufacturer's instructions, plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
No physical damage	<input type="checkbox"/>	<input type="checkbox"/>	
Verify voltage and current rating of circuit breaker are per plans and specifications	<input type="checkbox"/>	<input type="checkbox"/>	
Verify breakers are mounted securely and operates smoothly	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

Operational Checks			
Check if Acceptable; Provide comment if unacceptable		NA	Comment
Specified sequences of operation and operating schedules have been provided with all variations documented	<input type="checkbox"/>	<input type="checkbox"/>	
Specified point-to-point checks have been completed and documentation record submitted for this system	<input type="checkbox"/>	<input type="checkbox"/>	

Comments:

Plumbing Fixture Construction Checklist

Project:	
Date:	
Building:	
Location:	
Fixture Tag:	

Submittal / Approvals

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Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date	Plumbing Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to functional testing.

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13n – Plumbing Fixture Construction Checklist

Associated Checklists					
Plumbing Piping	<input type="checkbox"/>	Domestic Water Heater	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Installation is per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>
Equipment labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>
Pipe fittings complete and properly supported	<input type="checkbox"/>	<input type="checkbox"/>
Aerators/Strainers in place and clean	<input type="checkbox"/>	<input type="checkbox"/>
Faucet/flush handles secure and properly aligned	<input type="checkbox"/>	<input type="checkbox"/>
Installation detail checked against the drawing and all devices and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>
Associated trim and accessories consistent with contract documents	<input type="checkbox"/>	<input type="checkbox"/>
Joints between fixtures and walls, floors, and counters sealed	<input type="checkbox"/>	<input type="checkbox"/>
Insulation installed per requirements	<input type="checkbox"/>	<input type="checkbox"/>
Fixture consistent with ADA	<input type="checkbox"/>	<input type="checkbox"/>
Verify hot and cold water connections are on correct side of faucet	<input type="checkbox"/>	<input type="checkbox"/>
Water Pressure at Hot _____ at Cold _____	<input type="checkbox"/>	<input type="checkbox"/>
Water temperature _____ (if mixing valve present)	<input type="checkbox"/>	<input type="checkbox"/>
Automatic flush valves verified for proper operation and sensitivity adjustment	<input type="checkbox"/>	<input type="checkbox"/>
Automatic sensors verified for proper operation and sensitivity adjustment	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Plumbing Piping Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

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Electrical Contractor	Date	Plumbing Contractor	Date
TAB Contractor	Date	General Contractor	Date

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

Associated Checklists					
Plumbing Fixtures	<input type="checkbox"/>	Domestic Water Heater	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Sanitization plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA		Comment
General			
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>	
Piping, fittings, valves and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>	
Piping, fittings and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>	
Low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>	
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>	
Pressure / temperature relief valves installed per specification	<input type="checkbox"/>	<input type="checkbox"/>	
No one-quarter bends with 4 inch size or less drainage piping observed on building drains	<input type="checkbox"/>	<input type="checkbox"/>	
No observed double Y, double TY, double T or double waste fitting in nominally horizontal soil or waste pipe	<input type="checkbox"/>	<input type="checkbox"/>	
Pipe fittings complete, pipe properly supported and sloped	<input type="checkbox"/>	<input type="checkbox"/>	
Vertical Risers supported by riser clamp	<input type="checkbox"/>	<input type="checkbox"/>	
No hub bands in accordance with contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
Suitable air break indirect connections	<input type="checkbox"/>	<input type="checkbox"/>	
Vent pipe supported at roof termination	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13o – Plumbing Piping

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
Floor drains have electronic trap seal primers in accordance with contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
Cleanout for the building drain is accessible	<input type="checkbox"/>	<input type="checkbox"/>	
Cleanout located at base of stacks	<input type="checkbox"/>	<input type="checkbox"/>	
Cleanouts installed every 100 ft or when combined bend radius exceeds 135 deg e.g. when a pipe section has one 90 deg elbow and one 45 deg elbow cleanout is required	<input type="checkbox"/>	<input type="checkbox"/>	
Piping system properly sanitized	<input type="checkbox"/>	<input type="checkbox"/>	
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	
Waterproof membrane installed in all wet areas (restrooms, kitchens, bars, break rooms etc..)	<input type="checkbox"/>	<input type="checkbox"/>	
Valves			
Isolation valves provided at all mains, branches and fixture to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>	
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>	
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, DDC and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>	
Water Meters Installed and Connected to DDC	<input type="checkbox"/>	<input type="checkbox"/>	

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or DDC Value	Instrument Measured Value	Final Gage or DDC Value	Pass Y / N

Comments:

Steam and Condensate Piping Construction Checklist

Project:	
Date:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

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Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13p – Steam and Condensate Piping Construction Checklist

Pressure Reducing Valve Information										
PRV	Specified				Submitted				Installed	
Manufacturer										
Model										
Stage	1	2	1	2	1	2	1	2		
Size										
Capacity, lbs/hr										
Entering/Leaving Steam Pressure, psig										
Safety Relief Valve Pressure Setting, psig										
Safety Relief Valve Capacity, lbs/hr										
Sound level, dBA at 3 feet AFF and 3 feet in any direction										

Associated Checklists					
Steam Condensate Pump(s)	<input type="checkbox"/>	Heat Exchanger	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Others	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Flushing and cleaning plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Welder Certification	<input type="checkbox"/>	
Comments:		

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Piping		
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>
Piping, fittings, valves, traps and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13p – Steam and Condensate Piping Construction Checklist

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Piping, fittings, traps and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>
Flushing and cleaning plan submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>
Piping system properly flushed and cleaned and temporary piping removed	<input type="checkbox"/>	<input type="checkbox"/>
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>
Provisions in place for expansion compensation	<input type="checkbox"/>	<input type="checkbox"/>
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>
Valves		
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>
Unions installed to allow for easy removal of control valves	<input type="checkbox"/>	<input type="checkbox"/>
PRV Station		
Manufacturer's installation and pre-start-up checklists complete and attached	<input type="checkbox"/>	<input type="checkbox"/>
PRV installation matches contract documents and manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>
Tags affixed with proper information	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturer's straight run pipe diameters verified and correct	<input type="checkbox"/>	<input type="checkbox"/>
Sensing line installation correct distance from PRV, pitch of line, pressure gauge, single or common for PRVs	<input type="checkbox"/>	<input type="checkbox"/>
Safety relief valve installation complete	<input type="checkbox"/>	<input type="checkbox"/>
Drip pan elbow installed	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13p – Steam and Condensate Piping Construction Checklist

Installation Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comment
Valve body and drip pan drains piped to floor drain	<input type="checkbox"/>	<input type="checkbox"/>
Sensors and Gages		
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>
TAB		
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>

Operational Checks		
Check if Acceptable; Provide comment if unacceptable	NA	Comments
PRV Station		
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>
Bypass valves verified closed	<input type="checkbox"/>	<input type="checkbox"/>
Manual and automatic steam and condensate valves positioned for start-up	<input type="checkbox"/>	<input type="checkbox"/>
Steam introduced to system slowly, gradually to warm up system	<input type="checkbox"/>	<input type="checkbox"/>
Steam pressure carefully raised just until safety relief valve lifted through use of bypass line; lift pressure recorded to confirm relief valve setting	<input type="checkbox"/>	<input type="checkbox"/>
Final PRV pressure setting set for full steam mode or partial steam mode (indicate which one)	<input type="checkbox"/>	<input type="checkbox"/>
PRV pressures set (one at a time) for 1/3 and 2/3 valves with other valve isolated and proper load based on set mode (full or partial)	<input type="checkbox"/>	<input type="checkbox"/>
Permanent mark made on pressure adjustment spring to indicate where set; locking ring installed	<input type="checkbox"/>	<input type="checkbox"/>
All trap assemblies verified for proper operation	<input type="checkbox"/>	<input type="checkbox"/>
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13p – Steam and Condensate Piping Construction Checklist

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

Steam System Condensate Pump Construction Checklist

Project:	
Date:	
Pump tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ List attached.

Mechanical Contractor	Date	Controls Contractor	Date
Electrical Contractor	Date		
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13q – Steam System Condensate Pump Construction Checklist

Pump Information					
Make		Model Number			
Serial Number		GPM		Head	
Volts/Phase		Function		Service Area	
Motor Hp		Motor Eff		RPM	
Comments:					

Associated Checklists					
Heat Exchanger	<input type="checkbox"/>	Steam & Condensate Piping	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
General			
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Manufacturers recommended spare parts are provided	<input type="checkbox"/>	<input type="checkbox"/>	
Equipment label permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Pump lubricated	<input type="checkbox"/>	<input type="checkbox"/>	
Pump drive properly aligned	<input type="checkbox"/>	<input type="checkbox"/>	
Pump turns freely	<input type="checkbox"/>	<input type="checkbox"/>	
Drive guard or shield is properly installed	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13q – Steam System Condensate Pump Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	<input type="checkbox"/>	NA	Comment
Pump foundation is level within manufacturer’s tolerances	<input type="checkbox"/>	<input type="checkbox"/>	
Pumps in place and properly anchored	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes are supported independently of the pump	<input type="checkbox"/>	<input type="checkbox"/>	
Vibration isolation devices installed and functional (non-short circuiting)	<input type="checkbox"/>	<input type="checkbox"/>	
Seismic anchoring installed and functional where applicable (non-short circuiting)	<input type="checkbox"/>	<input type="checkbox"/>	
Isolation valves and piping specialties installed	<input type="checkbox"/>	<input type="checkbox"/>	
Shaft seal is leak free	<input type="checkbox"/>	<input type="checkbox"/>	
Pump detail checked against the drawings and all devices gages and appurtenances are in place	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation installed per requirements. Pumps for cold water insulated to avoid condensation yet allow for service.	<input type="checkbox"/>	<input type="checkbox"/>	
Net positive suction head within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	
Venting in place as required	<input type="checkbox"/>	<input type="checkbox"/>	
Venting Pipe and Receiver Tanks insulated	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical and Controls			
Power disconnect is located within site of the unit it controls and labeled	<input type="checkbox"/>	<input type="checkbox"/>	
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	
Grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties installed and operational	<input type="checkbox"/>	<input type="checkbox"/>	
Starter overload breakers installed and correct size	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks connected and functional	<input type="checkbox"/>	<input type="checkbox"/>	
Operation of HOA switch checked in all positions	<input type="checkbox"/>	<input type="checkbox"/>	
Proper safeties in control when HOA switch in hand position	<input type="checkbox"/>	<input type="checkbox"/>	
Installation per manufacturer’s instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Rotates in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>	
Checked the input voltage	<input type="checkbox"/>	<input type="checkbox"/>	
Input of motor FLA represents 100% to 105% of motor FLA rating	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>	
TAB			
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13q – Steam System Condensate Pump Construction Checklist

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

TAB Plan Review Checklist

Project:	
Date:	
System:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ **List attached.**

TAB Contractor	Date	General Contractor	Date

Checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout or procedures in standards referenced in the specifications, but is intended to augment them.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This completed checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13r – TAB Plan Review Checklist

Associated Systems					
Air Side	<input type="checkbox"/>	Water Side – Heating Hot Water	<input type="checkbox"/>	Water Side – Chilled Water	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
TAB plan	<input type="checkbox"/>	
TAB procedures	<input type="checkbox"/>	
Sample TAB forms	<input type="checkbox"/>	
Comments:		

General Objectives.

- The purpose of this checklist is to verify that necessary components of the TAB Plan have been included.
- A checkmark indicates that item is included in Plan. If deficient, identify issue in Comment section.

TAB Plan Checklist.

Review Checks			
Check if acceptable, provide comment if unacceptable		NA	Comments
Specified qualifications and certifications of parties performing TAB work submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>	
TAB contractor has reviewed drawings and walked through the site and verified that there are sufficient balancing dampers and valves, isolation dampers and valves and test ports installed to perform TAB per spec. Any deficiencies in design or installation that will adversely affect or preclude proper TAB have been reported.	<input type="checkbox"/>	<input type="checkbox"/>	
TAB contractor has reviewed the construction documents and the systems with the design engineers and contractors to sufficiently understand the design intent for each system	<input type="checkbox"/>	<input type="checkbox"/>	
Prior to plan, TAB contractor had planning meeting with controls contractor to discuss using BAS for TAB	<input type="checkbox"/>	<input type="checkbox"/>	
All field checkout sheets and logs provided as part of plan	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13r – TAB Plan Review Checklist

Review Checks		
Check if acceptable, provide comment if unacceptable	NA	Comments
Final test report sheets to be used provided as part of plan	<input type="checkbox"/>	<input type="checkbox"/>
Field and final test report sheets list each piece of equipment to be tested, adjusted and balanced with the data cells to be gathered for each	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of what notations and markings will be made on the duct and piping drawings complete	<input type="checkbox"/>	<input type="checkbox"/>
List of all air flow, water flow, sound level, system capacity and efficiency measurements to be performed and provide a description of specific test procedures, parameters, formulas and test instrument type to be used for the measurements Sample forms have been included	<input type="checkbox"/>	<input type="checkbox"/>
Detailed step-by-step procedures for TAB work include: terminal flow calibration (for each terminal type), diffuser proportioning, branch / submain proportioning, total flow calculations, rechecking, etc. Similar for water side	<input type="checkbox"/>	<input type="checkbox"/>
Details of how <i>total</i> flow will be determined (Air: sum of terminal flows via BAS calibrated readings or via hood read of all terminals, supply (SA) and return air (RA) pitot traverse, SA or RA flow stations. Water: pump curves, circuit setter, flow station, ultrasonic, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Specific procedures that will ensure (and which can be verified) that both air and water side are operating at the lowest possible pressures	<input type="checkbox"/>	<input type="checkbox"/>
Outside air ventilation criteria under all conditions clearly understood by TAB contractor	<input type="checkbox"/>	<input type="checkbox"/>
Details of if and how min. outside air cfm will be verified and set and for what level (total bldg, zone, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Details of how building static and exhaust fan / relief damper capacity will be checked	<input type="checkbox"/>	<input type="checkbox"/>
The identification and types of measurement instruments to be used and their most recent calibration date submitted	<input type="checkbox"/>	<input type="checkbox"/>
Proposed selection points for sound measurements included	<input type="checkbox"/>	<input type="checkbox"/>
Details of any TAB work to be done in phases (by floor, etc.), or of areas to be built out later	<input type="checkbox"/>	<input type="checkbox"/>
Details regarding specified deferred or seasonal TAB work	<input type="checkbox"/>	<input type="checkbox"/>
Details of any specified false loading of systems to complete TAB work	<input type="checkbox"/>	<input type="checkbox"/>
Details of all exhaust fan balancing and capacity verifications, including any required room pressure differentials (Not applicable to Heating Hot Water and Chilled Water TAB Plans.)	<input type="checkbox"/>	<input type="checkbox"/>
Plan for hand-written field technician logs of discrepancies, deficient or uncompleted work by others, contract interpretation requests and lists of completed tests (scope and frequency)	<input type="checkbox"/>	<input type="checkbox"/>
Plan for formal progress reports (scope and frequency)	<input type="checkbox"/>	<input type="checkbox"/>

DIVISION 1 – GENERAL REQUIREMENTS
Section 01 91 00.13r – TAB Plan Review Checklist

Review Checks		
Check if acceptable, provide comment if unacceptable	NA	Comments
Plan for formal deficiency reports (scope, frequency and distribution)	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Variable Air Volume with Hot Water Reheat Construction Checklist

Project:	
Date:	
VAV tag:	
Building:	
Location:	

Submittal / Approvals

Submittal. The above equipment and systems integral to them are complete and ready for functional testing. The checklist items are complete and have been checked off only by parties having direct knowledge of the event, as marked below, respective to each responsible contractor. This construction checklist is submitted for approval, subject to an attached list of outstanding items yet to be completed. A Statement of Correction will be submitted upon completion of any outstanding areas. None of the outstanding items preclude safe and reliable functional tests being performed. ___ List attached.

Mechanical Contractor	Date	Controls Contractor	Date
		Sheet Metal Contractor	Date
TAB Contractor	Date	General Contractor	Date

Construction checklist items are to be completed as part of startup & initial checkout, preparatory to performing test procedures.

- This checklist does not take the place of the manufacturer’s recommended checkout and startup procedures or report.
- Contractors assigned responsibility for sections of the checklist shall be responsible to see that checklist items by their subcontractors are completed and checked off.

Approvals. This filled-out checklist has been reviewed. Its completion is approved with the exceptions noted below.

Project Engineer	Date	Owner’s Representative	Date

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13s – Variable Air Volume with Hot Water Reheat Construction Checklist

VAV Information				
Make		Model Number		
Serial Number		Function	Service Area	
GPM		MBH		
Comments:				

Associated Checklists					
Ductwork	<input type="checkbox"/>	Heating Hot Water Piping	<input type="checkbox"/>	DDC	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (airflows, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Factory test results	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Warranty Certificate	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA	Comment	
General			
General appearance good, no apparent damage	<input type="checkbox"/>	<input type="checkbox"/>	
Installation is per manufacturers instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Permanent labels affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Casing condition good: no dents, leaks, door gaskets installed	<input type="checkbox"/>	<input type="checkbox"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	
Access doors close tightly - no leaks	<input type="checkbox"/>	<input type="checkbox"/>	
Connection between duct and unit tight and in good condition	<input type="checkbox"/>	<input type="checkbox"/>	
Vibration isolation equipment installed & released from shipping locks	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13s – Variable Air Volume with Hot Water Reheat Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	<input type="checkbox"/>	NA	Comment
Maintenance access acceptable for unit and components	<input type="checkbox"/>	<input type="checkbox"/>	
Sound attenuation installed	<input type="checkbox"/>	<input type="checkbox"/>	
Thermal insulation properly installed and according to specification	<input type="checkbox"/>	<input type="checkbox"/>	
Instrumentation installed according to specification (thermometers, pressure gages, flow meters, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
Clean up of equipment completed per contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that inlet conditions are OK: Smooth, round, straight duct for at least 3 duct diameters when possible and 2 diameters minimum for velocity pressure sensor and 3 to 5 diameters for single point electronic sensors, else airflow straighteners	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that outlet conditions are OK, per manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
Valves, Piping and Coils			
Pipe fittings complete and pipes properly supported	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Pipes properly insulated	<input type="checkbox"/>	<input type="checkbox"/>	
Strainers in place and clean; blowdown installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping system properly flushed	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent around fittings	<input type="checkbox"/>	<input type="checkbox"/>	
All coils are clean and fins are in good condition	<input type="checkbox"/>	<input type="checkbox"/>	
All condensate drain pans clean and slope to drain, per spec	<input type="checkbox"/>	<input type="checkbox"/>	
Valves properly labeled	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
OSAT, MAT, SAT, RAT, chilled water supply sensors properly located and secure (related OSAT sensor shielded)	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors calibrated	<input type="checkbox"/>	<input type="checkbox"/>	
P/T plugs and isolation valves installed per drawings	<input type="checkbox"/>	<input type="checkbox"/>	
No Air Leaks that can be felt or heard			
Dampers			
Smoke and fire dampers installed properly per contract docs (proper location, access doors, appropriate ratings verified)	<input type="checkbox"/>	<input type="checkbox"/>	
All dampers open fully	<input type="checkbox"/>	<input type="checkbox"/>	
All dampers close tightly	<input type="checkbox"/>	<input type="checkbox"/>	
All damper actuators installed	<input type="checkbox"/>	<input type="checkbox"/>	
No Air Leaks that can be felt or heard	<input type="checkbox"/>	<input type="checkbox"/>	
Ducts			
Sound attenuators installed	<input type="checkbox"/>	<input type="checkbox"/>	
Duct joint sealant properly installed	<input type="checkbox"/>	<input type="checkbox"/>	
No apparent severe duct restrictions	<input type="checkbox"/>	<input type="checkbox"/>	
Turning vanes in square elbows as per drawings	<input type="checkbox"/>	<input type="checkbox"/>	
Branch duct control dampers operable	<input type="checkbox"/>	<input type="checkbox"/>	
Ducts cleaned as per specifications	<input type="checkbox"/>	<input type="checkbox"/>	

DIVISION 1 – GENERAL REQUIREMENTS

Section 01 91 00.13s – Variable Air Volume with Hot Water Reheat Construction Checklist

Installation Checks			
Check if Acceptable; Provide comment if unacceptable		NA	Comment
Balancing dampers installed as per drawings and TAB's site visit	<input type="checkbox"/>	<input type="checkbox"/>	
No Air Leaks that can be felt or heard	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical and Controls			
All electric connections tight	<input type="checkbox"/>	<input type="checkbox"/>	
Proper grounding installed for components and unit	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties in place and operable	<input type="checkbox"/>	<input type="checkbox"/>	
Control system interlocks hooked up and functional	<input type="checkbox"/>	<input type="checkbox"/>	
All control devices and wiring complete	<input type="checkbox"/>	<input type="checkbox"/>	
Sensors and Gages			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, BAS and associated panel temperature and pressure readouts match	<input type="checkbox"/>	<input type="checkbox"/>	
TAB			
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>	

Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated. All test instruments shall have had a certified calibration within the last 12 months: **Y/N**_____. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1st Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:

READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [“ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

This specification is ONLY used if there is a commissioning agent for the project. If there is not, all information related to Contractor requirements for “commissioning” resides in the technical specifications.

PART 1 GENERAL

1.01 SUMMARY

- A. The intent of Commissioning is to verify systems and equipment are being delivered to the Port fully functioning in accordance with project documents and for which the Port’s personnel are fully trained and equipped to operate, maintain and troubleshoot. Additionally, the Port shall have supporting documentation to enable Port staff to maintain systems and equipment in accordance with manufacturer’s recommendations and the Port’s intent to sustain operations over the life of the system or equipment.
- B. Commissioning services will be provided by the owner hired commissioning agent. Contractor shall perform related work as specified to assist Owner's personnel in the commissioning process.

1.02 TERMS AND DEFINITIONS

- A. Commissioning: The process certifying that mechanical, electrical, communications, control, and life safety systems equipment, subsystems or systems, function together properly to meet performance requirements and design intent as shown in a composite manner in the Contract Documents.
- B. Commissioning Authority: The person or persons contracted by the Port to direct the commissioning process through appropriate contract channels and recommend project completion from the commissioning perspective.
- C. Systems: Group of components and equipment functioning as a unit or performing a common function. (IE: Chilled Water System: consisting of piping, valves, fittings, controls, chillers, expansion tanks, air relief, chemical treatment, pumps, etc.)

- D. Functional Testing: That full range of checks and tests carried out to determine if all components, sub-systems, systems, and interfaces between systems function in accordance with the contract documents. In this context, “function” includes all modes and sequences of control operation, all interlocks and conditional control responses, and all specified responses to abnormal emergency conditions.
- E. Acceptable Performance: A component or system shall meet specified design parameters and criteria under actual load conditions for duration of time as indicated within the functional test criteria as determined by technical specifications and manufacturer’s literature.
- F. Areas of Conflict: Where 01 91 00 - Commissioning specifications or requirements conflict with Technical Specifications or other requirements, the Technical Specification requirements shall take precedence.

1.03 COMMISSIONING TEAM

- A. The commissioning team shall consist of the Port’s representatives, Commissioning Agent, Contractor, Adjusting and Balancing Engineer, and other Subcontractors, Manufacturers, and the Project Designers in accordance with their contractual arrangements with the Port. The Port’s operating staff will be included during specific elements of the commissioning process. It is the intent that all members work together as a team to fulfill their contractual responsibilities and meet the objectives of the Contract Documents and make the project turnover and commissioning process seamless.

1.04 CONTRACTOR

- A. The Contractor shall execute the testing procedures in accordance with the commissioning plan.
- B. A Contractor’s representative shall be present during all commissioning activities performed by itself or one of its Subcontractors.
- C. The Contractor will schedule and execute the commissioning plan to the satisfaction of the Commissioning Authority.

1.05 DUTIES OF THE CONTRACTOR

- A. Execute the commissioning plan through the operation of equipment and systems by their subcontractors.
- B. Shall be solely responsible for the operations, testing, and results during the commissioning process for systems and equipment to perform in accordance with the contract documents.
- C. Notify the Engineer in writing that equipment and systems are ready for commissioning.
- D. Include within the master schedule, commissioning activities and durations.
- E. Professionally maintain shop drawings, as-built drawings and system single-line schematics and diagrams for all systems that are installed and are to be included in the O&M manuals and used during the commissioning process and training per Section 01 78 29 - As Built Redline Documents.

1.06 TESTING, ADJUSTING, AND BALANCING ENGINEER (TAB)

- A. The accepted TAB Engineer/Firm shall be qualified and perform Work in accordance with Specification Section 23 05 93 Testing, Adjusting and Balancing.
- B. TAB Firm shall communicate through the Contractor to the Engineer.

1.07 COMMISSIONING PHASING AND SEQUENCING

- A. The Contractor shall coordinate all phasing and/or sequencing requirements to integrate the commissioning plan activities and durations within the master schedule.

1.08 ACCEPTANCE PROCEDURES

- A. The Contractor shall execute the commissioning plan and verify that all commissioning activities have been completed and all activities have successfully met or exceeded the established acceptance criteria.
- B. The Contractor shall provide all acceptance test results and documentation to the Engineer for review and acceptance.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 GENERAL

- A. Contractor shall operate equipment and systems, and conduct all tests in presence of the Engineer and/or a designated Port Representative(s) to demonstrate compliance with technical specifications.
 - 1. Testing shall be conducted under design operating conditions as defined within the specifications and in the commissioning plan and approved by the Engineer.
- B. All elements of systems shall be tested to demonstrate that total systems satisfy all requirements of the technical specifications. Testing shall be accomplished on hierarchical basis. Each piece of equipment will be tested for proper operation, followed by each subsystem, followed by entire system, followed by interfaces to other major systems.
- C. Contractor or their subcontractor shall provide all special testing materials and test equipment.

3.02 PRE-COMMISSIONING WORK

- A. Attend a commissioning scoping meeting and other meetings necessary to facilitate the commissioning process. One representative of the Contractor cognizant of respective aspects of their work shall attend commissioning meetings. Other trades shall attend the commissioning meetings when their portions of the work are being tested. The Owner's personnel will administer the meetings. Meeting location will be determined.
- B. Normal start-up services required to bring system into a fully operational state. This includes cleaning, filling, purging, leak testing, motor rotation check, control sequences of operation, full and part load performance, and similar conditions.
- C. Completion of controls installation, calibration, programming, and testing is critical for efficient and successful commissioning process.

3.03 PARTICIPATION IN COMMISSIONING

- A. DESCRIPTION
 - 1. Start up and test of systems shall be by skilled technicians. Make these same technicians available to assist the Owner's personnel in completing the commissioning process as it relates to each system and their technical specialty.
 - 2. Coordinate work schedules, time required for commissioning, and similar conditions with the Owner's personnel. Ensure that qualified technicians are available and present during agreed upon schedules and for sufficient duration to complete necessary tests, adjustments, and problem resolutions.
- B. System Issues and Discrepancies: Additional technician time and Owner's personnel time may be required to resolve issues and discrepancies. Make additional technician time available for subsequent commissioning periods until required system performance is obtained.
 - 1. Complete corrective work to permit completion of commissioning process.
 - 2. If deadlines pass without resolution of the problems, the Owner reserves right to obtain supplementary services and equipment to resolve problems. Costs incurred to solve problems in an expeditious manner will be the Contractor's responsibility.

PART 4 MEASUREMENT AND PAYMENT

4.01 GENERAL

- A. No separate measurement or payment will be made for the Work required in this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices][Lump Sum price] bid for the project.

End of Section