massport

GUIDE TO TENANT CONSTRUCTION

Third Party Ground Lease Tenant Projects – 2025 Edition

This Guide to Tenant Construction is dedicated to Jennifer Revill for her steadfast work ethic and her unwavering dedication to our tenants and to the success of their projects.

PART 1- TENANT ALTERATION AND CONSTRUCTION PROCESS

PART 2- GENERAL REQUIREMENTS

PART 3- DESIGN AND CONSTRUCTION REQUIREMENTS

PREFACE

The Massachusetts Port Authority ("Massport" or alternatively the "Authority" or "MPA") is a dynamic entity, and its properties are subject to continual improvement through construction and alterations by tenants and developers. The Authority's Tenant Alteration Application ("TAA") process is the platform for collaboration between Massport and its tenants and licensees looking to construct and improve their leaseholds at Logan International Airport ("Logan"), Worcester Regional Airport, Hanscom Field, the Boston Fish Pier, and other development properties in Boston and Massachusetts. For tenants at Logan, Worcester, and Hanscom and other Massport owned properties see **Guide to Tenant Construction – Massport Owned Properties – 2025 edition.** This process shall also apply to construction activities of third parties who require access and occupancy of the Authority's property. Therefore, as used herein, the term "tenants" shall mean and include third parties to who the Authority grants a license or right of entry to access the Authority's property.

This Guide to Tenant Construction (the "GTC") was created to assist the Authority's tenants and licensees with the planning, design, and execution of their projects. It is intended to be only a guideline, and is not inclusive of all code requirements governing construction activities and operations. Although Massport will make every effort to assist tenants in maintaining regulatory compliance, it is the tenant's responsibility to ensure its construction activities meet, or exceed, all applicable statutes, code requirements, ordinances and regulations. Massport shall not be liable for a tenant's failure to comply with any applicable requirements.

This edition updates the previous version of the GTC (2023) and will be updated periodically as requirements are added, deleted, or changed. For the most current version of the GTC, and related forms, please refer to the Massport website at:
http://www.massport.com/massport/business/capital-improvements/important-documents/ or contact Massport Tenant Alterations at TAA@massport.com.

Seaport Circle Development Project

PART 1 – TENANT ALTERATION AND CONSTRUCTION PROCESS

1. INTRODUCTION

1.1 Purpose of GTC

This Guide to Tenant Construction (GTC) has been prepared to assist tenants seeking to construct, improve or alter their leased spaces. It outlines scalable requirements and procedures for all tenant alterations undertaken at Massport properties.

Unless otherwise noted, "Tenant" as used in this GTC may also refer to leaseholders, subtenants of leaseholders, licensees, grantees of rights of entry onto Authority property and agents acting on the Tenant's behalf (e.g., architects, engineers, contractors, etc.)

1.2 How to Use the GTC

A. Massport has developed the GTC to provide instructions to tenants seeking to improve or alter their leased spaces.

Part 1 provides tenants with a step-by-step guide to improving or altering their leased spaces ("Tenant Alterations"). Serving as a "roadmap" to Massport's Tenant Alteration Application (TAA) process, this section will help tenants determine:

- The likely approval path for proposed Tenant Alterations
- Key process steps for getting Tenant Alterations reviewed, approved, permitted, constructed, and closed out.

Part 2 presents the general requirements and policies applicable to Tenant Alterations, including:

- General terms and conditions
- Insurance requirements
- Applicable codes and laws

Part 3 defines the design and construction requirements governing Tenant Alterations.

B. The GTC is not intended to address every type of condition or detail individual tenants may encounter in the course of their projects. It is the Tenant's responsibility to establish familiarity with the base building design and with individual building elements unique to its leasehold(s) prior to initiating design and construction of Tenant Alterations.

1.3 Tenant Alteration Process Overview

A. An overview of the Tenant Alteration process for Third Party Ground Lease Tenants is presented in Exhibit 1-1. As shown, all proposed Tenant Alterations (other than that which Massport considers to be routine maintenance) require Massport's advance approval through either the Project Registration process or the TAA process. For complete details, refer to Section 3.

B. The review and approval process for Tenant Alterations on Massport Owned Properties is described in The Guide to Tenant Construction – Massport Owned Properties.

C. Regardless of the application path for the intended alteration, the Tenant shall comply with the following:

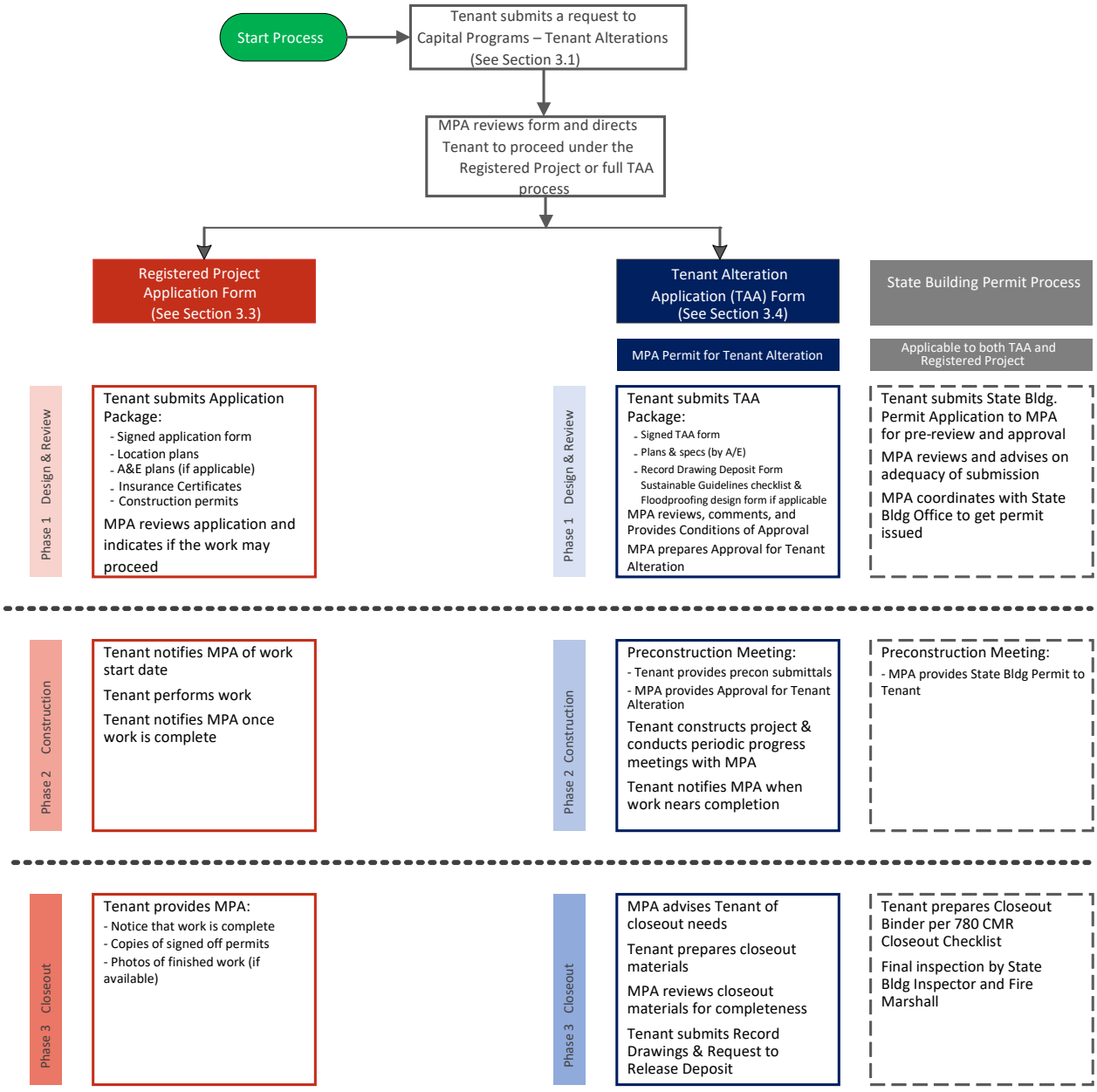
1. The Tenant shall engage a qualified architect or engineer, or other professional as appropriate, licensed in the Commonwealth of Massachusetts, for the preparation of the design, working drawings, calculations, specifications, and construction contract documents as required by the most recent edition of the Massachusetts State Building Code, 780 CMR Massachusetts State Building Code (the "State Building Code").

   The Massport Capital Programs Department will provide, upon request, a partial list of architectural, design and engineering consultants that have previously participated in tenant projects at Massport-owned properties. The Tenant, at its option, may contact these or any other qualified consultants and retain their services. No endorsement by Massport of any consultant on this list is intended or should be inferred. The tenant and its selected architect or engineer will contact Massport Capital Programs for all submittal requirements and design standards for construction documents and models.

2. Certain projects may require the Tenant to connect to base building or site systems and utilities (mechanical, electrical, fire protection, etc.) at a location beyond the Tenant's leased area. Such actions may require approval through Massport's Work Plan process. As described in Part 3 "Design and Construction Requirements", Section 8.6, the Tenant's contractor may be asked to prepare and submit a Work Plan, using the appropriate Massport template, to ensure minimal disruption or interference to other ongoing operations or facilities.

3. For certain Massport facilities, base building drawings are available upon request by the Tenant's design team. Drawings and specifications may not reflect complete existing or as-built conditions. Massport will make reasonable efforts to inform the Tenant of existing conditions; however, it shall remain the Tenant's responsibility to perform site surveys and inspections as necessary to verify field conditions.

Exhibit 1-1: Overview of the Tenant Alteration Process for Third Party Ground Lease Tenants



2. DEVELOPMENT PROJECT DESIGN REVIEW PROCESS GUIDE

2.1 Introduction

A. Required submissions shall be made at four stages of project design and construction

1. Conceptual Design
2. Schematic Design
3. Design Development
4. Final Plans and Specifications (TAA submission)

B. Submissions shall include the materials described in Section 2.2, below. Massport may waive any of the submission requirements at its discretion. Massport's right to approve and the process by which Massport shall approve or disapprove such submissions are set forth in Section 2.3.

C. Submission and review of design materials will be a continuing process, and it is expected that reasonable requests by Massport for progress prints, technical information and other materials in addition to those required herein will be met by the Applicant.

D. Regular and clear communication between Massport and the development team is critical throughout the Design Review Process. To facilitate this, Massport and the Applicant shall each designate a project manager and a primary design/engineering representative at the project outset. These individuals shall attend a mandatory pre-submission meeting at each phase of the Design Review Process at least two weeks prior to any submittal of plans to Massport. Massport will be responsible for inviting other key members of the project review team to these meetings. At a minimum, the Applicant should be prepared to at these meetings to present a summary of project progress and a schedule update, a review of design changes since the previous design review round, and a discussion of any unique conditions, issues, or requests.

2.2 Submission Requirements

A. Conceptual Design Plan Stage: The intent of the review at this stage is to have initial confirmation of the basic development program and preliminary design documentation. Requirements are as follows:

1. Written description or Powerpoint of the project including: building and site improvements program (amount, location and overall dimensions) including those components that support public realm; required permits and status of each; status of public or agency consultations; general transportation and parking approach; and a schedule showing major permitting, design, and construction milestones, and a statement of estimated total development costs and total construction cost.

2. Narrative design description or PPT, if not provided during a Request for Proposals submission process, which describes the overall design vision for the building, the site, and public realm overall, and why the design approach and building materials are

appropriate for the site and project. The design narrative should articulate how the building addresses architectural and urban design excellence and how the project will contribute to the character of the district and the city. The design narrative should address sustainability, energy efficiency including Net Zero and all-electric and how the designer's approach to resiliency to climate change and foreseeable weather-related events, such as flooding, if applicable to the project site

3. Site plans:

    i. Site plan at an appropriate scale showing the location of proposed buildings and open spaces, vehicular and pedestrian circulation improvements, service areas, building entries and public spaces, planting areas/landscape features and a preliminary layout of the ground floor of the proposed building(s); and, if applicable, dock and other maritime infrastructure improvements and

    ii. Site plan at appropriate scale showing the proposed building(s) in a broader context of surrounding buildings and its existing transportation infrastructure, depicting any proposed off-site improvements.

4. Preliminary building and site sections.

5. Preliminary building elevation studies indicating fenestration patterns and materials.

6. Preliminary floor plans for the ground floor, second floor, typical upper floors and typical floors below grade (parking).

7. Architectural study model only if required by Massport that illustrates the site context (surrounding streets, existing/planned buildings and major site features) and building massing (including any alternatives being considered).

8. Study perspective renderings taken from primary vehicular and pedestrian approaches to the building.

9. Written description or PPT and preliminary design information that addresses the Project's approach to obtain agreed upon LEED Certification as administered by the U.S. Green Building Council (USGBC) organized around the LEED checklist, and sustainability and resiliency requirements including but not limited to Net-Zero and all electric efforts

10. If applicable, analysis of marine infrastructure (if applicable), including seawalls, revetments, etc., should provide approximate technical specifications (e.g., dimensions, loading capacities) for all proposed new or improved facilities. This material should include a conditions assessment report of these infrastructure items as part of the initial conceptual design phase, as well as how the Project plans to upgrade these elements to serve the development.

11. Sustainability and Resiliency

i. Written description or PPT and preliminary design information concerning the sustainable building and site design features and principles that the Applicant has identified as applicable to the Project.
ii. Written description and preliminary design information concerning the Applicant's approach to addressing resiliency design issues. Massport directs the Applicant to reference Massport's Floodproofing Design Guide, which can be found here: https://www.massport.com/media/2xacmacm/massport-floodproofing-design-guide-revised-november-2018.pdf. Applicant must include the completed Massport floodproofing form.

B. Schematic Design Stage: Applicant acknowledges review of the TAA Guidelines and comments. The intent of the review at this stage is to secure an agreement on the basic design as documented by dimensional plans and preliminary building elevations and sections. The following materials must be submitted:

1. Updated written description or PPT of the project including all program elements and space allocation for each element, and an updated development schedule for the Project. This material should include a detailed description of the location and preliminary specifications of proposed buildings and other structures, roadways and parking areas, maritime infrastructure (if applicable), utility systems, sidewalks, landscape features, and other hardscape components that support the public realm vision for the project. Include a description of any changes to the project from the previous submission. Also include any design responses to prior Massport comments or questions.

2. Site plan showing:

i. Relationships of proposed and existing buildings and open space. Open spaces mutually defined by buildings on adjacent parcels and across streets shall be included.

ii. Location and dimensions of walks, driveways, parking, service areas, roads, and major landscape features.

iii. Location of maritime infrastructure, such as docks, piers, floats, fenders and loading equipment if applicable;

iv. Pedestrian and vehicular (including service) access and flow through the parcel and to adjacent areas, including building entries and curbside operations diagrams.

v. Survey information, such as existing elevations, benchmarks, utilities, etc. (Survey to be prepared by Massport).

vi. Preliminary grading plan.

vii. Preliminary utility plan showing water, gas, electric, telecommunications, etc., including analysis of utilities capacity supplying the site and their ability to meet projected site demand.

viii. Site and building sections plan.

ix. Schematic building plans showing ground floor, typical upper floor(s) and parking levels

x. Preliminary building elevations with identification of proposed materials.

xi. Shadow studies, if requested by Massport, showing the effects, at key times of day and during all seasons, of the proposed massing on the surrounding area with particular attention to nearby public spaces including sidewalks, parks, and plazas.

xii. Wind impact studies, if required by Massport, showing the effect of the project on the surrounding area with particular attention to nearby public spaces including sidewalks, parks, and plazas.

xiii. Description of the sustainable design and construction features of the Project organized in accordance with the LEED checklist of the USGBC.

xiv. Preliminary Code Memo

xv. Preliminary geotechnical memo on building foundation design and excavation support system

xvi. If the project does not trigger a MEPA Environmental Notification Form and/or an Environmental Impact Report, Massport may request a traffic study that may include trip generation, and parking and vehicular movement analysis.

xvii. Preliminary Construction Management Plan (CMP)

xviii. Fire & Life Safety approach which includes but not limited to the fire command center location, fire department connections, and hydrant locations.

xix. Massport Floodproofing Form completed by Applicant

C. Design Development Stage: The intent of the review at this stage is to secure agreement on the design prior to work on the Final Plans and Specifications. The following materials (if not already received, reviewed and approved as herein below provided) must be submitted:

1. Updated written description of the Project (including all program elements and space allocation for each element). Include a description of any changes to the project from the previous submission. Also include any design responses to prior Massport comments or questions.

2. Site plan at an appropriate scale or as determined after approval of the site plan submitted at the Schematic Design Stage) showing:

i. Relationship of proposed building and open space to existing or proposed adjacent buildings, open spaces, streets, and buildings and open spaces across streets.

ii. Proposed site improvements and amenities including paving, landscaping, lighting and street furniture extending at least to the back of the curb of adjacent streets and driveways.

iii. Building and site dimensions, including setbacks and other dimensions.

iv. Proposed site grading, including typical existing and proposed grades at parcel lines and finished floor elevations for buildings.

3. Site sections at an appropriate scale or as determined after approval of the plans submitted at the Schematic Design Stage).

4. Building plans, sections and elevations at an appropriate scale developed from approved Schematic Design Stage drawings. Elevations shall show the Project in the context of the surrounding area as required by Massport to illustrate character, scale, materials and colors to the project's existing context. All plans, sections and elevations shall reflect the impact of proposed structural and mechanical systems on the appearance of exterior facades, interior public spaces, and roofscape. All rooftop equipment, exhausts, elevator overrides, and the like must be shown to scale on building plans and sections.

5. Proposed utility plan.

6. Proposed site access and parking plan.

7. Large-scale (as required and customary) typical exterior wall sections, elevations and detail sufficient to describe the architectural components, methods of their assembly and character of the building.

8. Drawings that show the location, dimensions, color and material for all exterior signs. For retail spaces, the proposed exterior sign system needs to be included.

9. Outline Specifications of all materials for site improvements, exterior facades, roofscape, and interior public spaces.

10. If applicable, a report prepared by a professional acoustical engineer which demonstrates the proposed design and construction methodologies will be sufficient to meet any interior noise level standards established for the project. The scope and technical approach of the report shall be reviewed and approved by Massport.

11. Eye-level perspective drawings showing the Project in the context of the surrounding area.

12. Description of the sustainable design and construction features of the Project organized in accordance with the LEED checklist of the USGBC, including floodproofing, Net Zero and all-electric measures.

13. Proposed construction schedule for the project.

14. Photometric study, if required

15. To the extent that signs are not part of the original design submission, all signage design and permitting must be submitted at a later submission

16. Updated Code Memo including a list of any code variance requests

17. Updated geotechnical studies/reports

18. Updated building excavation support system

19. Draft Construction Management Plan (CMP)

20. Updated traffic analysis/parking analysis, if applicable

21. Auto turn analysis

22. Draft construction monitoring plans (noise, geotechnical settlement and vibration monitoring)

23. Updated Massport Floodproofing Form completed by Applicant

D. Final Plans and Specifications: The intent of the review at this stage is to secure agreement on the detailed design and specifications of the proposal. The following materials must be submitted:

1. Written description of the Project (including all program elements and space allocation for each element). Include a description of any changes to the project from the previous submission. Also include any design responses to prior Massport comments or questions

2. Site plan showing all site development and landscape details for lighting, paving, planting, street furniture, utilities, grading, drainage, access, service, and parking.

3. Complete architectural and engineering drawings and specifications in compliance with Appendix B TAA BIM/VDC Guide.

4. Material samples of the palette of materials proposed for the exterior of the building finishes and site improvement finishes.

5. Detailed construction schedule and construction phasing plan for the Project.

6. Description and documentation of the sustainable design and construction features of the Project organized in accordance with the LEED checklist of the USGBC.

7. Massport Floodproofing Form completed by Applicant

8. Final construction monitoring plans (noise, settlement monitoring, vibration monitoring)

9. Copy of all environmental permits

10. Final site Plan approved by Boston Water and Sewer Commission

During the preparation of the Final Plans and Specifications, it is the Applicant's responsibility to notify Massport promptly and secure its approval of all changes from the approved Design Development Stage drawings that are contemplated for site improvements, exterior facades, roofscape and interior public spaces. At this stage the applicant will be required to submit a Tenant Alterations Application with Massport Capital Programs and Environmental Affair. In addition, applicant is to submit a draft building permit application (see section 3.5 State Building Permit Process)

A. General Requirements – All Submissions: All materials submitted by the Applicant to Massport during the Schematic Design Stage, Design Development Stage, and the Final Plans and Specifications Stage shall comply with the following requirements.

    1. Such materials shall have been prepared by an architect, engineer, landscape architect and/or surveyor, as appropriate, licensed to practice by the Commonwealth of Massachusetts.

    2. Final plans and specifications shall conform to all applicable rules, regulations, ordinances, codes and laws of any governmental authority having jurisdiction over the construction, maintenance and use of the Project.

    3. Such materials shall comply with all applicable covenants, agreements and restrictions affecting the Premises and the Project.

    4. Such materials constituting models (for example, the items required under D-3 of this section) shall be made available for Massport's review, but the Applicant shall not be required to provide a duplicate model to Massport.

    5. Such materials shall comply with all applicable covenants, agreements and restrictions affecting the Premises and the Project.

B. LEED Requirements and Sustainability: Applicant agrees to obtain LEED certification, or as otherwise agreed to with Massport, for the improvements, which may include but not be limited to the following:

    1. Applicant, with the support and active participation of his project team (including architect and engineers, specifications writers, contractors, construction managers and LEED certified professionals), will use a multidisciplinary design approach that integrates the range of technical skills beginning in the conceptual design stage, continuing through final design and the construction period.

    2. Applicant and Applicant's project team will participate in a minimum of three work sessions with Massport and its consultants regarding the project design, specifications and construction management plan to assess and identify the sustainable design and construction objectives, opportunities and constraints.

    3. The Applicant will complete the LEED checklist form and provide a narrative description of the approach to each point category.

4. The Applicant will actively pursue grants (for design, construction and/or equipment) and energy demand reduction programs with the appropriate agencies and utilities including, but not limited to, National Grid, Eversource. Written documentation shall be submitted to Massport regarding these efforts.

5. The Applicant will register the project with the USGBC.

2.3 Approval of Design Submissions

A. Except as herein below expressly otherwise provided, Massport shall have the right to approve the materials submitted to it pursuant to the provisions of Section 2.2, and any substantial modifications thereof. Within a reasonable time, but not later than thirty (30) days (or such longer period of time as is mutually agreed upon by the parties) after submission by the Applicant of any such materials, Massport shall in writing either approve such materials or notify the Applicant of the specific respects in which it finds such materials to be unacceptable. Promptly after receipt of notice from Massport that it disapproves of any specific matters, the Applicant shall revise such materials in a manner acceptable to Massport and shall make a revised submission (within a period of time as is mutually agreed upon by the parties) after receiving Massport's notice of disapproval. All resubmissions and subsequent approvals or disapprovals thereof shall be made and given in accordance with the procedure hereinabove provided for the original submission, until the relevant materials shall be approved by Massport as set forth above, provided, however, that in no event shall the date by which construction of the Project is to be commenced be extended thereby.

2.4 Intergovernmental Cooperation

A. Subject to the relevant provisions of the Development Agreement, if any, Massport shall cooperate with the Applicant in the Appl's efforts to complete any reasonable development review process which the Applicant may choose to engage in, on a voluntary basis, with the Boston Planning and Development Agency (BPDA). The Applicant shall give Massport notice and the opportunity to attend, at Massport's option, all design review meetings with the BPDA so as to assure that design decisions and revisions are coordinated between Massport and the BPDA. The Applicant and Massport recognize that cost and time savings may be achieved by coordinating Massport's Design Review Process with the BPDA's design review process. In addition, Massport recognizes that the materials that the Applicant will be submitting as a part of this Design Review Process will also be submitted to the BPDA as a part of the BPDA's design review, and that the materials are intended to be substantially the same. Notwithstanding any such coordinated Massport/BPDA design review, however, Applicant acknowledges that, regardless of the status of any approval of the BPDA under the BPDA's design review process, the Applicant must obtain Massport's approval of all plans, specifications or other materials as required under Massport's design review process.

2.5 Construction Representatives

A. Massport and the Applicant shall each designate a construction representative and, after notice thereof to the other and until such designation is changed or withdrawn, such construction representative shall deliver and receive all notices, approvals, communications, plans,

specifications or other materials required or permitted to be delivered or received under the Design Review Process.

(End of Section)

3. PROJECTS FOR THIRD PARTY GROUND LEASE TENANTS

3.1 General – Project Types

A. There are three distinct processes for the review of projects for third party ground lease tenants i.e., facilities where tenant leases are managed by the Massport Real Estate and Asset Management Department.

10 World Trade Center

Table 3-1: Review and Approval Processes for Third Party Ground Lease Tenant Projects

Process	Application	Reference
Type 1: Tenant Projects	Tenant Alterations in Massport-Owned Buildings such as the Fish Pier	See Section 2 in Guide to Tenant Construction – Massport Owned Properties – 2023 Edition
Type 2: Registered Projects	Tenant Alterations in Third Party Buildings: Registered Project Process (Third Party Project Minor Works)	See Section 3.3 and Exhibit 3-1
Type 3: Third-Party Projects	New Building Construction occurring on a Leased Land Parcel	See Section 3.4 and Exhibit 3-2

B. The Project Review Process Guide, below, will assist Tenants in determining which review process applies to their projects.

PROJECT REVIEW PROCESS GUIDE for THIRD PARTY GROUND LEASE TENANTS

Typical project categories are noted below. Massport reserves the right to modify the following guidelines as may be deemed necessary by project circumstances.

ALTERATION (Work Done to Existing Buildings)

TYPE	DESCRIPTION	REGISTRATION ONLY	FULL TAA REQUIRED	DEPOSIT
Small repairs and replacements	Architectural and finish repair/replace	Yes	No	None
Roof repair and replacement	Roof work	Yes	No	None
Exterior alterations to building	Wall panels; new windows locations; canopies, awnings or other new building elements	No	Yes	Yes
Interior Fit-Outs	**Simple**: Interior fit-outs involving re-partitioning and minor MEP work in finished space; office renovations that do not significantly alter the base building structural elements.	Yes	No	None
	Complex: Interior fit-outs in raw space or fit-outs that require new and/or extensive renovation of MEP (mechanical, electrical, plumbing) or changes to the building structure would require a full TAA.	No	Yes	Yes

EQUIPMENT AND SYSTEMS

TYPE	DESCRIPTION	REGISTRATION ONLY	FULL TAA REQUIRED	DEPOSIT
NEW installation or significant modification	Electrical, mechanical, plumbing/gas, HVAC, telecommunications, fueling or other complete systems or individual components	No	Yes	Yes
REPLACEMENT or minor modification	Replacement of individual components of above systems, or components or systems with minimal impact to the facility	Yes	No	No

NEW CONSTRUCTION				
TYPE	**DESCRIPTION**	**REGISTRATION**	**FULL TAA REQUIRED**	**DEPOSIT**
New Buildings (single or multiphased)	New construction on an undeveloped parcel.	No	Yes	Yes

HORIZONTAL, CIVIL				
TYPE	**DESCRIPTION**	**REGISTRATION**	**FULL TAA REQUIRED**	**DEPOSIT**
Various Ground Improvements	Parking lots/paving; site grading; sidewalks; site utilities; maritime-repairs to docks and piling	No	Yes	Yes

SIGNS

TYPE	DESCRIPTION	REGISTRATION	FULL TAA REQUIRED	DEPOSIT
Identity	Ground-mounted identity signs; Building-mounted identity signs; wayfinding or other functional signs (blade or flat-mounted), powered signs	No	Yes	Yes
Others	1) Wayfinding or other functional signs or sign systems; 2) New construction identity signs that are part of the base building review.	Yes	No	No

OTHER				
TYPE	**DESCRIPTION**	**REGISTRATION**	**FULL TAA REQUIRED**	**DEPOSIT**
Demolition, total or partial		No	Yes	To be evaluated when received
Temporary Structures	Including modular buildings, but not including construction trailers	No	Yes	

Notes:

(1) Projects that do not require a TAA will be registered using the Project Registration Process protocol. Registered projects must provide information including applicant name, architect name, contractor name, start and end dates, and description of the work. Copies of all jurisdictional permits which are legally required for the project must be submitted to Massport for record throughout the course of the project, and evidence of final signoff from the jurisdictional authorities must be provided at completion of the project.

(2) Projects that require a TAA will submit project data on the standard Tenant Alteration Application (TAA) form and provide a deposit as noted above; plans proceed through normal TAA process, including the issuance of a Massport Notice of Approval for Tenant Alteration.

(3) Record Document Deposits are collected for certain projects in order to assure the submittal of as-built documentation at the close of the project. If your project requires a deposit, contact Massport Tenant Alterations at taa@massport.com to obtain the deposit form and directive.

3.2 Project Initiation

A. To initiate the alteration process, the Tenant shall prepare and submit a request to Massport Capital Programs – Tenant Alterations. Required information includes:

- Tenant contact information
- Location of the work
- Desired timeline
- Scope of alterations

Information shall be submitted electronically to TAA@massport.com .

B. Based on the information provided on the form and follow-up discussions with the Tenant as needed, Massport will direct the Tenant to proceed with either a Project Registration or a full Tenant Alteration Application (TAA).

For planning purposes, the Tenant may consult Table 3-1 and the Project Review Process Guide for Third Party Tenants for an indication of the type of work typically performed under each process. Massport will make the final determination as to which process applies.

C. Tenants are encouraged to reach out to Massport Capital Programs - Tenant Alterations if they would like to discuss any aspect of their project and receive direction or clarification on matters such as:

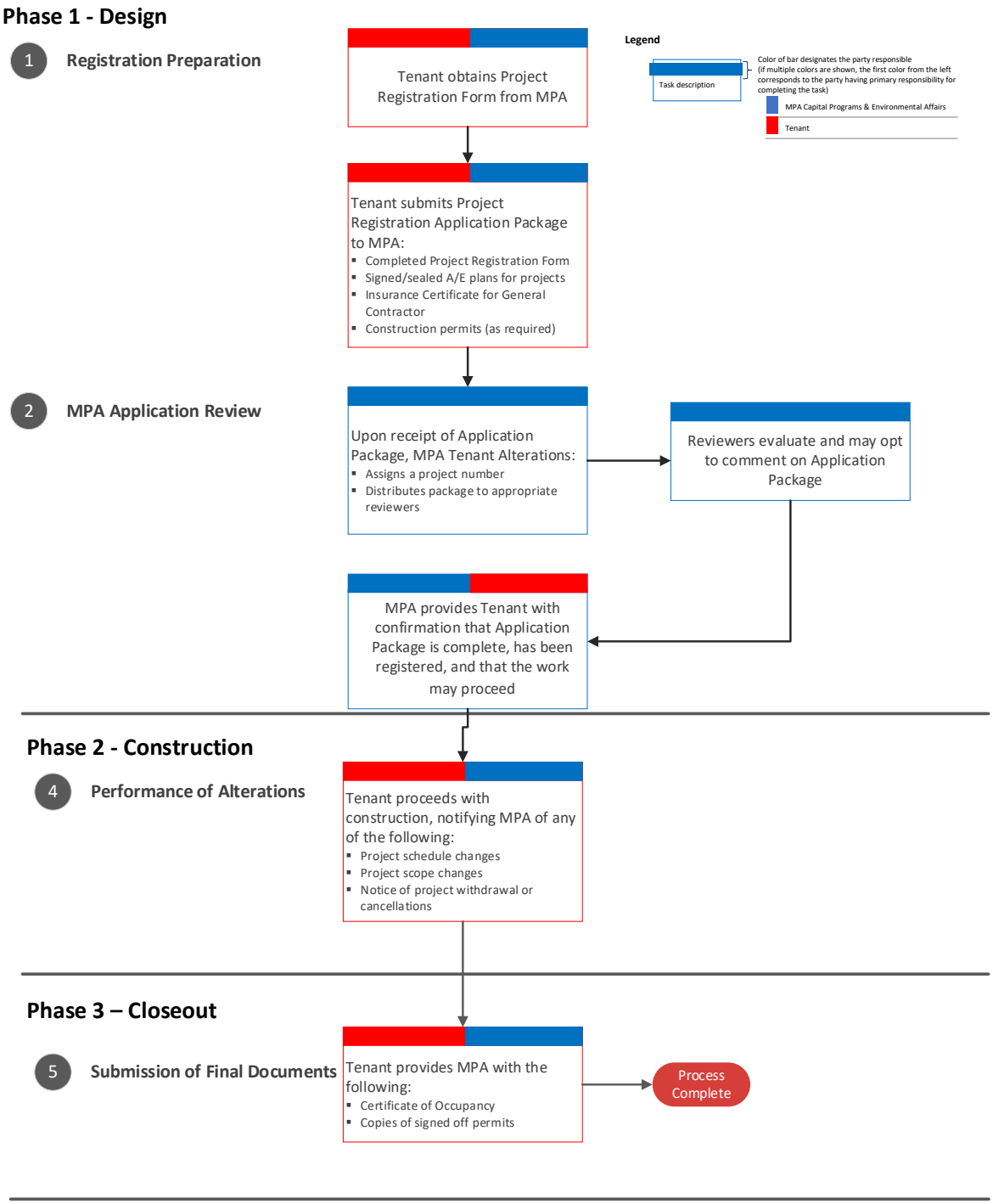
- Process steps
- Submittal requirements
- Potential permitting requirements
- Extent of as-built and other sources of existing conditions information
- Typical review timeframes
- Point of contact/resources

For certain complex projects, including those to be submitted in phases, a pre-design conference may be required. Massport will notify the Tenant of such need as early as possible in the project development process.

3.3 Project Registration Process

Certain projects by Third Party Ground Lease tenants do not require approval through the TAA process. The Project Registration Process, depicted in Exhibit 3-1, is a simpler alternative for the review of such projects.

Exhibit 3-1: Project Registration Process



3.3.1 Design Phase

Step 1 – Application Preparation

D. Using the current Project Registration Form, (found in Appendix A or on the Massport website), the Tenant shall describe the intended alterations to its leased space. The completed form is to be submitted to Massport Tenant Alterations electronically.

E. In Addition to the completed Application Form the following supporting information shall also be submitted:

- Digital copy of project plans in electronic format complying with Digital file Submission Requirements. Plans must be signed and sealed if seeking Massachusetts State Building Permit.
- Construction permits as required given the nature of the work (e.g., electrical, plumbing, sprinkler, etc.)
- Sustainability Guidelines Compliance Checklist and Floodproofing Guidelines Submittal if applicable (for projects over $5 million).

Step 2 – Massport Application Review

F. Upon receipt of a complete Project Registration Package, Massport Tenant Alterations will assign a project number and distribute the package to Massport stakeholders for review.

Project Registration Application packages may be distributed to the following departments:

- Massport Fire
- Utilities Management
- Capital Programs & Maritime
- Legal Department
- Real Estate & Asset Management
- Risk Management
- Information Technology
- Capital Programs Construction Management

Tenant shall allow for a Massport review period of **5 working days** from the time of submission in full.

G. Once reviewers have completed their evaluation, the Tenant Construction Office will provide the Tenant with consolidated review comments, if any.

3.3.2 Construction Phase

Step 3 – Performance of Alterations

A. The Tenant may proceed with Alteration as described when all applicable permits are obtained. For State Building Permit process information see Section 3.5. The Tenant shall notify the Massport Tenant Alterations of the intended work dates.

B. After performing the approved alterations, the Tenant shall notify the Massport Tenant Alterations that the work is complete.

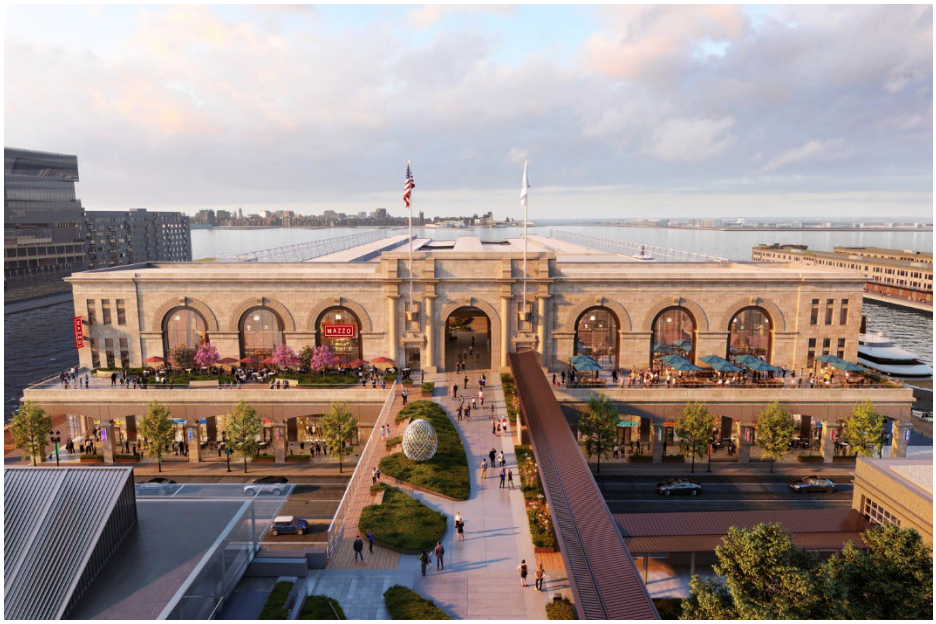
3.3.3 Closeout Phase

Step 4 – Submission of Closeout Documents

A. Project is considered Closed when Alteration is complete and copies of signed off Trade Permits and Certificate of Occupancy are provided to Massport Tenant Alterations.

3.4 TAA Process for Third Party Ground Lease Tenant Projects

For new building construction occurring on a leased land parcel, the review and approval process generally proceeds as depicted in Exhibit 3-2.



Commonwealth Pier

This flowchart does not depict all interactions and design reviews which are coordinated by RE&AM but shows how the TAA process is involved in design review.

Exhibit 3-2: TAA Process for Third Party Ground Lease Tenant Projects (1 of 2)

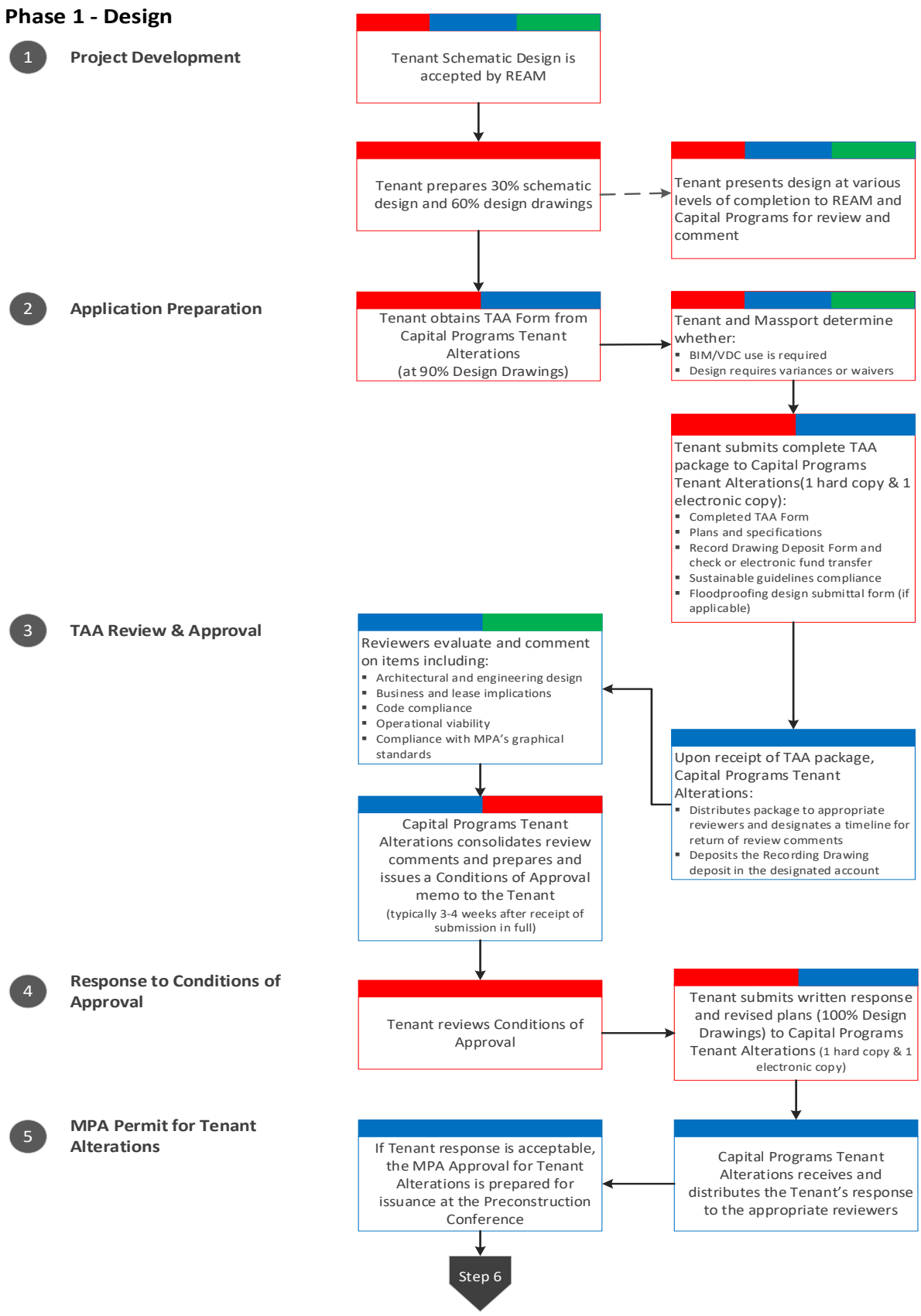
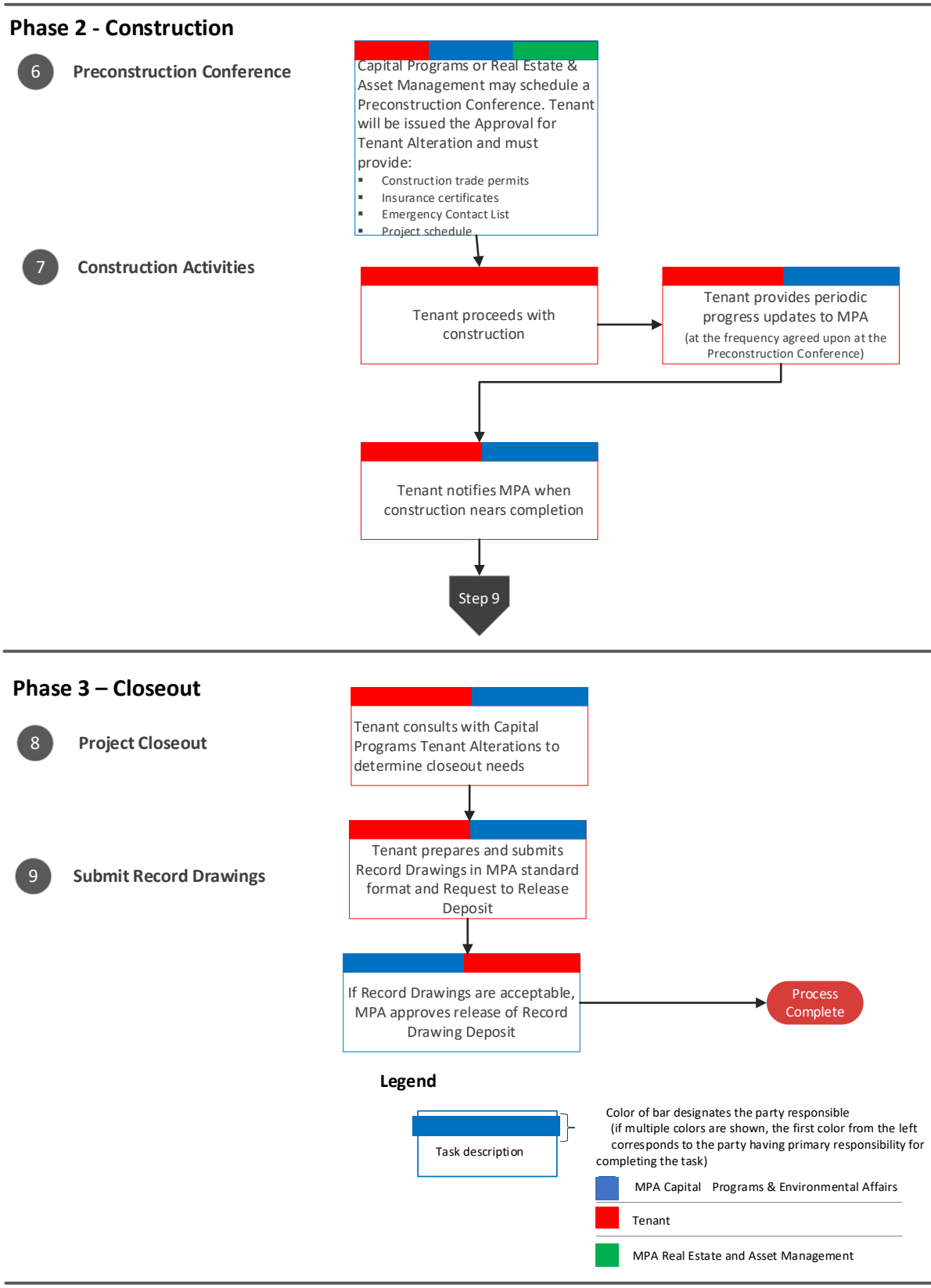


Exhibit 3-2: TAA Process for Third Party Ground Lease Tenant Projects (2 of 2)



Please note that TAA forms for Subtenant build-outs must be signed by both the Ground Lease Tenant and its subtenant.

3.4.1 Design Phase

Step 1 – TAA Preparation and Submission

A. The Tenant shall obtain, and carefully review, Massport's Tenant Alteration Application form. Massport requires the submission of one executed original of the TAA form.

B. The Tenant shall engage a qualified architect or engineer, licensed in the Commonwealth of Massachusetts, to prepare plans and specifications that meet the design and construction requirements set forth in Part 3 of this guide. The architect or engineer shall determine if:

- BIM/VDC use is required (refer to Appendix B: TAA BIM/VDC Guide or available for download on Massport's website))
- A State Building Permit is needed in addition to the Massport Approval for Tenant Alteration (formerly Massport Permit for Tenant Alteration) (refer to section 3.5 State Building Permit for more details).
- Sustainability Guidelines Compliance Checklist and Floodproofing Design Submittal if applicable (projects over $5 million).

C. Plans shall be prepared in accordance with the most recent edition of the Massachusetts State Building Code, 780 CMR, and shall bear the seals and signature required per that regulation. Drawings and specifications shall completely identify the Tenant Alterations being proposed, and shall include, without exception, the following information:

- A site/location plan with respect to existing conditions (include column numbers, coordinates, dimensions to existing structures, or other contextual information);
- Descriptive plans of both demolition and construction work, which may include demolition plans, floor plans, roof plans, exterior/interior elevations, sections, door/hardware/finish schedules, and trade drawings, including structural drawings or analyses, electrical riser diagrams, plumbing and mechanical drawings, and sprinkler and fire alarm drawings; and
- Complete specifications of all materials.

D. If the proposed design requires a waiver or variance from other agencies or authorities having jurisdiction, the Tenant shall obtain Massport's consent to the waiver/variance request prior to submitting such requests to the applicable agency or authority, and shall keep Massport apprised of any communications or meetings scheduled on the topic with such agency or authority.

E. Applications for projects with a total estimated cost exceeding $20,000 shall be accompanied by a monetary deposit (the "Record Drawing Deposit") to ensure submittal of record documentation and satisfactory completion of other project requirements at closeout.

Table 3-2: Required Record Drawing Deposits

Estimated Project Construction Cost	Record Drawing Deposit
$20,000 or less	No deposit required
$20,000 - $49,999	$2,500
$50,000 - $99,999	$5,000
$100,000 - $249,999	$10,000
$250,000 - $499,999	$15,000
$500,000 - $999,999	$20,000
$1,000,000 and over	$20,000 for first million + $10,000 per subsequent million up to $50,000 MAXIMUM

Upon written request by the Tenant, Massport may consider waiver of the Record Drawing Deposit requirement if Massport determines, in its reasonable discretion that the proposed Tenant Alteration is transient in nature and Record Drawings are not required.

Checks, made payable to "Massachusetts Port Authority", or payment through electronic QuikPay, shall be submitted with a completed Deposit Form. Massport will return deposits to the applicant upon successful closeout of the project as detailed in the Closeout Phase.

The Record Drawing Deposit Form may be accessed in Appendix A or on the Massport Website.

F. Once all information is complete, the Tenant shall submit the following to the Tenant Construction Office:

- One paper set of the complete TAA drawings package in a size no smaller than 11"x 17" and no larger than 24" x 36"
- Electronic copy of the signed TAA form
- Electronic models, CAD and drawing files in standard format as detailed in Table 3-3 of this Guide
- Electronic copies of any associated materials (project manual, manufacturer's data, renderings, etc.)

Step 2 – TAA Review and Conditions of Approval

A. Upon receipt of the TAA package, the Manager of Tenant Alterations will:

- Assign a project number;
- Distribute the package to the appropriate reviewers and designate a timeline for the return of review comments; and
- Deposit the Record Drawing Deposit check into a designated account.

B. Reviewers may include the following departments:

- Massport Fire Rescue
- Utilities Management
- Capital Programs & Maritime
- Legal Department
- Real Estate & Asset Management
- Environmental Management
- Risk Management
- Information Technology
- Capital Programs Construction Management

C. The scope of the review may extend to items such as:

- Physical design
- Code compliance
- Operational viability
- Sustainability & Resiliency initiatives
- Compliance with MPA's BIM & VDC standards and formatting

D. Once reviewers have completed their evaluation of the TAA package, they will recommend approval or disapproval with specific conditions. Such review comments are compiled by the Manager of Tenant Alterations and consolidated into a Conditions of Approval memo issued to the Tenant for its response and agreement.

E. The TAA review process ordinarily requires **three to four weeks** from the time the complete TAA package is received by the Manager of Tenant Alterations, dependent upon the following:

- Size and complexity of the project
- Extent of a project's impact to adjacent buildings and neighboring sites
- Quality, clarity, and completeness of the submitted documents

Tenants shall allow for this review time when ordering materials and scheduling the construction program.

Submission of incomplete or inadequate TAA documentation will delay the review turnaround time for the project.

F. Massport, in its sole discretion, reserves the right, in accordance with its TAA review process, to require the Tenant, its contractor, or subcontractors to demonstrate, to Massport's satisfaction, that the contractor or subcontractor(s) proposed for the work possess the experience,

qualifications, skill, ability, competent workmanship, integrity, and financial soundness to satisfactorily perform the work.

The Tenant, its contractor, or subcontractor(s) shall, upon Massport's request, submit such information or documentation necessary for Massport to perform its review or evaluation.

On all questions of acceptance or rejection of a contractor or subcontractor under this provision, Massport's decision shall be considered final.

Step 3 – Tenant's Response to Conditions of Approval

A. The Tenant shall review Massport's Conditions of Approval. If the Tenant cannot comply with one or more of Massport's Conditions of Approval, or if clarification is needed, the Tenant shall so advise Massport in writing.

B. Within **90 days** of Massport's issuance of the Conditions of Approval memo, the Tenant shall submit to the Tenant Construction Office a written response indicating agreement with each of the conditions of approval, accompanied by revised (conformed) plans or drawings.

   All review comments or conditions generated by Massport's TAA process shall be reflected in revisions to the Tenant's construction documents (if prior to bidding), or in addenda to the documents.

   If there is no resubmission or response from the Tenant within this period, the TAA will be deemed to have been withdrawn by the tenant. The project file will be officially closed, the Record Drawing Deposit will be returned to the Tenant, and the Tenant will be required to submit a new TAA if it wishes to pursue the project

Step 4 – Massport Approval for Tenant Alteration

A. The Manager of Tenant Alterations receives and distributes the Tenant's response to the Conditions of Approval to the appropriate reviewers.

B. If the Tenant's response is acceptable, the Manager of Tenant Alterations will prepare an Approval for Tenant Alteration (formerly the Massport Permit for Tenant Alteration), which will be issued to the Tenant at the preconstruction conference (see Step 5).

C. There is no fee for the Approval for Tenant Alteration.

D. Construction on the project must commence within **six months** of issuance of the Approval for Tenant Alteration; if construction does not commence within this period, the Approval expires, and a request for a new Approval must be submitted and a new Approval issued.

3.4.2 Construction Phase

Step 5 – Preconstruction Conference

A. The Manager of Tenant Alterations or Real Estate & Asset Management may schedule a preconstruction conference. The Tenant's representative, general contractor, and design consultants are required to attend the meeting, whether held in person or virtually.

B. Massport will issue the Massport Approval for Tenant Alteration. This document will be valid for one year from the date of issuance.

C. If applicable, the Manager of Tenant Alterations or the Building Code Compliance (BCC) Manager will also provide the Tenant with the State Building Permit.

D. At the preconstruction conference, or prior to project commencement the Tenant shall provide the following submittals:

- Construction trade permits
- Contractor Insurance Certificates (see Part 2 "General Requirements", Section 5)
- Emergency Contact List, in Massport's standard format
- Project schedule

Step 6 – Construction Activities

A. The Tenant proceeds with construction. The tenant may be asked to provide periodic construction updates or hold periodic construction progress meetings.

B. The State Building Inspector may request monthly progress reports be submitted by the Tenant's designer for any Tenant Alterations working under a State Building Permit. As construction progresses, the Tenant's contractor shall notify Capital Programs of all requests for scheduling rough and other interim inspections by the State Building Inspector. Trade inspections are to be scheduled directly with the specific authorities having jurisdiction.

3.4.3 Closeout Phase

Step 7 – Closeout Documentation

A. The Tenant shall consult with Massport Tenant Alterations to determine a project's closeout requirements. Closeout documentation must be received by Capital Programs for Massport to consider the project to be complete.

B. As part of closeout, the Tenant shall submit the following to Massport Tenant Alterations:

- Signed off construction trade permits
- Architect's field reports
- Photos (if available)

C. Materials will be reviewed by Massport Tenant Alterations for completeness, and the Tenant will be notified of their acceptance. At that time, Massport will consider the project closed.

Step 8 – Record Drawings

A. The Tenant with its design team shall prepare and submit to Massport Record Drawings of the completed project within 90 days of substantial completion in accordance with TAA requirements.

Within this timeframe, the Tenant shall also submit operations and maintenance manuals, if applicable.

B. The Record Drawings/Models and associated technical files shall document what alterations were constructed, and where they are located, both horizontally and vertically. The Tenant with its design team shall incorporate in the Record Drawings/Models all the changes that were made during construction so as to inform future work of existing and as-built conditions.

C. The Tenant shall provide a link for digital transmission of files.

1. The submission shall include everything associated with creating construction documents, including design files at 100% Design and As-Built Record submissions at the time of construction completion / project closeout. These are required to be in the form of BIM, CAD (Site Civil) and individual PDF sheet files.

2. The link for digital transmittal of files shall include, but not be limited to, the following:

    - All Revit, CAD, Civil 3D, individual and combined PDF Construction Documents,
    - Navisworks,
    - BIMxP,
    - Point Clouds (if applicable),
    - Completed Excel file of title block information,
    - Written transmittal of files contained in the current submittal, and
    - Any other files pertinent to the creation of the construction documents.

    The record drawings/models shall be in the format required by Massport, and be stamped and signed by the designer of record attesting to their accuracy.

3. Massport has specific BIM, Site Civil CAD and Room Numbering requirements for all Tenant projects. Massport's TAA BIM Guide, Site Civil CAD Standards and Room Numbering Standards can be found on the Massport website (https://www.massport.com/media/nz4pwtp1/bos-room-numbering-standard-v1-0-20210319-clean.pdf). Please coordinate with Massport Design Technologies Integration Group (DTIG) for file templates and additional information at DTIG@massport.com.

4. Table 3-3 identifies what is required on all vertical or horizontal project submissions. They fall into 3 categories, (BIM, CAD/Civil 3D, and PDF Construction Documents), each with its own requirements.

Table 3-3: Digital File Submission Requirements

BIM

Consultants shall be required to include the following:

- Acknowledgement of the provided BIMxP and that the project followed the pre-determined LOD requirements.
- Revit: .rvt
  - ❑ Arch
  - ❑ Struc
  - ❑ MEP
  - ❑ FP
  - ❑ All other disciplines
- Navisworks: .nwd, .nwc, .nwf
  (if applicable)
  - ❑ Federated model: .nwd
  - ❑ Clash Reports, pdf – printable and legible
  - ❑ Associated files: .nwc / .nwf
- Point Clouds: (Native files & Autodesk compatible)
  (if applicable)
  - ❑ Pre-Con existing conditions
  - ❑ Post construction As-builts
  - ❑ Registered point cloud in non-vendor specific format (ascii text or las) with XYZI (plus RGB if applicable).
  - ❑ Register point cloud in Autodesk RCS/RCP format

CAD/Civil 3D

- CAD/Civil 3D: .dwg
  - ❑ Any related CAD
  - ❑ Any Civil 3D
  - ❑ Site Civil data geo referenced to MPA (Massport Authority) state plane cords
- All supporting linked files:
  - ❑ CAD
  - ❑ PDF
  - ❑ Revit
  - ❑ Sketchup
  - ❑ Jpegs
  - ❑ Other…
- All supporting trade files:
  - ❑ CAD
  - ❑ PDF
  - ❑ Revit
  - ❑ Sketchup
  - ❑ Jpegs
  - ❑ Other…

SITE CIVIL: Consultants shall refer to MPA Site Civil CAD Standard guide for all civil, site and underground utility requirements. For all site / civil design & construction at Massport, MPA DTIG requires the following file types submitted, which must comply with all MPA standards:

- AutoCAD & Civil 3D file Standards:
  - ❑ MPA CAD files shall be individual files per drawing sheet; named (MPA Project No.-Sheet No.dwg)
  - ❑ Follow MPA standards for all layer naming
  - ❑ AutoCAD file units must be set to: Decimal, Insertion set to "Unitless", angle precision set to "0.0000"
  - ❑ UCS set to "World"
  - ❑ All objects must be in MA State Plane Coordinates
  - ❑ Horizontal Coordinates: NAD83, EPSG Code is 2249
  - ❑ Vertical Coordinates: NAD88, EPSG Code is 6360
- AutoCAD eTransmit: (always utilize to submit CAD to MPA)
  - ❑ eTransmit to package all CAD & linked files
  - ❑ Include all xrefs and associated files used to create CAD files
  - ❑ In "settings" – be sure to package everything into one (1) parent folder with no sub folders
- Point Clouds: (Native files & Autodesk compatible) (if applicable)
  - ❑ Pre-Con existing conditions
  - ❑ Post construction As-builts (prior to back-filling or slab pouring)
  - ❑ Registered point cloud in non-vendor specific format (ascii text or las) with XYZI (plus RGB if applicable).
  - ❑ Register point cloud in Autodesk RCS/RCP format

PDF Construction Documents

All projects, regardless of design methods (BIM vs CAD) require both design and record/as-built PDF construction documents to be submitted in the format listed below:

- Design / Bid
  - ❑ One pdf file of conformed sheets in a BID set: TAA####-Entire Design Set.pdf
  - ❑ Individual pdf files of said set; named correctly: TAA####-A101.pdf
- As-Built / Record
  - ❑ One pdf file of conformed sheets in a RECORD set: TAA####-Entire Record Set.pdf
  - ❑ Individual pdf files of said set; named correctly: TAA####-A101.pdf

The Primary party will also be issued an excel file in which they are required to populate the title block information from each PDF file.

3.5 State Building Permit Application (if applicable)

3.5.1 Application Phase

A. Most construction projects at Massport properties require a state building permit, which is issued by the Commonwealth of Massachusetts Division of Occupational Licensure Office of Public Safety and Inspections. **Massport facilitates the process of state building permit application and permit issuance for the tenant; however, requirements for the state building permit process and that Massport TAA process are different, and the submissions for each must be kept separate**.

B. Once a TAA or Registered Project number is assigned the Tenant can start the application process for State Building Permit. Application and instructions can be obtained from the Building Code Compliance (BCC) Manager at Massport Capital Programs. The Tenant shall follow the steps below to obtain the State Building Permit

- Step One:
  - Applicant will fill out permit application, provide all required back up documents with the exception of the signed/stamped drawings. Applicant will email documents to the BCC Manager for a pre-review to ensure application has been filled out correctly and completely.
  - Once the submission is deemed complete the following will be submitted to the attention of the BCC manager
    - 1 paper copy of the permit application
    - 1 paper copy of each required additional document listed in the checklist
    - 1 paper copy of a full sized signed/stamped set of drawings.
    - 2 thumb drives that includes all of the above noted documents.
  - The BCC Manager will have 7 days to review the package.
- Step Two:
  - Once submission package is deemed complete, the Assistant Director of Capital Programs Construction Unit will sign off on the package and it will be hand delivered to the State Building Inspector for his review.
  - The State Building Inspector has 30 days from date of receipt to issue the permit. More review time may be required if the project is large.
  - Once the Inspector's review has been completed, he will direct Massport to issue an approval letter to the applicant.
  - This approval letter will be received by the applicant via email and will include instructions on how to set up an IPS account and apply/pay for the permit via the Division of Occupational Licensure's online IPS system.
- Step Three:
  - The applicant will need to set up an online account with the Division of Occupational Licensure's Inspections and Permitting System (IPS) if they do not have one. Once the online account has been set up the applicant will apply/pay for the building permit.
  - The applicant will receive via email a receipt from IPS that contains a pending building permit number.

- This receipt will be forwarded to the BCC Manager at Massport Capital Programs.
- This receipt will be hand delivered to the Building Inspector
- The Building Inspector will then release the permit to the BCC Manager who will deliver the permit to the applicant.

Note: The building permit application required documents can be obtained by contacting Massport Capital Programs Building Code & Compliance Manager.

C. Construction under this permit must commence within **six months** from the date of issuance.

3.5.2 Final Inspections, and Final Submission

When construction is complete and the project is ready to start the project close out process for the Commonwealth of Massachusetts – Division of Occupational Licensure, Office of Public Safety and Inspections, there are several items that must be completed prior to submission of the project close out binder – Final inspections for Electrical, Plumbing and Sheet Metal. Once these final inspections have taken place, the building permit has been signed off by each of the inspectors and all final construction control affidavits are received from the Engineer of Record, the final project closeout binder review process can begin. Steps outlined below:

- Tenant Contractor follow instructions on the project close out binder checklist, which is provided by Massport Capital Programs. This checklist includes the “tabs” and “titles” for each section of the binder.
- When the three ring project close out binder has been completed (with the exception of the final MPA Fire inspection and the final Building inspection) the binder will be submitted to Massport Capital Programs for review. The Contractor/Permit Holder is to keep an electronic copy of the binder contents for their own files.
- When the review of the binder has been completed and the binder has been approved, the MPA Fire final inspections will be scheduled through the BCC Manager at Massport Capital Programs.
- MPA Fire will complete their final inspections and sign the Building Permit in the final block noted on the permit card. This allows the State Building Inspector to schedule his final inspection of the project.
- The State Building Inspector will perform his final inspection and if the inspection passes, the State Building Inspector will provide the final signature required on the permit card.
- The contractor/permit holder will then send a copy of the signed permit card via email to the BCC Manager at Massport Capital Programs. The copy of the permit will be inserted into the project close out binder.
- The project then submits four thumb drives to Massport Capital Programs. They will be distributed to the State Building Inspector, MPA Project Manager and/or MPA Real Estate Asset Manager and MPA Building Code Compliance Manager. They must include the following:

1. The signed off building permit card
2. All project closeout binder contents
3. As-built drawings

- At this time the State Building Inspector will either issue a Certificate of Occupancy or a Certificate of Completion for the project. The certificate will be sent to the permit applicant and all other stakeholders. The project and permit are now officially closed.

(End of Section)

PART 2- GENERAL REQUIREMENTS

4. TERMS AND CONDITIONS

The terms and conditions below apply to all Tenant Alterations on Massport properties. Please read them carefully. The Applicant's signature on the TAA constitutes agreement to comply with and be bound by all conditions of project approval stated in this Guide, on the TAA, and/or otherwise required through the TAA process. Applicant acknowledges that in addition to the TAA there is a right of entry, license agreement or lease agreement by and between the Authority and Applicant providing Applicant with entry upon the work area. It is intended that the terms and conditions of the TAA supplement the terms and conditions relating to Tenant Alterations and other tenant obligations under the right of entry, license agreement or lease agreement between the Applicant and the Authority. In the event of conflict between the TAA and the right of entry, license agreement or lease agreement, the terms of the right of entry, license agreement or lease agreement shall control.

4.1 General Terms and Conditions

A. The Applicant shall obtain prior to, and keep in full force and effect during construction, any and all permits, licenses and approvals relating to the Tenant Alterations that is the subject of this TAA as required pursuant to applicable federal, state and local laws, statutes, ordinances, rules, regulations, directives and orders.

B. The Applicant shall perform all construction under this TAA in accordance with all federal, state, and municipal laws, statutes, orders, ordinances, rules, regulations, and directives, including the Massachusetts Environmental Policy Act ("MEPA"), as may be applicable to the Tenant Alterations or the performance thereof.

C. Approval by the Authority of the Tenant Alterations shall not create any liability on the part of the Authority for the design sufficiency of such work or its compliance with any applicable laws, statutes, ordinances, rules, regulations, directives or orders, nor does it relieve the Applicant of its responsibility for assuring compliance.

D. Approval by the Authority of the Tenant Alterations shall not waive any rights of the Authority under M.G.L. Ch. 21E, §1 *et seq.*, or any other local, state or federal law, statute, ordinance, rule, regulation, directive or order to compel Applicant to assess, contain, remove, remediate, clean-up or take any other response action in connection with any oil or hazardous waste or material that:

   1. Has been released or threatens to be released on or from the premises on which the Tenant Alterations subject to this TAA is performed, or

   2. Is released or threatened to be released in connection with the Tenant Alterations subject to this TAA or to seek payment for or reimbursement of any damages, costs and liabilities of the Authority or any third party for such assessment, containment, removal, remediation, clean-up or response action.

E. The Applicant shall comply with and direct its officers, employees, agents, consultants, vendors, and contractors to comply with the rules, regulations, and directives of the Authority now in effect which are applicable to the performance of the Tenant Alterations, and such further applicable rules, regulations and directives which may from time to time during said performance be promulgated by the Authority for reasons of safety, security, health, preservation of property or

maintenance of a good and orderly appearance of the facility, or for the safe and efficient operation of the facility.

F. Based on information submitted by Applicant in the TAA, the Authority will consider whether the proposed project has the potential to result in the discovery or generation of asbestos containing materials, oil-contaminated media, or other hazardous materials, or to impact any known areas of contamination. Prior to commencement of project construction, Applicant may be required to conduct pre-characterization studies of structures, soil, groundwater, and/or other relevant media as the Authority, in its reasonable judgment, deems necessary to determine the scope and nature of the potential for discovery or generation of asbestos-containing materials, oil-contaminated media, or other hazardous materials. Any such hazardous materials discovered or generated during the course of the Tenant Alterations approved by this TAA must be reported immediately to the Authority and must be handled and disposed of in accordance with the terms and conditions of the right of entry or lease agreement.

G. To the fullest extent permitted by law, Applicant at its sole cost and expense, shall defend, indemnify, and hold harmless the Authority and its members, officers, employees, and agents from and against any and all liabilities, claims, demands, causes of action, losses, damages, actions, including actions for personal or bodily injury or wrongful death, actions for property damage, and any other types of claims asserted by third persons alleging a violation of law or for any other cause, costs, fines, fees and expenses of any kind or nature whatsoever, including attorneys' fees and costs of investigation and litigation, arising from or related to the acts, omissions, operations, or negligence of Applicant, and a tenant's contractors, subcontractors, suppliers, agents, or employees; provided, however, that this obligation to defend, indemnify and hold harmless shall not apply to claims which Applicant demonstrates were caused solely by the negligence or willful misconduct of the Authority. The foregoing express obligation of indemnification shall not be construed to negate or abridge any other obligation of indemnification running to the Authority which would exist at common law, and the extent of this obligation of indemnification shall not be limited by any provision of insurance undertaken by Applicant. In case any action or proceeding is brought against the Authority by reason of any such claim, Applicant upon notice from the Authority, shall resist and defend such action or proceeding with counsel reasonably acceptable to the Authority. The Authority shall give Applicant reasonable written notice of any claims threatened or made or suit instituted against it which could result in a claim of indemnification hereunder.

H. All Tenant Alterations shall be performed in a professional manner, using only first-class materials. Quality control is the responsibility of the Applicant. Tenant Alterations shall be done in accordance with the drawings and specifications described in Part 1 of the Tenant Alteration Application Form (Located in Appendix A) and approved by the Authority, to the satisfaction of and subject to the inspection of the Authority's representatives. The Applicant shall re-do or replace at its expense, any Tenant Alterations not approved by the Authority's representatives.

I. Prior to the commencement of the Tenant Alterations and throughout the performance thereof, the Applicant shall erect and maintain at its own expense in or about the space such barriers, shields, and other suitable protective devices for the protection of the public and others and their property or, as may be necessary or desirable for the purpose. The Tenant Alterations shall be performed in such manner as will cause the minimum inconvenience to members of the public and others at the facility. During the performance of the Tenant Alterations, the Applicant shall not permit the accumulation in or about the space of any debris, rubbish, or litter, of any sort, resulting from the work, and shall make such arrangements for the frequent and controlled

removal thereof from the facility, by means to be furnished by the Applicant, or as may be necessary to prevent such accumulation.

J. In the performance of the Tenant Alterations, the Applicant will employ, directly or indirectly, only labor which can work in harmony with that being employed by Massport at its facilities, and that being employed by other tenants if Applicant is working side by side with such other tenants. Applicant will not employ or permit the use of labor or otherwise take any action, which might result in a labor dispute involving personnel performing work or providing services at Massport's facilities by or on behalf of Applicant. Furthermore, in the event of any such interference or conflict, Applicant, upon demand of Massport, shall cause such contractors, mechanics or laborers causing such interference or conflict to leave the premises immediately. In the event that Massport determines that it is necessary for public safety or the efficient operation of its facilities to post police details or to take other actions as a result of the inability of Applicant's employees, contractors, subcontractors, or other parties performing work on or about the premises to work in harmony with other elements of labor employed at such facilities, Applicant shall reimburse Massport for all reasonable costs incurred by Massport in doing so.

K. The Applicant shall notify the Authority not less than two (2) days prior to the commencement of the Tenant Alteration, and shall complete the Tenant Alterations fully and acceptably within the time period specified in Part 1 of the application. Upon completion of the Tenant Alterations, Applicant shall notify the Authority in writing, and shall provide as-built documentation and Record Drawings, as defined in Appendix B and described in Section Table 3.3, as required by the Authority. In the event the Tenant Alterations performed pursuant to this TAA do not require a State Building Permit, then at the completion of such work, the Authority reserves the right to request that the Applicant provide the Authority with a closeout certificate and all associated backup documentation.

L. The Authority's approval of the TAA shall not imply the existence of any lease or leasehold interest of the Applicant in any Massport's properties.

M. The Authority reserves the right to require payment and performance bonds to ensure project completion in accordance with the Project Closeout Requirements.

4.2 Alteration of Terms and Conditions

It is intended that the terms and conditions of this Guide supplement the terms and conditions relating to Tenant Alterations and other tenant obligations under the existing right of entry, license agreement or lease agreement between a tenant and the Authority. In the event of any inconsistency between the terms and conditions of this Guide and the terms and conditions of the right of entry, license agreement or lease agreement, the more restrictive and stringent provision as applied to a tenant shall control and govern.

(End of Section)

5. TENANT CONTRACTOR INSURANCE REQUIREMENTS

5.1 General Requirements

A. The contactor and subcontractor(s) shall not commence Tenant Alterations under their contract until each has obtained all the insurance required by these specifications and/or provisions.

B. The types and minimum amounts of the insurance to be provided for by the contractor and subcontractor(s) shall be as defined hereinafter.

C. Each policy of insurance required herein shall be in a form and by a company reasonably satisfactory to Massport. Each insurer shall be authorized to do business in Massachusetts and shall have a so-called A. M. Best rating of "A-" or better.

D. All certificates of insurance, except for workers' compensation, shall list Massport as an additional insured and be specifically endorsed to recognize the Tenant's obligations pursuant to the right of entry or lease agreement. The certificates of insurance shall be provided to Capital Programs prior to the issuance of the Approval for Tenant Alteration. Tenant shall additionally provide the certificates of insurance to Massport Real Estate & Asset Management.

E. Insurance certificates shall contain an agreement that such policies of insurance shall not be altered or cancelled by the insurer during its term without giving at least thirty (30) days written notice to Massport.

F. The Tenant shall provide annually updated certificates indicating insurance coverage to Massport, as applicable.

G. Insurance certificates shall reference the project's TAA number, and shall be submitted for every TAA project.

H. Questions on Massport's insurance requirements should be directed to the Massport Risk Management Department.

5.2 Worker's Compensation Insurance

The general contractor and subcontractor(s) shall, before commencing performance of the Tenant Alterations, provide Workers' Compensation insurance as required by law, including Employers Liability insurance with a minimum limit of One Million Dollars ($1,000,000.00), or evidence of satisfactory compliance with the regulations of the Commonwealth of Massachusetts regarding self-insurance, for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws, as amended, to all persons to be employed under the contract, and shall continue such insurance in full force and effect during the term of the Tenant Alterations.

A. Liability Insurance/Commercial General Liability – Tenant shall ensure that the contractor and subcontractor(s) shall obtain and maintain a Commercial General Liability Policy, including products/completed operations coverage, with a combined single limit provision for bodily injury and/or property damage of a minimum of One Million Dollars (**$1,000,000.00)**, and written on an occurrence basis, and including XCU coverage (explosion, collapse, underground), as applicable.

B. Commercial Automobile Liability and Property Damage – The contractor and subcontractor(s) shall obtain and maintain commercial automobile liability insurance for bodily injury and property damage with a minimum combined single limit of not less than **$1,000,000**, written on an occurrence basis, covering all owned vehicles, or non-owned vehicles for all damages arising out of bodily injuries, death or destruction of property.

NOTE: Massachusetts Port Authority shall be named as an additional Insured on all policies of liability insurance.

C. Property Insurance – The contractor and subcontractor(s) shall provide property insurance to cover business personal property and property in the contractor and subcontractor(s) care, custody and control at the work site to the full insurable interest thereof and shall with respect to said property insurance designate the Tenant and Massport as additional insureds and loss payee as their interest may appear.

Contractor and subcontractor(s) shall also provide Builders Risk coverage for projects that involve the construction of facilities separate and apart from existing structures.

D. All limits of liability and coverage are subject to review and change based upon the nature and scope of work to be performed. The Authority reserves the right to require higher insurance coverage amounts in its sole discretion.

5.3 Pollution Liability Insurance

When projects involve oil and hazardous materials (e.g., asbestos abatement, tank and/or pipeline removals), contractor and subcontractor shall obtain and maintain appropriate pollution legal liability insurance, as determined by Massport.

(End of Section)

6. CODES, LAWS, AND COMPLIANCE

6.1 Regulatory Construction Permits and Certificate of Occupancy

A. New construction, renovations to existing buildings, and/or spaces within existing buildings, including associated demolition, are subject to the requirements of the State Building Code and require review, approval and issuance of appropriate permits by the Commonwealth of Massachusetts agencies, and others that may apply. All construction documents shall be reviewed and approved by the State Building Inspector and required permits obtained prior to start of any construction.

B. All construction is subject to:

1. Massachusetts General Law (M.G.L.) Chapter 143, Section 54A "Acceptance or Approval of Construction Plans or Specification; Seal of Architect or Professional Engineer"

2. 250 Commonwealth of Massachusetts Regulations (CMR) Board of Registration of Professional Engineers and Land Surveyors

3. 231 CMR Board of Registration of Architects

C. The State Building Inspector will review all construction documents subject to regulatory permits or may direct how construction documents are to be reviewed and approved prior to the issuance of a State Building Permit, which may include the review of plans with design professionals or contractors.

D. All construction is subject to periodic inspections during construction by any authorized inspection authority, and is subject to final inspection prior to the issuance of a certificate of occupancy by the permitting authorities.

E. For projects within the City of Boston, permits and inspections are the responsibility of the following agencies and entities:

Permit	Responsible Agency/Entity
Building Permit	Commonwealth of Massachusetts Department of Public Safety - State Building Inspector
Plumbing and Gas Permit	Board of State Examiners of Plumbing and Gas Fitters, State Plumbing Inspector
Elevator Permit	Department of Public Safety Elevator Board, State Elevator Inspector
Electrical Permit	City of Boston Inspectional Service Department, Electrical Inspector
Cross-connection (Backflow Preventer/Sprinkler Systems) Permit	Boston Water and Sewer Commission

Permit	Responsible Agency/Entity
Restaurant/Food Establishment	City of Boston Inspectional Services, Health Department Inspector, Board of Health (Liquor License through City of Boston)
Fire Protection, Fire Prevention Permits	Massport's Fire Marshal's Office
Storage Tank Permits (Installation and Removal)	State Fire Marshal's Office
Sheet Metal Permit	Commonwealth of Massachusetts
FAA 7460 Crane Determination	Federal Aviation Administration
Trench Permit	Massport Capital Programs
Certificate of Inspection	Commonwealth of Massachusetts Department of Public Safety – State Building Inspector
Assembly Permit	Massport's Fire Marshal's Office
Common Victualler License	City of Boston
BATH License	City of Boston

6.2 Massport's Fire Marshal's Office Permits

Applications for the following activities shall be made online at https://www.massport.com/safety-and-security/fire-rescue-permits :

- Assembly Permit
- Automatic Sprinkler Systems Permit
- Bag Smoke Detector Permit
- Barbeque Permit
- Fire Alarm Permit
- Fire Detail Request
- Fire Hydrant Permit
- Flammable and/or compressed gas storage Permit
- Flammable and/or compressed liquid storage Permit
- Hotwork Permit
- BDA (bi-directional antenna/amplifier) system as required by Building Code and functional to all required frequencies

6.3 Laws, Regulations, Standards and Massport's Fire Marshal's Office Fire Protection and Fire Prevention

A. Massport's Fire Marshal's Office reserves the right through the Massachusetts Port Authority's enabling act, legislation, regulations and certification manuals to meet or exceed minimum state regulatory fire protection, fire prevention and construction safety requirements for the protection of all of its properties and the safeguarding of the general public, employees, tenants and emergency response personnel.

B. At a minimum, the following regulatory documents must be complied with for all construction and construction installation activities at all times:

1. M.G.L. Chapter 143, Sections 1 *et seq.*, "Inspection and Regulations of, and Licenses for Buildings, Elevators and Cinematographs"
2. 780 CMR Section 10 *et seq.*, The Massachusetts State Building Code
3. 524 CMR "Board of Elevator Regulations"
4. 521 CMR, "Architectural Access Board"
5. M.G.L. Chapter 148, "Fire Prevention"
6. 527 CMR, "Massachusetts Comprehensive Fire Safety Code"
7. 310 CMR, "Department of Environmental Protection"
8. 105 CMR Section 120, "The Control of Radiation"
9. 248 CMR "Board of State Examiners of Plumbers and Gas Fitters"
10. 237 CMR "Board of State Examiners of Electricians and Board of Electricians Appeals"
11. 528 CMR "Bureau of Pipefitters & Refrigeration Technicians"
12. Americans with Disabilities Act of 1990, 42 USC 1210 *et seq.*, as amended
13. All applicable regulations of the Occupational and Health Administration (OSHA), as amended

C. See below excerpt from 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code

1.15 Technical Assistance

1.15.1 General

1.15.1.1 As permitted by other sections of this CODE the Authority Having Jurisdiction (AHJ) shall be permitted to require a review by an approved independent third-party with expertise in the matter, to be reviewed at the submitter's expense.

1.15.1.2 The independent reviewer shall provide an evaluation and, if appropriate, recommend necessary changes of the proposed design, operation, process, or new technology to the AHJ

1.15.1.3 The AHJ shall be authorized to require design submittals to bear the stamp of a registered professional.

1.15.1.4 The AHJ shall make the final determination as to whether the provisions of this code have been met.

The above mentioned code allows the AHJ to request a 3rd party reviewer of the fire protection systems during the design process. Massport Fire may request that a Tenant Alteration must submit all plans to a third party reviewer at the submitters expense. After the third party review, the results are to be shared with Massport Fire/Rescue and a final determination will be issued from Massport Fire/Rescue in writing to all parties involved.

6.4 Accessible Facilities

Massport is committed to developing and maintaining accessible facilities for the traveling public, and requires its tenants and vendors to commit to the same. All new construction and alterations undertaken by the Tenant must fully comply with all state and federal accessibility regulations and codes.

6.4.1 Compliance with Americans with Disabilities Act (ADA) Requirements

A. Massport is a public entity subject to Title II of the Americans with Disabilities Act (42 USC 12101, et seq. and regulations at 28 CFR part 35 et seq.). To the extent permitted by law, Massport's obligations under Title II of the ADA shall be assumed by and become obligations of the Tenant.

B. Private entities are covered under Title III of the ADA. Title III prohibits discrimination on the basis of disability by private entities in places of public accommodation (facilities that provide products and services to the public) or commercial facilities (facilities that provide products and services to other businesses.)

C. Applicants are required to comply with all obligations related to construction and alterations under the ADA, including without limitation the most recent edition of the ADA Standards for Accessible Design: http://www.ada.gov/2010ADAstandards_index.htm

D. Employee common use areas (e.g. lounges, toilet and locker rooms, and emergency egress routes) are required to be fully accessible. Employee-only work areas must be designed and constructed so that a person with a disability can approach, enter, and exit. Under Title I of the ADA, any employer with fifteen (15) or more employees is required to make reasonable accommodations for employees with disabilities as defined in the ADA.

E. Readily Achievable Barrier Removal. Some tenants may have architectural and communication barrier removal requirements even though they are not engaged in a tenant alteration. Owners and operators of public accommodations have an obligation to remove architectural barriers and communications barriers within existing facilities. The deadline for compliance was January 26, 1992 and is an on-going obligation. This barrier removal obligation is equivalent to an affirmative action requirement.

6.4.2 Compliance with Massachusetts Architectural Access Board (AAB) Regulations (521 CMR Section 1.0 et seq.)

The Tenant is subject to all provisions of the Massachusetts AAB Regulations, 521 CMR 1.0, *et seq.* http://www.mass.gov/eopss/architectural-access-board.html. The rules and regulations of the AAB are in addition to the ADA requirements. The AAB has stated its intention to bring the state regulations into a substantial equivalency with the ADA standards. Until this is achieved, compliance with AAB's regulations, as well as the ADA standards for all alterations to public areas is required.

(End of Section)

PART 3 – DESIGN AND CONSTRUCTION REQUIREMENTS

7. DESIGN CRITERIA

7.1 General Requirements

A. Tenant projects are generally subject to the requirements indicated herein. Proposed deviations shall be subject to review and approval through the TAA process.

B. The Tenant's design team shall refer to Appendix B: *Massport's Guide to BIM & VDC on TAA Projects* to determine required design deliverables and whether BIM use is necessary. See also the digital file submission requirements in Part 1 "Tenant Alteration & Construction Process", Section 3.4.3.

7.2 Architecture

7.2.1 General

A. No wood blocking shall be used.

7.2.2 Carpet Material

A. All new carpet material shall reflect acceptable Critical Radiant Flux Test Criteria as specified in the State Building Code.

Omni Hotel at Seaport interior

B. A minimum Critical Radiant Flux Test rating of 0.22 watts centimeter squared or better is acceptable within a building with 100% sprinkler protection throughout.

C. A minimum Critical Radiant Flux Test rating of 0.45 watts per centimeter squared or better is acceptable within a building without sprinkler protection, if approved by Massport's Fire Marshal's Office.

D. Carpet Material Test Reports from an approved testing laboratory shall be submitted to Massport's Fire Marshal's Office for review and approval prior to carpet installation. Specification data sheets from the manufacturer will not be accepted in lieu of an actual material test report.

E. Carpet material shall be installed only by methods defined in applicable test reports and presented to Massport's Fire Marshal's Office for review and approval. If a carpet is tested as direct glue down installation, then it shall be installed in the same manner, without any type of padding and/or underlayment.

F. Massport's Fire Marshal's Office reserves the right and authority to oversee and further regulate the installation of any and all carpet installation within Massport's facilities and tenant areas. New carpet installation in any areas that are not regulated by the State Building Code will be evaluated for use on the basis of either Critical Radiant Flux Test Criteria and/or flame spread, fuel contribution, or smoke development test criteria.

7.2.3 Other Interior Finishes

A. Interior finishes and materials installed within building areas shall comply with both 780 CMR State Building Code and 527 CMR 1.00 et seq., the Massachusetts Comprehensive Fire Safety Code, latest edition.

B. All materials used for interior finish and/or for decorative purposes shall be approved for use prior to installation. Flammability Test Report Data and Manufacturer Specification Data shall be submitted to Massport's Fire Marshal's Office for review and approval prior to material installation.

C. Interior finish material shall be installed on non-combustible surfaces. If new finish material is to be installed on existing surfaces, then all finish materials, including glues and bonding agents shall be removed prior to installation of any new material.

D. Interior finish material shall be installed in accordance with the approvals issued by designated testing agency.

E. Acoustical type ceiling tiles shall have a Class A Flame Spread Rating. Suspended ceilings and their support systems shall be listed by Underwriters Laboratories, Inc. as non-combustible construction. Combustible construction and building components are not permissible above any ceiling areas. Insulation for pipes and duct-work (including duct liners) and their adhesives shall be non-combustible and listed by Underwriters Laboratories, Inc. as non-combustible building materials.

7.2.4 Decorative Material

A. All decorative materials to be used within Massport buildings shall satisfy all requirements regulated by 527 CMR Section 1.00 *et seq.*, the Massachusetts Comprehensive Fire Safety Code, latest edition. Manufacturer data sheets shall be submitted to Massport's Fire Marshal's Office for approval.

7.2.5 Furniture

A. Upholstered furniture, molded seating, and re-upholstered furniture shall comply with the State of California, Bureau of Home Furnishing and Thermal Insulation Technical Bulletin Number 117 (Cal. 117), entitled "Flammable Test Procedures for Seating for Use in Public Occupancies", dated 1991 as amended and as regulated by 527 CMR Section 1.00 et seq., the Massachusetts Comprehensive Fire Safety Code, latest edition.

B. The following label shall be attached to all articles of regulated furniture complying with Cal. 117.

NOTICE: THIS ARTICLE IS MANUFACTURED FOR USE IN PUBLIC OCCUPANCIES AND MEETS THE FLAMMABILITY REQUIREMENTS OF CALIFORNIA BUREAU OF HOME FURNISHING TECHNICAL BULLETIN 133. CARE SHOULD BE EXERCISED NEAR OPEN FLAME OR WITH BURNING CIGARETTES.

7.3 Mechanical Systems

Boston Sword & Tuna Construction

7.3.1 General

A. All mechanical system contract documents (drawings and specifications) shall be designed and stamped by a Massachusetts registered professional engineer (P.E.).

B. The design of HVAC systems shall meet all applicable manufacturer standards, SMACNA, ASHRAE, state, and local minimum codes. The Tenant's project designer, as part of the TAA submittal, shall provide Massport with complete information on the characteristics of all HVAC equipment components proposed for the Tenant Alterations in electronic tabular form, and shall update this information at the completion of construction should any of the components be altered during construction.

C. Abandonment of equipment is not allowed and shall be removed. During construction, filters shall be installed on supply and return openings, and maintained throughout the project. Filters are to be replaced, not cleaned.

D. Floor penetrations shall be sleeved and sealed against water.

7.3.2 Mechanical Insulation

A. All horizontal insulated piping below 6 feet above the finish floor level shall be equipped with a metal jacket with integral metal banding.

B. Heating tracing shall be used on all piping where needed.

C. Rigid or semi-rigid insulation on HVAC equipment shall be attached using welded pin and speed washer assemblies.

7.3.3 Kitchen Hood System

A. Kitchen hood and kitchen hood suppression systems shall be designed, installed and tested per the current edition of NFPA 96, "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations".

B. Suppression systems shall be interconnected to the building fire alarm system.

C. Tenants shall maintain adequate cleaning of kitchen hood systems and testing of suppression systems in accordance with 527 CMR 1.00 et seq., the Massachusetts Comprehensive Fire Safety Code and with all applicable laws, ordinances, rules and regulations and as directed by Massport's Fire Marshal's Office.

7.4 Electrical Systems

7.4.1 General

A. The requirements of the Massachusetts Electrical and Building Codes, as currently amended, shall be fully met and shall be used as the minimum basis of design.

B. All Tenant Alterations are subject to the inspection and approval of the Wiring Inspection representative of the Division of Inspectional Services of the local jurisdiction and by Massport. Contractors are responsible for obtaining all necessary permits.

C. All Tenant Alterations shall be performed by competent licensed electricians as required by the applicable code, using the quality and quantity of materials at least equal to those specified in the approved contract documents.

D. After the construction of any electrical system, the installing contractor shall prepare and submit complete certified as-built drawings ("As-Built Drawings") showing all parts of the work as actually installed prior to Massport's acceptance of that system and update electrical one line diagrams. As-Built Drawings shall be prepared as provided under Record Drawings in Part 1 "Tenant Alteration & Construction Process", Section 3.4.3 of this Guide.

7.5 Bidirectional Antenna Systems

7.5.1 General

A. 780 CMR 916.1 emergency responder radio coverage is required to be provided in all new buildings in accordance with sections 916.2 through 916.3 and NFPA 72 section 24.5 Two –way, in-building Emergency Communications Systems. New buildings are required to install a Bi-Directional Amplifier (BDA) system to ensure adequate signal strength. This typically consists of a distributed antenna system (DAS) installed throughout each floor of the building and wired to amplifier equipment. The amplifier equipment then connects to an exterior donor antenna which communicates with the municipalities public safety communication systems.

B. Two Way Radio Communications Enhancement Systems generally need to accommodate several different radio frequencies in order to address the responding fire department's needs, as well as any frequencies required by other emergency responders that require radio coverage. The system

is expected to be able to accommodate future expansion to cover new or changing frequencies. These requirements should be considered when designing the BDA system.

7.6 Plumbing

7.6.1 General

A. All plumbing work shall comply with the current and applicable Commonwealth of Massachusetts Uniform State Plumbing Code 248 CMR 10.01 – 10.23 regulations in effect at the time of construction.

B. The contractor shall obtain all required plumbing permits from the Commonwealth of Massachusetts State Plumbing Inspector, pay all fees, and arrange all inspections as required to comply with 248 CMR 3.05.

7.6.2 Backflow Preventers

A. Unprotected cross connections are in violation of 310 CMR Section 22 of the Drinking Water Regulations of Massachusetts. A cross connection is defined as any actual or potential connection between a distribution pipe of potable water from a public water system and any waste pipe, soil pipe, sewer, drain or other unapproved source. Without limiting the generality of the foregoing, the term cross connection shall also include any bypass arrangements, jumper connection, removal section, swivel or changeover devices, and other temporary or permanent connections through which backflow can occur.

B. Where backflow preventers are required, the Tenant shall submit plumbing diagrams as part of the TAA process, which shall include a single line schematic diagram indicating:

- water lines,
- the separation of domestic and process water,
- the type, size and model number of the backflow preventer to be used, and
- all clearances involved in the installation of the backflow device.

Under no circumstances will a vertical installation of a reduced pressure backflow preventer or double check valve assembly be approved, regardless of manufacturer's suggestions or specifications.

C. Reduced pressure backflow preventers shall not be installed outdoors. The backflow device shall be installed on a building or structure in order to protect the device from flooding, snow and ice embedment, freezing, or mechanical damage due to normal activities in the vicinity of the device.

D. When the plumbing diagrams are submitted for approval, they shall be accompanied by a "Boston Water and Sewer Commission Backflow Preventer Device Design Data Sheet" which has space provided for the Master Plumber's License Number and Plumbing Permit Number. Backflow devices shall be installed and inspected under a permit issued by the State Board of Plumbing Examiners.

7.6.3 Grease Interceptor/Trap

A. Grease interceptor/trap shall be by Endura, MIFAB, Zurn, Big Dipper, or approved equal.

B. Tenant shall furnish and install, as needed, a "point-of-use" grease trap bearing the seal of approval from the Plumbing Drainage Institute (PDI). Accessible flow control shall be provided for servicing the unit. The interceptor shall be constructed of seamless engineered thermoplastic and be readily accessible for periodic cleaning.

C. Kitchen waste shall be separated from the sanitary system, upstream of the interceptor. The Tenant's engineer is responsible for locating the existing system and showing proper tie-ins on the construction contract documents.

D. To ensure maximum efficiency, a flow control fitting shall be provided on the inlet.

7.7 Fire Protection Systems / Safety

7.7.1 Fire Protection Sprinkler and Standpipe Systems - General

A. All new construction and alterations shall incorporate fire protection sprinkler systems throughout with water flow switches connected to a zoned annunciator.

B. Inspection test ports shall be provided and locations indicated on the construction contract documents.

C. Exposed standpipe systems shall be color coded, color galvanized.

D. Schedule 10 piping is permissible for ground-up construction under Third Party projects as defined in this Guide, and as may be allowed as permitted by NFPA.

E. Fire department connection with cast bronze identification plate shall be provided to identify service designated: Viz. – "AUTOSPKR', "OPEN SPKR", "STANDPIPE" OR "AUTOSPKR and STANDPIPE".

F. All fire protection contract documents (drawings and specifications) shall be designed and stamped by a MA licensed fire protection engineer.

G. Hydrant flow test data will be provided if it is available and less than 12 months old. Otherwise, a new hydrant test shall be conducted. Massport Water Department will perform hydrant flow tests at Logan International Airport properties only.

H. Access to above-ceiling valves and equipment shall be provided. In addition, locations of all above-ceiling valves and equipment shall be permanently labeled as approved by the Capital Programs Department. Access shall not be blocked by furniture or equipment and shall be easily accessible above any ceiling tile or access panel, within reaching distance of the ceiling, if possible.

I. Fire protection during demolition: Upon removal of any ceiling tiles or grid, sprinkler heads are to be identified by safety tape or other marking, and all heads are to be turned up and made upright instead of pendant to ensure that they will activate in a fire condition. No area shall be rendered as unprotected throughout the entire duration of demolition and construction of the project unless a fire watch is in place, and a sprinkler impairment permit is used by the Massport Fire Marshal.

7.7.2 Automatic Sprinkler Systems and Protection

A. Automatic sprinkler systems shall be installed in all areas (100% protection) of all new and existing buildings and portions of existing buildings being renovated regardless of size in accordance with the most recent edition of NFPA 13, "Standard for the Installation of Sprinkler Systems". Exceptions include the following:

1. No sprinkler protection shall be permitted in elevator hoistways, pits, machine rooms or control spaces as regulated by 524 CMR Section 10 "Board of Elevator Regulations", current edition.

2. Requests for the omission or removal of sprinkler protection for any building, portion or area of a building shall be made, in writing, to Massport's Fire Marshal's Office with a statement of reason, including what alternative protection will be provided for consideration.

B. All automatic sprinkler systems shall be designed, installed and tested in accordance with NFPA13, "Standard for the Installation of Sprinkler Systems," current edition, and any applicable NFPA Standard referenced therein.

C. All sprinkler and standpipe systems, and related equipment and components, such as standpipes, fire pump systems, etc. shall be provided with protection against damage subject to earthquakes in accordance with NFPA 13, "Installation of Sprinkler Systems," current edition.

D. All fire protection equipment and devices shall be Factory Mutual (FM) approved.

E. All sprinkler heads shall be Quick Response Type. Sprinkler head spacing shall not exceed 15 feet, and sprinkler area protection shall not exceed 130 sq. ft. for each sprinkler head unless approved otherwise by the Massport Fire Marshal's Office.

F. The design approach for all buildings, portions of buildings and tenant spaces, except warehouses, aircraft hangars, high-rise buildings, residential occupancies shall be as follows:

1. All automatic wet-type sprinkler systems shall be hydraulically calculated in accordance with NFPA 13, "Standard for the Installation of Sprinkler Systems," current edition, and the following system design criteria:

   - 0.19 gpm per sq. ft. over a 2000 sq. ft. design area
   - 0.18 gpm per sq. ft. over a 2500 sq. ft. design area
   - 0.17 gpm per sq. ft., over a 3000 sq. ft. design are.

2. Dry systems are allowed in un-heated buildings only. Automatic dry-type sprinkler systems shall have their design area increased in accordance with the applicable requirements of NFPA 13 "Standard for the Installation of the Sprinkler Systems", current edition, unless approved otherwise by Massport's Fire Marshal's Office.

3. Automatic pre-action sprinkler systems, when proposed, shall be double interlock type and designed per the above noted criteria and manufacturer's requirements.

4. The hose stream allowance shall be a minimum of 250 gpm.

G. All sprinkler system test valves shall discharge to the outside of the building and/or to a drain receptacle not subject to overflow/water damage and be accessible without the use of ladders, hoses and or special tools.

H. All sprinkler system flow alarm devices shall be set to activate an alarm between 30 to 45 seconds upon water flow and connected to the fire alarm system as an alarm (evacuation) signal.

I. All sprinkler system control valves shall be provided with a lock and chain and tamper switches, and connected to the fire alarm system as a supervisory signal.

J. All automatic dry pipe systems shall be provided with high/low air alarm supervisory switches and connected to the fire alarm system.

K. All sprinkler systems shall be steel piping and satisfy the material specifications requirements per NFPA 13 "Standard for the Installation of the Sprinkler Systems", current edition. No CPVC shall be permitted in any sprinkler system installation unless approved otherwise by Massport's Fire Marshal's Office.

L. Any required manual releasing station for any type of fire suppression system shall be installed in a location approved by Massport Fire Rescue.

M. Any ANSUL systems to be installed or reconfigured as part of a Tenant Alteration process shall be of the total flooding design only. Appliance specific coverage or design is prohibited. Certain appliances may however require separated fixed dedicated ANSUL nozzles for effective coverage in addition to the total flooding system such as eyebrow broilers or cheese melters.

N. All Tenants, as part of the TAA approval, shall be required to furnish an approved Knox Box upon request of Massport Fire Rescue at the Tenant's expense. The Knox Box shall be installed in an approved, durable, workmanlike manner at the Tenant's expense as directed by Massport Fire Rescue.

O. All fire protection sprinkler systems shall be "hard piped" to allow for a functional flow test of all waterflow alarm devices without the use of additional hose lengths or other equipment and without causing water damage to any area.

P. All Tenant retails shops and spaces shall be equipped with a dedicated sprinkler control valve and flow switch to isolate only that space, unless the Fire Marshal's Office approves of an alternate arrangement.

7.7.3 Underground Fire Mains and Hydrants

A. All underground fire mains and fire hydrant systems shall be designed, installed and tested in accordance with NFPA 24 *Standard for the Installation of private Fire Service Mains and their Appurtenances*, current edition. All new fire hydrants shall match the Massport standard, Mueller Super Centurion 5-1/4" right hand open. Fire hydrants shall be located within 100 feet of a fire department connection. The final location of all fire hydrants shall be determined by Massport's Fire Marshal's Office. The type and style of fire hydrants shall be determined by Massport's Facilities Department.

7.7.4 Standpipe System

A. A standpipe system, if required by the State Building Code, shall be designed, installed and tested per NFPA 14 *Standard for the Installation of Standpipe and Hose Systems*, current edition. The Fire Marshal's Office shall be consulted relative to all requirements and approvals of operational flow and pressure requirements, location, type and style of fire department hose valves and if a 1-1/2" diameter fire hose station will be required for a specific building or occupancy. The standpipe system shall be designed to provide 100 psi residual pressure at all fire department hose valve outlets when supplemented through the fire department pumper connection at 150 psi in-let pressure. Massport's Fire Marshal's Office reserves the right to require additional fire department hose valves during site inspections or at time of final inspection due to unforeseen building conditions requiring accessibility of fire department hose valves. An FDC sign must be provided and clearly indicate the required pump pressure at the connection point.

7.7.5 Fire Pump System

A. A fire pump system, if required as part of an automatic sprinkler system and/or standpipe system, shall be designed, installed and tested per NFPA 20 "Standard for the Installation of Stationary Pumps for Fire Protection", current edition. The Fire Marshal's Office shall be consulted relative to requirements and approval of type of fire pump(s) to be used and location of all equipment and operational features.

7.7.6 Commercial Kitchens

A. Kitchen hood systems and kitchen hood food suppression systems shall be designed, installed and tested per NFPA 96, "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations," current edition. The suppression system shall be interconnected to the building fire alarm system. Tenants shall maintain adequate cleaning of kitchen hood systems and testing of suppression systems in accordance with the current edition of the Massachusetts Comprehensive State Fire Code 527 CMR 1.0 and as directed by Massport' Fire Marshal's Office.

B. Kitchen grease exhaust systems shall be electrically interlocked by the installing contractors such that any cooking equipment located under the grease exhaust hood will not operate without the grease exhaust fan operating, and if the grease exhaust fan is inadvertently shut down while cooking, any cooking equipment located under the grease exhaust hood will automatically shut down until the exhaust fan is made operational again.

C. The use of wheeled cooking equipment located under any listed grease exhaust hood, including with or without locking casters or chains and padlocks, is prohibited. All cooking equipment located under any listed grease exhaust hood shall be installed in a stationary manner with sufficient clearance provided below and behind said equipment to allow for proper floor and wall cleaning and disinfection as required. As an alternative, the installation of a total-flooding type Ansul system under the entire grease exhaust hood, rather than an equipment-specific Ansul-type installation, will be permitted to allow the installation of wheeled cooking equipment.

D. All kitchens that produce smoke and/or grease laden vapors shall be provided with the following:

1. A minimum of one UL-listed Class K type fire extinguisher, which shall be mounted in a durable manner immediately below or adjacent to the manual pull ring for the kitchen fire suppression (Ansul) system. The manual pull ring shall be installed along the natural

path of egress leading out of the kitchen to bring occupants to an exit before reaching the pull ring and extinguisher.

2. A durable laminated schematic securely affixed to the wall in a visible location in the kitchen that clearly shows the layout and relevant dimensions of the entire kitchen grease exhaust hood and related duct system from the point of grease entry into the system to the point of grease discharge to the atmosphere outside.

E. All walk-in coolers and walk-in freezers shall be provided with a minimum of one emergency light fixture within said cooler or freezer. The Fire Marshal's Office requires fire alarm audio/visual and sprinkler within the cooler and visual only within the freezer.

F. All sprinkler spaces, storage rooms, offices, food preparation areas, walk-in coolers and freezers not in view of the public in which there exists the potential to store items stacked up to the ceiling shall be equipped with permanent signs reading, "No storage allowed within 18 inches of ceiling" and shall have a red line painted on the wall perimeter at a level 18 inches from the ceiling. In unsprinkled buildings the distance should be 24 inches. The signs shall be mounted above the line a minimum of once on every wall. This requirement is inclusive of walk-in coolers and freezers equipped with sprinkler heads.

7.7.7 Extinguishers

A. Fire extinguishers with visible signage as to their location are required to be installed in all building areas. The specifying architect/engineer or installing contractor shall review NFPA 10, "Standard for Portable Fire Extinguishers", current edition, and make a recommendation as to the appropriate type for the hazard. Generally, Type ABC extinguishers are required inside buildings; Type BC are required near and on airport ramp areas. Massport's Fire Marshal's Office shall be consulted as to final requirements and approval of type, size and location of all fire extinguishers. All extinguishers shall be equipped with a valid Inspection Data Tag indicating its last date of inspection, as well as the inspection firm's certificate of registration number as issued by the Massachusetts State Fire Marshal's Office.

7.7.8 Smoke Control System

A. A smoke control system, if required by the State Building Code or as a construction alternative, shall be reviewed by Massport's Fire Marshal's Office relative to specific design, operational requirements and final approval. The smoke control system shall be tied into the fire alarm system and be compatible.

7.7.9 Fire Suppression System

A. Clean agent fire suppression systems, when provided in addition to automatic sprinkler protection, shall comply with NFPA 2001 "Standard of Clean Agent Fire Extinguishing Systems", current edition. Automatic sprinkler system protection cannot be eliminated unless approved by Massport's Fire Marshal's Office.

7.7.10 Fire Alarm System

A. Fire alarm system design, installation and testing shall be in accordance with most recent edition of NFPA 72 National Fire Alarm and Signaling Code, and NFPA 70 National Electrical Code

(Massachusetts Edition) and as amended by 527 CMR, Section 12, of the Massachusetts Electrical Code. The design shall also be in accordance with the State Building Code, the Americans with Disabilities Act (ADA), Massport's Fire Marshal's Office and the requirements of the local authority having jurisdiction.

B. All fire alarm system circuit wiring shall be installed in conduits and/or MC fire alarm cable with red markings.

C. The performance and design of initiating device circuits (IDC) shall be Class A (Style D), unless approved otherwise by Massport's Fire Marshal's Office.

D. The performance and design of signaling line circuits (SLC) shall be Class A (Style 7), unless approved otherwise by Massport's Fire Marshal's Office.

E. The performance and design of notification appliance circuits (NAC) shall be Class A (Style 2) unless approved otherwise by Massport's Fire Marshal's Office. All notification appliances shall have speaker/paging capabilities.

F. Notification (visual/strobe) appliance candela ratings shall be identified on all construction documents and shall comply with location and spacing requirements per most recent edition of NFPA 72 "National Fire Alarms and Signaling Code", Chapter 7, Table 7.5.4.1(a) "Wall mounted" or Table 7.5.4.1.1(b) "Ceiling mounted" or Section 7.5.4.3 "Performance Based Alternative". All visual/strobes shall be synchronized.

G. Smoke detection shall be provided in all electrical rooms and/or electrical closets, fire alarm control and remote panel locations, notification appliance power booster panel locations and in the immediate vicinity of transformers located above suspended ceilings, all storage rooms regardless of size, and all locations specified by 524 CMR "Board of Elevator Regulations".

H. Double action pull-boxes (stations) shall be provided at all required building exit doors and exit doors with an exit sign. Pull-boxes (stations) shall be provided so that the travel distance to any pull-box does not exceed 200 ft. All pull-boxes (stations) shall be provided with protective stopper covers with built-in local alarm devices.

I. HVAC duct smoke detection shall be provided in all HVAC units over 2000 cfm in the air supply side and located per manufacturer's (JCI) recommendations and instructions. The duct smoke detector shall be provided with a remote test switch in the vicinity of the duct smoke detector and be readily accessible for testing. All HVAC duct detectors shall be properly labeled and coordinated with remote test switches, HVAC units on roof, fire alarm control panels and remote annunciators.

J. Fire alarm system evacuation signals shall have a synchronized three-pulse temporal pattern in accordance with most recent edition of NFPA 72 "National Fire Alarms and Signaling Code". No pre-recorded evacuation instruction messages shall be provided unless approved otherwise by Massport's Fire Marshal's Office.

K. Fire alarm control panel and remote annunciators with manual voice paging capability shall be provided and located as directed by Massport's Fire Marshal's Office. Location of panels and annunciators shall be determined during the plan review process.

L. The designer of the fire alarm system shall indicate on plans, the location of all fire alarm system equipment and devices, location of all other fire and life safety system devices connected and integrated with the fire alarm system (such as sprinkler, HVAC, fire suppression devices, etc.) All circuitry location and wiring type shall be identified on fire alarm as-built plans prior to requesting a final inspection. When occupied premises transfer from a former to a present tenant, the new tenant (or master tenant) is required to engage Massport's fire alarm contractor (JCI) to readdress the fire alarm and signal system. All tenant spaces are required to have a (FATC) fire alarm terminal cabinet within their space. The reuse of an existing FATC within the Tenant space may be allowed. If no FATC exists, the Tenant shall provide new.

M. Any Tenant lighting controls, sound system, or other type of audio entertainment system shall be interlocked with the building fire alarm and signal system such that activation of the building fire alarms will override the lighting controls and cause the audio entertainment system to become silent until the building fire alarm system is fully reset.

N. All Tenant retail shops and spaces shall be provided with a manual fire alarm pull station in a location approved by the Fire Marshal's Office.

O. All fire alarm systems shall be connected to an approved central station as follows:

   a. Boston Fire Department and/or local fire department, depending on location of site.

   b. When direct connection to a local fire department is unavailable, a central station shall be provided by a Fire Alarm Service Company that is acceptable to both Massport and the local fire department.

P. All new Tenant construction shall be required to provide and install an approved UL-listed emergency key box (Knox Box) in a location approved by Fire Rescue. Instead of a Knox Box, the tenant may provide Massport Fire Rescue with a MasterKey to the property.

7.8 Telecommunication Systems

7.8.1 General

A. Applicable Publications Standards

Except where otherwise noted, all material and workmanship shall conform to the most current industry standards. All equipment shall operate in conformance with these standards as designated for each cable component including:

- EIA/TIA Commercial Building Telecommunications Wiring Standard
- EIA/TIA Commercial Building Standard for Telecommunications Pathways and Spaces
- EIA/TIA Administration Standard for Telecommunications Infrastructure of Commercial Buildings
- EIA/TIA - Commercial Building Grounding and Bonding Requirements for Telecommunications

- ASTM Fire Tests of Through-Penetrations Fire Stops
- NFPA National Electrical Code
- ANSI/IEEE Std. - Recommended Practice for Powering and Grounding Sensitive Electronic Equipment in Industrial and Commercial Power Systems
- Appropriate federal, state and local building codes and ordinances

B. As-Built Drawings

The contractor shall provide and keep up-to-date a complete record set of as-built drawings which shall be corrected and shall show every change from the original specifications and contract drawing. Please refer to Appendix B for complete as-built requirements. These drawings will include:

- Inter-building paths
- Conduit and cable detail
- Entrance facility and equipment rack layouts
- All splice points and cross connect/patch panel points
- Fiber and copper cable lengths installed
- Fiber cable and individual fiber routes
- Copper cable and individual twisted pair routes
- Acceptance Testing
- A complete description of acceptance testing procedures as outlined by product below

7.9 Fire Protection Signage

A. All storage rooms shall be provided with visible, permanently mounted signs to read “No Storage within 18” of ceiling or within 36” of any electrical equipment”, and a red line painted 18” below the ceiling on each wall of the room. Distance shall be 24” in unsprinkled rooms. Signs shall be red background with 1” high white letters.

A. All fire protection system equipment shall be properly identified as to its function.

B. Massport’s Fire Marshal’s Office reserves the right to request additional signage to assist the fire department personnel in locating fire protection equipment, fire hydrants, emergency equipment, etc.

7.10 Environmental Compliance and Sustainability

7.10.1 Overview

A. Regulatory Compliance

1. Massport conducts an ongoing program to assess environmental compliance and pollution prevention practices on Massport's properties, including those operated by tenants. Massport not only works with federal and state agencies and airport tenants to meet mandated regulations, but it is also proactive with its own initiatives, and with facilitating tenant initiatives, in an effort to exceed regulatory requirements and reduce the environmental impact of airport operations.

   Information on environmental programs can be found in the Environmental Management section of Massport's website: http://www.massport.com/massport/business/capital-improvements/sustainability/environmental-management-policy/.

2. While Massport will make every effort to assist tenants in maintaining regulatory compliance, it is fully the Tenant's responsibility to ensure its construction and operation activities meet or exceed all applicable environmental regulations. Massport is not liable for a Tenant's failure to comply with regulations.

B. Sustainable Design

1. Massport recognizes the importance of incorporating sustainable principles into construction design, planning, and management projects to improve environmental performance and plan for the longevity of capital investments, assets and critical infrastructure.

2. Tenants serve an important role in contributing to the continued success of Massport's holistic sustainability, net zero, and resilliency program. Massport remains committed to providing resources, guidance, and leadership to ensure that tenants effectively demonstrate sustainability and create meaningful, positive environmental impacts while working and building on Massport property.

3. Massport strongly encourages its tenants, to the greatest extent feasible, to:

   a) Design fit-outs and facilities to qualify for a Leadership in Energy and Environmental Design (LEED) Gold certification (or better), even if certification is not being sought. Applicable LEED rating systems for tenant projects can include Building Design and Construction (BD+C), Interior Design and Construction (ID+C), or Building Operations and Maintenance (O+M).

   b) Support LEED certification processes for Massport Capital Projects and meet sustainability standards of the building for which the tenants are set within

   c) Collaborate with Massport and jointly establish goals for sustainable design, which may be required for certain projects under the TAA process.

4. Massport expects TAA project teams to thoroughly review and comply with all applicable standards outlined in the following documents:

    a) Massport's *Sustainability & Resiliency Design Standards (2023)* which ensure a baseline standard of sustainability for all Massport Projects. The S&R Design Standards streamline the achievement of sustainable outcomes by codifying practices that allow the Authority to reach its sustainability, net zero, and resiliency goals.

    b) Massport's *Floodproofing Design Guide (2018)* which establishes standards for ensuring any capital investments and infrastructure can be prepared to deal with the impacts of flooding hazards caused by extreme storms and rising sea levels. Link: https://www.massport.com/sites/default/files/2024-12/Massport-Floodproofing-Design-Guide-January-2025.pdf

5. Tenants shall consult with Massport's Environmental Management Team in Capital Programs to determine any necessary measures and applicable standards for sustainability, net zero, resiliency, and environmental protection. Questions can be directed to sustainability@massport.com.

7.10.2 Existing Conditions Survey

The Tenant shall conduct a thorough review of available information on existing hazardous materials, storage tanks and environmental conditions, such as Massachusetts Contingency Plan (MCP) disposal sites or Activity and Use Limitations, within the proposed project area. Any information provided by Massport shall be verified by the Tenant and supplemented as needed to ensure a complete survey of existing conditions. The Tenant shall provide an existing conditions report that addresses the items below as part of the TAA.

A. **Asbestos Containing Material and Lead-Based Paint.** The Tenant is required to survey the proposed project area for the presence of asbestos using an Asbestos Inspector trained in accordance with EPA regulations and licensed by the Massachusetts Department of Labor and Workforce Development (DLWD).

B. **Hazardous Materials and Storage Tanks.** The Tenant shall provide an inventory of all hazardous materials and storage tanks within the proposed project area, and shall provide a plan describing how they will be managed during construction.

C. **Subsurface Contamination.** The design of a project involving foundation and/or utility excavation shall include an assessment of potential subsurface contamination within the construction area. The Tenant shall engage the services of a Massachusetts Licensed Site Professional (LSP) to conduct the assessment.

7.10.3 Subsurface Investigation

The following procedures shall apply when a Tenant project involves work to accomplish test borings, test pits or other forms of subsurface investigations.

A. Investigation Plan

1. The TAA shall include an Investigation Plan that states the purpose and scope of the investigation, delineates the specific test locations and depth of borings, and describes the sampling and analyses to be conducted.

2. A site plan shall be included that shows the specific area of work, the footprint of where equipment will be needed including elevations of such equipment, and any other ancillary equipment necessary to perform the work.

3. The Investigation Plan shall include the requested schedule (i.e., dates, hours of performance, etc.). The schedule shall also include any follow-up access to the area needed to perform activities such as monitoring well sampling and the frequency of such follow-up (e.g., monthly, quarterly, annually).

B. Concrete Removal

1. Tenant's contractor shall use a concrete coring machine to cut through the existing concrete surface.

2. Contractor shall contain all concrete slurry generated during coring activities in a manner that is confined to the immediate work area through the use of containment booms and shop vacuums.

3. All waste/spoils generated during soil boring well activities shall be pumped or removed by a means that shall not runoff outside the immediate work area and shall be properly disposed of off-site.

C. Utility Clearance

1. The Tenant shall contact the Capital Programs Department to request available information on existing utilities.

2. The Tenant shall verify the location of utilities and follow the required "Dig-Safe" notification procedures as discussed in Section 8.3.

3. A geophysical investigation shall be conducted by a licensed contractor to verify the location of utilities and identify any potential obstructions.

4. Vacuum excavation, air knife or other soft-dig tools shall be conducted at all test locations prior to drilling or excavating to a depth of 10 feet below ground surface for utility clearance.

D. Management of Investigation-Derived Waste

All excess soil generated during subsurface investigations, and water from monitoring well development, shall be drummed and promptly removed by a licensed waste transporter. No wastes and/or containers shall remain at the conclusion of work.

E. Data Submittal

1. The Tenant shall provide Massport with all subsurface data including boring/test pit logs and locations, laboratory analytic results and information on any utilities encountered.

2. The geographical data shall be provided in an electronic format using the latest version of AutoCAD.

7.10.4 Construction Excavation and Dewatering

A. MCP Requirements

1. The Massachusetts Contingency Plan (MCP) is administered by the Massachusetts Department of Environmental Protection (DEP) in accordance with 310 CMR 40 and applies to subsurface work within known or suspected areas of contamination. The Tenant shall be responsible for complying with all requirements under the MCP.

2. The Tenant shall include a Massachusetts Licensed Site Professional (LSP) on its design team to address issues associated with potential soil and groundwater contamination within the proposed project area. If work is to be conducted within a DEP listed "Disposal Site", the Tenant's LSP shall prepare and submit required plans to the DEP, with copies provided to Massport during the TAA review process. The LSP shall oversee all subsurface construction work within area of subsurface contamination.

B. Stormwater Pollution Prevention

1. For any project that disturbs one or more acres of land surface, the Tenant shall submit a Notice of Intent (NOI) to the U.S. Environmental Protection Agency (EPA) requesting coverage under the Construction General Permit. The Tenant shall comply with all applicable National Pollution Discharge Elimination System (NPDES) regulations and shall provide Massport with a copy of the NOI, the acknowledgement letter issued by the EPA, and the Stormwater Pollution Prevention Plan (SWPPP) for the project. These documents shall be provided prior to Massport's issuance of the TAA Permit.

2. During construction, copies of the weekly stormwater management inspection reports shall be maintained on site and provided to Massport upon request.

C. Soil Management

1. All soil transported offsite shall be managed in accordance with the Massport's Soil Management Policy as well as the MCP, the Massachusetts Similar Soils Policy (WSC #13-500), MassDEP's Policy COMM-97-001 Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, and any other applicable laws, regulations and facility permits. Soil which is planned to be exported from the property shall be properly characterized via laboratory testing in accordance with facility permits and in accordance with the findings of due diligence performed by the tenant.

2. Prior to issuance of a Massport Permit for Tenant Alteration for a project involving excavation and removal of soil, the Tenant shall submit a soil management plan detailing characterization of the soil and listing potential offsite receiving facilities for Massport's review and approval.

3. For proposed dewatering within a contaminated area, the Tenant shall submit an NOI to the EPA requesting coverage under the Remediation General Permit, and/or a Massachusetts Water Resources Authority (MWRA) Construction Site Dewatering Discharge Permit Application, and/or a BWSC Dewatering Discharge Permit Application. The NOI and/or permit application shall provide details for treating pumped groundwater, and a water sampling and analysis program.

D. Groundwater Management

1. For projects involving excavation, the Tenant shall submit an excavation dewatering plan that details how groundwater will be managed.

2. Water pumped during dewatering shall be recharged onsite or treated prior to discharging to the stormwater drainage system under appropriate permitting. Minimum treatment shall include a sedimentation tank.

3. For proposed dewatering within a contaminated area, the Tenant shall submit an NOI to the EPA requesting coverage under the Remediation General Permit. The NOI shall provide details for treating pumped groundwater, and a water sampling and analysis program.

E. Health and Safety Plan

1. Excavation within a contaminated area requires a Health and Safety Plan (HASP) in accordance with 29 CFR 1910.120.

2. The HASP shall be prepared and implemented by a Certified Industrial Hygienist, and be maintained on site and available to Massport upon request.

F. Solid Waste Disposal

1. Disposal of solid waste shall comply with 310 CMR 19.00. Tenant shall abide by prohibitions of materials specifically banned from landfills.

2. Refer to https://www.mass.gov/guides/massdep-waste-disposal-bans for a complete list of prohibited materials.

7.10.5 Storage Tank and Fueling System Installations and Removals

A. Regulations and Permits

Applicable regulations are to be found at 40 CFR 280, 310 CMR Section 80 and 310 CMR Section 7.00. The Tenant shall obtain a permit from Massport's Fire Marshal's Office through Massport's Environmental Management Unit prior to installing or removing a tank or fueling system, and shall provide at least forty-eight (48) hours advance written notice to the Environmental Management Unit and Massport Fire Rescue. For aboveground storage tanks greater than 10,000 gallons in capacity, permitting shall also be received from the Massachusetts Department of Fire Services, Office of the State Fire Marshall. Completed permit application and permit signed by the State Fire Marshall shall be provided to Massport.

B. Plans and Specifications

1. Any Tenant Alteration which proposes a tank installation or fueling system (e.g. fuel hydrant, distribution pipe) shall provide specifications prepared by a Professional Engineer that include, but are not limited to, the following: tank/piping size and construction, location, product, foundation and anchoring, piping layout, corrosion protection, spill overflow protection, leak detection and alarm systems.

2. All new installations of underground storage tanks on Massport's property shall be double-wall fiberglass. All related underground piping shall also be double-wall fiberglass or other industry-approved reinforced flexible piping.

3. Storage tanks containing volatile organic compounds shall comply with the Massachusetts Air Pollution Control regulations found at 310 CMR 7.00, and shall be outfitted with the required vapor control equipment.

4. For a tank or fueling system removal, the Tenant shall submit a Work Plan that includes: a schedule, methods and operations for tank/piping closure (excavation, purging of tank and piping, tank removal, confirmatory soil sampling to be performed by an LSP), and notification and emergency response procedures in the event of a leaking storage tank or pipe. The Tenant shall identify proposed receiving facilities for the tank and piping, product and any excess excavated material. Work shall not be conducted unless a representative from Massport's Fire Marshal's Office is present to observe the tank or fueling system removal.

C. Document Submittals

1. For releases of oil or hazardous materials encountered during a tank removal, the Tenant shall be responsible for implementing all Spill Response and Notification Procedures, and for submitting all documents required under the MCP and prepared by an LSP.

2. Copies of the documents shall be submitted concurrently to the DEP and Massport. Within two weeks of removing a tank, the Tenant shall submit two copies of the confirmatory sampling data and manifest documents for offsite disposal of the tank and product to Massport.

7.10.6 Spill Response and Notification Requirements

A. Sudden Release of Oil or Hazardous Material (OHM)

1. A Tenant shall respond to any spill of OHM resulting from its construction activities or other operations and shall be prepared to contain and clean up waste materials in an expeditious manner.

2. The Tenant shall immediately notify Massport's Fire Dept of any spill of OHM (within 2 hours), and shall be responsible for complying with the DEP notification requirements in all cases.

D. Notification for Exceedance of Reportable Concentration or Reportable Quantity

3. If the Tenant obtains data during subsurface investigations or construction excavation indicating that a Reportable Concentration and/or a Reportable Quantity has been exceeded (as defined in 310 CMR 40.0300), then the Tenant shall notify Massport's Environmental Management Unit and shall be responsible for notifying the DEP and submitting a Release Notification Form to the DEP.

4. The Tenant shall consult with an LSP regarding proper notification procedures and subsequent response actions.

7.10.7 Air Quality

All proposed projects shall comply with the Massachusetts Air Pollution Control regulations found at 310 CMR 7.00, EPA Standards for Industrial, Commercial and Institutional Boilers found at 40 CFR Part 63, EPA regulations for the installation, maintenance and disposal of refrigerant containing equipment, found at 40 CFR part 82, sections of which are summarized below.

A. Construction and Demolition

1. Proposed projects shall comply with 310 CMR Section 7.09 and 453 CMR Section 6.00, and the TAA shall describe measures to prevent excessive emission of particulate matter during construction or demolition.

2. The Tenant is responsible for advance notification to the DEP and shall submit Form BWP AQ 06 at least ten business days prior to construction or demolition, with a copy provided concurrently to Massport.

3. Protective filter material shall be installed on intakes and ducts during demolition and construction, and removed upon completion of the work.

B. Asbestos and Lead Abatement

1. The Tenant is responsible for removing asbestos and/or lead as required to facilitate proposed demolition and renovation projects. Projects requiring the removal of asbestos-containing material (ACM) shall comply with 310 CMR Section 7.15, and the TAA shall detail the quantity of ACM to be removed and how it will be contained, and shall identify the transporter and disposal site.

2. The Tenant is responsible for submitting Form ANF-001 (also known as BWP AQ-04) to the DEP, with a copy provided concurrently to Massport.

C. Furnace / Boiler Installation

1. The Tenant shall ensure that boilers or furnaces utilizing natural gas, fuel oil (of any grade) or propane for industrial or space heat comply with MassDEP requirements found at: https://www.mass.gov/how-to/compliance-certification-commercial-industrial-or-institutional-boiler.

2. The Tenant is responsible for determining proper stack height, ensuring that the new unit meets applicable emission standards as of the date of installation, and preparing all necessary permit applications and certifications as required by MassDEP and EPA.

3. The Tenant is responsible for proper maintenance and testing of any boiler(s) subject to 40 CFR Part 63 including biennial testing and tune ups and maintaining adequate documentation of testing and tune ups. The Tenant shall provide Massport with copies of all permit applications, certifications and testing/tune-up certifications for boilers/furnaces installed as part of a TAA.

D. Emergency Generator Installation

1. All Tenant installed emergency generators shall comply with current MassDEP and EPA standards. The Tenant shall be responsible for performing any air quality modeling analysis necessary to ensure that the generator does not contribute to a condition of air pollution or adversely impact indoor air quality in any occupied structures. MassDEP regulations governing installation of emergency generators can be found at: https://www.mass.gov/how-to/submit-a-compliance-certification-stationary-engine-or-turbine

2. Notification to MassDEP of installation of any new generator greater than 37kW (engine power, not electrical output) is required within 60 days of installation. This notification is the responsibility of the Tenant and a copy of the certification form shall be provided to Massport.

E. Fuel Dispensing Operations

In addition to complying with underground and aboveground tank installation requirements found in Section 7.11.1, any Tenant installing a tank designed for dispensing of gasoline shall ensure that installed equipment is installed and maintained in accordance with MassDEP Vapor Recovery program requirements. MassDEP regulations can be found at: https://www.mass.gov/guides/massdep-stage-i-ii-vapor-recovery-program

F. Installation and/or Removal of Refrigerant Containing Equipment

The Tenant is responsible for the proper handling and disposal of refrigerant containing equipment located on Massport property. Records of refrigerant used in new or repaired systems shall include type of refrigerant and total system charge. Records of reclamation and proper recycling of old refrigerant shall include type of refrigerant recovered, quantity recovered, location of licensed offsite reclamation facility, and name of licensed technician. All refrigerant related records shall be submitted to Massport prior to project completion.

7.10.8 Wastewater

To ensure compliance with the Sewer Use Regulations (360 CMR Section 10) and Drinking Water Regulations (310 CMR Section 22.00) the Tenant shall determine applicability of the regulations during the TAA process. This will include examining the following items.

A. If the project includes adding or altering an existing storm drain or sanitary sewer connection (such as the installation of an oil/water separator), a permit may be required. To connect to a

municipal sewer or a Massachusetts Water Resources Authority Sewer, it may be necessary to obtain a DEP Sewer Connection and Extension Permit (360 CMR Section 10.006(5)).

B. Identify any additional permits that are required in accordance with 360 CMR Section 10.007. These could include: Sewer Use Discharge Permit; Septage Discharge Permit; Direct Connection Permit; Municipal Permit; Landfill Permit; Temporary Construction Site Dewatering Permit; Group Permit or a General Permit.

C. If the project includes the addition or removal of a backflow prevention device the Drinking Water Regulations (310 CMR Section 22.00) shall be adhered to. Installation approval for a backflow prevention device shall be obtained from the local water department. Notification also shall be provided if a device is being removed.

7.10.9 Wetlands Permitting

All Tenant Alterations within a wetland resource area or a buffer zone shall comply with the requirements of the Massachusetts Wetlands Protection Act (310 CMR Section 10.00). If an application to the local Conservation Commission is required, the Massport Environmental Management Unit will review and sign the Tenant's application as the property owner, the tenant's environmental consultant must represent the project at any public hearing. Fuel Farms and Storage Tanks

7.11 Fuel Farms and Storage Tanks

7.11.1 Fuel Farms, Fuel Pipe Lines, Fuel Hydrant Pits and Fueling Ramp Drainage

D. Work associated with the installation, repair and/or alteration of any fuel farm storage area, fuel pipeline, fuel hydrant system pit, aircraft-terminal ramps, etc. shall be accomplished in full compliance with the applicable codes and regulations including but not limited to, state codes and state fire prevention regulations, NFPA 415, "Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways", current edition, American Petroleum Institute Standards, EPA Regulations, Codes of Federal Regulations, etc. and as directed by Massport's Fire Marshal's Office.

E. In addition to the above, any and all work associated with fuel systems on Massport properties shall be conducted in full compliance with Massport's Rules and Regulations as well as applicable rules, regulations, ordinances and statutes.

7.11.2 Storage Tanks

F. All underground and above ground storage tanks and associated piping systems shall be designed, installed and maintained in full compliance with M.G. L. Chapter 148 "Fire Prevention Laws", 527CMR 1.00 "Massachusetts Comprehensive Fire Safety Code," NFPA-30 "Flammable and Combustible Liquids Code", 502 CMR 5.00 "Permit and Inspection Requirements of Aboveground Storage Tanks of More Than Ten Thousand Gallons Capacity", and 310 CMR 80.00 "Massachusetts Underground Storage Tank Systems Regulations."

G. Prior to new storage tank(s) going into operational service, said tank(s) shall be properly leak tested by an approved tank testing company in accordance with 502 CMR 5.00 or 310 CMR 80.00. Properly documented test reports shall be submitted to Massport's Fire Marshal's Office. All underground and above ground tanks shall be properly permitted with Massport's Fire Marshal's

Office via Massport Environmental Management. Further, underground tanks shall be properly registered with MassDEP via the Massachusetts Department of Environmental Protection (MassDEP) online UST Data Management System. Above ground storage tanks of 10,000-gallons or greater capacity shall be properly approved and permitted by the Massachusetts Department of Fire Services (MassDFS).

H. Storage tank removal shall be performed in full compliance with applicable laws and regulations and under the oversight of a Massachusetts Licensed Site Professional (LSP). Application for appropriate Tank Removal and Transportation Permit shall be received by Massport's Fire Marshal's Office via Massport Environmental Management at least two weeks prior to scheduled tank removal work. The Fire Marshal's Office approval shall be obtained prior to advancing removal work, and 48-hour notice of the date and time of the work shall be given. Underground storage tank removals shall be properly documented with MassDEP via the UST Data Management System. Removal of underground storage tanks exempt from registration requirements shall be documented and reported to MassDEP using MassDEP's UST System Removal/Closure-in-Place forms. Removal of aboveground storage tanks 10,000 gallons or greater capacity shall be reported to MassDFS in accordance with the requirements of 502 CMR 5.00.

7.11.3 Flammable, Combustible Liquid and Fuel Storage Tanks

Massport's Fire Marshal's Office shall be consulted as to the design, installation and specifications for fire protection and fire prevention requirements for all proposed above ground storage tanks regardless of liquid or fuel type. Massport's Fire Marshal's Office shall determine all requirements.

7.12 Utilities Control

7.12.1 General

All connections to Massport's electrical and water systems shall include a dedicated meter. New meters and associated equipment (disconnect, CT cabinet, encoder, etc.) shall be located in Tenant space and accessible to Massport Utilities. Any exceptions shall be approved in writing by Massport Utilities. Prior to removal or installation of an electric or water meter, the Utilities Management Department shall be contacted at (617) 568-3605.

For all other utility connections, coordination shall be made directly with the serving utility, while keeping Massport Utilities informed.

7.12.2 Electric Metering (Massport System)

A. All prospective and existing tenants shall be required to submit an Electrical Load Data and Meter Specification Form for each project with all pertinent data filled out in the TAA. The Tenant and its electrical engineer of record shall be responsible for completing these forms and for the accuracy of the information provided. The Tenant shall include in the design documents, the specifications for meters, meter sockets and if applicable, the current transformers (CTs) and potential transformers (PTs).

B. New electric meter shall be Itron Centron, in the appropriate class and form, according to the table below.

Massport Approved Itron Centron Electric Meters*

Phase	Application	Voltage	Class (Max Amps)	Form	Type
1	Self-Contained	120/208	200	12S	CN1SR3
		120/240	200	2S	C1SR3
			320	2S	
3	Self-Contained	480 and below	200	16S (wye)	CP3SDR3
				12S (delta)	
			320	16S (wye)	
				12S (delta)	
	Transformer	600 and below	20	9S	
		Over 600 with PTs	20	See Massport Meter Socket Specifications	

* Contact Massport's Utilities Department for meter applications not shown on table

C. Massport's Meter Socket Specifications shall be used to determine rate and style or meter and meter socket, as well as any other required equipment. For new primary rate customers with interior switchgear, metering shall be on the secondary side of the transformer with transformer loss compensation. For exterior switchgear, metering may be located on the primary side with permission of Massport. Electrical connections shall be made consistent with the requirements of the Massport electric construction specifications.

D. Meter sockets, CTs and PTs shall be specified by the Tenant's design consultant and paid for by the electrical contractor. Meter sockets shall be wired in accordance with Massport's Meter Socket Wiring Diagrams. Meters shall be programmed by the Massport Utilities Department. Refer to Electrical Load Data and Meter Specifications document. The Electrical Load Data and Meter Specification Form are mandatory submittals.

7.12.3 Water Metering (Massport System)

A. The Plumbing Contractor shall provide a Badger water meter at the supply, graduated in cubic feet, and located in an accessible area. Meter shall contain an Itron model #100W-R Encoder Receiver Transmitter (ERT). ERT shall not be concealed and serial number shall be visible from floor after installation.

B. Additional requirements are provided in the following Massport Utilities documents:

1. Meters up to 1": Cold Water Meter with Itron ERT Specification - MPA 0-1in
2. Meters 1.5-2": Cold Water Meter with Itron ERT Specification - MPA 1.5-2in
3. Meters greater than 2" shall be Badger with Itron ERT.

C. In Boston, for domestic water connections NOT contributing any discharge to the sewer system (e.g., ice machines, irrigation, etc.), a submeter and backflow prevention device shall be installed

in accordance with the Boston Water and Sewer Commission (BWSC) Sewer Abatement General Guidelines:

https://www.bwsc.org/business-customers/programs-guidelines-assistance/sewer-abatement

Abatement application shall be coordinated with Massport Utilities.

Figure 1. Crane Work on various development projects

(End of Section)

8. CONSTRUCTION CONTROLS

8.1 Preparation for Construction

A. The Tenant's contractor, before commencing work, shall verify all governing dimensions and field conditions at the work site and shall examine, to the extent reasonable, all adjoining work, systems and substrates on which its work is in any way dependent according to the approved project documents.

As may be required, the Tenant's contractor shall employ imaging technology (X-ray, ground-penetrating radar or similar) and/or vacuum excavation methods to survey buried or concealed conditions.

All cores in existing concrete slabs shall be scanned with ground penetrating radar (GPR) to mark and avoid cutting of slab reinforcement and/or conduit. Coring of slabs shall not damage existing reinforcement of structural components. Where coring requires addition of reinforcement to structural elements, details shall be submitted to show how reinforcement will be integrated with the original structure.

B. If the Tenant's contractor or any of its subcontractors of any tier knows or reasonably should have known, by virtue of knowledge of construction industry standards, that any of the approved contract documents are at variance with applicable laws, statutes, building codes, regulations, or ordinances, in any respect, the Tenant's contractor shall promptly notify the Capital Programs Department and the Tenant, in writing, of any necessary changes which shall be accomplished by the Tenant or its design consultant.

C. In its scheduling, procurement and cost estimating, the Tenant should anticipate that its work may be interfered with or delayed from time to time by the acts, omissions, or scheduling of other contractors engaged in work in adjacent areas by Massport or by other tenants.

D. The Tenant's contractor(s) are responsible for securing all permits that may be required for the proposed Tenant Alterations.

E. The term "coordinate" or "notify" shall be understood to mean the presentation of complete information (to include any drawings or sketches where appropriate) to fully define the nature and duration of the proposed actions. The presentation shall include disclosure of any potentially hazardous or weather-vulnerable consequences of the activity when applicable. The Tenant or Tenant's contractor shall not proceed with such activity unless specifically approved by Massport.

8.2 Safety During Construction Activities

A. The Tenant's contractor shall protect site personnel, occupants and the public from potential safety hazards created by any construction activity.

B. All Tenant contractor work activities shall comply with all applicable occupational and environmental safety and health laws, regulations, standards, ordinances, codes and other similar requirements. Such requirements shall serve as minimum guidelines for all activities of the contractor and all other parties entering Massport premises in connection with the Tenant Alterations.

C. Prior to the start of construction, the Tenant contractor shall provide Massport with a written Health and Safety Plan (HASP) for review. The HASP shall include procedures to control all hazards created by the construction. Example hazards include, but are not limited to, housekeeping, fall hazards, noise, dusts and odors, fires and explosions due to hot work, chemical and solid waste storage, electrical hazards/lockout tagout, trenching, crane activities, aerial lift and overhead hazards, confined space entry, lead and asbestos. The HASP shall be fully compliant with all applicable laws, regulations, standards, ordinances, codes and other similar requirements.

D. OSHA 10-hour training cards must be onsite for every worker.

E. A contractor found not in compliance with applicable occupational and environmental safety and health laws, regulations, standards, ordinances, codes and other similar requirements, or project safety and loss prevention requirements, will be notified in writing and given a specific time period in which it shall correct the unsafe condition(s) and/or unsafe acts. Failure to correct the identified condition(s) in a timely manner may result in the shutdown of the activity. Regardless, Massport project staff and Massport's designated representatives shall have the authority to immediately shut down any construction operation deemed by Massport to represent a condition imminently dangerous to the life and health of employees, occupants or the public.

F. All construction accidents involving personal injuries resulting in a workers' compensation claim, property damage, a chemical spill, fire, crane, automobile or mobile equipment vehicle shall be reported to Massport within 24 hours. An accident investigation shall be completed by the contractor or designated representative within 14 days of the incident. Completed reports shall be forwarded to Massport and shall identify cause(s) of the accident, the corrective actions proposed and a timeframe for implementation and completion.

8.3 "Dig-Safe"

A. Dig-Safe" is the name of the Utility Underground Plant Damage Prevention Authority within the Commonwealth of Massachusetts. They may be contacted by calling 811 or (888) 344-7233 or through their website at http://www.digsafe.com/.

B. Contractors shall notify "Dig-Safe" of contemplated excavation, demolition, or explosive work in public or private ways, or in any Utility Company Right of Way or easement.

C. This notification shall be made at least 72 hours prior to the work. Such notice shall set forth the name of the street or the route number of said way, and an accurate description of the location and nature of the proposed work. In order to ensure accuracy, Massport requests that such notification not be made more than 30 days before the contemplated work.

D. "Dig-Safe" is required to respond to the notice within 72 hours from the time said notice is received by designating at the locus the location of pipes, mains, wires, or conduits.

E. Contractors shall not commence work until "Dig-Safe" has responded as noted above. The work shall then be performed in such a manner, and with reasonable precautions taken, to avoid damage to utilities under the surface in said areas of work.

F. Prior to the "Dig-Safe" notification, Massport requires contractors to provide their superintendents with current "Dig-Safe" regulations, and a copy of Massachusetts General Laws, Chapter 80, §40.

G. If the Tenant has not commenced work within 60 days after notification to "Dig-Safe", the Tenant shall be required to re-notify "Dig-Safe".

H. Each "Dig-Safe" number issued is valid for 30 days. If project extends past 30 days contractor must call "dig-Safe" to receive a new number.

8.4 Trench Approval

A. In accordance with M.G.L. c. 82A, §2 and 520 CMR §14.03, prior to an excavation of a trench, the contractor shall obtain a permit for the excavation ("Trench Permit") approved by Massport.

B. The permit applies to excavations in excess of 3 feet below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is not greater than 15 feet.

C. The contractor shall take necessary steps to provide appropriate protections when trenches are unattended. Necessary steps shall include one of the following: erecting a fence that is at least 6 feet tall; providing appropriate signage (DANGER – OPEN TRENCH); using a road plate that is at least ¾-inch thick steel; posting an attendant; or backfilling the trench.

8.5 Inspection During Construction

A. Massport shall be allowed 24-hour access to the Tenant's construction site(s). A Resident Engineer may be assigned by Massport to each tenant project and will review ongoing and completed construction work. The Tenant's contractor shall permit these resident engineers, as well as the State Building Inspector and representatives of Massport's Fire Marshal's Office, to have unlimited access to the work site, and shall respond to all reasonable requests to further their ability to observe work in progress or complete other investigations or tests. Such inspections shall not relieve the Tenant's contractor of any of its obligations under its agreement with the Tenant, or any applicable laws, codes or regulations.

B. Massport shall have the authority to reject any work, fixtures, systems, materials, equipment, furnishings, or any component of the work that is not as required or as specified in the approved contract documents. Any such rejection shall be communicated in writing to the Tenant.

C. Massport may, at its option, or if required by the State Building Code, in cases where proposed construction is of a complex nature, require the Tenant to hire a competent resident engineer or inspector to be present at all times during the construction period. For projects that necessitate work in multiple locations within a facility, or for those with a value exceeding one million dollars ($1,000,000), Massport may require that the Tenant provide a dedicated project coordinator or construction manager.

8.6 Work Plans

A. For work that will take place outside of the Tenant's leased premises or which can reasonably be expected to affect the systems or operations of a Massport facility or the experience or safety of passengers or other building users, the Tenant's contractor shall submit a Work Plan Form (the "Work Plan"). Examples of activities requiring a Work Plan include:

- Road or Sidewalk work involving closures

- Fencing/barricading impeding the public
- Mobilization
- Crane activity

B. The Work Plan shall be prepared using the standard template provided by Massport.

C. All Work Plans require the following:

- A physical plan showing the location of the space in which the work is to take place, as well as plans laying out the work as proposed. Plans may not be hand-drawn.

- An Emergency Contact List, prepared using the template provided by Massport. Information shall be filled in for the Construction Manager (Tenant name goes there), designer if any, and contractor(s).

- A current insurance certificate for the contractor, naming both the Tenant and Massport as additional insured parties.

D. If other permits are being obtained as part of this work (electrical, plumbing, or sprinkler permits, for example), those permits must be obtained first and attached to the Work Plan transmittal.

E. Work Plans shall be supplemented with such other materials that the Tenant believes can facilitate Massport's review, such as schedules, photographs, and cut sheets.

F. The Tenant shall submit the Work Plan package IN FULL; individual emails and files shall be avoided. The Work Plan shall be submitted electronically to the Manager of Tenant Alterations and to the Massport Resident Engineer assigned to the Tenant Alteration.

G. Massport will review and either approve the Work Plan or approve the Work Plan with conditions, with which the Tenant's contractor and/or subcontractors shall abide. Work Plans require approximately 5 working days to be routed and commented on once they have been submitted in full and any needed corrections made.

8.7 Construction Operations

A. All facilities will continue in full operation throughout the period of the Tenant Alterations. Where the operations of Massport's services, utilities, functions, spaces and facilities conflict with contractor operations, Massport's operations will take precedence. Contractor's work hours shall be approved in advance by Massport, which may require that all or part of the proposed work take place at night or other off-hours.

B. All work shall be performed by competent tradespeople licensed as required by their respective trade's codes and regulations, using materials of a quality equal to or greater than that specified by code and approved by the Engineer of Record.

C. The Tenant and its contractor shall familiarize themselves with other ongoing projects by Massport or by other tenants which may be taking place in the same or adjacent areas. The contractor shall coordinate the progress of its work with that of others working at the same facility.

D. A complete set of plans shall be available on the work site at all times. All permits issued for the project shall be posted at the work site.

E. Once approved by Massport, no significant changes to the proposed Tenant Alterations (including

Commonwealth Pier Construction

but not limited to changes in layout, modifications to building structural elements, or large-scale material substitutions) shall be made by the Tenant or the Tenant's contractor unless these changes are resubmitted and approved in writing by Massport and, if applicable, the State Building Inspector.

F. When access or traffic control, special fire hazards, or other public safety issues arise as a result of project activity, Massport may require fire or police details, overtime operations and/or special equipment services. In such cases, the Tenant or the Tenant's contractor shall make arrangements for and pay all charges in connection therewith. Such services shall be provided only by assigned representatives of the Massachusetts State Police and/or Massachusetts Fire Rescue Department unless otherwise determined by Massport.

G. For roadway lane closures, the following requirements shall apply:

1. The Tenant is required to submit a Traffic Management Plan, inclusive of the following:

    a) Provide a drawing, a supporting narrative and a schedule of work to be done, at least one week prior to the work date(s). This submittal shall include, but not be limited to, a description of all lanes affected, method of lane closure(s), the anticipated need for police details, equipment to be used, temporary lighting, and signage and cleanup procedures.

    b) The Traffic Management Plan shall conform to the current Manual on Uniform Traffic Control Devices (MUTCD), including all supplements and revisions thereto and the latest revisions to Part IV, thereof.

H. Cranes and other construction equipment with an overall height in excess of 25 feet shall be lowered during hours of darkness, or be equipped with obstruction lighting in accordance with all

current FAA regulations. Notification to FAA may be needed where cranes may potentially affect airfield operations. Such notification shall be made in coordination with Massport. A crane permit shall be issued by the Capital Programs Department for crane activities. Request a Crane Checklist, which details the information required for this permit.

I. The storage of construction materials shall be controlled on sites to avoid unsightly appearance, to allow safe egress and navigation around the site, and to prevent winds or jet blast from scattering materials. Appropriate storage areas, containers and methods shall be provided by the Tenant's contractor.

J. Massport shall have the right to photograph, videotape, film, or in any other manner document the progress of the Tenant Alterations at any time, and to use such documentation for any purpose. The Tenant's contractor shall coordinate the photography of the work and of adjacent affected work areas as requested by the Capital Programs Department.

K. Contractors working on other projects may occasionally need to gain access to the Tenant's area under construction. The Tenant and its contractor shall fully cooperate and coordinate their project work with that of other projects to the maximum extent possible to avoid or mitigate any delay or hindrance of either's work. The Tenant shall provide written notice to the Capital Programs Department if the Tenant cannot reasonably coordinate its work with that of others.

8.8 Protection of Property and Tenant Alterations in Progress

A. The Tenant's contractor shall take all responsible precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:

1. All the work and all materials, equipment, systems, fixtures, and furnishings to be incorporated therein, whether in storage on or off of the work site, under the care, custody, or control of the contractor, subcontractors, subordinate subcontractors of any tier or suppliers; and

Hyatt Place - Seaport

2. Other property at the work site or adjacent thereto, including but without limitation, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction; and

3. Work of Massport or its contractors, provided, however, that the Tenant's contractor shall not be responsible to furnish the direct protection of the work of Massport or other contractors.

B. The Tenant's contractor shall give all notices and comply with all applicable laws, ordinances, codes, rules, regulations, and lawful orders of Massport's insurer and any public authority bearing on the safety of property or its protection from damage, injury, or loss, and further, shall cooperate and keep the Tenant,

Massport and other contractors informed of all of the Tenant contractor's precautions for the protection of the work.

C. The Tenant's contractor shall be solely responsible for the design, installation and maintenance of all temporary structures such as, but without limitation, all necessary bracing, framing, and structures or structural elements to prevent the failure of materials or temporary facilities required in the execution of its work which could result in damage to property or the injury or death of persons.

D. If any of the Tenant contractor's operations destroy or damage any real or personal property, public or private, the Tenant's contractor shall promptly repair or replace such property. Occupancy of the work area will not be approved until such repairs have been completed to Massport's satisfaction.

8.9 Protection of Municipal and Public Service Systems

A. Before the work is begun, the Tenant's contractor shall communicate with all governmental agencies and private entities having jurisdiction over municipal or other public service systems that might be affected by the work.

B. After the work is begun, the Tenant's contractor shall perform in a manner designed to reduce to a minimum the potential for disrupting the operations of service systems. In particular, when a Massport, municipal, or other public service system could be affected by Tenant Alterations or utilities service extensions executed by the Tenant's contractor, the Tenant's contractor is required to contact the agency responsible for the operation of that affected system for instructions on how best to proceed.

8.10 Protection of Streets and Roads

Traffic control systems (such as street signs, traffic signals, traffic lane markings, and any other equipment or facilities that aid in the control of traffic) shall be protected, and the Tenant shall be liable for any damages to these systems or any damages to persons and properties that may result from failures in the traffic control system that were caused by the Tenant or its contractor(s).

8.11 Protection of Drainage Ways

A. The Tenant and its contractor shall not bypass untreated or partially treated waste waters or waste materials to storm sewers or other drainage courses.

B. All bypassing or pumping of sanitary sewerage required during construction shall be to other sanitary sewer facilities approved by Massport.

C. All existing sewer facilities shall remain in continuous and full operation during construction.

D. Dewatering activity shall be conducted in accordance with DEP and EPA regulations and the requirements of Massport Environmental. Use of environmental controls when dewatering, or performing site work, is required for all impacted storm drains.

8.12 Fire Protection / Safety Procedures

It is the overall responsibility of Tenant's contractor to establish, develop and implement an appropriate fire safety program to prevent and minimize fire damage during Tenant Alterations. The following guideline, established by Massport's Fire Marshal's Office, shall be complied with at all times by all contractors and subcontractors working at Massport properties. It is intended to be only a guideline and is not inclusive of all code requirements governing construction activities and operations.

A. Regulatory Compliance and Building Permits

1. All construction, alteration and demolition work shall be accomplished in full compliance with all applicable provisions and requirements of the State Building Code, State Fire Prevention Regulations, and all applicable National Fire Protection Association Codes and Standards, particularly NFPA 241, "Standard for Safeguarding Construction, Alteration and Demolition Operations", and all OSHA Standards and Regulations governing construction activities and worker safety.

2. No work is to take place until the State Building Permit has been issued by the State Building Inspector.

B. Fire Prevention

Good fire prevention practices shall be observed on all construction sites. No smoking rules shall be enforced, storage area shall be kept neat and orderly, and trash emptied once a day or more frequently if needed.

C. Paid Fire Department Details

1. Paid fire department watch details may be required by Massport's Fire Marshal's Office or designee in the case of fire protection-life safety system impairments (including out-of-service fire alarm systems, automatic sprinkler systems, fire pumps, fire mains, etc.), certain phases of hotwork involving welding and/or torch burning that is deemed hazardous and/or which may result in a fire, or if the Tenant or its contractor has failed to comply with permit requirements. The cost for paid fire department details shall be borne by the Tenant or the Tenant's contractor.

2. Impairment of any sprinkler and/or fire alarm system in excess of 4 hours in any 24-hour period in any facility occupied in part or in whole by any non-construction personnel shall require the presence of a paid fire rescue detail at the contractor's sole expense along with the required impairment permit. No hot work is ever allowed in any sprinkler protected space or facility if the sprinkler protection is impaired for any reason.

D. Maintenance of Exits

All exits within or adjacent to construction areas are to be maintained free and clear of any and all obstructions that may restrict access and exiting.

E. Fire Extinguishers

Fire extinguishers shall be readily available throughout the entire construction area. The type of fire extinguisher required (A, B, C) shall be indicated in the contract documents. "BC" only fire

extinguishers are to be used on apron, taxiways, or runways at all airports. Fire extinguishers are to be properly maintained and inspected, and be readily visible. Travel distance to an extinguisher from any point in the construction area shall not exceed 75 feet. To verify its serviceability, an extinguisher shall be equipped with a valid Inspection Data Tag indicating its last date of inspection, as well as the inspection firm's certificate of registration number as issued by the Massachusetts State Fire Marshal's Office.

F. No Open Burning / Open Flames

No open burning is permitted at any construction site on Massport's property. No open flames from construction-related equipment such as a tar kettle, torches, salamanders, smudge pots, or like devices, will be allowed unless permits for same are issued by Massport's Fire Marshal's Office.

G. Explosives

The use of explosives is prohibited at any construction site on Massport's property, unless properly permitted and permission is obtained by Massport's Fire Marshal's Office.

H. Construction Barricades / Barriers

All construction-related barriers/barricades within a building area shall be constructed of non-combustible, fire–retardant material. Massport will work with the Tenant to produce site signage for barricades.

I. Unprotected Openings

All horizontal floor and/or roof openings are to be properly covered at all times. Under no circumstances will any type of shaft, roof or duct opening be left unprotected. Fire walls and fire rated construction assemblies shall remain in service as long as possible to prevent unwarranted fire spread. No fire doors are to be left open or blocked open in any manner at any time during any phase of construction.

J. Trash Chutes

Trash chutes, when authorized, shall be constructed of non-combustible material and be erected on the exterior of the building. Trash chutes shall not enter into a building and shall empty directly into an exterior dumpster. Trash chute openings shall be secured at the end of the day with a protective cover that will stop the spread of fire into the building via the chute.

K. Construction Dumpsters

Construction dumpsters shall be located at as great a distance as possible from adjacent building areas, particularly away from any windows, doors or roof overhang areas. Dumpsters are not to block fire lanes, fire hydrants, fire department sprinkler connections, exterior exit doors, fire escapes, etc. Trash will not be permitted to accumulate on or around the exterior of a dumpster. Dumpsters are to be kept closed or covered at all times, and shall be labeled with the project name and 24-hour contact information. Dumpsters shall be emptied when full, and prior to major weather events (e.g., heavy wind, snow, etc.). Dumpster locations shall be approved by Massport.

L. Electrical Work

All electrical work (both temporary and permanent) within the construction area shall be accomplished in full compliance with all applicable Massachusetts Electrical Code requirements. Electrical extension cords shall be suitable for their intended use, and if necessary, be approved for outdoor use. Equipment requiring ground faults for use outdoors or in damp atmospheres shall be properly maintained. Electric panel covers are to be replaced at the end of each day so as not to leave unprotected open panels. Electrical appliances, tools and equipment shall be disconnected when not in use. All construction of related wiring and equipment for lighting, heat or power shall be in accordance with applicable codes.

M. Welding and Torch Burning

All welding, torch burning and cutting processes shall be conducted in full compliance with Massachusetts State Fire Prevention Regulations 527 CMR 1.00 Chapter 41 which addresses welding and cutting processes. No hotwork (welding, torch burning, etc.) is permitted unless permits authorizing such work are issued by Massport's Fire Marshal's Office. (Application for permit may be obtained from the Fire Prevention Office of Massport's Fire Rescue Department). It is the responsibility of the Tenant's contractor to fully understand all requirements of 527 CMR 1.00 Chapter 41.

N. Storage of Flammable Liquids

Storage of flammable liquids is prohibited within building areas at all construction sites unless a permit for same is issued by Massport's Fire Marshal's Office. Storage will not be permitted in places of public assembly. Storage, if permitted by the Fire Marshal's Office, shall be in U.L. approved containers stored within a U.L. approved flammable liquid cabinet.

O. Outside Storage

Outside storage and staging equipment shall not block fire lanes, fire hydrants, fire department sprinkler connections, exterior exit doors, or access to emergency equipment. All items shall be secured to prevent foreign object debris or damage.

P. Fire Hydrants

Fire hydrants are to be kept clear and accessible at all times. No parking is permitted within a 20-foot diameter of a hydrant. Fire hydrant use by Tenant's contractor(s) is strictly prohibited unless permission for use is authorized by the Fire Marshal's Office and the Massport Facilities Department.

Q. Fire Lanes

Twenty foot wide & Thirteen and one half foot high fire lanes to and from all building areas are to be established and kept clear at all times. Fire lanes are not to be blocked by vehicles, storage dumpsters, or other equipment. Surface travel areas within a designated fire lane shall be capable of supporting and withstanding live loads of responding fire apparatus in all weather conditions. In addition, fire lanes shall be kept free of snow and ice accumulation in the winter months. Only airport-approved chemicals may be used to treat the pavement on the ramp in any aircraft apron area.

R. Excavation

Prior to any excavation work, the Tenant's contractor shall contact the Capital Programs Department regarding utility distribution systems and acceptable excavation methods. In addition, established Massachusetts Dig Safe procedures and requirements, and trench permit requirements if excavation is 3 ft. or greater, shall be complied with in full (see requirements in Section 8.3 and Section 8.4).

S. Temporary Heat

Use of any temporary heating units exhibiting an open flame or any type of glowing element will require a permit issued by the Massport Fire Rescue. Only temporary heating units that have been approved by the office of the Massachusetts State Fire Marshal will be considered for use.

T. Fencing / Security

Building areas under construction shall be secured at all times to prevent unauthorized access. If necessary, a Massport "Restricted Access" sign will be provided to be posted at all access points to the site. Watchman/guard services may be required depending upon the hazards involved.

U. Compressed Gases and Liquids

No compressed gases or liquids are to be stored on site unless permits for same are issued by Massport's Fire Marshal's Office. The storage of flammable gases or liquids within buildings is prohibited.

V. Spray Painting / Painting

Spray painting with flammable liquids, solvents, thinners, etc. is prohibited unless permits for same are issued by the Massport's Fire Marshal's Office. In addition to the above, paints and other associated products such as solvents, thinners, urethanes, etc. are not to be left in open containers. Covers shall be replaced to ensure containers are properly sealed. No oily rags and/or rags contaminated with paint products are allowed to accumulate at the work site unless they are stored in approved self-closing metal containers.

W. Trash / Debris Removal

All trash, debris and all other waste material shall be removed from all building areas once a day or more frequently if needed. Trash and debris will not be permitted to accumulate in any building area.

X. Canvas / Tarpaulins

All canvas and tarpaulins used to enclose either interior and/or exterior building areas shall be U.L. Listed Fire Resistant Material with flame spread rating of 15 or less. Tarpaulins shall be properly secured at all times.

Y. Tar Kettles

A Massport's Fire Marshal's Office permit is required for the use and operation of any type of asphalt and/or tar kettle. Tar kettle operations shall be conducted in safe locations as determined by the Massport's Fire Marshal's Office.

Z. Construction Trailers and Tool Sheds

Construction trailers and tool sheds, when used, shall conform to State Building Code requirements. Heating and electrical systems are to be properly maintained. Exits are to be kept clear, and fire extinguishers shall be available. Construction trailers are not to be positioned and/or located so as to unnecessarily expose existing building area to fire exposure hazards. Location of construction trailers shall be approved as part of the larger project through the TAA process. Sprinkler protection may be required within construction trailers depending on the length of construction activity. Massport's Fire Marshal's Office will determine protection requirements during TAA process review.

8.13 Warranties and Correction of Work

A. The Tenant shall ensure that all parts, materials, components, fixtures, furnishings, equipment, finishes and other items used to perform the work shall be new (unless otherwise specified in the Tenant's approved specifications) and suitable for the purpose used; and further, are of good quality, free from faults and defects, and in conformance with the approved construction contract documents. Work not conforming to these requirements, including substitutions not properly approved and authorized by the Tenant, its representatives, or Massport, may be considered defective. The Tenant's contractor shall, when requested by the Capital Programs Department through the Tenant, furnish Massport with submittals or other satisfactory evidence as to the kind of materials, fixtures, furnishings and equipment planned to be installed, or which have been installed. The Tenant shall ensure that the construction procedures and methods employed by its contractor to perform the work shall have in the past proven to be suitable for the results expected. If the Tenant's contractor proposes to use an unproven and untried method, process or product, the Capital Programs Department shall be advised of that proposal, in writing. Massport reserves the right, in its sole discretion, to approve or disapprove or to require special guarantees to cover, the work produced by any such new and untried process, method or product.

B. Except as provided in the General Terms and Conditions (Section 4.1), title to all fixed equipment, systems, components, exhaust hoods and other fixed items ("fixed equipment") shall immediately upon installation vest in Massport without execution of any further instrument. Title to all such fixed equipment shall be transferred to Massport free and clear from all security interests, liens, or encumbrances whatsoever. Tenant's warranty for such items shall pass and be assigned to Massport at the date of substantial completion.

C. The Tenant shall ensure that its contractor will promptly repair, replace or otherwise correct any of its workmanship and any parts, materials, furnishings, fixtures, finishes, components, equipment or other items in the work which contain faults or defects or which otherwise fail to comply with the warranties set forth in this section, as determined or as identified by the State Building Inspector, Massport, Tenant's architect or engineer, or Tenant's contractor, whether observed and/or reported before or after substantial completion.

8.14 Performance during Warranty Period

A. Massport's Capital Programs Department will notify the Tenant of work which it finds does not satisfy the warranties described above, and the Tenant's contractor shall, within the time set forth in such a notice, begin to repair, replace or otherwise correct the defective work. If the Tenant's contractor fails to begin such work within such time period, Massport may make the repairs or replacements at the expense of the Tenant. If Massport determines that immediate action to make repairs, replacements or other corrections is necessary because of emergency conditions or to prevent further loss or damage, Massport may proceed without notice to the Tenant's contractor and such remedial work by Massport shall be at the Tenant's expense.

B. If the Tenant's contractor or Tenant does not agree with a determination of the Capital Programs Department concerning defective work, the Tenant's contractor or Tenant may dispute in writing, Massport's determination and shall provide a detailed explanation of such position.

C. Should Massport claim by written communication to Tenant's contractor or Tenant before the warranty periods expire determine that Tenant's contractor or Tenant's position regarding defective work is without merit, or that certain defective work exists and that it requires repair or replacement, the warranty period shall be automatically extended for as long as the defective work exists.

10 World Trade

(End of Section)

APPENDIX A – TAA FORMS

Massachusetts Port Authority
TENANT ALTERATION APPLICATION DEPOSIT FORM

2023

Information and Instructions

A deposit is required for all qualifying tenant alteration work.
The Deposit Form and payment must accompany the submittal of the Tenant Alteration Application to Massport's Capital Programs Department, 1 Harborside Drive Suite 200S, East Boston, MA 02128, or be provided prior to the issuance of the TAA permit or other project approval.

Please TAA submit the following:

- A W-9 form (tax ID) for the entity submitting the payment, which may be the tenant, the architect or the contractor.

Note: The check will be returned ONLY to the entity which submitted the original payment.

- This form with the information section, below, fully completed.
- Payment. Deposits may be paid online at massport.com/quickpay OR by enclosing a check with this form made payable to Massachusetts Port Authority.

Deposit Schedule

ESTIMATED TOTAL PROJECT COST	DEPOSIT AMOUNT
$20,000 or less	No deposit required
$20,000 - $49,999	$2,500
$50,000 - $99,999	$5,000
$100,000 - $249,999	$10,000
$250,000 - $499,999	$15,000
$500,000 - $999,999	$20,000
$1,000,000 and over	$20,000 for first million + $10,000 per subsequent million. $50,000 MAXIMUM

Return of Deposit to Applicant

Deposit will be returned by mail to the Applicant at the time that the project is 1) successfully concluded OR 2) withdrawn by the Applicant OR 3) disapproved by Massport. See the *Guide to Tenant Construction* for information on Massport's requirements for project closeout and record documentation, or contact Tenant Construction Office, Massachusetts Port Authority, 1 Harborside Drive Suite 200S, East Boston, MA 02128, or call (617) 561-1851.

The Applicant must provide complete and accurate record documentation in accordance with the Tenant CAD standard within 90 days of project completion (defined as, alternately, substantial completion or issuance of certificate of occupancy, or as agreed). If the Applicant fails to provide this information within the 90-day time frame, the deposit shall be retained by Massport. Massport reserves the right to withhold approval of future Tenant Alteration Application requests by the Applicant until such record documentation for past projects is provided.

APPLICANT INFORMATION SECTION

to be completed by applicant; please type.

Applicant (Company Name)	
Project Title	
Estimated Project Cost	
Deposit Amount Submitted	
Contact information for return of depo Name, Address, Phone and e-mail	

PROJECT REGISTRATION FORM for THIRD PARTY GROUND LEASE TENANTS

_____
Project Registration Number

Title of Project:

Massport tenant name:

Subtenant name (if applicable):

Date submitted to Massport:

Facility/Location:

Who is your Massport Asset Manager for this property?

Scope of Work Description

Construction Cost Estimate

$

Schedule Estimate

Start date End date

Submittal Item	Required?	Description	Date	Notes
Digital Transmission with signed and sealed project plans in electronic format (CAD and pdf)	Yes, if stamped plans are required for building permit If no building permit is required, submit plans describing the location of the project and scope of work			
Permits – list of all permits to be sought	Copies of all permits must be provided to Massport once obtained			

PROJECT REGISTRATION FORM for THIRD PARTY GROUND LEASE TENANTS

_____
Project Registration Number

Project Team	Phone	Email	Address
Architect/Engineer			
General Contractor			
Subtenant Name			

Registration Contact for all correspondence related to this project
Tenant Company name
Individual's name and address
Address of contact
Phone number
Email address

Appendix B – TAA BIM & VDC Guide

Preface

Massport appreciates the investment made by tenants in its facilities, and is committed to doing everything possible to support the investment of our tenant partners in the built environment we share. Tenants are encouraged to establish ongoing communication with Massport staff during their projects' design and construction phases, to help ensure that project information complies with Massport's design and construction criteria and standards. This information supports Massport's goal to create digital information on its facilities and assets.

B-1 Introduction to BIM & VDC Use and Resources

Most architects and engineers use BIM, given the benefits to their practice. If you are reviewing 3D renderings, animations, and 3D construction views, then your designer is probably using BIM software.

For some TAA projects, Massport will require BIM and VDC use. A ***BIM & VDC Project Decision Matrix*** has been developed and included in this document to help you determine whether BIM is required, recommended, or unnecessary on your project.

The Design Technologies Integration Group (DTIG) is responsible for all BIM, CAD templates, submittal standards, legacy data and related information use for projects at Massport. Members in this group are in charge of all BIM, GIS, Site & Civil utilities, Asset Management, and are available to answer questions concerning BIM use for Massport Projects.

If BIM is required on your TAA project, there is help from Massport through the DTIG and the Tenant Alteration representative for the project. The design team hired shall contact DTIG regarding project, BIM templates and submittal requirements prior to any official design submissions. DTIG can be contacted at DTIG@Massport.com. Tenant Alteration representative can be contacted at TAA@massport.com.

B-2 The TAA BIM/VDC Project Decision Matrix

Full TAA projects may require BIM. Massport has developed a BIM/VDC Project Decision Matrix included on pages B-3 and B-4 which includes project types, definition, registration, TAA, deposit requirements, and BIM use.

Also to be considered are the two (2) main lease types that TAA projects are categorized under, which are Direct Leases and 3rd Party Leases. Included is a Project Decision Matrix for either type.

- Figure B1: Direct Tenant TAA Projects: BIM/VDC Project Decision Matrix and its associated BIMxP template.

- Figure B2: Third Party Development Properties: BIM/VDC Project Decision Matrix and its associated BIMxP template.

Both BIMxP templates of these can be found in Appendices B1 & B2 (pages B-10 & B-11).

Other factors considered when determining if a project should be developed in BIM include:

- Internal projects of sufficient complexity as to impact building systems, specifically mechanical, plumbing, and electrical and lighting systems
- Visual impact of the space on the facility and surrounding spaces – commercial, food, and retail spaces conveying the Massport aesthetic goals for the traveler experience
- Projects which impact security and passenger flow
- Extensive rework of existing spaces – internal and external shell modifications

If there is a question concerning BIM and VDC use, it is recommended that you consult with the DTIG team member(s) and your design team to determine BIM value and requirements for your review and submission process.

Figure B1: Project Decision Matrix – Direct Tenant TAA Projects

See: BIMxP Template - Direct Tenant TAA Projects (see Appendix B1 on page B-10)

BIM/VDC Project Decision Matrix - Direct Tenant TAA Projects			
Massport reserves the right to modify the following guidelines as deemed necessary by project circumstances			
Type	**Description**	**BIM Requirement**	**Notes and Assumptions**
Building Alteration (Work Done to Existing Buildings)			
Exterior alterations to building	Roof replacement; new wall panels; new or replacement windows; canopies, awnings or other new building elements	Yes	BIM if there is significant change to the building exterior. BIM Uses: • Existing Conditions Model • New Building Elements
Interior alterations to building	Interior fit-outs which may include repartitioning, installation or renovation of MEP (mechanical, electrical, plumbing) systems, structural changes, finishes and furniture or other components.	Yes BIMxP Record Model	BIM for MEP - Specifically mechanical, plumbing, electrical and fire protection - to capture major building systems and connection points to the existing building systems.
Equipment and Systems			
Installation of new standalone systems	Electrical, mechanical, plumbing/gas, HVAC, telecommunications, security, fueling or other complete systems or individual components OR replacement of individual components of the above systems	Yes	BIM for complete system redesign and changes. No BIM for equipment replacement.
New Construction			
New Buildings	All Single or Multi-phased	Yes BIMxP Record Model	BIM for: • Architectural • Building Systems • Utilities and Connections
Horizontal, Civil			
All Horizontal and Site Utility Replacement	Parking lots/paving; site grading; sidewalks; site utilities; maritime-repairs to docks and piling; Aprons	Yes	Civil 3D and 3D utility information is required, and must be in State Plane Coordinates (NAD 83) and modeled to show an accurate "Z" coordinate for underground utilities and surface features.
Other			
Building demolition, total or partial	Any	No	
Temporary Structures	Including modular buildings, but not including construction trailers	No	
Signage	Ground-mounted identity signs; Building-mounted identity signs; wayfinding signs or sign systems (blade or flat-mounted, powered or not powered)	No	

Figure B2: Project Decision Matrix – Third Party Development Properties

See: BIMxP Template - Third Party Development Properties (see Appendix B2 page B-11)

BIM/VDC Project Decision Matrix - Third Party Development Properties			
Massport reserves the right to modify the following guidelines as deemed necessary by project circumstances			
Type	**Description**	**BIM Requirement**	**Notes and Assumptions**
Building Alteration (Work Done to Existing Buildings)			
Small Repairs and Replacements	Architectural and finish repair/replace	No	
Roof Repairs and Replacements	Roof work	No	
Exterior Alterations to Building	Wall panels; new windows locations; canopies, awnings or other new building elements	Yes	BIM if there is significant change to the building exterior. BIM Uses: • Existing Conditions Model • New Building Elements
Interior Fit outs	**Simple**: Interior fit-outs involving re-partitioning and minor MEP work in finished space; office renovations that do not significantly alter the base building structural elements.	No	BIM for MEP – Specifically
	Complex: Interior fit-outs in raw space or fit-outs that require new and/or extensive renovation of MEP (mechanical, electrical, plumbing) or changes to the building structure would require a full TAA.	Yes BIMxP Record Model	BIM for MEP - Specifically mechanical, plumbing, electrical and fire protection - to capture major building systems and connection points to the existing building systems.
Equipment and Systems			
New Installation or Significant Modifications	Electrical, mechanical, plumbing/gas, HVAC, telecommunications, fueling or other complete systems or individual components	Yes	BIM for complete system redesign and changes. No BIM for equipment replacement.
Replacement or Minor Modifications	Replacement of individual components of above systems, or components or systems with minimal impact to the facility	No	
New Construction			
New Buildings	All Single or Multi-phased	Yes BIMxP Record Model	BIM for: • Architectural • Building Systems • Utilities and Connections
Horizontal, Civil			
Parking lots/paving; site grading; sidewalks; site utilities; maritime-repairs to docks and piling	Parking lots/paving; site grading; sidewalks; site utilities; maritime-repairs to docks and piling; Aprons	Yes	Civil 3D and 3D utility information is required, and must be in State Plane Coordinates (NAD 83) and modeled to show an accurate "Z" coordinate for underground utilities and surface features.
Signs			
Identity	Ground-mounted identity signs; Building-mounted identity signs; wayfinding or other functional signs (blade or flat-mounted), powered signs	Yes	As Part of an associated BIM Project, otherwise No
Others	1) Wayfinding or other functional signs or sign systems 2) New construction identity signs that are part of the base building review.	Yes	As Part of an associated BIM Project, otherwise No
Other			
Demolition, Total or Partial	Any	No	
Temporary Structures	Including modular buildings, but not including construction trailers	No	

Notes:

(1) Projects that do not require a TAA will be registered using the Project Registration Process protocol. Registered projects must provide information including applicant name, architect name, contractor name, start and end dates, and description of the work. Copies of all jurisdictional permits which are legally required for the project must be submitted to Massport for record throughout the course of the project, and evidence of final signoff from the jurisdictional authorities must be provided at completion of the project.

(2) Projects that require a TAA will submit project data on the standard Tenant Alteration Application (TAA) form and provide a deposit as noted above; plans proceed through normal TAA process, including the issuance of a Massport Permit for Tenant Alteration.

(3) Record Document Deposits are collected for certain projects in order to assure the submittal of as-built documentation at the close of the project. If your project requires a deposit, contact the Manager of Tenant Alterations at jrevill@massport.com to obtain the deposit form and directive.

B3 BIM & VDC on Projects

Building Information Modeling (BIM) and Virtual Design and Construction (VDC) are processes allowing teams to work in a collaborative manner on a digital or virtual model of the project. To facilitate this collaboration, basic information is required and documented for team and Massport use. This information is documented utilizing industry standards and forms developed by Massport.

B3.1 BIM Authoring Software

Massport's BIM Authoring tool is Autodesk Revit. Review the Massport resource page for Revit templates and the current version of Revit being used by Massport. Autodesk Civil 3D and AutoCAD are also used as the authoring tools for any site / civil and survey projects.

B3.2 Massport Existing Conditions Documentation

Massport may provide existing documentation (Revit models, CAD files, PDF drawings) appropriate for the project location. This information shall be verified by the tenant prior to any design or construction.

B3.3 Massport BIM Execution Plan

Massport's ***BIM Execution Plan*** (**BIMxP**) was developed to standardize project data requirements and reporting on BIM projects. There are two (2) BIMxP templates developed for TAA projects:

- Appendix B1 - Direct Tenant TAA Projects (Page B-10)
- Appendix B2 - Third Party Development Properties (Page B-11)

The spreadsheet contains:

- Project Information – Responsible Parties Abbreviations
- Record Model Documentation - identifies the responsible party/company (R/P) of a design element and the level of development (LOD) for that element, per the MPA LOD guidelines (See Section B4 for LOD definitions)

B3.4 Record Models and Trade As-Built Deliverables

The Revit (.rvt) model is considered a deliverable on BIM projects. All linked and associated models and any other file types used in project creation must be submitted along with the central model, and must be clearly named according to the MPA BIM Guidelines. Also, if laser scanning has been performed, associated point clouds must be submitted in a registered format, preferably Autodesk ReCap, design or construction.

B3.5 Record Drawings

PDF of record drawings shall be submitted. Refer to section B5.1 (page B-8) for PDF submittal standards.

B3.6 Equipment Information

The following information is submitted for projects with new equipment for utilities, and major building systems

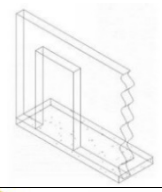
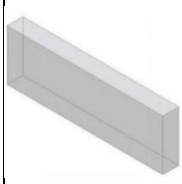
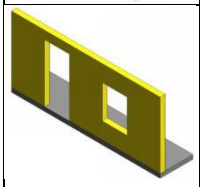
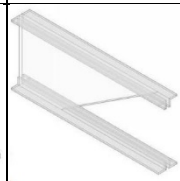
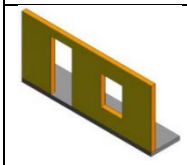
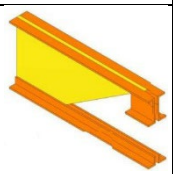
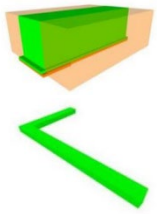
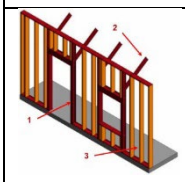
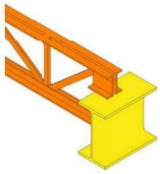
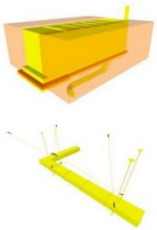
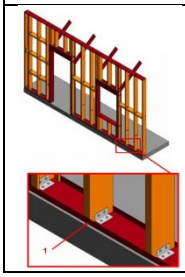
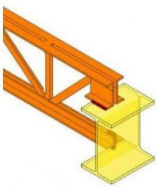
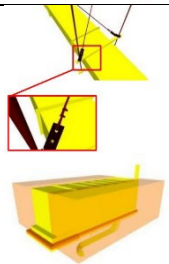
- Manufacturer of equipment

- Model and Serial Number
- Location - Actual room or location the asset resides

B4 BIM Model and Drawing Standards

BIM uses a set of industry standards to identify the level of graphic and information development required on a project. This standard, developed through the BIMFORUM, is called Level of Development Specification Part I (LOD). A copy of the latest BIMFORUM LOD Specification is available on the BIMFORUM website: http://bimforum.org/lod/

FUNDAMENTAL LOD DEFINITIONS
BIMFORUM Revision: December 2021

Architectural	Structural	MEP/FP	
		No Model	**LOD 100** The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e. cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.
			**LOD 200** The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.
			**LOD 300** The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.
			**LOD 350** The Model Element is graphically represented within the Model as a specific system, object, or assembly in terms of quantity, size, shape, location, orientation, and interfaces with other building systems. Non-graphic information may also be attached to the Model Element.
			**LOD 400** The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.

B5 Project Review Models

B5.1 TAA Model and PDF Submittal Guidelines:

The electronic files will be reviewed to verify that all the files meet Massport guidelines.
All Design/Record drawings that are not in compliance with these standards will be returned and resubmitted by the Tenant.

- Design Phase Submittal - Revit models, and individual PDF sheet files in their latest format.
- Record Files Submittal - Revit models, and individual PDF sheet files in their latest format.
- All record drawings require both a signature and stamp.
- File naming format for Revit file submissions: TAAXXXX_ARCH_RXX.rvt, TAAXXXX_MEP_RXX.rvt, TAAXXXX_STRUC_RXX.rvt, where TAAXXXX is the TAA number, ARCH/MEP/STRUC etc. is the discipline, and RXX is the Revit version year. NOTE: This is for official submittals only. Initial (design) TAAs will not yet have the TAA number assigned. Therefore it is strongly urged that the design team obtain the official TAA number from the Tenant Alteration Manager in Capital Programs prior to file creation and/or official submittals to Capital Programs.
- All PDF files will be prepared at 300 DPI.
- All PDF submissions: PDF files of the construction documents / sheets within the model shall be submitted as individual files per sheet. PDF files must follow the MPA naming convention for internal archiving purposes and shall be named as follows: TAAXXXX-A101.pdf, and orientated to landscape. Ensure to have the proper TAA number prior to submission.

B5.2 Initiating Projects with Massport

When initiating a BIM project with Massport, the project team should obtain the required submittal standards from the TAA Manager. BIM and related VDC technology is constantly changing and evolving. Be sure to always obtain the latest standards, families, and shared parameters at the start of each project from the MPA TAA Manager.

- Revit Version: When requesting the Revit models, please specify the version of Revit being used. MPA currently runs the latest version along with two (2) previous versions to help with flexibility.
- Families: Along with the Revit files, there will also be MPA Revit families for standard symbols and sheets.
- Shared Parameters: Shared parameters will also be included with the template package.
- Legibility: Drawings must be clear and legible.

B5.2.1 Site / Civil Project Submissions

Massport uses Autodesk Civil 3D for all site/civil and underground utility projects. The information taken from these submissions will be utilized for the MPA GIS program. To ensure proper submission of the site/civil work, the TAA Manager will supply the consultant with the MPA Site Civil base file containing the MPA GIS layering standards. These layering standards and geospatial location (NAD83) must be followed for incorporation into Massport's compiled utility base maps for our various campuses.

B5.3 As-Bid / Design BIM Deliverables

Final 100% Design BIM Submittal
The following submissions are to be delivered to the Authority via physical media:

- BIMxP
- As-Designed Revit Architectural Model – centralized
- As-Designed Revit MEP/FP and Structural models
- Navisworks Files and associated clash reports (if available)
- Individual PDF files of the Construction Documents
- 2D AutoCAD files, exported from Revit, of blank floor plans
- Civil 3D files of all site, civil, and underground utility drawings

B5.4 Final Record BIM Deliverables

Final 100% Record BIM Submittal
The following submissions are to be delivered to the Authority via physical media:

- BIMxP
- Record Models shall be developed in accordance with the decision matrix type, (see Figure B1 Direct Tenant Matrix on page B-3, or Figure B2 Third Party Matrix on page B-4) and shall match the category type on the appropriate BIMxP, (see Appendix B1 Direct Tenant Matrix on page B-10, or Appendix B2 Third Party Matrix on page B-11) along with the required LOD
- Record As-Built point cloud files, registered, rotated and elevated (if available)
- Record Federated Navisworks Model (if available)
- Trade Contractor / Sub Contractor Native Files (if available)
- Individual PDF files of the Construction Documents. Refer back to section 5.1 in this guide for PDF submittal standards and file naming.

Please contact MPA DTIG (Design Technologies Integration Group) for Revit and/or CAD templates by email: DTIG@massport.com

APPENDIX B1 BIM Direct Tenant TAA Projects

	Element Classification	Building Alteration (Work Done to Existing Buildings)		Equipment and Systems	New Construction	Horizontal, Civil	Other			Direct Tenant TAA Projects
	Element Name	Exterior Alterations	Interior Alterations to Building	Installation of new Standalone Systems	New Buildings	All Horizontal and Site Utility Replacement	Building Demolition, Total or Partial	Temporary Structures	Signage	Notes for LOD Requirements
Site/Civil	A									
	Site Improvements	Use Pull Down Menu for LOD.								Use MPA Civil 3D Template and Standards for Sitework - Provide "Z" Coordinate for Utilities
	Roadways	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Parking Lots	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Pedestrian Plazas and Walkways	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Airfields	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Athletic, Recreational, and Playfield Areas	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Site Development	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Landscaping	200	200	N/A	300	300	N/A	N/A	N/A	MPA Civil 3D Template File
	Liquid and Gas Site Utilities									
	Water Utilities	200	300	N/A	300	300	N/A	N/A	N/A	Interior Projects- Link to Utilities
	Sanitary Sewerage Utilities	200	300	N/A	300	300	N/A	N/A	N/A	Provide hook-up location to existing utility lines. Provide "z" coordinate for utilities. MPA Civil 3D template file
	Storm Drainage Utilities	200	300	N/A	300	300	N/A	N/A	N/A	
	Site Energy Distribution	200	300	N/A	300	300	N/A	N/A	N/A	
	Site Fuel Distribution	200	300	N/A	300	300	N/A	N/A	N/A	
	Liquid and Gas Site Utilities Supplementary Components	200	300	N/A	300	300	N/A	N/A	N/A	
	Electrical Site Improvements									
	Site Electric Distribution Systems	200	300	N/A	300	300	N/A	N/A	N/A	Equipment shall be identified
	Site Lighting	200	300	N/A	300	300	N/A	N/A	N/A	Equipment shall be identified
	Site Communications									
	Site Communications Systems	200	300	N/A	300	300	N/A	N/A	N/A	
	Miscellaneous Site Const									
	Tunnels	200	300	N/A	300	300	N/A	N/A	N/A	
	Subgrade Enclosures									
	Walls for Subgrade Enclosures	300	300	N/A	300	300	N/A	N/A	N/A	
	Slabs-on-Grade									
	Slabs	300	300	N/A	300	300	N/A	N/A	N/A	
Superstructure/Envelope	B									
	Superstructure									
	Floor Construction	300	300	N/A	300	N/A	N/A	N/A	N/A	Provide accurate geometry to the highest level created for project. For new construction Massport requires the exterior shell. Interior information on major equipment location and type required for rescue services.
	Roof Construction	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Structural Framing	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Structural Columns	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Exterior Vertical Enclosures									
	Exterior Walls	300	300	N/A	300	N/A	N/A	N/A	N/A	Provide accurate geometry to the highest level created for project. For new construction Massport requires the exterior shell. Interior information on major equipment location and type required for rescue services.
	Exterior Windows	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Exterior Doors	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Exterior Louvers	300	300	N/A	300	N/A	N/A	N/A	N/A	
Interiors	C Internal to MPA Facilities									
	Interior Construction									
	Interior Partitions	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Interior Windows	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Interior Doors	N/A	300	N/A	300	N/A	N/A	N/A	N/A	Secure/Not secure
	Interior Grilles	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Raised Floor Construction	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Suspended Ceiling Construction	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Interior Finishes									
	Wall Finishes	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Flooring	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Stair Finishes	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Ceiling Finishes	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Interior Finish Schedules	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
MEP/FP & Equipment	D									
	Conveying									
	Vertical Conveying Systems	N/A	300	N/A	300	N/A	N/A	N/A	N/A	Provide Shop Drawings
	Horizontal Conveying Systems	N/A	300	N/A	300	N/A	N/A	N/A	N/A	Provide Shop Drawings
	Material Handling	N/A	300	N/A	300	N/A	N/A	N/A	N/A	Provide Shop Drawings
	Plumbing									
	Domestic Water Distribution	N/A	300	N/A	350	N/A	N/A	N/A	N/A	Provide hook-up location to existing utility lines. Provide "z" coordinate for utilities. MPA AutoCAD template file or .rvt model file
	Sanitary Drainage	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	Building Support Plumbing	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	General Service Compressed Air	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	Process Support Plumbing	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	HVAC									
	Facility Fuel Systems	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	Heating Systems	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Cooling Systems	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Facility HVAC Distribution System	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Ventilation	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Special Purpose HVAC Systems	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Fire Protection									
	Fire Suppression	N/A	300	N/A	350	N/A	N/A	N/A	N/A	
	Fire Protection Specialties	N/A	350	N/A	350	N/A	N/A	N/A	N/A	
	Electrical									
	Facility Power Generation	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Electrical Service and Distribution	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	General Purpose Elec. Power	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Lighting	300	350	N/A	350	N/A	N/A	N/A	N/A	
	Misc. Electrical Systems	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
	Communications									
	Data Communications	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
	Voice Communications	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
	Audio-Video Communication	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
	Distributed Communications and Monitoring	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
	Communications Components	N/A	300	N/A	200	N/A	N/A	N/A	N/A	
	Elect Safety and Security									
	Access Control and Intrusion Detection	300	200	N/A	200	N/A	N/A	N/A	N/A	
	Electronic Surveillance	200	200	N/A	200	N/A	N/A	N/A	N/A	
	Detection and Alarm	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Electronic Monitoring and Control	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Electronic Safety and Security Supplementary Components	300	300	N/A	300	N/A	N/A	N/A	N/A	
	Integrated Automation									
	Integrated Automation Facility Controls	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	E									
	Equipment									
	Vehicle and Pedestrian Equipment	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Commercial Equipment	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Institutional Equipment	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
Furnishings	F									
	Furnishings									
	Fixed Furnishings	N/A	300	N/A	300	N/A	N/A	N/A	N/A	
	Movable Furnishings	N/A	200	N/A	200	N/A	N/A	N/A	N/A	
Specialties	G									
	Special Construction									
	Special Function Construction	200	300	N/A	300	N/A	N/A	N/A	N/A	
	Special Facility Components	200	300	N/A	300	N/A	N/A	N/A	N/A	
	Athletic and Recreational Special Construction	200	200	N/A	200	N/A	N/A	N/A	N/A	
	Special Instrumentation	200	200	N/A	200	N/A	N/A	N/A	N/A	

APPENDIX B2 BIM Third Party Development Properties

	Element Classification	Building Alteration (Work Done to Existing Buildings)				Equipment and Systems		New Construction	Horizontal, Civil	Signs		Other		Third Party Development Properties
	Element Name	Small Repairs and Replacements	Roof Repairs and Replacements	Exterior Alterations to Buildings	Interior Fitouts	New Installation or Significant Modifications	Replacement or Minor Modifications	New Buildings	Parking lots / Paving; Site grading; Sidewalks, Site Utilities; Maritime Repairs to Docks and Pilings	Identity	Others	Demolition; Total or Partial	Temporary Structures	Notes for LOD Requirements
Site/Civil	A													
	Site Improvements	Use Pull Down Menu for LOD.												Use MPA Civil 3D Template and Standards for Sitework - Provide "Z" Coordinate for Utilities
	Roadways	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A	200	200	N/A	N/A	MPA Civil 3D Template File
	Parking Lots	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A	200	200	N/A	N/A	MPA Civil 3D Template File
	Pedestrian Plazas and Walkways	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A	200	200	N/A	N/A	MPA Civil 3D Template File
	Airfields	N/A	N/A	N/A	N/A	N/A	N/A	300	200	200	200	N/A	N/A	MPA Civil 3D Template File
	Athletic, Recreational, and Playfield Areas	N/A	N/A	N/A	N/A	N/A	N/A	300	200	200	200	N/A	N/A	MPA Civil 3D Template File
	Site Development	N/A	N/A	N/A	N/A	N/A	N/A	300	200	200	200	N/A	N/A	MPA Civil 3D Template File
	Landscaping	N/A	N/A	N/A	N/A	N/A	N/A	300	200	200	200	N/A	N/A	MPA Civil 3D Template File
	Liquid and Gas Site Utilities													
	Water Utilities	200	300	300	300	300	N/A	300	300	300	300	N/A	N/A	Interior Projects- Link to Utilities
	Sanitary Sewerage Utilities	200	300	300	300	300	N/A	300	300	300	300	N/A	N/A	Provide hook-up location to existing utility lines. Provide "z" coordinate for utilities. MPA Civil 3D template file
	Storm Drainage Utilities	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Site Energy Distribution	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Site Fuel Distribution	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Liquid and Gas Site Utilities Supplementary Components	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Electrical Site Improvements													
	Site Electric Distribution Systems	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	Equipment shall be identified
	Site Lighting	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	Equipment shall be identified
	Site Communications													
	Site Communications Systems	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Miscellaneous Site Const													
	Tunnels	200	N/A	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Subgrade Enclosures													
	Walls for Subgrade Enclosures	300	300	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Slabs-on-Grade													
	Slabs	300	300	300	300	300	N/A	300	300	300	300	N/A	N/A	
Superstructure/Envelope	B													
	Superstructure													
	Floor Construction	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	Provide accurate geometry to the highest level created for project. For new construction Massport requires the exterior shell. Interior information on major equipment location and type required for rescue services.
	Roof Construction	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Structural Framing	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Structural Columns	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Exterior Vertical Enclosures													
	Exterior Walls	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	Provide accurate geometry to the highest level created for project. For new construction Massport requires the exterior shell. Interior information on major equipment location and type required for rescue services.
	Exterior Windows	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Exterior Doors	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
	Exterior Louvers	300	200	300	300	300	N/A	300	300	300	300	N/A	N/A	
Interiors	C Internal to MPA Facilities													
	Interior Construction													
	Interior Partitions	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Interior Windows	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Interior Doors	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	Secure/Not secure
	Interior Grilles	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Raised Floor Construction	N/A	200	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Suspended Ceiling Construction	N/A	200	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Interior Finishes													
	Wall Finishes	N/A	300	N/A	300	N/A	300	300	300	300	300	N/A	N/A	
	Flooring	N/A	300	N/A	300	N/A	300	300	300	300	300	N/A	N/A	
	Stair Finishes	N/A	300	N/A	300	N/A	300	300	300	300	300	N/A	N/A	
	Ceiling Finishes	N/A	300	N/A	300	N/A	300	300	300	300	300	N/A	N/A	
	Interior Finish Schedules	N/A	300	N/A	300	N/A	300	300	300	300	300	N/A	N/A	
MEP/FP & Equipment	D													
	Conveying													
	Vertical Conveying Systems	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	Provide Shop Drawings
	Horizontal Conveying Systems	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	Provide Shop Drawings
	Material Handling	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	Provide Shop Drawings
	Plumbing													
	Domestic Water Distribution	N/A	300	300	N/A	300	N/A	350	350	350	350	N/A	N/A	
	Sanitary Drainage	N/A	300	300	N/A	300	N/A	350	350	350	350	N/A	N/A	Provide hook-up location to existing utility lines. Provide "z" coordinate for utilities. MPA AutoCAD template file or .rvt model file
	Building Support Plumbing	N/A	300	300	N/A	300	N/A	350	350	350	350	N/A	N/A	
	General Service Compressed Air	N/A	300	300	N/A	300	N/A	350	350	350	350	N/A	N/A	
	Process Support Plumbing	N/A	300	300	N/A	300	N/A	350	350	350	350	N/A	N/A	
	HVAC													
	Facility Fuel Systems	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Heating Systems	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Cooling Systems	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Facility HVAC Distribution System	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Ventilation	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Special Purpose HVAC Systems	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Fire Protection													
	Fire Suppression	N/A	300	300	N/A	300	N/A	300	350	300	300	N/A	N/A	
	Fire Protection Specialties	N/A	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Electrical													
	Facility Power Generation	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Electrical Service and Distribution	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	General Purpose Elec. Power	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Lighting	300	350	350	N/A	350	N/A	350	350	350	350	N/A	N/A	
	Misc. Electrical Systems	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Communications													
	Data Communications	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Voice Communications	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Audio-Video Communication	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Distributed Communications and Monitoring	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Communications Components	N/A	300	300	N/A	200	N/A	300	300	300	300	N/A	N/A	
	Elect Safety and Security													
	Access Control and Intrusion Detection	300	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Electronic Surveillance	200	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
	Detection and Alarm	300	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Electronic Monitoring and Control	300	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Electronic Safety and Security Supplementary Components	300	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Integrated Automation													
	Integrated Automation Facility Controls	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	E													
	Equipment													
	Vehicle and Pedestrian Equipment	N/A	N/A	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Commercial Equipment	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Institutional Equipment	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
Furnishings	F													
	Furnishings													
	Fixed Furnishings	N/A	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Movable Furnishings	N/A	200	200	N/A	200	N/A	200	200	200	200	N/A	N/A	
Specialties	G													
	Special Construction													
	Special Function Construction	200	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Special Facility Components	200	300	300	N/A	300	N/A	300	300	300	300	N/A	N/A	
	Athletic and Recreational Special Construction	200	N/A	200	N/A	200	N/A	300	300	300	300	N/A	N/A	
	Special Instrumentation	200	200	200	N/A	200	N/A	300	300	300	300	N/A	N/A	

Appendix C1 – Sustainability Guidelines
https://www.massport.com/sites/default/files/2025-01/2025-Massport-Sustainability-Design-Guidelines-FINAL.pdf

Appendix C2 – Floodproofing Design Guidelines
https://www.massport.com/sites/default/files/2025-01/2025-Massport-Floodproofing-Design-Guide_FINAL.pdf