This master should be used by designers working on Port of Portland construction projects and by designers working for PDX tenants (“Tenants”). Usage notes highlight a few specific editing choices, however the entire section should be evaluated and edited to fit specific project needs.

SECTION 017000 - EXECUTION REQUIREMENTS

1. GENERAL
	* + 1. INSPECTION OF WORK AREA
				1. Examine the work area and become satisfied as to the conditions of the work involved and the quantities of materials required for the performance of the work.
				2. Prior to any drilling, coring, or cutting of existing floor slabs, use ground-penetrating radar or similar to identify location of embedded items such as utilities, conduit raceways, prestressing/post-tensioning cables, reinforcing steel, etc.
				3. Address penetrations through new or existing structures as indicated in the contract documents. Where the contract documents do not cover the conditions encountered, submit a coordinated plan showing penetration sizes and locations required by all trades for Port approval prior to proceeding with the work.

Retain only for projects over $100,000.

* + - 1. NOTIFICATION TO PORT
				1. Notify the Port at least 48 hours before intent to commence work. Do not start work until authorized to do so by the Port.

Retain only appropriate paragraphs. Use H for dredging only.

Tenants: Delete B, E, F and H.

* + - 1. LAYOUT OF WORK
				1. Survey and layout work performed under this contract shall be performed under the direct supervision of a professional land surveyor licensed in the State of Oregon.
				2. The Port will provide survey control points for the layout of alignment and grades shown on the drawings. The Contractor shall lay out the work from the survey control points and be responsible for all measurements in connection therewith.
				3. Furnish stakes, templates, platforms, equipment, and labor as required to lay out every part of the work from the established survey control points.
				4. Maintain and preserve stakes and monuments established by the Port until authorized to remove them. If such marks are destroyed by the Contractor prior to authorized removal, they may be replaced by the Port at its discretion. The expense of replacement will be deducted from any amounts due, or to become due, the Contractor.

Delete if not using Section 012200.

* + - * 1. Measuring for pay quantities will be by the Port.
				2. Submit a copy of field notes made in connection with layout measurements to the Port if they are requested. The Port may check field layout measurements at any time.
				3. Engage a professional land surveyor licensed in the State of Oregon to replace monuments that are disturbed, damaged, or destroyed during the course of the work, and ensure that a record of survey depicting replaced monuments is filed at the appropriate county survey office, all at no additional cost to the Port.
				4. Furnish, set, and maintain ranges, buoys, and markers in good working order as necessary to define the work and to facilitate inspection and taking of soundings by the Port.

Delete either A or B. A is for civil work, B is for architectural.

Tenants: Replace “Port” with name of tenant.

* + - 1. VERIFICATION OF MEASUREMENTS
				1. Verify that elevations and measurements shown on the drawings match the actual conditions and submit discrepancies to the Port before proceeding with the work. The Contractor will not receive extra compensation for verification of elevations and measurements or for labor or material expended on account of differences that the Contractor could have, but did not, properly verify.
				2. Before ordering material or doing work, verify measurements of the building and be responsible for the correctness of same. Submit discrepancies to the Port before proceeding with the work. The Contractor will not receive extra compensation for verification of measurements or for work performed based on incorrect measurements that, could have been, but were not verified by the Contractor.

The following article (except paragraph H) does not usually require editing.

* + - 1. EXISTING UTILITIES
				1. Notify the Oregon Utility Notification Center (OUNC), and owners of underground utilities within the construction area or within affected public rights-of-way or easements, via the “one-call” notification system (1-800-332-2344) in advance of the commencement of excavation activities, as prescribed in Oregon Revised Statutes (ORS) 757.541 to 757.571, Excavation Regulations.
				2. Notify the Port when the “one-call” request is being initiated.
				3. Protect existing utilities, and other public and private facilities and improvements which are to remain in place, from damage in the course of the work.
				4. Perform any shutdown of utilities only when such shutdown will not interfere with Port or tenant operations. Schedule shutdowns through the Port, allowing time for adequate coordination.
				5. In the event of interruption to field-located utility services as a result of the work, promptly notify the Port first, and then the proper authority. Cooperate with said authority in restoring service as promptly as possible. If required, the Contractor shall install suitable temporary service until permanent repair is completed and bear the cost of repair and temporary service.
				6. Unless noted as abandoned, expose utilities only by hand excavation.
				7. Notify the Port of all utilities exposed. Do not disrupt or cut utilities until identified and the Port has approved the cut.

Delete if work does not require paving.

Edit if project is not within “City of Portland right-of-way.”

* + - * 1. Coordinate the work with the City of Portland and any other appropriate utility so that the necessary utility adjustment within City of Portland right‑of‑way may be accomplished before paving has commenced.

Tenants: In first sentence, delete “to the Port.”

* + - * 1. Repair damages that result from execution of the work at no additional cost to the Port. Repairs shall be subject to approval of the Port.

FAA-required, verbatim, for work inside the airfield environment.

* + - 1. PROTECTION OF NAVAIDS AND CABLES
				1. The airfield contains various navigational aids (NAVAIDS), associated facilities, and power and control cables serving both, installed by the FAA and the Port to assist aircraft in landing safely at Portland International Airport.
				2. Continuous, uninterrupted operation of these NAVAIDS is essential to the airport. An interruption of the operation of a NAVAID may result in harm to the Port, the FAA, airlines, Port tenants, and the general public. The harm may include, without limitation, aircraft delays, extra ground movement, diversion to other airports, ground transportation, meals and lodging for diverted passengers, physical harm to aircraft and airfield, and serious bodily injury or death of employees, passengers, and bystanders. The Contractor’s duty to indemnify under this contract shall extend to such harm, and the Contractor shall reimburse the Port for any amounts the Port is obligated to pay as a result of harm arising from the interruption of the operation of a NAVAID caused by the Contractor or the Contractor’s employees, subcontractors, suppliers, agents, or invitees.
				3. Work under this contract in the vicinity of these facilities and cables shall be accomplished only during periods approved by the Port. Approval is subject to withdrawal at any time because of changes in weather, emergency conditions on airfield areas, anticipation of emergency conditions, or for any other reason determined by the Port and/orthe FAA. Instructions to clear any given area, at any time, by the Port or the FAA control tower (by radio or other reasonable means) shall be immediately executed by the Contractor and the Contractor’s employees, subcontractors, suppliers, agents, and invitees. Construction work shall not resume in the cleared area until authorization is given by the Port. Compliance with such instructions shall be considered an ordinary part of working on an operating airfield.
				4. The Port will mark in the field all power and control cables leading to and from these NAVAIDS and their associated facilities. This will be accomplished before any work in their general vicinity is begun and will be for the information of the Contractor. The Contractor shall protect all marked areas and identified NAVAIDS, associated facilities, and power and control cables during construction from any possible damage, including, but not limited to, crossing with unauthorized equipment and disruption by radio transmission from vehicles or equipment in proximity to the NAVAID.
				5. The Contractor shall notify the Port immediately and await instructions if a NAVAID, associated facility, or cable is harmed by the Contractor, the Contractor’s employees, subcontractors, suppliers, agents,or invitees, in the course of performing work under this contract. If instructed to do so by the Port, the Contractor shall immediately repair or replace, with identical material by skilled workers, the affected NAVAID or associated facility, or any underground cable serving a NAVAID or related facility damaged by the Contractor’s workers, equipment, or work. Prior approval from the Port shall be obtained for the materials, workers, time of day or night, and method of repairs (whether temporary or permanent) the Contractor proposes to make to any NAVAID, facility, and/or cable damaged by the Contractor. The Port may choose, at its sole, unfettered discretion, to have the repairs or replacement performed by someone other than the Contractor, in which case the Contractor shall fully reimburse the Port for the cost of repairs or replacement.

For PDX terminal building, pedestrian tunnels, and parking garage elevator cores.

* + - 1. CEILING SYSTEMS
				1. Work requiring the temporary removal and subsequent replacement of existing ceiling systems shall be performed in a manner such that, when complete, the ceiling is equal to its original condition.

All components shall be clean and free of damage.

The ceiling plane shall be maintained at a constant elevation.

Light fixtures, if present, shall be reinstalled at their original location if removed.

Insulating materials, if originally present, shall be replaced, providing uniform coverage.

* + - * 1. Portions of the terminal building have an aluminum slat type suspended ceiling system — Alcan “Planar.” This system is composed of parallel formed aluminum strips, approximately 4 inches wide by 10 feet in length, snapped into special suspended cross-bars which are on about a 4‑foot spacing. In some areas, approximately 1 1/2‑inch‑thick insulating batting is lying atop the system. The following are some recommendations concerning the handling of this ceiling system.

The slats are formed from relatively thin aluminum and are susceptible to damage, kinking in particular, if improperly handled. Where applicable, slats are provided with end caps; butt joints have a hidden splice piece.

When a small area of ceiling is to be removed temporarily, mark each piece (use a method that will not damage the surface) so it can be replaced at the same location, then carefully snap out individual slat pieces and store them in a secure location where they will be properly supported and kept free from accidental damage. A recommended procedure is to fabricate simple wire hooks which hook to cross bars of the ceiling system immediately adjacent to, and unaffected by, the removal work; the individual slats can then be suspended individually from these hooks.

If insulating batting is present, simply slide it to the side, atop adjacent ceiling and batting.

After necessary inspections, the ceiling shall then be reinstalled in the reverse procedure with insulation in place. The finished ceiling system shall be level.

The Port will inspect the reinstalled portion of the ceiling. Repair or replacement of any damaged elements shall be the Contractor’s responsibility under the direction of the Port.

* + - * 1. Port personnel will, upon request, be available to advise and train the Contractor’s personnel in the procedure described.
			1. POWER-ACTUATED FASTENERS (PAFs)
				1. Do not use PAFs for attachments for any work other than the following.

Attachment of confined space signage.

Anchorage of non-structural light gauge cold-formed steel framing to structure.

Attachment of steel floor decking.

Suspended ceiling applications, in accordance with ASCE 7-10, Chapter 13, if accompanied by calculations stamped and signed by an engineer registered in the state of Oregon, and in the following applications:

Shear loading.

Tension loading where the service load on any individual fastener in concrete does not exceed 90 pounds, or in steel does not exceed 250 pounds.

Slack wires where there is no continuous loading in tension for items such as light fixtures.

* + - * 1. PAFs shall have silencers.
				2. PAFs may only be used during night work hours when the public and tenants are not present and during the day in areas where the public and tenants are well separated from the sound. Coordinate with the Port prior to performing the work.

Use for projects that include carpet removal, patching, or installation.  Also use for projects with any coring of holes through slab covered by carpet or where any items will be bolted to the floor through the carpet.

* + - 1. EXISTING PORT CARPET
				1. The existing Port carpet is a custom broadloom carpet that is abnormally thick and dense, and is difficult to work with. The field carpet is tufted with some loop and the border carpet is loop. Any new carpet required by the work for patching or repairing existing carpet shall be obtained from Port maintenance. All work with new and existing carpet shall be performed by individuals skilled at working with broadloom carpet.

Match finish elevation at seams including between the new and existing carpet. This requires extra care at the border carpet because some of the cushion attached to the border carpet has differing thickness.

Coring holes through concrete floor slab: Carefully cut and remove the carpet 1/4-inch beyond the diameter of the hole that will be cut or bored into the floor. Align drill bit or coring bit in center of the carpet cut-out and hold securely so drill bit or coring bit doesn’t wander and catch on the carpet edge. Do not bolt the core drill to the floor without prior approval from the Port. Attach the drill to a large piece of steel plate that is heavy enough to hold it in place. If the core drill needs to be bolted to the floor, do not bolt core drill to slab through carpet; instead, carefully cut and remove approximately 3' x 3' of carpet and adhesive so that core drill can be attached directly to the floor. Locate and size the area to be removed by cutting across pattern in as few spots as possible. Cut across areas of solid color where possible as this best hides the seam and helps hide pattern match issues. When removing carpet from floor, start from the center and work out toward an edge to reduce possible damage to the edge of the carpet. Follow instructions for installing patches as described above.

In all instances, apply sealer to both primary and secondary backings. This is most critical for the border carpet which has an attached cushion. The sealer shall be applied to the backing yarns where they meet the attached cushion. Allow sealer to dry before gluing the patch into place so as not to contaminate the face yarns.

* + - * 1. Patching Existing Carpet:

Submit a drawing identifying where each patch will be located. Show size of each patch and dimensions from adjacent features and existing seams. Obtain Port approval for location and dimensions prior to proceeding with the work. The following are guidelines for patching existing Port carpet.

To patch very small holes (less than 1" x 1") or pulls in carpet: Cut yarn strands off and apply super glue to the small hole or where yarn pull came out of.

To patch small holes in carpet (larger than 1" x 1"): Top cut just outside of problem area. Remove excess carpet and clean substrate. Super glue or seam seal raw edge of cut carpet. Locate same area of pattern in a small scrap of carpet, furnished by Port maintenance, and cut out a fill piece of the appropriate size. Once trimmed to a good fit, seam seal or super glue the fill piece edges. Apply adhesive to substrate and insert patch. Protect area during drying time.

To install medium sized patches (e.g. 3' by 3'): Trim existing carpet edges to remove loose or damaged material and so that the patch will cut across pattern in as few spots as possible. Cut across areas of solid color where possible as this best hides the seam and helps hide pattern match issues. Clean adhesive and prep floor as required. Cut the new piece from carpet furnished by Port maintenance, matching fill size and pattern as close as possible. Seal edges of existing carpet on the floor as well as edges of new carpet to be inserted. Adhere carpet to floor and protect area during drying time.

Large areas of replacement or where abutting new carpet to existing: Measure four pattern repeats across the width (about 143 inches) of existing adjacent carpet. Measure five pattern repeats down length (about 145 inches) of existing adjacent carpet. Look at the overage roll measurement chart, obtained from Port maintenance, and request from Port maintenance a roll of the same width or slightly narrower than that measured on the existing carpet and has five pattern repeats that is the same or slightly shorter than that measured on the existing carpet, because it is easier to stretch the carpet then to shrink it. Clean any adhesive from substrate and prep floor as required. Seal edges of existing adjacent carpet as well as edges of new carpet being installed. Adhere carpet to floor. Stretch as required to align pattern along edges and within field. Protect area during drying time.

* + - 1. EQUIPMENT BAR CODE TAGS
				1. Affix an equipment bar coded entity number tag to each item indicated on the drawings to require one. In general, equipment requiring tags include, but are not limited to: baggage handling system components; HVAC equipment; mechanized doors; passenger loading bridges and related equipment such as pre-conditioned air, power supplies and water cabinets; major electrical equipment such as switchgear, transformers, large UPS, sewer lift station components, grease vacuum system components, fire sprinkler system equipment, elevators, escalators, moving walkways, and revenue control equipment. If possible, attach tags adjacent to the equipment manufacturer’s name plate, if one exists. If such a name plate doesn’t exist, install the tag in a location easily accessible by maintenance personnel. Attach with mechanical fasteners.
				2. Tags shall be as follows:

Minimum 0.02 thick aluminum, anodized a light color such as silver.

Size: 2 1/2" x 1 3/4".

* + - * 1. Text shall be as follows:

Port logo followed by PORT OF PORTLAND, and entity number in both text and barcode.

Standard Code 39, I 2 of 5, 2/d DataMatrix, and QR Code with between 2.7 and 15 characters per inch.

Block type characters with minimum font size of 12.

Black permanent ink or paint to provide minimal fading under the conditions the tag will experience.

* + - * 1. The Port will generate the alphanumeric entity number for each piece of equipment and will provide a list to the Contractor. The Port will also digitally provide the artwork required for printing the Port logo.
				2. Submit three finished sample tags for review.

If there is “salvage,” retain and edit as appropriate. Coordinate with Section 024119, Selective Interior Demolition (if used).

Tenants: Salvage to Port or tenant as agreed to in the terms of the lease.

* + - 1. SALVAGE
				1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ removed or replaced by the Contractor remain the property of the Port. Obtain a signed receipt from the Port.

END OF SECTION 017000