PDX TERMINAL DESIGN STANDARDS

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CHAPTER 1 - INTRODUCTION

Portland International Airport (PDX) is recognized as the gateway to Portland and the Pacific Northwest. It is often the first impression travelers have of the city and region and, as such, the public spaces portray the most positive aspects of the area to visitors. The Terminal Design Standards establish a clearly defined framework to guide future projects in the public areas of Portland International Airport terminal. Designs relate to the human emotion associated with travel and welcome travelers through the entire sequence of spaces they visit in the terminal. Fundamentally, the terminal design serves to enhance the traveler’s experience at each step of the airport process: arrival by ground transportation, ticketing and check-in, security, waiting to board, departure and the return or new arrival by air passengers through bag claim, international arrivals and customs, and those waiting to greet passengers.

1.1.1 PURPOSE AND USE OF THIS DOCUMENT

These Terminal Design Standards are guidelines created to provide an initial framework for future projects in the Terminal. The Terminal Design Standards are a living document that should be reviewed and updated in a consistent manner in order to remain current with the evolution of the air travel industry and shifting traveler demographics and trends.

The purpose of the Terminal Design Standards is to give clear information to guide the design, construction and maintenance of a space so that it will support the objectives of PDX. These standards address future projects and any modifications or alterations to existing spaces.

The Terminal Design Standards are intended to serve as a starting point to stimulate quality design. It is the intent of the Port to communicate a regional identity as well as important information about travel and airport services. To that end, all future development should be consistent with the quality of design and materials established in the public spaces of PDX.

The Terminal Design Standards will assist tenants in understanding some of the unique conditions at PDX and how they affect the design, construction process, and the construction cost of projects.

The Port maintains a Design Review Process through which Port staff evaluates proposed design and the implementation of the design standards. The goal is to assure consistent design quality and to help all parties understand what is intended in terms of process, products and systems. The Design Review process is the framework for realizing the guiding principles in each project and communicating effectively with the Port at each project phase. The guidelines for this process are included in the Appendix to this document.

1.1.2 DOCUMENT ORGANIZATION AND FOCUS

The Terminal Design Standards document is organized by building area and includes standards for terminal design as well as airline and concessions tenants’ operations within public view. The Guiding Principles for all projects encompass four conceptual categories ranging from qualitative to quantitative criteria; in this way the design standards address all factors which support a positive traveler’s experience.
This document is not prescriptive. Rather, it describes how to create an atmosphere for a successful airport terminal by addressing the emotional, physical, service and operational objectives for design. The design standards prioritize enhancement of the traveler experience as the primary goal of design for public and tenant spaces in the PDX terminal. They address how to create an environment which is intuitive and inviting from the travelers’ perspectives and which supports the Port’s mission.

1.1.3 GUIDING PRINCIPLES

There are four Organizing Concepts within the guiding principles for projects terminal-wide:

Emotion

The terminal design creates an experience that reduces the inherent stress of traveling. Decisions are simplified and wayfinding made obvious and intuitive. Information is available in an easily understood format and at the right time and place to be useful.

Image

The terminal design creates a strong sense of place. The traveler understands they are in Portland and connects to the culture and natural environment of the Pacific Northwest.

Service

The terminal design supports high-quality services throughout PDX. Services acknowledge and respond to changing demographics and air travel industry trends. Appropriate and up to date technology serves the traveling public.

Operations

The terminal design is high quality, durable, cost effective, environmentally responsible, and simply maintained. PDX is a complex facility; operational efficiencies and effectiveness are important to providing a consistently high-quality passenger experience.

A. EMOTION

Travelers often find the airport experience intimidating. It can be a frenetic environment: service procedures and security protocols change frequently; airlines seldom seem to have an adequate number of staff; and other passengers can add to ones stress if they are unfamiliar with the terminal. The terminal design supports the feeling of a safe and secure journey through the purposeful design of graphics, wayfinding, spatial layout and material development.

- Understanding the Passenger Experience:

  The terminal design acknowledges that each passenger’s or greeter’s experience begins prior to arrival and lasts through ticketing, security, waiting, departure, baggage claim and transition to ground transportation. Personal assistance is
available at each step of the way. This helps create a sense of calm and makes the passenger experience seamless and unhurried. Well-planned amenities and services support the needs of deplaning passengers and visitors coming to the terminal to meet and greet them.

- Wayfinding; Providing Clear Information and Simplifying Decisions:

  Obvious signs and information make major decisions easy for passengers and simplify the travel process and provide the opportunity to access services throughout the experience. Directional signs are clear and consistent throughout the terminal. PDX uses common international symbols to reach the greatest number of travelers. Terminal layout and organization minimize decision points; major information nodes are clearly arranged at intersections and transitions in the terminal.

- Minimize Travelers’ Stress:

  To minimize the stress associated with travel, the terminal design anticipates and supports traveler needs, responds to changing industry trends, makes directions clear and provides information in an easily understood format. Technology is coordinated with space planning to streamline and simplify the process wherever appropriate and humanized to engage travelers directly and respond intuitively to their individual needs. Technology is integrated with signs, graphics wayfinding programs and space planning to provide clear and appropriate information. The integration of finishes and technology equipment is smooth to provide a seamless visual and tactile experience; electrical and data connections are concealed from public view as part of the overall aesthetic and to support a more secure environment for the information delivery. Terminal design continues to stay ahead of technology advances by including regular reviews of the integration of technology, space planning and uses, signs and graphics throughout the terminal.

- Orchestrating the Experience:

  As passengers navigate through the terminal they have a well-orchestrated emotional experience. The terminal design acknowledges the different major areas, types of spaces and quality of places within the airport. Different spaces are used for different reasons and therefore have distinct experiences and finishes. The major public areas of the Ticket Lobby, the Concourses and Bag Claim are equally important as the spaces in-between them; the terminal design considers these areas carefully to provide a smoother transition between them. The framework for “active,” “quiet” and “contemplative” spaces reflect different uses and inform the design of transitions.

  At a variety of locations throughout the terminal there are options for rest, relaxation and for play, as well as opportunities to be excited about travel. Spaces are programmed appropriately and anticipate passenger needs by facilitating the placement of services when and where the traveler needs it.

  The “golden age” of airline travel may be over for those passengers traveling coach. The golden age of airline terminals provides an opportunity to recapture
the adventure of travel by enhancing the passenger’s experience just when they are most vulnerable.

B. IMAGE
The PDX Terminal has a unique character. Over the years it has evolved to reflect and represent Portland and the Pacific Northwest. Abundant skylights provide daylight and a connection to the changing sky, generous windows invite views to the surrounding environment and natural wood and colors reflect the landscape; these features anchor the image of the terminal firmly in the region. Throughout all aspects of the terminal experience the palette of finishes and colors establish PDX as a friendly and welcoming place; the aesthetic is contemporary, elegant and timeless, visually clear and acoustically calm. The Terminal Design Standards build on the existing sense of place and advance the Port’s ability to improve and enhance its character with each new project.

- Fostering a Strong Sense of Place:
  A strong sense of place establishes the identity of PDX in the mind of the traveler and places it clearly in the Pacific Northwest. Retail areas have successfully created an environment that is related to recognized Portland shopping districts by using elements of scale, signs and graphics, lighting, distinctive materials and storefront merchandising. Art is integrated into the architecture through installations which include sculpture, visual storytelling and cultural images or motifs.

  The Terminal Design Standards describe a design framework based on past successes and draw from the best available practices today. They are structured to include new information as it emerges and is appropriate. The terminal at PDX contains a wide range of spatial experiences and accommodates multiple functions; a coordinated graphic and aesthetic story throughout the public spaces reinforces a calm and enjoyable passenger experience and provides tangible reminders of the region.

- Environmental Stewardship:
  Demonstrated responsibility for environmental stewardship is integral to the Port’s vision. The local light rail system, MAX, serves PDX directly and is a safe, efficient ground transportation alternative for travelers; the intersection of the terminal with the MAX station and visitor information is part of the welcoming experience. The design standards reinforce the Port’s environmental policies at the project level by encouraging life-cycle cost assessment of project and material selection, the use of non-toxic, regional and renewable materials, and by requiring energy-saving strategies for all areas in the terminal. Pioneering programs, such as the liquid and compost separation centers, are part of the Port’s ongoing commitment to caring for the region.

- Connecting to the Culture and Natural Environment of the Pacific Northwest:
  The selection of colors and materials that reflect the natural environment of the Pacific Northwest helps to educate travelers about the Port’s ideals in building sustainable places and provides a literal connection to the region. Direct views
of the river and access to natural light further bring the environment of the region to passengers and contribute to a pleasant experience within PDX. In addition to a well-crafted material palette, images, graphics and exhibits like the Columbia River installation illustrate the Port’s vision.

The Port encourages economic growth of the Pacific Northwest by supporting local businesses who present goods from a wide range of regional designers and craftspeople throughout the concessions program. The food concessions program also features local favorites. The design standards demonstrate the Port’s and the City of Portland’s reputation for and leadership in sustainability.

C. SERVICE

The service environment at PDX supports the unique sense of place throughout the terminal by offering access to regional businesses and culture. It is a further expression of the high quality of the facility in the range and sophistication of passenger support it offers. Technological advances are shaping parts of the traveling experience. Development at PDX embraces these as service opportunities by integrating new equipment into the way passengers navigate to and from flights and by continually upgrading information and communication services available along the way.

The changing demographics of travelers and trends in the air travel industry continue to change the services which passengers seek. Maintaining clear, up-to-date wayfinding and information graphics and physical access to all aspects of available services is an important part of welcoming travelers to PDX.

- Access to High-Quality Services and Technology:

Emerging technologies in ticketing and security have afforded passengers a great deal of autonomy and this will likely increase in the near future. Technological development is not completely predictable in terms of its impact on the existing building infrastructure; in order to provide for the best outcome while supporting change, the Design Review process evaluates projects on their ability to support a high quality passenger experience. Shortening the perceived wait in ticketing and security lines, communicating up-to-the-minute flight information, and providing the opportunity for full service at each step of the traveling process are all important to creating a lasting, positive impression of a passenger’s trip.

The standards address the unified appearance of displays and kiosks; PDX can lead airlines by establishing standards for the framework and installation of these “boxes.” The Port website is a portal and is a virtual front door to PDX, providing more access to terminal services and airline information.

The design standards include those specific to managing technology solutions. The Information Technology department works in partnership with key terminal stakeholders on design, installation, ongoing support, and long-term planning to evaluate and implement new technology services and the renewal and replacement for existing systems.
- Self-Service and Full-Service Choices for Passengers:

PDX provides full service options throughout the air travel process while simultaneously supporting self-service formats at each step. The curbside check-in, ticket counter, baggage check and pick-up, security, and the holdroom and gate are all places where there is a full-service opportunity. Because travel can be anxiety-producing, the full-service option always complements the more autonomous, self-service choices.

- Acknowledge and Support Changing Demographics:

PDX currently provides services to support a variety of travelers through a wide range of concessions services; waiting, working, and play spaces; WiFi and other communications support; and a number of self-service options from the airlines. The design standards give focus to the on-going assessment of services in light of changing demographics. Services need to be clearly identified and located where the public will intuitively seek them.

A significant study on the air travel industry has identified current and emerging traveler trends that will impact demands on passenger services within the next 15 years.** Key groups include:

- Active Seniors
  An aging global population will yield an unprecedented number of older people traveling.

- Family Groups
  Growth in global migration increases the number and generations of family members traveling together.

- Distance Commuters
  More people are living and working in different regions requiring regular, sometimes international, travel.

- Global Business Leaders
  Senior executives traveling domestically and internationally in premium class.

- Air Travel Industry Trends:

The Port works constantly to anticipate trends in air travel and to predict travelers’ needs. Trends strongly influence the services provided to passengers and the technology and protocols used to deliver them.

Specific developments in low-cost carriers, large-capacity planes and those focused on business travelers may influence peak operation times and passenger expectations for information and services availability. Concessions services will need to operate for longer hours and full-service demands may increase even as retail tenants implement their own new sales technology.

New aircraft designs will introduce lighter and more efficient planes with the potential for longer range. More international and non-stop flights will be easier and cheaper to provide. Rising affluence and the associated globalization of
travel and tourism will continue to influence the way passengers connect to their airline and the services that assist them.

- Graphics and Communications:

The terminal design integrates the full range of graphic communication, wayfinding, MUFIDS, tenant signs and graphics, service icons, advertising and code-mandated messages into a coherent structure that keeps the traveler directed, informed and comfortable. Signs communicate the range of services available, starting before arrival at PDX, and provide the necessary information to successfully navigate the terminal. Each tier of the graphics hierarchy must provide legible and consistent colors, fonts, logos and imagery for multiple generations of travelers. Graphics of all kinds are integrated with the overall image of PDX as an inviting place.

D. OPERATIONS

- Promote High-Quality, Durable and Cost-Effective Design:

Development at PDX responds to a variety of factors. Standards identify key facilities and services and provide a framework for their design. Effective placement of program elements, high-quality materials and finishes and cost efficiency are all important to the success of the facility.

Material selections will be incorporated into asset management with information about life-cycle costs and life expectancy to benefit future planning. For example, high-quality finishes are more cost effective, withstand maintenance over a longer timeframe and provide lasting value to the Port by supporting the Port’s image and contributing to a favorable passenger experience. The choice of high-quality finishes, well-designed lighting, technology support infrastructure, and efficient mechanical equipment all contribute to good operations.

- Simplify Maintenance:

Balancing the selection of high quality materials with the ease of maintenance is an important design consideration. Although some materials may elicit a desired passenger response, the best design solution is determined by evaluating a range of possibilities in light of their effect as well as their practicality of maintenance and long term asset management.

- Facilitate Operational Efficiency:

Efficient operations contribute to the sense of place at PDX by ensuring a consistent quality of environment throughout the terminal; this ensures the impression that it is a well-functioning, service-oriented airport. The facilities staff is important to the realization of the standards in day-to-day operations at PDX and should participate in the design review process.
• Sustainable Practices:
  High-performance, environmentally-responsible operations align with the Port’s broader goal for sustainability and travelers’ expectations regarding Portland’s commitment to sustainability. The design standards reinforce best practices in energy efficiency, water efficiency, environmentally-responsible materials selection, and a healthy indoor environment.

Recommended sustainability performance standards and a list of local resources are included in this document to assist tenants in sourcing environmentally friendly materials locally. See Chapter 13 – Sustainability.

1.1.3 PALETTE CONCEPTS

There are four conceptual palettes that guide color and material selection throughout the terminal complex. In each case, the palettes address the range of design considerations within the organizing concepts. Following this text, there are color plates that illustrate these palettes. In each case the illustrative images are intended to guide future color and material palette development:

• Relaxed
  One primary goal in the vision is to reduce the inherent stress of traveling. The colors and textures of materials associated with this palette have a calming and soothing effect as well as the advantage of making time seem to pass more quickly. This is important to enhancing the passengers’ positive impressions of customer service especially in spaces for queuing and other waiting such as the Ticket Lobby, security checkpoint queuing areas and Holdrooms.

• Enlightening
  The colors and materials associated with this palette have a clear and revealing effect, helping to create a distinct sense of place for passengers and visitors to PDX and to connect to the culture and natural environment of the region. This palette is integrated throughout the terminal, providing continuity across different activities and functions.

• Enduring
  Timelessness and stability are associated with this palette. Materials like metal, tile and stone and more neutral colors are used in all entries to the building and vertical circulation. The concept also addresses the materials and construction of equipment and furnishings such as the public seating, trash and recycling containers and bag carousels.

• Accent
  This palette is derived from active and social concepts and is used most visibly in the concessions nodes in order to distinguish those activities from other functions in the terminal. Associated with the colors and materials of this palette, the concept includes
warmer lighting color temperatures and opportunities to create customized installations in the design.

1.1.4 INTERIOR FINISHES AND AESTHETICS

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal. Interior finishes have a significant effect on the atmosphere, character and lasting image of every space within public view, so all developments display a creative selection and application of interior finishes, using high quality, durable materials. It is important for the Tenant or the Tenant’s representative (architect, graphic designer, etc.) to work with the Port’s representative, under the guidance of the Terminal Design Standards and the Design Review Process, to create a unique look for each Tenant operation within the Airport.

Following this narrative, there are color plates which illustrate a design approach for a family of carpets terminal-wide which are consistent with the vision.

There are three recommended cycles for the review and replacement of interior systems and finishes:

- Every 5 years:
  Technology equipment and infrastructure, Technology planning, upholstery and concessions furnishings.

- Every 10 years:
  HVAC equipment and systems terminal-wide, lighting equipment and systems, counters and tabletops, furniture, restrooms.

- Every 20 years:
  Carpet, Port-built elements such as roadside podiums and canopies, skylights, overall master plan.

1.1.5 ENVIRONMENTAL GOALS & DESIGN AND CONSTRUCTION BEST PRACTICES

In the public spaces at PDX many strategies are in use to reduce waste and the consumption of water and energy. All projects at PDX have these goals as guiding design principles. See the Port of Portland’s web page at the following URL: http://www.portofportland.com/Env_Home.aspx.

Design and construction best practices are integrated within the Terminal Design Standards. This integration of more sustainable practices aligns with the Port’s Environmental Policy adopted in 2000 to formalize the Port’s commitment to achieving its mission through the implementation of proactive environmental programs. The Terminal Design Standards’ Guiding Principles – including a sense of place, environmental stewardship, a connection to Pacific Northwest culture and environment, high performance, high efficiency, high quality,
durability, cost-effectiveness—directly and simultaneously the achievement of the Port’s goals for environmental stewardship and a positive experience for travelers.

1.1.6 THE ASSET MANAGEMENT PROGRAM

The Port of Portland Aviation Division has developed an Asset Management program to maintain and preserve Aviation assets. This program is identified in the Aviation Business Plan as a strategy that supports facility and financial goals. There are three main parts to the program:

- Asset Maintenance:
  Determining equipment criticality, performing life cycle cost analyses, performing preventative maintenance.

- Facility Asset Management:
  Performing comprehensive needs assessments for the PDX facility to determine immediate needs and to create a long-range facility plan.

- Pavement Management:
  Evaluating present and working to predict future conditions of paving at PDX to perform life cycle cost analysis and develop recommendations for maintenance of the pavement network.

  This Asset Management program will provide documented histories of assets, a general plan of improvements, and long-term budget projections for these improvements; the plans and budgets reflect a careful attention to life cycle cost assessment and surveys of existing conditions. This information assists Aviation Management in making decisions about an asset, how to maintain it, when to refurbish or replace it, whether or not to defer maintenance, and when to demolish it.

1.1.7 SECURITY

The Portland International Airport Terminal is comprised of nearly 1.5 million square feet of public and private interior space. Ensuring all spaces are properly secured is a fundamental component in maintaining the safety and security of our facility. As such, the Port of Portland has adopted a Key Program for PDX that establishes procedures and designates responsibilities for the issuance and control of keys. The goal of this program is to provide a secure locking system for PDX facilities owned by the Port, and to ensure compliance with TSA regulations related to controlling access to the Restricted Area.

1.1.8 VARIANCES

The Port recognizes that situations arise which may warrant modification to these Terminal Design Standards. A written request for an exception shall be submitted to the Design Review coordinator stating the variance requested and the Port’s applicable section of the standards. The Port will evaluate each request and will notify the tenant of its decision.
1.1.9 TENANT FLOOR AREA

The floor area of each Tenant’s space will be designed on the Lease Plat provided and maintained by the Port.

**Future Traveller Tribes 2020**
by Henley Centre HeadlightVision and Amadeus
GUIDING PRINCIPLES: organizing concepts

The terminal design creates an experience that reduces the inherent stress of traveling. Decisions are simplified and wayfinding made obvious and intuitive. Information is available in an easily understood format and at the right time and place to be useful.

The terminal design creates a strong sense of place. The traveler understands they are in Portland and connects to the culture and natural environment of the Pacific Northwest.

The terminal design supports high-quality services throughout PDX. Services acknowledge and respond to changing demographics and air travel industry trends. Appropriate and up to date technology serves the traveling public.

Terminal design is high quality, durable, cost effective and simply maintained. PDX is a complex facility; operational efficiencies and effectiveness are important to providing a high-quality passenger experience.
Goal: To create spaces to pause, rest and unwind; spaces to seek refuge from the frenetic pace of travel.

Effect: Soothing, relaxing, calming, peaceful and restful.

Spaces: Meet and greet, public seating including food court or concessions, restrooms, holdrooms.

Colors: Blue, green, turquoise, white.
Goal: To create areas where you need to pause to gather yourself and or gather information.

Effect: Candid, revealing, clear, light

Spaces: Transition/throat, threshold spaces, portions of ticket and post security lobby, information kiosk or node locations, restrooms

Colors: White, green, brown, turquoise
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<thead>
<tr>
<th>Goal</th>
<th>To support hardworking areas of the Port / stable aspects of the image</th>
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<tr>
<td>Effect</td>
<td>Timeless, lasting, durable, stable</td>
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<tr>
<td>Spaces</td>
<td>Baggage screening/checking, entries and exits, restrooms, baggage claim, security</td>
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<tr>
<td>Colors</td>
<td>Black, brown, gray, blue</td>
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<tr>
<td>Goal</td>
<td>To support active environments that are full of life and capture the excitement of travel, to create movement and flow in areas for communication and community gathering</td>
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<td>Effect</td>
<td>Energetic, dynamic, bright, and inspiring, exciting, stimulating, playful, and spirited</td>
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<tr>
<td>Spaces</td>
<td>Circulation, queuing, meet + greet, threshold spaces, security, lobby spaces, play spaces, public seating</td>
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<td>Colors</td>
<td>Orange, red, yellow, brown and green</td>
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CHAPTER 2 - TICKET LOBBY

The Ticket Lobby and curb front of Portland International Airport (PDX) are designed to be attractive, welcoming, open spaces that greet passengers and provide them with the information and services they need to have an enjoyable, successful journey. The Ticket Lobby is the front door to PDX, so the design and feel of this space is focused on creating the best first impression to travelers and introducing them to the entire Terminal Complex. The Port has set a high standard of quality for the Ticket Lobby and the tenant-operated spaces within public view; all areas are professionally designed and organized to maintain the attractiveness and friendliness of this important space. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

The open design of the lobby offers passengers easy access to the Airline counters, as well as to the Oregon Market and the concourses. The material palette in this space is based on colors, materials, textures and imagery from the region’s natural environment. The palette is based primarily on the relaxed and enduring concepts; there are very enduring materials and neutral colors at the entries and vertical circulation areas and at the baggage carousels. The pattern and colors of the carpet system constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme. The graphic proportions of the different patterns provide a human scale to the space; together with wood, this material softens the lively acoustics and helps to create a warm and welcoming environment in the Ticket Lobby.

2.1.1 INTERIOR FINISHES/AESTHETICS

Public spaces at PDX are finished in a material palette that is durable and consistent throughout the terminal. The relaxed and enduring conceptual palettes guide color and materials selection in the Ticket Lobby and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are solely responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information; in all cases, a site survey is strongly recommended.
A. Public Space Finishes

The Port provides all flooring in the public areas of the Ticket Lobby, including carpeting, base and transition materials, as well as appropriate wall base, wainscot in select locations, wall and ceiling finishes and general lighting. Flooring behind the ticket counter shall be provided by the Airline at the Airline’s expense.

4. Walk-Off Carpet: Cyrus Systems (custom product with Milliken Street Smart Face and Mannington Infinity Backing), Color: Sapphire, Roll size: 6’
5. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
6. Wainscot: Stainless Steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
7. Counters
Ticket counter displays shall not create a cluttered appearance and shall consist of Airline materials only.
Ticket counters are initially provided by the Port for Airline Tenant use. The Airline Tenant may install a new counter provided that it complements the Terminal Design Standard finishes. Alterations, signs, and other displays are not permitted.
   a. Port Counter Top: Nevamar, Fossil Gray S-6031T
   b. Port Counter Front: Nevamar, Regimental Blue S-3016T
   c. Future Port Common Use counters:
      1) Counter Top: Richlite, Cascade Shasta, 1¼” thick
      2) Writing Counter: Richlite, Blue Canyon, ¾” thick
      3) Counter Front: Bendheim tempered glass, PORT-568, stripes alternating between first and second surface, ¼” thick; ¼” thick back-painted glass, Miller 5760W (to match Port white)
      4) Counter Side: Rigidized Metals Corp stainless steel, Product 4-LB in 304 SS Satin, 14-gauge
9. Metal Panels: Alucabond, Natural Anodized Aluminum
10. Ceilings
The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   b. Ticket Counter Canopy: Open Wood Slats
   c. GFRG Soffits: Painted finish.
11. Window Coverings, Roller Shades

12. Lighting
   General illumination is provided by a combination of uplights on the columns and recessed downlights in the ceiling. There is also a series of lights mounted at the rear of the canopy over the ticket counters, which provides a brighter, diffuse light near this hub of activity.
   Future developments should consider revisions to the general lighting by adding pendants or other sculptural installations to provide visual interest and varied scale to the space as well as increasing the range of light levels and characteristics.

B. Public Space Furnishings and Accessories
   The Port provides public seating in the Ticket Lobby to give passengers an opportunity to pause during the ticketing and bag-check process. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable.

   There is interior landscape in the Ticket Lobby arranged along the entry wall and near the Max Lobby to the South.

1. The utilization of a combination of cluster and linear seating is recommended wherever possible. Studies indicate a higher seating usage capacity because of the flexibility and various seating configurations that can be created with cluster and linear seating which accommodates a wide range of airport user group sizes. Other recommendations would be as follows:
   a. Materials: Satin polish, die-cast aluminum exposed metal components and vinyl- and plasticizer-free, solid-paneled, stain-repellant, leather alternative upholstery. Foam products used in upholstery should be high resiliency. Substrates for tables should be appropriate for extremely durable construction with factory formed joints and solid smooth edges.
   b. Framework should be solid metal with welded joints whenever possible. Seating structure needs to resist tipping.
   c. Power integration with boxes and raceway under the standard seat pan.
   d. Generally, a higher-back seating style is preferred for comfort. Bench seating (seats with no backrest) can be considered in areas where customers are only pausing for a short-duration.
   e. Manufacturer’s warranty on structural integrity of units should be no less than 10 years and 3 years for upholstery.
C. Airline Tenant Public Finishes

1. Back Wall at Ticket Counter Areas
   The back wall finish is an integral element of the design of the Airline’s ticket counter space and shall be provided at the Airline’s expense. The back wall may serve as the support for the Primary Sign/Logo. The back wall shall be professionally finished with the name, corporate logo(s), and colors of the Airline. High quality, attractive finishes are required.
   - a. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
   - b. Wainscot: Stainless Steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.

2. Lighting
   The Port provides all general lighting in the Ticket Lobby. No tenant-installed accent or spotlight lighting shall be permitted on the Ticket Counter or the back wall signs.

D. Airline Tenant Furnishings and Accessories

1. Queuing Zone/Devices Design and Use
   To provide the highest level of customer service in the ticket counter area, queuing devices are required to moderate the circulation and flow of passengers through the Ticket Lobby. Airlines should adjust their use of queuing devices according to their peak travel periods to limit passenger congestion in the Ticket Lobby. The queuing zone begins 7’ from the front of the ticket counter, extends out 20’, and shall be no wider than the Airline’s leased ticket counter space. The Port recommends the use of Tensa Barrier brand stanchions or equivalent. The Port provides queuing devices for common use counter locations.

2. Queuing Diagram

   ![Queuing Diagram](image-url)
3. **Stanchions**
   The base and stands should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each Airline is required to standardize the finish of the stands for all of their queuing areas in the Ticket Lobby.

4. **Bag Tag Podiums**
   Bag tag podiums in the Ticket Lobby shall be provided by the Airline at the Airline’s expense. The podiums shall be finished with durable, high quality materials, and should match the finish of the Airline’s ticket counter. Bag tag podiums shall be located at the entrance to the Airline’s queuing zone to offer the greatest visibility to passengers. Bag tag podiums shall be no larger than 20" wide, 20" deep, and 40" high (including tag storage and writing top) and shall be mobile. The appearance of podiums shall be maintained by the Airline and be of a quality consistent with the terminal design. Failure to maintain bag tag podiums will result in the replacement of the podium by the Port at the Airline’s expense.

E. **Curbside Check-in Podiums**

Fixed-location curbside check-in podiums are installed and maintained by the Port. In general, all tenant provided equipment, signage, and fixturing is to be of the same aesthetic quality and durability as those found inside the ticket lobby, and may not impede pedestrian circulation at the curb front. In addition, the following criteria apply.

1. **Fixtures**
   All airline or tenant-provided fixtures must be weatherproof and designed for exterior use.

2. **Counter Top Displays**
   Airline disclaimer notices, baggage liability, FAA statements, counter top brochure displays, and other Airline required signs are allowed on podiums. No signs are permitted on counter fronts. Holiday décor is not permitted curbside.

3. **Stanchions**
   The base and stands should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome, and suitable for exterior use. Each Airline is required to standardize the finish of the stands for all of their queuing areas at the curb front. The signage standards below in section 2.1.3 (B) also apply.

   In addition, should the Port elect to provide stanchions, airlines will be required to use the Port-provided queuing devices. The Port may also require airlines to utilize a certain stanchion type or model at its discretion.

4. **Signage**
   Please reference Section 2.1.3 below for general signage standards that also apply to curb front signage. No hand lettered or non-professionally produced signage is permitted, and all signage should be constructed for exterior use.
5. Storage
Storage is not permitted at the terminal front. All equipment not in use must be securely stored within the check-in podiums. Luggage carts that are not actively in use may not be stored on the curb front.

2.1.2 TECHNOLOGY

A. Instant Ticket Machines

As a customer service option, self-service kiosks and Instant Ticket Machines are allowed in the airport Ticket Lobby in locations coordinated with the Airline’s ticket counter lease. The term Instant Ticket Machine (ITM) shall also apply to any other self-service devices within the Ticket Lobby. Airlines are permitted to install these ITMs for use by their passengers in accordance with the following guidelines.

1. Signs
   a. ITMs built into the existing ticket counter shall use the Port provided rotating signs following the standards described in the Signs and Information section of this chapter.
   b. ITMs within the Airline queuing zone may include signs that contain the overall height of the unit (unit plus signs) to 62” high.
   c. ITMs outside of the Airline queuing zone may include signs that contain the overall height of the unit (unit plus signs) to 84” high. Primary text shall not exceed 3” in height, and should be a bold, Arial-type font.

2. Location
   a. Airlines may include ITMs in their ticket counter lease area and queuing zone.
   b. Queuing in front of the ticket machines shall not disrupt circulation in the corridor(s), common/public areas or building egress.
   c. Placement of ITMs and ITMs with signs shall not obstruct sight lines through the Ticket Lobby or to other signs or to building amenities and egress.

3. Aesthetics
   a. Ticket machine design shall be integrated into the general design of the Ticket Lobby and ticket counter in which it is situated to achieve flush surfaces and joints between materials; all electrical and data conduits are to be fully concealed. Ticket machines on pedestals within Airline leased areas shall be designed to be compatible with existing nearby finishes, materials, and colors.

B. Multiple Flight Information Display

The Port provides monitors in a number of locations throughout the terminal that display flight information for all airlines. The system is supported by Information Technology and relies either on information submitted by the airlines manually or through an automated interface. Refer also to the chapter on Technology.
2.1.3 SIGNS AND INFORMATION

The following signs standards apply within the Ticket Lobby and at the curb front at Portland International Airport, and are provided to ensure that PDX retains high quality aesthetic finishes and overall appearance.

All sign additions, modifications, or updates must be approved through the Port’s Design Review Process. Signs that do not have Port Design Review approval will be subject to immediate removal. In some cases, a Port Tenant Construction Permit may also be required. This requirement will be determined as part of the Design Review Process.

In general, the use of red text is discouraged, as this color is reserved for emergency purposes.

A. Port Directional (“Wayfinding”) Program

The Directional (“Wayfinding”) Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

B. Ticket Lobby Airline Tenant Signs General Guidelines

1. All internal identification and directional signs are provided by the Port for Airlines beginning service at PDX. All subsequent changes will be at the Airline’s expense and subject to approval by the Port. Illuminated signs containing the Airline’s name shall be provided on the face of the overhead canopy at the Port’s expense for new Airline tenants. Relocation of this sign is at the Airline’s expense, unless the Port requires relocation. Internally illuminated signs and/or other graphic elements are not permitted in the Ticket Lobby. No signs or advertisements shall be attached to or hung from the overhead canopy, except Port-provided rotating “Position Open/Closed” signs. No promotional material is allowed, except on counter displays. Banners are only acceptable as temporary signs within the tenant’s lease area. No Airline decals or paste-on signs shall be permitted.

2. Back Wall Signs

The back wall finish is an integral design element of an airline’s ticket counter space, and an important element in an airline’s branding. Back wall signs shall be provided by the Airlines at the Airline’s expense. The back wall shall be professionally finished with the name, corporate logo and colors of the airline; high quality, attractive finishes are required.

3. Rotating Signs

a. Rotating signs are located above each check in position along the ticket counter, and typically denote queue type or status (for example, “Open Position” or “First Class”). Visiontron Corp. provides the Port’s rotating signs; and one rotating sign is provided at each ticket counter position.

b. Airlines may use the existing rotating sign frames to enlarge their check in position signs to a maximum of 66” wide x 8” high. No more than two rotating signs may be combined, and only signs above two check-in positions may be combined; signs spanning the bag drop areas are not permitted. Font shall be of type and size to be readable from the
beginning of the airline’s standard queue line. The alternative signs should be attached to the rotating sign frames without disturbing the existing structure.

c. The standard insert size for the rotating signs is 30” long x 2 7/8” wide, and inserts should be made of durable vinyl and be professionally produced. The Port’s standard rotating sign has four sides suitable for inserts.

4. Queuing Control System Signs
   a. Posts
      Tensabarrier-type posts should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. Each Airline is required to standardize the finish of their posts, either within their queuing area as a whole, or within each individual type of queue in the Ticket Lobby.
   b. Tapes
      Tapes should be standardized for each Airline queue. Airlines are encouraged to use different color tapes to delineate individual types of lines. Tapes shall be a maximum of two colors. Text may be printed on the tapes, identifying the airline name or specific line type.

5. Queuing Control System Sign Holders
   Tensabarrier-type sign holders are mounted on top of the Tensabarrier-type posts and are typically a frame that can accept a vinyl insert.
   a. Size, Color and Configuration
      Tensabarrier-type barrier mounted sign frames shall be a maximum of 24”x 16”, and may be mounted in portrait or landscape orientation. A maximum of one additional oversize sign (24” wide x 30” high MAX) may be mounted on a tensa-type post within each queue. Frames shall match or complement the color of barrier posts to which they are mounted. Tenants may use one barrier-mounted sign for each individual queue or function. Signs should be professionally produced on a durable vinyl or plastic material.

6. Instant Ticket Machine (ITM) Signs
   a. The term Instant Ticket Machine (ITM) shall also apply to any other self-service devices within the ticket lobby.
   b. ITMs built into the existing ticket counter may utilize the Port provided rotating signage following the standards noted above.
   c. ITMs within the airline queuing zone may include signage that contains the overall height of the unit (unit plus signage) to 62” high. Signs may be any color. Font shall be of type and size to be readable from the beginning of the airline’s standard queuing line.
   d. ITMs outside of the airline ticket lobby queuing zone may include signage that contains the overall height of the unit (unit plus signage) at 84” high. Signs may be any color. Primary text shall not exceed 3” in height, and should be a bold, Arial-type font.

7. Freestanding Signs
   a. One freestanding sign may be located at the entrance to each individual type of queue within an Airline’s queuing zone. Signs may be a portable
Common Design

2. Literature, removed apply. After

b. Portable Sign Stands and Inserts

The frame and stand should be rustproof and finished in an attractive and durable material. Portable sign stands shall have a maximum frame size of 24” wide x 30” high to support the standard 22” wide x 28” high insert. The overall dimensions (base plus frame) shall be a maximum of 24” wide x 62” high. The sign shall be two sided to be visible from both sides; sign colors, fonts, and finishes should be selected based on intended use.

c. Monolithic Signs

Monolithic signs should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. Other materials, such as laminates, may also be considered through the Design Review Process. The overall dimensions shall be a maximum of 24” wide x 72” tall. Each Airline is required to standardize the finishes of the signs for each of their individual queues within the Ticket Lobby. Signs shall be two sided to be visible from both sides; sign colors, fonts, finishes, and materials should be selected based on intended use.

8. Carry-On Baggage Sizing Units

a. Each Airline is permitted to install carry-on baggage sizing units as appropriate for their operations, up to a maximum of one unit per queue. There are no size restrictions on these units; however, if they are combined with any other type of signs or advertisement, the standards outlined elsewhere in this document shall apply. Baggage sizing units may contain an integrated scale. These units must be contained within the Ticket Lobby queuing space parameters within the Airline’s leased area.

C. Common Use Counter Signs

For those airlines operating from Common Use ticket counters, slightly different standards apply.

After each flight has been processed, airline signs and other branded materials must be removed from the ticket lobby and stored elsewhere (for example, airline carpeting, literature, baggage tags, baggage scales or sizing units, and/or timetables).

1. Back Wall Signs

The back wall space at Common Use ticket counters includes monitors provided by the Port. Information is displayed based on the scheduled flight operations.

2. Rotating Signs

In the Common Use area, enlarging the rotating signs as noted above is not
permitted. Airlines must use the standard size rotating signs described above, and custom inserts can be used.

3. TensabARRIER-TYPE QUEUING CONTROL SYSTEMS
Airline queuing within the Common Use area must use the Port provided Port of Portland TensabARRIER-type system. Airlines may also use the Port provided TensabARRIER-type posts for their own signs, though Airlines must provide their own frames and inserts.

4. Freestanding Signs
Freestanding signs are permitted within the Common Use area following the standards outlined above.

D. Temporary Signs

1. Temporary signs includes those displayed for a limited period of time (as determined by the Port), banners, computer generated and/or laminated promotional materials, paste on signs, required notifications, security changes, and any mandated governmental signs. In each case, signs should appear professionally produced; high quality printing, materials and finishes should be used wherever possible. Ripped, discolored, defaced, faded, or temporary signs being used as permanent shall not be accepted.

2. The use of paper signs is strongly discouraged. As an interim measure may be used provided they are sandwiched between clear plastic and are printed in such a manner as to appear professionally produced. Paper signs must also be printed so as to fit the sign holder for which it is intended.

3. Department of Homeland Security (DHS) or Port of Portland or governmentally mandated signs or temporary measures shall be installed and removed as recommended by the DHS or the Port. In all cases, when possible, signs shall be durable and attractively constructed. Each airline is responsible for maintaining, updating, and removing the signs as required by the issuing authority.

4. Holiday Décor
Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

   a. Locations
   1) All holiday displays shall be limited to within tenant leasehold space.
   2) Decoration is limited to check in desk counter tops, and 20% of back wall area in the Ticket Lobby.
   3) Holiday displays are not allowed along the front surface of check in counters, or against ticket lobby windows.
   4) Limited décor is permitted to be hung from the canopy above the check in desks.
   5) No displays shall block passenger visibility, sight lines, or circulation pathways.

   b. Displays
   1) All décor shall be of professional quality.
   2) Tenants shall use a consistent theme for unity within their space.
3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.

4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.

5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.

6) Weapons, or toy replicas thereof, are expressly prohibited.

7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.
CHAPTER 3 - BAGGAGE CLAIM AND INTERNATIONAL ARRIVALS LOBBY

The Baggage Claim and International Arrivals Lobby of Portland International Airport (PDX) is designed to be an attractive, welcoming space that greets arriving passengers and helps them transition to their destination. The Port has set a high standard of quality for the Baggage Claim and International Arrivals Lobby and the tenant-operated spaces within public view; all areas are professionally designed and organized to maintain the attractiveness and friendliness of this important space. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

The design of the Baggage Claim and International Arrivals Lobby offers passengers easy access to the baggage carousels and clear circulation paths to ground transportation and the parking areas, as well as vertical circulation to the Ticket Lobby and Tunnels. The material and color palette is based primarily on the relaxed and enduring concepts with very enduring materials and neutral colors at the entries, vertical circulation areas and at the baggage carousels. The pattern and colors of the carpet system constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme. The graphic proportions of the different patterns provide a human scale to the space; this material softens the lively acoustics and helps to create a warm and welcoming environment in the Baggage Claim and International Arrivals Lobby.

3.1.1 INTERIOR FINISHES/AESTHETICS

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal. The relaxed and enduring conceptual palettes guide color and materials selection in the Baggage Claim and International Arrivals Lobby and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Public Space Finishes

The Port provides all flooring in the public areas of the Baggage Claim and International Arrivals Lobby including carpeting, the appropriate wall base and wainscot in select locations, wall and ceiling finishes and lighting. This Port-provided flooring terminates at the Tenant’s lease line, unless otherwise indicated.
2. Carpet Border: Brintons U.S. Axminster, Pattern: Flight Border 3303/07/10-1, Color: Custom color and pattern
4. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
5. Wainscot: Stainless Steel 42” high or to match adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
8. Wall Covering: Wolf Gordon, Overture, Suite 2 Sisal AZ114 (less preferred) or Wolf Gordon Vycon Value V 54” VVP416 (preferred).
9. Ceilings
   The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   b. Above Bag Carousels: Suspended Perforated Metal Panel: Ceilings Plus 1/16” x 1” Obrround/ 33% Open. Color: white.
   c. GFRG Soffits: Painted finish.
10. Window Coverings
    There are no window coverings in the Baggage Claim and International Arrivals Lobby at PDX; views to the exterior are to remain unobstructed.
11. Lighting
    General illumination is provided by recessed downlights in the ceiling with accent lighting from pendant fixtures above the bag carousels and in the International Arrivals area.

B. Public Space Furnishings and Accessories

The Port provides public seating in the Baggage Claim and International Arrivals Lobby to give passengers an opportunity to pause during the ticketing and bag-check process. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable.

1. The utilization of a combination of cluster and linear seating is recommended wherever possible. Studies indicate a higher seating usage capacity because of the flexibility and various seating configurations that can be created with cluster and linear seating which accommodates a wide range of airport user group sizes.
   Other recommendations would be as follows:
   a. Materials: Satin polish, die-cast aluminum exposed metal components and vinyl- and plasticizer-free, solid-paneled, stain-repellant, leather alternative upholstery. Foam products used in upholstery should be high
resiliency. Substrates for tables should be appropriate for extremely durable construction with factory formed joints and solid smooth edges.

b. Framework should be solid metal with welded joints whenever possible. Seating structure needs to resist tipping.

c. Power-integration with boxes and raceway under standard seat pan.

d. Generally a higher-back seating style is preferred in regard to comfort. Bench seating (seats with no back rest) could possibly be considered in areas where customers are only pausing for a short-duration.

e. Manufacturer’s warranty on structural integrity of units should be no less than 10 years and 3 years for upholstery.


C. Airline Tenant Public Finishes

1. Finishes at the exterior of the Airline Bag Claim Offices are provided by the Port.

D. Tenant Equipment

Tenant-owned equipment will not be positioned in public areas without prior approval of the Port.

3.1.2 GENERAL SIGN STANDARDS

The Port provides flight information monitors in select locations in the Baggage Claim area and electronic signs above each bag carousel. The carousel signs are activated by the Airline/Handler to indicate that a specific flight is now operating at that bag claim device.

Signs are an integral element of the overall design and image of the space and are to be unique, distinctive, and graphically creative. All signs shall be compatible with the terminal design and should be of a size, color, and illumination level to be readily visible, but not disruptive to adjacent activities. All Tenant signs and attachments shall be provided at the Tenant’s expense, unless otherwise noted. Tenants are responsible for maintenance of their signs.

All sign additions, modifications, or updates must be approved through the Port’s Design Review Process. Signs that do not have Port Design Review approval will be subject to immediate removal. In some cases, a Port Tenant Construction Permit may also be required. This requirement will be determined as part of the Design Review Process.

See the following criteria for more information:

A. Port Directional (“Wayfinding”) Program

The Directional (“Wayfinding”) Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.
B. Tenants, Signs and Information

The following sign standards apply within the Baggage Claim and International Arrivals Lobby at Portland International Airport, and are provided to ensure that the Baggage Claim and International Arrivals Lobby at PDX retains a high quality aesthetic and overall appearance. In general, the use of red text is discouraged, as this color is reserved for emergency purposes.

C. The Following General Criteria Apply:

1. Materials used in all signs are to be non-glare to avoid reflections from external light sources.
2. Exposed neon and/or internally illuminated box signs may be considered and permitted only for specific uses. Exposed neon signage shall be limited to one.
3. Additional signs and/or advertising, such as supplier logos, may not be displayed, unless otherwise noted.
4. Hand lettered, non-professional signs and newspaper advertisements are not permitted.
5. Signs may not flash, move, or make noise.
6. The bottom of any sign may not hang lower than 7’ 6” above the finished floor.

D. Standards for Graphics

All signs and displays shall have consistent colors and type styles. Colors and finishes must complement the overall design.

E. Portable Sign Stands

The frame and stand should be rustproof and finished in an attractive and durable material. Portable sign stands shall have a maximum frame size of 24” wide x 30” high to support the standard 22” wide x 28” high insert. The overall dimensions (base plus frame) shall be a maximum of 24” wide x 62” high. The sign shall be two sided to be visible from both sides; sign colors, fonts, and finishes should be selected based on intended use.

F. Temporary Signs

1. Temporary signs includes those displayed for a limited period of time (as determined by the Port), banners, computer generated and/or laminated promotional materials, paste on signs, required notifications, security changes, and any mandated governmental signs. In each case signs should appear professionally produced; high quality printing, materials and finishes should be used wherever possible. Ripped, discolored, defaced, faded, or temporary signs being used as permanent shall not be accepted.
2. The use of paper signs is strongly discouraged. As an interim measure may be used provided they are sandwiched between clear plastic and are printed in such a manner as to appear professionally produced. Paper signs must also be printed so as to fit the sign holder for which it is intended.
3. Department of Homeland Security (DHS) or Port of Portland or governmentally mandated signs or temporary measures shall be installed and removed as recommended by the DHS or the Port. In all cases, when possible, signs shall be
durable and attractively constructed. Each airline is responsible for maintaining, updating, and removing the signs as required by the issuing authority.

4. Holiday Décor

Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

a. Locations

1) All holiday displays shall be limited to within tenant leasehold space.
2) Decoration is limited to desk counter tops and 20% of back wall area in Baggage Claim.
3) Holiday displays are not allowed along the front surface of counters or against exterior windows.
4) No displays shall block passenger visibility, sight lines, or circulation pathways.

b. Displays

1) All décor shall be of professional quality.
2) Tenants shall use a consistent theme for unity within their space.
3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.
4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.
5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.
6) Weapons, or toy replicas thereof, are expressly prohibited.
7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.

3.1.3 TECHNOLOGY

A. Instant Ticket Machines

As a customer service option, self-service kiosks and Instant Ticket Machines are allowed in the Baggage Claim and International Arrivals Lobby in locations coordinated with the Airline’s lease. The term Instant Ticket Machine (ITM) shall also apply to any other self-service devices within the Lobby. Airlines are permitted to install these ITMs for use by their passengers in accordance with the following guidelines.

1. Signs

a. ITMs may include signs which contain the overall height of the unit (unit plus signs) to 62” high.

b. Primary text shall not exceed 3” in height, and should be a bold, Arial-type font.
2. Location  
   a. Airlines may include ITMs in locations coordinates through their lease.  
   b. Queuing in front of the ITMs shall not disrupt circulation in the corridor(s), common/public areas or building egress.  
   c. Placement of ITMs and ITMs with signs shall not obstruct sight lines through the Baggage Claim and International Arrivals Lobby or to other signs or to building amenities and egress.

3. Aesthetics  
   a. Ticket machine design shall be integrated into the general design of the Baggage Claim and International Arrivals Lobby. They should be detailed to achieve flush surfaces and joints between materials; all electrical and data conduits are to be fully concealed. Ticket machines on pedestals should be designed to be compatible with existing nearby finishes, materials, and colors.

B. Multiple Flight Information Display  
   The Port provides Multi-user Flight Information Display System (MUFIDS) monitors in a number of locations throughout the terminal which display flight information for all airlines. The system is supported by Information Technology and relies on information submitted by the airlines either manually or through an automated interface. Refer also to the chapter on Technology.
CHAPTER 4 - MEET AND GREET LOUNGES

The Meet and Greet Lounges of Portland International Airport (PDX) are designed to be attractive, welcoming spaces to greet arriving passengers and their welcoming visitors to PDX, and provide them with the information and services they need to help them transition to their destination. The Port has set a high standard of quality for the Meet and Greet Lounges and the tenant-operated spaces within public view; all areas are professionally designed and organized to maintain the attractiveness and friendliness of this important space. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

The Meet and Greet Lounges are calming and friendly spaces and include integrated design features. The material and colors palettes are based primarily on the relaxed and enduring concepts with colors, materials, textures and imagery from the region’s natural environment. There are views to the exterior and public seating provided for people with longer wait times and there is current flight information displayed on Port-provided MUFIDs within each Lounge. The pattern and colors of the carpet system constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme. The graphic proportions of the different patterns provide a human scale to the space; this material softens the lively acoustics and helps to create a warm and welcoming environment in the Lounges.

4.1.1 INTERIOR FINISHES/AESTHETICS

Public spaces at PDX are finished in a material palette that is durable and consistent throughout the terminal. The relaxed and enduring conceptual palettes guide color and materials selection in the Meet and Greet Lounges and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Public Space Finishes

The Port provides all flooring in the public areas of the Meet and Greet Lounges, including carpeting, base and transition materials, as well as appropriate wall base, wainscot in select locations, wall and ceiling finishes and general lighting.
6. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
7. Wainscot: Stainless Steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
9. Columns/Braces: Wolf Gordon Scuffmaster WG 6179304, Solid Metal Flat Finish, SM727
10. Metal Panels: Alucabond, Natural Anodized Aluminum
11. Ceilings
   The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   b. GFRG Soffits: Painted finish.
12. Lighting
   General illumination is provided by recessed downlights in the ceiling.

B. Public Space Furnishings and Accessories

The Port provides public seating in the Meet and Greet Lounges to give passengers an opportunity to rest during the waiting process. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable.

1. The utilization of a combination of cluster and linear seating is recommended wherever possible. Studies indicate a higher seating usage capacity because of the flexibility and various seating configurations that can be created with cluster and linear seating which accommodates a wide range of airport user group sizes. Other recommendations would be as follows:
   a. Materials: Satin polish, die-cast aluminum exposed metal components and vinyl- and plasticizer-free, solid-paneled, stain-repellent, leather alternative upholstery. Foam products used in upholstery should be high resiliency. Substrates for tables should be appropriate for extremely durable construction with factory formed joints and solid smooth edges.
b. Framework should be solid metal with welded joints whenever possible. Seating structure needs to resist tipping.
c. Power-integration with boxes and raceway under standard seat pan.
d. Generally a higher-back seating style is preferred in regard to comfort. Bench seating (seats with no back rest) could possibly be considered in areas where customers are only pausing for a short-duration.
e. Manufacturer’s warranty on structural integrity of units should be no less than 10 years and 3 years for upholstery.

C. Tenant Public Finishes

All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. The Tenant is responsible for transitions between Port materials and Tenant materials.

1. General
   All Tenant areas visible to the public shall be carefully designed and maintained through daily operations to avoid a cluttered appearance.

2. Lighting
   Lighting within the Tenant’s space is provided and maintained by the Tenant.

3. Blade Sign Lighting
   All Port-provided Blade Signs are externally illuminated with integrated fixtures provided by the Port.

D. Tenant Furnishings and Accessories

1. Queuing Zone/Devices Design and Use
   To provide the highest level of customer service in the ticket counter area, queuing devices are required to moderate the circulation and flow of passengers through and around the Meet and Greet Lounges. Tenants should adjust their use of queuing devices according to their peak travel periods to limit passenger congestion in the Meet and Greet Lounges and the nearby circulation areas. The queuing zone shall be no wider than the Tenant’s leased space. The Port recommends the use of Tensa Barrier brand stanchions or equivalent.

2. Stanchions
   The base and stands should be rust-proof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each Tenant is required to standardize the finish of the stands for all of their queuing areas in the Meet and Greet Lounges.

4.1.2 TECHNOLOGY

A. Multiple Flight Information Display

The Port provides monitors in a number of locations throughout the terminal which display flight information for all airlines. The system is supported by Information Technology and
relies on information submitted by the airlines either manually or through an automated interface. Refer also to the chapter on Technology.

4.1.3 SIGNS AND INFORMATION

The following signs standards apply within the Meet and Greet Lounges at Portland International Airport, and are provided to ensure that the Meet and Greet Lounges at PDX retains high quality aesthetic finishes and overall appearance.

All signs additions, modifications, or updates must be approved through the Port’s Design Review Process. Signs that do not have Port Design Review approval will be subject to immediate removal. In some cases, a Port Tenant Construction Permit may also be required. This requirement will be determined as part of the Design Review Process.

In general, the use of red text is discouraged, as this color is reserved for emergency purposes. The bottom of any sign may not hang lower than 7’ 6” above the finished floor.

A. Port Directional (“Wayfinding”) Program

The Directional (“Wayfinding”) Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

B. Temporary Signs

1. Holiday Décor

Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

a. Locations

1) All holiday displays shall be limited to within tenant leasehold space.
2) Decoration is limited to counter tops, and 20% of wall areas in the Meet and Greet Lounges.
3) Holiday displays are not allowed along the front surface of counters, or against exterior windows.
4) No displays shall block passenger visibility, sight lines, or circulation pathways.

b. Displays

1) All décor shall be of professional quality.
2) Tenants shall use a consistent theme for unity within their space.
3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.
4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.
5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.
6) Weapons, or toy replicas thereof, are expressly prohibited.
7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.
CHAPTER 5 - OREGON MARKET AND FOOD COURT

The Oregon Market and Food Court of Portland International Airport (PDX) is designed to be an attractive, welcoming space that greets passengers and provides them with the services they need to have an enjoyable, successful journey. The open design of the market offers passengers easy access to concessionaires and the food court seating area behind the Ticket Lobby and in between the two security checkpoints. The Port has set a high standard of quality for the Oregon Market and Food Court public spaces and the tenant-operated spaces within public view; all areas are professionally designed and organized to maintain the attractiveness and friendliness of this important space. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

Oregon Market serves as a meeting place for passengers and visitors to PDX. Oregon Market’s character as a lively and friendly marketplace is the result of many integrated design features: The material and colors palettes are based primarily on the relaxed and enlightening palette concepts with colors, materials, textures and imagery from the region’s natural environment. The patterns and colors of the floor covering systems constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme.

The form and lighting of the main vaulted space with its clerestory windows, views to the activities on the mezzanine level, and the curved, perforated metal ceiling are unique among the public spaces in PDX. Lighting in the Market and Food Court seating area emphasizes the tenants’ spaces. There is diffuse daylight in the main space and daylight is filtered through the concourse connector adjacent to the seating area; electric lighting augments this without distracting from the tenants’ spaces.

Each concessions space is in aesthetic harmony with the feel of the Market. Concessions are developed to best represent the individual concept and still appear coordinated across multiple stores or when viewed in the context of the entire Market.

5.1.1 INTERIOR FINISHES AND AESTHETICS

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal. The relaxed and enlightening conceptual palettes guide color and materials selection in the Oregon Market and Food Court which is consistent with the other public spaces at PDX. Colors from the accent palette used throughout this space distinguish the active, social experiences people enjoy here; together with the lighting scheme which
emphasizes the tenants’ concessions, the colors and materials create a warm and lively environment in the Market.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Public Space Finishes

The Port provides all of the main finishes in the public areas of the Oregon Market and Food Court including carpeting and other floor finishes, transition materials, wall base, wainscot in select locations, wall and ceiling finishes and general lighting.

1. General
   c. Carpet Border: Brintons U.S. Axminster, Pattern: Flight Border 3303/07/10-1, Color: Custom color and pattern
   d. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
   g. Ceilings
      The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   h. Lighting: The Port provides all general lighting in the Oregon Market and Food Court. Lighting within the Tenant’s space is provided and maintained by the Concessionaire.

2. Oregon Market
   a. Floor Transition
      There is a granite tile threshold at each storefront entry in the Oregon Market to separate the Port-provided flooring from that in the Tenant’s space.
b. Storefronts
The entries and display windows of the storefronts are framed in maple and cherry wood details and have a granite tile base. Large merchandise windows are butt glazed clear glass.

c. Ceilings
In the Oregon Market, there is a curved perforated metal ceiling suspended over the main circulation space; this diffuses the natural light from the clerestory windows and gives the space a distinctive visual form. Above that system is a linear metal ceiling.
Perforated Curved Metal Ceiling: Standard 24” x 24” perforated metal ceiling panels on regular suspension grid. Color: matching Miller White 5760W

d. Lighting
Illumination in the Oregon Market is provided by diffuse daylight through clerestory windows and indirect fluorescent uplights above tenant storefronts with some focused down- and spot-lights for accents. The tenant storefronts provide focus through the contrast between their general illumination and the ambient lighting in the market, as well as sign and display lighting. The general lighting in this area is intended to support activities but not distract from the tenants’ signs and displays. The Port provides lighting at the standard blade signs for tenants’ use.

3. Food Court
a. Stone Tile: Permagraph Products Inc. Permetage #41,52,53 & 54
b. Carpet Tile: Interface Biomorph 3897 Exotic
c. Wainscot: Stainless Steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
d. Low Demising Partition
Low demising partitions separate the In-Line Concessions Space in the Food Court. These partitions have a decorative end cap that tapers in from the top cap down to the floor. All dimensions related to the low demising partition are taken from the top of the end cap. Alterations to the partitions are unlikely but may be proposed for consideration. See the following illustrations.
e. **Ceilings**
   In the Food Court there are linear metal ceilings and metal fins which coordinate with the other materials used in the seating area.
   Linear Metal Ceiling: Interfinish/ Chicago Metallic Planar Style 4 in.
   Round Edge. Color: matching Miller White 5760W
   Metal Fin Ceiling: Hunter Douglas V200 Metal Baffles

f. **Lighting**
   Illumination in the Food Court is provided by ceiling-mounted downlights and track lighting in front of the armature. As in the Oregon Market, illumination from tenants’ spaces creates the focus for this area.

4. **Public Space Furnishings and Accessories**
   The Port provides public seating in the Oregon Market and Food Court to give passengers an opportunity to enjoy their food concessions purchases or to have an alternative spot to pause during the travel process. The furniture materials are based on the enduring palette concept; the design and construction of the public seating and tables are extremely durable. The Port provides trash and recycling receptacles in the public areas of the Terminal Complex.
   a. **Public Seating**
      Nesting Side Chair/Café Twist, MTS Seating Model #195, Material: maple ply with natural stain. Frame: satin nickel chrome. Also available as Stool, MTS Seating 195-30, 44” height.
b. Table Base
   - MTS Seating Model #1523-2LS SNC Size: 22” x 28” base spread, with 2” diameter column, 30” height, Metal Finish: Satin Nickel Chrome
   - MTS Seating Model #1523-2LS SNC Size: 22” x 28” base spread, with 2” diameter column, 42” height, Metal Finish: Satin Nickel Chrome
   - MTS Seating Model #1530-2LS SNC Size: 28” x 28” base spread, with 2” diameter column, 30” height, Metal Finish: Satin Nickel Chrome
   - MTS Seating Model #4430-4, Orbit, 30” diameter base with 4” diameter column, dining height, threaded manual adjustable glides, metal with powder coat finish, Optional Finish: Chrome on column only

c. Table Top
   - MTS Seating Model # 321-24x30l, Rectangle, 24” x 30”, 1 ¼” x 1 ¼” wood edge “picture frame” style with mitered corners, large bullnose edge attached with unitized spline and glue construction, 1 1/8” core premium grade particle board, Group 1 laminate, square corners, Laminate: Wilsonart, “Nebulas” #4623-60, Edge: Solid Maple with natural stain
   - MTS Seating Model # 321-30R, Round, 30”, 1 ¼” x 1 ¼” wood edge “picture frame” style with mitered corners, large bullnose edge attached with unitized spline and glue construction, 1 1/8” core premium grade particle board, Group 1 laminate
   - MTS Seating Model # 321-36R, Round, 36”, 1 ¼” x 1 ¼” wood edge “picture frame” style with mitered corners, large bullnose edge attached with unitized spline and glue construction, 1 1/8” core premium grade particle board, Group 1 laminate

d. Accessible Table Top
   Plymold Seating Model # 30048WE4M, rectangle, 30” x 48”, laminate top, maple natural finish edge, custom inlay handicap wheel chair logo inlay, C4 Edge

B. Tenant Public Finishes

   All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. The Tenant is responsible for coordinating and providing for all transitions between Port materials and Tenant materials.

   1. General
      All Tenant areas visible to the public shall be carefully designed and maintained through daily operations to avoid a cluttered appearance. Dispensers for tray storage, cups, straws, cup covers, napkins, and condiment containers should be recessed into the counter as an integral part of the counter design.
2. Oregon Market
   a. Lease Space Threshold
      The Port provides a border carpet threshold in the concourses to separate the Port’s flooring from the Tenant’s flooring. Each storefront also includes a granite tile threshold at each entry to separate the Tenant’s and the Port’s flooring. Any modifications to this threshold, if approved, will be provided by the Tenant at the Tenant’s expense and must conform to the current standard.
   b. Lighting
      Lighting within the Tenant’s space is provided and maintained by the Tenant.
   c. Blade Sign Lighting
      All Blade Signs in the Oregon Market are externally illuminated with integrated fixtures.

3. Food Court
   a. Back Wall
      A back wall may be built behind the counter separating the public serving area from the food preparation area. The back wall is at the Tenant’s option, however Tenants are encouraged to create a separation to maintain a clean and clutter-free view from the public area. The design of the back wall should be an integral element of the design of the Tenant’s space and shall be provided at the Tenant’s expense.
   b. Counters
      Counters are one of the key elements that contribute to the overall identity and character of the Tenant’s space. The counter area shall be flexible and creative in design and include a clearly definable area for ordering and check-out. All counters should be accessible to the widest range of passengers possible.
      A highly durable counter base shall be provided by the Tenant. The counter base shall be set back from the counterfront in a manner consistent with high quality casework design and construction to add variety and depth to the counter design. The height of the counter base shall be sufficient to accommodate customer toe space and cleaning equipment under the counter.
      The counterfront is to be a durable, high quality material consistent with the Tenant’s overall design image. Careful attention must be paid to the detailing of materials and how adjacent materials join.

Suggested Counterfront Materials
   - Stone
   - Metal
   - Wood
   - Glass
   - Tile
   - Solid Surfacing Material
   - Engineered Stone
   - Solid Paper Composites
Countertop material must be durable, high quality, monolithic material. The Tenant is encouraged to add decorative elements such as wood, metal trim, a tile band and lighting details along the face or leading edge of the countertop.

Suggested Countertop Materials
- Stone
- Stainless steel
- Engineered Stone
- Glass
- Solid Paper Composites

c. Armature
The armature within the in-line Concessionaires’ spaces is provided at the Port’s expense and may not be altered by the Tenant. A sign band is provided on the armature for the Tenant’s primary sign.

d. Ceilings
The ceilings in the Concessions Tenant’s leased space shall be provided and maintained at the Tenant’s expense. The ceilings in the Food Court Concessions locations shall comply with these Terminal Design Standards and all health and other applicable code requirements.

e. Lighting
The Port provides all general lighting in the Food Court. All lighting within the Tenant’s space is provided and maintained by the Tenant at the Tenant’s expense including menu board, over-counter and back wall lighting. The Tenant is responsible for coordinating and providing for all transitions between Port lighting and Tenant lighting. All lighting systems should be compatible with the overall character and design of the space. Lighting systems and illumination levels should not interfere with the view of the menu board.
Tenants are required to provide a well lit menu board that is legible and glare free. Location of menu board lighting at Food Court In-Line Concessions shall be behind the armature and shall be concealed from public view.

f. Primary Sign and Counter Lighting is coordinated across adjacent tenants’ lighting systems.
Counters and Primary Signs should be illuminated at a higher level than the surrounding areas to draw attention to the Tenant’s products.

g. Back of Counter Lighting
In-Line Concessions Tenants shall provide fixtures to illuminate the counter work area at the Tenant’s expense. All fixtures should match the ceiling color, be recessed in and not hang below the finished ceiling.

h. Decorative Lighting
Food Court Concessions Tenants may use decorative lighting fixtures, such as pendants or wall sconces, to create special effects. This lighting should be an integral part of the overall design and is provided, installed and maintained at the Tenant’s expense.
C. Tenant Furnishings and Accessories

1. General
   All equipment, fixtures, and furnishing shall be provided by the Tenant at the
   Tenant’s expense. The equipment and its placement are important visual elements
   of the overall design and appearance of the space. Careful consideration is to be
   given to each piece of equipment in the areas visible to the public. High quality and
   durable materials such as natural metal, glass, or ceramic tile are required.
   Simulated wood grain finishes are not permitted on any equipment.

2. Oregon Market
   Oregon Market Tenants are encouraged to design and maintain their spaces with
   careful attention to material quality, durability and overall design consistency. All
   furnishings and accessories should complement the Tenant’s theme and help to
   create a well-coordinated effect throughout the Market.

3. Food Court
   a. Furniture
      Concessions Tenants in the Food Court may provide seating for
      customers in their lease area. Materials and construction should be high
      quality and durable and complement the overall design of the space. See
      the Public Space Furnishings and Accessories section for more
      information.
   b. Display Cases
      Food presentation is an important aspect of the Tenant’s counter design.
      Display cases for food presentation and preparation may be installed
      within the counter area and must be designed as an integral element of
      the space.
   c. Sneeze Guards
      If the Tenant incorporates a sneeze guard and/or tray slide, they must be
      custom designed as an integral part of the counter and must meet health
      and all other applicable code requirements. The sneeze guards may be
      flush with the face of the front counter line and shall be no higher than
      4'-6" above the floor. All joints are to be butt glazed glass to allow for
      maximum visibility. Transparent sheet plastic (Plexiglas) is not permitted.
      Tray slides are to extend no more than 6" beyond the face of the counter
      and are to be constructed of materials which are compatible with the
      counter.
   d. Trash Receptacles
      Tenants with interior seating shall provide high quality trash and
      recycling receptacles throughout their space that are compatible with
      their overall space design. All trash and recycling receptacles shall be
      provided at the Tenant’s expense.
   e. Queuing Zone/Devices Design and Use
      Queuing devices shall be provided by the Tenant to direct and control
      customer lines within the Tenant’s space, as deemed necessary by the
      Port. Temporary queuing devices are allowed in Port space when used to
      control crowds during peak periods. All devices shall be compatible with
the overall design of the space. Tenants need to be able to quickly adjust their queuing devices according to their peak business periods.

f. **Stanchions**
The base and stands should be rust-proof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each Tenant is required to standardize the finish of the stands for all of their queuing areas in the Oregon Market and Food Court.

g. **Cash registers, drink dispensers and other counter-located equipment**
shall be recessed in the front countertop and are to be set back a minimum of 6" from the front counter edge. No piece of equipment may exceed the 4'6" height limit above the floor.

h. **Condiment containers, napkin holders, and other containers should be integral elements of the front counter design and complement and be consistent with the colors and materials of the space. None of these elements are permitted on the top of sneeze guards or other pieces of equipment. All bulk paper goods and supplies are to be stored in areas not visible to the public.**

i. **Kitchen Equipment**
The use of high-efficiency kitchen equipment is recommended. Water, power, and natural gas conservation is encouraged.

### 5.1.2 SIGNS AND INFORMATION

The following sign standards apply within the Oregon Market and Food Court at Portland International Airport, and are provided to ensure that the Oregon Market and Food Court at PDX retains high quality aesthetic finishes and overall appearance.

In general, the use of red text is discouraged, as this color is reserved for emergency purposes, and he bottom of any sign may not hang lower than 7’ 6” above the finished floor. All signs and attachments shall be provided at the Tenant’s expense, unless otherwise noted. The Tenant is responsible for maintenance of their signs.

**A. Port Directional (“Wayfinding”) Program**
The Directional (“Wayfinding”) Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

**B. Oregon Market Tenant Signs General Guidelines**
As with the overall design for Concession Tenant spaces, the signs for each space should be in aesthetic harmony with the feel of the Market. The Concessions Tenant’s signs should be developed to best represent the individual concept and still appear coordinated across multiple stores or when viewed in the context of the entire Market.

1. **Blade Sign**
Blade signs are located on each side of the concession lobby of the Oregon Market in locations determined solely by the Port. Blade Signs are two-sided signs hanging perpendicular to the storefront for easy viewing by the public. Typically, one Blade
Sign is allowed for each Tenant space in the Oregon Market. The Blade Sign mounting height and size varies depending on the location.

In all terminal locations, the following conditions apply:

a. Blade Sign Face Plates are glass panels and are provided for the display of the Tenant’s name and/or logo.

b. The Tenant shall design the artwork for the face plates of their Blade Sign and will be responsible for the expense of the artwork and manufacturer of the sign insert or face plate. The Tenant shall install the face plate, according to Port standards which can be obtained from the Port Aviation Facilities Department.

c. The face plate graphics must be consistent with the graphics of the Tenant’s space. Face plate letters and graphics may be two dimensional (black paint, vinyl, or metal leaf) or may be surface mounted three dimensional letters not to exceed 3/4” deep. The weight of the face plate must be compatible with the structural design of the Blade Sign frame.

2. Storefront Soffit Sign
At all Port-provided storefronts in the Oregon Market, there is a soffit over the entry or just inside of the entry which shall be used for the Tenant’s storefront sign. In cases where no storefront soffit sign area is available, the Port may consider other accommodations. The Tenant shall use individual dimensional letters mounted directly to the soffit. Letters shall be 6” to 9” in height; font and graphic style shall be compatible with the overall design of the space. The sign shall be provided, installed, and maintained at the Tenant’s expense.

C. Food Court

As with the overall design for a Concession Tenant’s space, the signs for each space should be in aesthetic harmony with the feel of the Food Court. The Concessions Tenant’s signs should be developed to best represent the individual concept and still appear coordinated across multiple stores or when viewed in the context of the entire Food Court and Market.

1. Blade Signs
Blade signs are located on each side of the concession lobby of the Oregon Market in locations determined solely by the Port. Blade Signs for the Food Court are at the entrance of the Food Court and not immediately adjacent to the Concession Tenant’s location. These Blade Signs are two-sided signs which hang perpendicular to the Food Court entry for easy viewing by the public. Typically, one Blade Sign is allowed for each Tenant space in the Food Court. The Blade Sign mounting height and size varies depending on the location.

In all terminal locations, the following conditions apply:

a. Blade Sign Face Plates are glass panels and are provided for the display of the Tenant’s name and/or logo.

b. The Tenant shall design the artwork for the face plates of their Blade Sign and will be responsible for the expense of the artwork and manufacturer of the sign insert or face plate. The Tenant shall install the face plate, according to Port standards which can be obtained from the Port Aviation Facilities Department.
c. The face plate graphics must be consistent with the graphics of the Tenant’s space. Face plate letters and graphics may be two dimensional (black paint, vinyl, or metal leaf) or may be surface mounted three dimensional letters not to exceed 3/4” deep. The weight of the face plate must be compatible with the structural design of the Blade Sign frame.

2. Back Wall Signs
The back wall finish is an integral design element of the Concessions Tenant’s counter space, and an important element in their branding. Back Wall Signs are to be designed as an integral element of the overall character of the Tenant’s space; they are provided, installed and maintained by the Tenant at the Tenant’s expense.

3. Food Identification Signs
Small food identification signs with pricing in display cases are encouraged and must be professionally produced reflecting the same style, colors, and design quality of the Tenant’s other signs. These signs shall be provided, installed and maintained at the Tenant’s expense.

4. “Order Here” Signs
All Food Concessions Tenants have the option to have one “Order Here” sign provided at the Tenant’s expense. The sign must be of a design and material consistent with the overall design of the space. Maximum height of the support system shall be 6'–8”. The maximum letter height is 2-1/2”. The type shall be consistent with other graphic materials such as the menu board.

5. Menu Boards
Menu boards are critically important to all Food Concessions Tenants for efficient operations and service to the customer. Menu boards are to be designed as an integral element of the overall signage and character of the space. Menu boards shall be of a similar style and color as the other elements of the store, and of the primary sign and graphic elements.
   a. The colors, materials, levels of illumination, and layout will be closely examined to assure that signage is legible and compatible with the design in the Market as a whole. At the time of menu board installation, the Tenant may be required to adjust light levels, change fixtures, and add lighting diffusers to meet the conditions of the approved design.
   b. Letters and prices should be of sufficient height to be read easily from the counter front.
   c. Chalk board signs can be proposed, but they must be of high quality, and an integral part of the Tenant’s brand concept theme.
6. **Diagram**

See the following diagram for an illustration of some key sign elements.

![Diagram of sign elements]

D. **Holiday Décor**

Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

a. **Locations**

1) All holiday displays shall be limited to within tenant leasehold space.
2) Decoration is limited to counter tops, and 20% of back wall area in the Oregon Market.
3) Holiday displays are not allowed along the front surface of counters, or against exterior windows.
4) No displays shall block passenger visibility, sight lines, or circulation pathways.

b. **Displays**

1) All décor shall be of professional quality.
2) Tenants shall use a consistent theme for unity within their space.
3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.
4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.
5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.
6) Weapons, or toy replicas thereof, are expressly prohibited.
7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.
5.1.3 TECHNOLOGY

A. Multiple Flight Information Display

The Port provides monitors in a number of locations throughout the terminal which display flight information for all airlines. The system is supported by Information Technology and relies on information submitted by the airlines either manually or through an automated interface. Refer also to the chapter on Technology.

5.1.4 PDX IN-LINE BAGGAGE SCREENING SYSTEM

A. General

The deplaning area below the Oregon Market houses many complex and sophisticated components of the Terminal’s In-Line Baggage Screening System (BSI). To prevent damage to essential equipment and minimize interruptions in screening operations, the Port has highlighted the zone around these components as the BSI Critical Areas (See Appendix D). It should be noted that all work conducted within this zone on the deplaning level, and work that is to penetrate the floor within this zone on the enplaning level, will be subject to more stringent Port Design Review and Development Standards. The Port Design Review Process cannot be expedited for projects within this zone, and these more stringent standards may potentially increase proposed project scope, lead times, and budget. Once within the construction phase, the Port will require that all tenants and their contractors coordinate work within the BSI Critical Areas with the Port’s BSI Project Liaison.
CHAPTER 6 - CONCOURSE LOBBIES AND CONCOURSES

The Concourse Lobbies and Concourses of Portland International Airport (PDX) are designed to be attractive, welcoming, open spaces for departing, connecting and arriving passengers. A variety of amenities are available in the Concourse Lobbies and Concourse Concessions Nodes to provide passengers with the information and services they need to have an enjoyable, successful journey. Holdrooms are arranged along the concourses and each features public seating and views to the outdoors to accommodate waiting passengers.

The Concourse Lobbies are secondary lobbies to the public ticketing area and main terminal. Passengers reach the Concourse Lobbies after passing through the security screening process; these are primarily passenger lounges that support the transition from security to gate destinations. Finishes and the materials in the built-in furnishings throughout these spaces reinforce the Northwest theme. Flight information is provided at highly visible locations in the Lobbies and Concourses. The South Concourse Lobby features a thematic art installation in the terrazzo floor and the North Concourse Lobby features a terrazzo floor pattern that provides a visual and spatial connection between the two adjoining concourses.

Key design elements in the Concourse Lobbies include high open truss ceilings and skylights, wood paneling, built-in seating elements with planters, distinctive light fixtures, and generous public seating areas overlooking the runways and surrounding landscape. In the South Lobby flat screen displays are integrated into a flight information display tower and in the North Lobby flat screen displays are mounted on featured light fixtures; each of these installations is designed to be easily identified from all areas of the lobbies and the adjacent security screening areas. Terrazzo flooring and a variety of plantings in the public seating areas create interior urban plazas.

The Port has set a high standard of quality for the Concourse Lobbies, Concourses and the tenant-operated spaces within public view; all areas are professionally designed and organized to maintain the attractiveness and friendliness of these important spaces. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

The Concourses generally include public areas, airline hold rooms and concessions groupings or “nodes” with additional services and amenities for the public. Flight information is provided at highly visible locations throughout the Concourses. The material palette in the Concourses is based on colors, materials, textures and imagery from the region’s natural environment. The palette is based primarily on the relaxed and enduring palette concepts. There are very enduring materials and neutral colors at the restrooms, escalators and moving walkways. The pattern and colors of the carpet system constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme. The graphic proportions of the different patterns provide a human scale to the space; the carpet softens the lively acoustics of the Concourses and helps to distinguish the activities in the Concourse Lobbies and Concessions Nodes that feature terrazzo floors and more colors from the accent palette concept.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 — Sustainability,
as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

6.1.1 INTERIOR FINISHES/AESTHETICS

Public spaces at PDX are finished in a material palette that is durable and consistent throughout the terminal. The relaxed and enlightening palette concepts which guide color and materials selection in the Concourse Lobbies and Concourses reflect the range of organizing concepts, emotion, image, service and operations, necessary to providing a high-quality passenger experience in those spaces.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Public Space Finishes

The Port provides all flooring in the public areas of the Lobby, Concourses and Concessions Nodes including carpeting or terrazzo, as well as appropriate wall base, wainscot in select locations, wall and ceiling finishes and general lighting. This Port-provided flooring terminates at the Tenant’s lease line, unless otherwise indicated.

1. Concourses and Concourse Lobbies, general

b. Carpet Border: Brintons U.S. Axminster, Pattern: Flight Border 3303/07/10-1, Color: Custom color and pattern
c. Carpet Tile, Concourse Connector and International Arrivals Area: Interface, Pattern: Frequency, Color: 2613 Sequence (field) and Interface, Pattern: Menagerie, Colors: 4944 Peacock, 4953 Eden, 4915 Ruby, 4943 Mulberry (accents)
e. Walk-Off Carpet: Cyrus Systems (custom product with Milliken Street Smart Face and Mannington Infinity Backing), Color: Sapphire, Roll size: 6’
f. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
g. Column Base and Wainscot: Stainless Steel 42” high or to match adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
j. Wall Covering: Wolf Gordon, Overture, Suite 2 Sisal AZ114 (less preferred) or Wolf Gordon Vycon Value V 54” VVP416 (preferred); Len-Tex, Celloton, 9720 Palladium; Lanark, Kyosi Type II, Ambertone L2-KY-23

k. Ceilings
The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.

1) Between Skylight Trusses: Interfinish/ Chicago Metallic Planar Style 2 in. Square Edge, Color: matching Miller White 5760W
3) GFRG Soffits: Painted finish

l. Lighting
In the Concourse Lobbies, primary lighting is provided by ceiling mounted fixtures in the vaulted areas and integrated linear fluorescent fixtures in the standard linear metal at the perimeter. The primary lighting in the Concourses is provided by indirect, linear fluorescent cove fixtures in two locations with uplight accents on the trusses and downlights positioned in the soffits at each side of the columns.

2. Concourse Lobbies
a. Terrazzo Flooring: In both Concourse Lobbies there are custom-designed epoxy terrazzo floors. The mixes for each color can be matched by any professional terrazzo installer who meets the Port’s specified requirements. Colors and aggregate should be observed on site as changes occur over time from exposure to UV light and general wear.

b. Ceilings, Concourse Lobbies
The Concourse Lobbies are vaulted spaces with exposed structural trusses and skylights with suspended metal fin ceilings. At the perimeter of the lobbies, a standard soffit with painted finish provides the transition to the linear metal slat ceiling.

1) Between Skylight Trusses: Ceilings Plus Custom Hanging Fin Color: matching Miller White 5760W
3) GFRG Soffits: Painted finish

3. Concourse Concessions Nodes
a. Paint at Concourse D East Node: Miller 8264D, “Tuscon Clay,” (color name and number as of spring 2007) MPI INT 9.2A, MPI Gloss Level 3

b. Floor Transition: In the Concourse Concession Nodes there are either terrazzo or stone floor transitions that separate tenant finishes from Port finishes. Tenants are responsible for matching the existing transition standard to their space, at their expense.
c. Terrazzo Flooring: In the Concessions Nodes there are custom-designed epoxy terrazzo floors. The mixes for each color can be matched by any professional terrazzo installer who meets the Port’s specified requirements. Colors and aggregate should be observed on site as changes occur over time from exposure to UV light and general wear.

d. Ceilings

1) Concourse C Concessions Nodes, Between Skylight Trusses: Interfinish/ Chicago Metallic Planar Style 2 in. Square Edge, Color: matching Miller White 5760W

B. Public Space Furnishings and Accessories

The Port provides public seating in the Concourse Lobbies and in the Concessions Nodes to give passengers an opportunity to relax during their journey. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable. In the Concessions Nodes, the color and materials are based on the relaxed and enlightening palette concepts.

In future developments, power will be integrated into public seating areas at regular intervals or into passenger service nodes adjacent to these seating areas in order to serve a large number of passengers. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable.

There is interior landscape in the Concourse Lobbies in the public seating area.

1. Custom Public Seating, Concourse Lobbies: Hardwood and metal seating with upholstered seat and back cushions and integrated stainless or galvanized steel lined plant containers. In future developments, custom seating will include removable slipcovered seat and back cushions to facilitate maintenance and repair.

2. The utilization of a combination of cluster and linear seating is recommended wherever possible. Studies indicate a higher seating usage capacity because of the flexibility and various seating configurations that can be created with cluster and linear seating which accommodates a wide range of airport user group sizes. Other recommendations would be as follows:

   a. Materials: Satin polish, die-cast aluminum exposed metal components and vinyl- and plasticizer-free, solid-paneled, stain-repellant, leather alternative upholstery. Foam products used in upholstery should be high resiliency. Substrates for tables should be appropriate for extremely durable construction with factory formed joints and solid smooth edges.

   b. Framework should be solid metal with welded joints whenever possible. Seating structure needs to resist tipping.

   c. Power-integration with boxes and raceway under standard seat pan.

   d. Generally a higher-back seating style is preferred in regard to comfort. Bench seating (seats with no back rest) could possibly be considered in areas where customers are only pausing for a short-duration.

   e. Manufacturer’s warranty on structural integrity of units should be no less than 10 years and 3 years for upholstery.

3. Lobbies and Concourses Concessions Node Furnishings
   a. Public Seating
      Nesting Side Chair/Café Twist, MTS Seating Model #195, Material: maple
      ply with natural stain. Frame: satin nickel chrome. Also available as Stool,
      MTS Seating 195-30, 44” height.
   b. Table Base
      - MTS Seating Model #1523-2LS SNC Size: 22” x 28” base spread,
        with 2” diameter column, 30” height, Metal Finish: Satin Nickel
        Chrome
      - MTS Seating Model #1523-2LS SNC Size: 22” x 28” base spread,
        with 2” diameter column, 42” height, Metal Finish: Satin Nickel
        Chrome
      - MTS Seating Model #1530-2LS SNC Size: 28” x 28” base spread,
        with 2” diameter column, 30” height, Metal Finish: Satin Nickel
        Chrome
      - MTS Seating Model #4430-4, Orbit, 30” diameter base with 4”
        diameter column, dining height, threaded manual adjustable
        glides, metal with powder coat finish, Optional Finish: Chrome
        on column only
   c. Table Top
      - MTS Seating Model #321-24x30L, Rectangle, 24” x 30”, 1 ¼” x 1
        ¾” wood edge “picture frame” style with mitered corners, large
        bullnose edge attached with unitized spline and glue
        construction, 1 1/8” core premium grade particle board, Group 1
        laminate, square corners, Laminate: Wilsonart, “Nebulas” #4623-
        60, Edge: Solid Maple with natural stain
      - MTS Seating Model #321-30R, Round, 30”, 1 ¼” x 1 ¾” wood
        edge “picture frame” style with mitered corners, large bullnose
        edge attached with unitized spline and glue construction, 1 1/8”
        core premium grade particle board, Group 1 laminate
      - MTS Seating Model #321-36R, Round, 36”, 1 ¼” x 1 ¾” wood
        edge “picture frame” style with mitered corners, large bullnose
        edge attached with unitized spline and glue construction, 1 1/8”
        core premium grade particle board, Group 1 laminate
   d. Accessible Table Top
      Plymold Seating Model #30048WE4M, rectangle, 30” x 48”, laminate
      top, maple natural finish edge, custom inlay handicap wheel chair logo
      inlay, C4 Edge

C. Tenant Public Finishes
   The Port provides a storefront surround at the Concourse in-line Concessions Tenant spaces
   and opportunity for sign-mounting on the public side of each storefront. All Tenant interior
   finishes are provided and maintained by the Tenant at the Tenant’s expense, unless
   otherwise indicated. The Tenant is responsible for coordinating and providing for all
   transitions between Port materials and Tenant materials
The Tenant shall provide all finishes within their space, at the Tenant’s expense. High quality and durable materials such as stainless steel, heavy duty carpet, stone, wood, terrazzo and ceramic tile are required. The use of vinyl composition tile, sheet vinyl flooring and plastic laminate is not permitted in areas viewed by the public. The Tenant is responsible for securing their space when not open for business.

1. General
   All Tenant areas visible to the public shall be carefully designed and maintained through daily operations to avoid a cluttered appearance. Dispensers for tray storage, cups, straws, cup covers, napkins, and condiment containers should be recessed into the counter as an integral part of the counter design.
   a. Merchandise Display
      Display of the Tenant’s merchandise in the storefront window is crucial in creating the customer's first impression of the space. Display units shall be of high quality materials consistent with the design of the space. All display and signage information shall be contained within the Tenant's lease line space.
      Interior display unit finishes must complement the quality of the store exterior. Simulated wood plastic laminate is not permitted. High quality metal display units may be permitted under limited circumstances and must be integrated with natural materials. Metal racks shall not be permitted in window areas or at entrances. Display units shall be integrated design elements and allow for adequate customer circulation. All display units shall be provided at the Tenant’s expense.
   b. Flooring Border: The Tenant shall provide a border to separate the Port provided flooring from the Tenant’s flooring, matching current standards in the area. The border shall be of a width to match current standards, and shall run the entire width of the Tenant’s entry. This threshold shall be provided at the Tenant’s expense.
   c. Transition Materials at Public Space: The Tenant shall be responsible for all transition conditions between finish materials. Any transition strips between flooring materials shall be metal.
   d. Lease Space Threshold: When applicable, the Port provides a border carpet threshold in the concourses to separate the Port’s flooring from the Tenant’s flooring. In some cases, the Port also provides a granite tile threshold at storefront entries in the concourses to separate the Tenant’s and the Port’s flooring. Any modifications to this threshold, if approved, will be provided by the Tenant at the Tenant’s expense.
   e. Wall Base: The Tenant shall provide the wall base throughout their space at the Tenant’s expense. The Tenant shall use high quality, durable materials such as stainless steel, ceramic tile, stone, or wood. The use of rubber base is not permitted in areas viewed by the public.
   f. Wall Finish: Tenant shall provide all wall finishes within their space at the Tenant’s expense. The use of high quality materials will be required. Plastic laminate, vinyl wall covering, rough textured wood, or imitation materials may be considered and permitted only for specific applications.
   g. Ceilings: The Port provides ceiling material in all public spaces which terminate at the Tenant’s lease line, unless otherwise indicated. The
Tenant shall provide the Terminal Design Standard linear metal slat ceiling painted to match surrounding soffits, or other high quality systems throughout their space in all areas viewed by the public. The ceiling heights and conditions within the Tenant spaces vary depending on location. Deviations in ceiling heights are limited. All ceiling access panels, grills, diffusers, light tracks and fixtures shall be recessed into or above the ceiling and shall be finished to match the ceiling. New ceilings, ceiling alterations, and access panels shall be provided and maintained at the Tenant’s expense.

h. Access Panels: Access panels shall be provided as required at locations determined by the Port to facilitate direct access to utilities and building services regardless of approved ceiling system. When feasible, the Tenant should coordinate equipment locations to minimize the total number of required access panels.

i. Doors within Tenant’s Premises: All doors within the Tenant’s space shall be provided and installed at the Tenant’s expense. These doors shall be designed to be compatible with the overall design of the space. High quality doors such as solid core wood or metal shall be used. The Tenant is encouraged to install kick plates to reduce damage to these doors.

j. General Lighting Standards: Lighting is an aspect of the design which has a significant impact on the overall character, merchandise display, and ambiance. Tenants are encouraged to balance creativity and technical performance of their lighting design. Tenants are responsible for meeting energy code requirements for City permitting.

1) Lighting in Public Areas: The Port will provide general lighting throughout the public areas of the terminal complex, including the Oregon Market, the Ticket Lobby and the Concourses, at the Port’s expense. Tenants may not supplement the general lighting in the public areas without prior Port approval.

2) Lighting within the Tenant’s Space: The Tenant shall provide all the general and task lighting fixtures within their space at the Tenant’s expense. All lighting visible to the public shall be recessed into the ceiling or by ceiling mounted tracks painted to match the ceiling. Track light fixtures shall have glare-reducing baffles, must be located to avoid glare as viewed by the public, and shall not exceed 9” below the ceiling. Signage containing exposed neon tubing is limited to one.

3) General Primary Sign Lighting
The Tenant shall provide lighting for their primary sign at the Tenant’s expense, unless otherwise indicated. This lighting shall be compatible with the overall design, shall not produce glare, and shall light the primary sign adequately for easy viewing by the public.

4) Blade Sign Lighting
All Blade Signs in the Terminal are externally illuminated. Blade Signs in Concourses A, B, and C shall be lit by the general lighting in the public area and are not spot lighted. If the Tenant wishes to install spot lighting in an area where lighting
is not provided, the design shall be consistent with the overall
design of the space and shall be at the Tenant’s expense.

2. Concourse Lobby Tenants
   a. Storefronts
      Concourse Lobby Tenants are located with frontage to the public seating
      area in the lobbies and to the circulation paths to the Concourses. In each
      space, Tenants shall provide a storefront within the storefront zone;
      Tenants are encouraged to be creative in this design to establish a
distinctive and inviting image. Storefront materials shall be high quality and
compatible with the surrounding Port-provided public space finishes. The
materials used in the storefront shall be of high quality materials which are
compatible with the public areas of the concourses.
      1) The Storefront Zone shall include an overhead soffit which
         extends the entire length of the storefront entry. This soffit
         separates the Port provided ceiling or soffit from the Tenant
         provided ceiling and creates a Tenant sign band.
      2) Storefront Base: The Tenant shall incorporate a stainless steel
         base along their storefront to match the height of the adjacent
         Port provided base.

3. Concourse Tenants
   a. Storefronts
      The Port provides a storefront surround at the in-line Concourse
      Concessions Tenant space and opportunity for sign-mounting on the public
      side of each storefront.
      1) Typically, Concourse Concessions Tenants are located with
         frontage on the public circulation path of the concourses. A
         storefront zone has been established for each Tenant which
         encompasses the entire width of the Tenant’s frontage
         between the demising walls and from the floor to the Port-
         provided ceiling or soffit.
      2) The Storefront Zone includes an overhead soffit which extends
         the entire length of the storefront entry. This soffit separates
         the Port provided ceiling from the Tenant provided ceiling and
         creates a Tenant sign band.

D. Concessions Tenant Furnishings, Accessories and Equipment
   1. General
      All equipment, fixtures, and furnishing shall be provided by the Tenant at the
      Tenant’s expense. The equipment and its placement are important visual elements
      of the overall design and appearance of the space. Careful consideration is to be
given to each piece of equipment in the areas visible to the public. High quality and
durable materials such as natural metal, glass, or ceramic tile are required;
simulated wood grain finishes are not permitted on any equipment.
2. Queuing Devices
   To provide the highest level of customer service at PDX, queuing devices shall be used to moderate the circulation and flow of passengers and customers through the Tenant’s space. Queuing devices shall be required for, and as deemed necessary by the Port, Food Tenants and Cart/Kiosk Tenants, to provide direction for and control of customer lines. Tenants shall provide attractive, movable, high quality queuing devices in their space and should adjust their use of them according to their peak periods. The Port recommends the use of Tensabarrier brand stanchions or equivalent.
   a. Stanchions and Tape
      The base and stands should be rust-proof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each tenant is required to standardize the finish of the stands for all of their lease areas.
      Durable, retractable tapes are required to provide the greatest amount of flexibility in layout and positioning.

3. Window Coverings, Exterior Windows
   Window coverings on exterior windows shall be provided by the Tenant at the Tenant’s expense, unless otherwise indicated. All window coverings will be of high quality and durable materials; window covering systems such as roller shades or operable blinds are to be professionally manufactured, installed and maintained. Modifications to exterior windows or window wall shall be closely monitored to maintain visual consistency from outside the terminal complex. Any tenant construction near or covering any portion of the exterior window system must be correctly designed, detailed and constructed to maintain optimal performance and appearance of the window system and to comply with the window system manufacturer’s warranty.

4. Window Coverings, Interior Windows
   Window coverings are not permitted on any interior windows.

5. Furnishings
   Tenants may provide seating for customers in their lease area at the Tenant’s expense. Materials and construction should be high quality and durable and complement the overall design of the space. See the Public Space Furnishings and Accessories section above for more information.

6. Kitchen Equipment
   The use of high-efficiency kitchen equipment is recommended. In general, water, energy, and natural gas conservation is encouraged.

6.1.2 SIGNS AND INFORMATION

   The following signs standards apply within the Concourses and Concourse Lobbies at Portland International Airport, and are provided to ensure that these spaces retain high quality aesthetic finishes and overall appearance.

   All signs additions, modifications, or updates must be approved through the Port’s Design Review Process. Signs that do not have Port Design Review approval will be subject to immediate removal.
In general, the use of red text is discouraged, as this color is reserved for emergency purposes, and the bottom of any sign may not hang lower than 7’ 6” above the finished floor.

A. Port Directional ("Wayfinding") Program

The Directional ("Wayfinding") Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

B. Concourse Lobbies and Concourses Tenant Signs

Signs are an integral element of the overall design and image of the Tenant’s space and are to be unique, distinctive, and graphically creative. All signs within the Tenant’s space shall be compatible with the terminal design and should be of a size, color, and illumination level to be readily visible, but not disruptive to adjacent activities. Free standing signs shall be permitted only as approved through the Design Review Process. All signs and attachments shall be provided installed and maintained at the Tenant’s expense, unless otherwise noted. The Tenant is responsible for maintenance of their signs. See the following criteria for more information.

1. The Following General Criteria Apply
   a. Materials used in all signs and menu boards are to be non-glare to avoid reflections from external light sources.
   b. Exposed neon signs may be considered only for specific uses and shall be limited to one.
   c. Additional signs and/or advertising, such as supplier logos, may not be displayed, unless otherwise noted.
   d. Hand lettered, non-professional signs and newspaper advertisements are not permitted.
   e. Signs may not flash, move, or make noise.
   f. Signs may not be located on storefront windows.

2. Standards for Graphics
   The Tenant shall use consistent colors and type styles for all graphic materials. Colors and finishes must complement the overall design.

3. Primary Sign and Graphic Element
   Tenants have the option, unless otherwise noted, to provide a primary sign and graphic element within their space at the Tenant’s expense. One primary sign is allowed per space, unless otherwise indicated.
   a. The primary sign shall be the Tenant’s identifying name. The use of a secondary tag line is not permitted. Use of individual, three-dimensional letters is encouraged. Letters should be a recommended maximum of 10” in height. The sign may be externally illuminated or halo illuminated. Internally illuminated signs may be considered and permitted only for specific applications.
   b. The Graphic Element may be the logo, product, or other symbol representing the Tenant. A three-dimensional graphic element is encouraged. It shall be externally illuminated or halo illuminated.
c. Soffit or Sign Band and Blade Signs
   The storefront soffit- or sign band-mounted sign and the blade sign are
   the Tenant’s primary identity signs.
   The Tenant shall use individual dimensional letters 6" to 9" in height
   mounted onto the soffit. Type styles shall be compatible with the overall
   design of the space. The soffit and signs shall be at the Tenant’s expense.

4. Food Identification Signs
   Small food identification signs with pricing in display cases are encouraged and must
   be professionally produced reflecting the same style, colors, and design quality of
   the Tenant’s other signs. These signs shall be provided at the Tenant’s expense.

5. “Order Here” Signs
   All Food Concessions Tenants have the option to have one “Order Here” sign
   provided at the Tenant’s expense. The sign must be of a design and material
   consistent with the overall design of the space. The maximum height of the support
   system shall be 6'-8". The maximum letter height is 2-1/2” The type shall be
   consistent with other graphic materials such as the menu board.

6. Menu Boards:
   Menu boards are critically important to all Food Concessions Tenants for efficient
   operations and service to the customer. Menu boards are to be designed as an
   integral element of the overall signage and character of the space. Menu boards
   shall be of a similar style and color as the other elements of the store, and of the
   primary sign and graphic elements.
   a. The colors, materials, levels of illumination, and layout will be closely
      examined to assure that signage is legible and compatible with the
      design in the Market as a whole. At the time of menu board installation,
      the Tenant may be required to adjust light levels, change fixtures, and
      add lighting diffusers to meet the conditions of the approved design.

7. Letters and prices should be of sufficient height to be easily read from the counter
   front.

C. Concourses Tenant Signs

1. Blade Sign
   In concourse locations, the frame, face plate, and attachment of the Blade Sign is
   designed, installed, and provided by the Port at the Port’s expense.
   Blade signs are located at each bay in the concourses in locations determined solely
   by the Port. Blade Signs are two-sided signs hanging perpendicular to the storefront
   for easy viewing by the public. Typically, one Blade Sign is allowed for each Tenant
   space in the Concourses. The Blade Sign design details, mounting height and size
   vary depending on the location.
   In all terminal locations, the following conditions apply:
   a. Blade Sign Face Plates are glass panels and are provided for the display
      of the Tenant’s name and/or logo.
   b. The Tenant shall design the artwork for the face plates of their Blade
      Sign and will be responsible for the expense of the artwork and
6.1.3 TECHNOLOGY

A. Multiple Flight Information Display

The Port provides monitors in a number of locations throughout the terminal which display flight information for all airlines. The system is supported by Information Technology and relies on information submitted by the airlines either manually or through an automated interface. Refer also to the chapter on Technology.
CHAPTER 7 - HOLDROOMS

The Holdrooms in Portland International Airport (PDX) are designed to be attractive, welcoming, open spaces for departing and connecting passengers. The Holdrooms are arranged along the concourses and each features public seating and views to the outdoors. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

The Port provides room finishes, lighting and public seating at all Port-operated Holdrooms to accommodate waiting passengers. In Airline-operated Holdrooms, carpet, wall finishes and furnishings are provided and maintained by the Airline. Airline-operated Holdrooms are customized Airline spaces.

The color palette for the Holdrooms is based primarily on the relaxed and enduring conceptual palettes. The material palette is particularly durable with attention to edge details and transitions that get wear from luggage and heavy traffic. Layouts allow for passengers to circulate and queue with their luggage. All Holdrooms are designed with the needs and comfort of the passenger in mind.

7.1.1 INTERIOR FINISHES/AESTHETICS

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal. The relaxed and enduring conceptual palettes guide color and materials selection in the Holdrooms and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Port Holdroom Finishes

2. Carpet Border: Brintons U.S. Axminster, Pattern: Flight Border 3303/07/10-1, Color: Custom color and pattern
3. Walk-Off Carpet: Cyrus Systems (custom product with Milliken Street Smart Face and Mannington Infinity Backing), Color: Sapphire, Roll size: 6’
4. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
5. Wainscot: Stainless Steel 42” high or to match adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain
8. Ceilings
   The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   b. GFRG Soffits, painted finish
9. Window Coverings
   There are no window coverings in any Holdrooms at PDX; views to the exterior are to remain unobstructed.
10. Lighting
    Holdroom lighting is provided by linear recessed ceiling-mounted downlights.
11. Podiums
    Podiums and backscreens are situated near the exterior window wall to provide for the maximum queuing space within Holdrooms without interfering with passenger circulation in the Concourses. Podiums are finished with high quality durable materials.
    a. Existing Blue/Cream color scheme
       1) Counter Top: Nevamar, Straw Matrix MR-2006T
       2) Counter Front: Nevamar, Regimental Blue S-3016T
    b. Existing Gray color scheme
       1) Counter Top: Nevamar, Storm Gray MR-600-4T
       2) Counter Front: Nevamar, Charcoal Matrix MR-6002T
    c. Existing Trim: Stainless Steel, 16 gage sheet, #4 finish, horizontal grain
    d. All future gates
       1) Counter Top: Richlite, Cascade Shasta, 1¾” thick
       2) Writing Counter: Richlite, Blue Canyon, ¾” thick
       3) Counter Front: Bendheim tempered glass, PORT-568, stripes alternating between first and second surface, ¼” thick; ¼” thick back-painted glass, Miller 5760W (to match Port white)
       4) Counter Side: Rigidized Metals Corp stainless steel, Product 4-LB in 304 SS Satin, 14-gauge
       5) Back Wall: Stainless steel, Bendheim tempered glass, PORT-568, stripes alternating between first and second surface, ½” thick, MechoShade manual shade with Thermoveil fabric 3% open 1500 Series.
B. Port Holdroom Furnishings and Accessories

1. The utilization of a combination of cluster and linear seating is recommended wherever possible. Studies indicate a higher seating usage capacity because of the flexibility and various seating configurations that can be created with cluster and linear seating which accommodates a wide range of airport user group sizes. Other recommendations would be as follows:
   a. Materials: Satin polish, die-cast aluminum exposed metal components and vinyl- and plasticizer-free, solid-paneled, stain-repellent, leather alternative upholstery. Foam products used in upholstery should be high resiliency. Substrates for tables should be appropriate for extremely durable construction with factory formed joints and solid smooth edges.
   b. Framework should be solid metal with welded joints whenever possible. Seating structure needs to resist tipping.
   c. Power-integration with boxes and raceway under standard seat pan.
   d. Generally a higher-back seating style is preferred in regard to comfort. Bench seating (seats with no back rest) could possibly be considered in areas where customers are only pausing for a short-duration.
   e. Manufacturer’s warranty on structural integrity of units should be no less than 10 years and 3 years for upholstery.

C. Airline Tenant Holdroom Finishes

High quality and durable materials such as stainless steel and heavy duty carpet are required. Vinyl composition tile, sheet vinyl flooring and concrete are not permitted in areas viewed by the public.

1. Transition Materials
   The Tenant shall be responsible for all transition conditions between finish materials. Any required flooring transition strips shall be metal.
2. Lease Space Threshold
   The Port provides a border carpet threshold in the concourses to separate the Port’s flooring from the Tenant’s flooring.
3. Flooring: Carpet, color and style compatible with surrounding PDX standard finishes. Cut pile carpet is preferred.
4. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
5. Wainscot: Stainless Steel 42” high or to match adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
6. Wall Paint: Miller, color 5760, White Shadow, Gloss Level 3
8. Ceilings:
   The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish; it provides a clean, uncluttered appearance complementing the architecture and supports a range of functions. Many locations in PDX use an
above-ceiling plenum for return air and this operational consideration must be included when selecting and detailing any ceiling.
   b. GFRG Soffits, painted finish

9. Window Coverings
There are no window coverings in any Holdrooms at PDX; views to the exterior are to remain unobstructed.

10. Lighting
Holdroom lighting is provided by linear recessed ceiling-mounted downlights.

11. Podiums
Podiums and back screens are situated 3 feet away from the exterior window wall to provide for the maximum queuing space within Holdrooms without interfering with passenger circulation in the Concourses. Podiums are finished with high quality durable materials and designed and constructed in a manner consistent with high quality casework. The counter top and front are to be durable, high quality materials consistent with the overall design image of PDX.
   a. Trim: Stainless Steel, 16 gage sheet, #4 finish, horizontal grain.

D. Airline Tenant Furnishings and Accessories

1. Queuing Devices
To provide the highest level of customer service at PDX, queuing devices shall be used to moderate the circulation and flow of passengers and customers through the Tenant’s space. Queuing devices shall be required for Airlines to provide direction for and control of passenger lines. Airline Tenants shall provide attractive, movable, high quality queuing devices in their space and should adjust their use of them according to their peak periods. The Port recommends the use of Tensabarrier brand stanchions or equivalent.
   a. Stanchions and Tape:
      The base and stands should be rust-proof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each tenant is required to standardize the finish of the stands for all of their lease areas.
      Durable, retractable tapes are required to provide the greatest amount of flexibility in layout and positioning.

2. Furnishings
Airline Tenants provide seating in their Holdrooms. Layouts should accommodate queuing needs in the Holdroom space and provide waiting space for group as well as individual travelers. Seating quality and layout should be of comparable quality to that in Port operated holdrooms.

7.1.2 GENERAL SIGN STANDARDS

Signs are an integral element of the overall design and image of the Tenant’s space and are to be unique, distinctive, and graphically creative. All signs within the Tenant’s space shall be compatible with the terminal design and should be of a size, color, and illumination level to be readily visible, but not disruptive to adjacent activities. All signs and attachments shall be
provided at the Tenant's expense, unless otherwise noted. The Tenant is responsible for maintenance of their signs. See the following diagrams and criteria for more information:

A. The Following General Criteria Apply

1. Materials used in all signs are to be non-glare to avoid reflections from external light sources.
2. Additional signs and/or advertising, such as supplier logos, may not be displayed, unless otherwise noted.
3. Hand lettered, non-professional signs and newspaper advertisements are not permitted.
4. Signs may not flash, move, or make noise.
5. The bottom of any sign may not hang lower than 7’ 6” above the finished floor.

B. Broadcast Media Standards

Broadcast media shall include television (broadcast, cable, satellite, or pre-recorded), radio, wireless communications (cellular telephones, wireless internet, and wireless audio/video connections), and text feeds. Design and installation of broadcast media is subject to the Port's standard Design Review Process, and any approvals or variances must be granted by the Port in writing. In general, the following criteria apply:

1. Tenant installed broadcast media is not permitted within public spaces at PDX. The Port of Portland may, in certain circumstances, provide broadcast media services in public areas of the concourses. Examples include the entertainment areas at Concourse C West, the Port’s Wi-Fi services, and Department of Homeland Security video messaging at the security checkpoints.
2. Broadcast media shall be permitted in concessionaire leaseholds, and the approval thereof shall be determined during the Port’s Design Review Process. Audible broadcast media shall be kept at volume levels contained within concessionaire leaseholds.
3. Broadcast media is not permitted within airline gate leaseholds.
4. Broadcast media is not permitted within the PDX Ticket Lobby.
5. Objectionable or obscene media is expressly prohibited, and the definition of these terms is at the Port’s sole discretion.
6. All broadcast media that is permitted must be licensed in accordance with applicable laws.
7. Permitted installations shall adhere to the PDX Technical Guidelines Specifications, latest version, and shall be constructed using high quality materials and finishes.
8. In no case may broadcast media installations interfere with terminal wayfinding signage, visual paging, or terminal announcements.
9. Broadcast media shall not interfere with adjacent tenant operations, terminal operations, or air navigation. Further, broadcast media should be powered off while not in use.

C. Standards for Graphics

The Tenant shall use consistent colors and type styles for all graphic materials. Colors and finishes must complement the overall design.
D. Airline Tenants, Signs and Information

The following sign standards apply within the Holdrooms at Portland International Airport, and are provided to ensure that the Holdrooms and Concourses at PDX retain high quality aesthetic finishes and overall appearance.

All signs additions, modifications, or updates must be approved through the Port’s Design Review Process. Signs that do not have Port Design Review approval will be subject to immediate removal. In some cases, a Port Tenant Construction Permit may also be required. This requirement will be determined as part of the Design Review Process.

In general, the use of red text is discouraged, as this color is reserved for emergency purposes.

E. Port Directional (“Wayfinding”) Program

The main wayfinding program at PDX is coordinated with roadway signs and PDX web collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

F. Holdroom Signs, General Guidelines

1. All internal identification, wayfinding and directional signs are provided by the Port for Airlines beginning service at PDX. All subsequent changes will be at the Airline’s expense and subject to approval by the Port. Internally illuminated signs and/or other graphic elements are not permitted in the Holdrooms. No promotional material is allowed, except on counter displays. No Airline decals or paste-on signs shall be permitted.

2. Queuing Control System Signs
   a. Stanchions
      Tensabarrier-type stanchions should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. Each Airline is required to standardize the finish of their posts, either within their queuing area as a whole, or within each individual type of queue in the Holdrooms.
   b. Tapes
      Tapes should be standardized for each Airline queue. Airlines are encouraged to use different color tapes to delineate individual types of queues. Tapes shall be a maximum of two colors. Text may be printed on the tapes, identifying the Airline name or specific queue type.

3. Queuing Control System Sign Holders
   Tensabarrier-type sign holders are mounted on top of the Tensabarrier-type stanchions and are typically a frame that can accept a vinyl insert.
   a. Size, Color and Configuration
      Tensabarrier-type barrier mounted sign frames shall be a maximum of 24” x 16”, and may be mounted in portrait or landscape orientation. Frames shall match or complement the color of barrier posts to which
they are mounted. Airlines may use one barrier mounted sign for each individual queue or function. Signs should be professionally produced on a durable vinyl or plastic material.

4. Freestanding Signs
   a. One freestanding sign may be located at the entrance to each individual type of queue within an Airline’s Holdroom lease area. Signs may be a portable sign stand type or monolithic style. One style of sign is allowed per Airline tenant. In all cases, care should be taken to ensure that freestanding signs will not pose a hazard to the public under normal queuing conditions. In most cases, this means ensuring that the bases of the signs are of a sufficient size and weight to prevent them from tipping. Further, freestanding signs may not block paging telephones, fire extinguishers, other critical infrastructure or building egress.

   b. Portable Sign Stands and Inserts
      The frame and stand should be rustproof and finished in an attractive and durable material. Portable sign stands shall have a maximum frame size of 24” wide x 30” high to support the standard 22” wide x 28” high insert. The overall dimensions (base plus frame) shall be a maximum of 24” wide x 62” high. The sign shall be two sided to be visible from both sides; sign colors, fonts, and finishes should be selected based on intended use.

   c. Monolithic Signs
      Monolithic signs should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. The overall dimensions shall be a maximum of 24” wide x 72” tall. Each Airline is required to standardize the finishes of the signs for each of their individual queues within the Holdrooms. Signs shall be two sided to be visible from both sides; sign colors, fonts, finishes, and materials should be selected based on intended use.

5. Carry-On Baggage Sizing Units
   a. Each Airline is permitted to install carry-on baggage sizing units as appropriate for their operations, up to a maximum of one unit per queue. There are no size restrictions on these units; however, if they are combined with any other type of signs or advertisement, the standards outlined elsewhere in this document shall apply. Baggage sizing units may contain an integrated scale. These units must be contained within the Airline’s Holdroom lease area.

G. Temporary Signs
   1. Temporary signs include those displayed for a limited period of time (as determined by the Port), banners, computer generated and/or laminated promotional materials,
paste on signs, required notifications, security changes, and any mandated governmental signs. In each case, high quality materials and finishes should still be used wherever possible. Ripped, discolored, defaced, faded, or temporary signs being used as permanent shall not be accepted.

2. Department of Homeland Security (DHS) or Port of Portland or governmentally mandated signs or temporary measures shall be installed and removed as recommended by the DHS or the Port. In all cases, when possible, signs shall be durable and attractively constructed. Each airline is responsible for maintaining, updating, and removing the signs as required by the issuing authority.

H. Holiday Décor

Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

a. Locations
   1) All holiday displays shall be limited to within tenant leasehold space.
   2) Decoration is limited to check in desk/podium counter tops, and 20% of back wall areas in leased holdrooms.
   3) Holiday displays are not allowed along the front surface of check in counters, or against concourse windows.
   4) No displays shall block passenger visibility, sight lines, or circulation pathways.

b. Displays
   1) All décor shall be of professional quality.
   2) Tenants shall use a consistent theme for unity within their space.
   3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.
   4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.
   5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.
   6) Weapons, or toy replicas thereof, are expressly prohibited.
   7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.

7.1.3 TECHNOLOGY

A. Instant Ticket Machines

As a customer service option, Instant Ticket Machines are allowed in the airport Holdrooms in locations coordinated with the Airline’s lease area or in other designated locations. The term Instant Ticket Machine (ITM) shall also apply to any other self-service devices within the Holdrooms.
ITM installations must be approved through the Port’s Design Review Process, and as such, ITM signs are reviewed as a part of that process.

ITMs within the airline queuing zone may include signs which contain the overall height of the unit (unit plus signs) to 62” high.

ITMs outside of the Airline Holdroom queuing area may include signs which contain the overall height of the unit (unit plus signs) to 84” high. Primary text shall not exceed 3” in height, and should be a bold, Arial-type font.

Airlines are permitted to install these electronic, self-service, check-in ticket machines for use by their passengers in accordance with the following guidelines.

1. Locations
   a. Airlines may include Instant Ticket Machines in their Holdroom lease area.
   b. Queuing in front of the ticket machines shall not disrupt circulation in the Concourse(s) and common/public areas or building egress.

2. Aesthetics
   a. Ticket machine design shall be integrated into the general design of the Holdroom in which it is situated to achieve flush surfaces and joints at adjacent materials; all electrical and data conduits are to be fully concealed. Ticket machines on pedestals within Airline Holdrooms shall be designed to be compatible with existing nearby finishes, materials, and colors.
Manufacturer: Arconas

- Style: Flyaway Cluster + Linear
- Legs and other structural components: Die-cast aluminum in satin polish.
- Upholstered Seats: Leather alternatives are nylon or polyester products such as Destiny by Majilite with proven durability testing according to upholstery industry standards.
- Tables: Tops are solid surface
- 2-5 seat units, 6 seat cluster units/ Single and back to back rows
- Optional arms and footrests/ End, intermediate and corner tables
FURNITURE TEST AREA: Holdroom

HOLDROOM

Usage rate comparison of straight beam vs. cluster

-- Study shows that the usage capacity for the straight beam only layout was a 60% rate maximum.
-- In cluster seating configurations passengers used the available seats at a 100% rate.
-- Looking at the layout comparisons in concourse D, the existing layout seat count is 286 vs. 213.
-- Actual seats used in the straight beam layout is 172 at the 60% rate vs. cluster layout of 196 at 90% rate.
CHAPTER 8 - RESTROOM REHABILITATION DESIGN STANDARDS

As the gateway to Portland and the Pacific Northwest, Portland International Airport (PDX) provides the first impression of the region to many arriving visitors. With this in mind, the Port of Portland strives to provide a passenger friendly airport experience by offering a wide variety of passenger amenities and services; public restrooms are a key element of this program. The Restroom Rehabilitation Standards are intended to serve as a starting point for project teams to facilitate high quality design solutions and provide a consistency of design, materials, and products throughout the terminal facility.

The Design Standards are general in nature and are to be used as a starting point and overall guide for project teams. The Standards are used in conjunction with the Port of Portland Construction Master Specifications where detailed information regarding performance criteria, standards, products, installation requirements, etc. may be found. In addition to these resources all applicable local, state, and national building codes and regulations (including, but not limited to, the Oregon Structural Specialty Code and the Americans with Disabilities Act) shall be applied.

The Restroom Rehabilitation Design Standards address four main categories: General Design Standards, Architectural Standards, Mechanical Standards and Electrical Standards. In addition, the Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 - Sustainability. The design standards described in this document pertain to all public restrooms maintained by the Port of Portland in the PDX Terminal, Concourses, and Rental Car Facility. This includes the restrooms in the Conference Center, Port Administrative Offices, and Common Use-Restricted Areas (i.e., the secure deplaning level of Concourses C, D, and E).

The design standards do not specifically apply to leased, temporary, or the taxi backfield restrooms. The drawings below and on the following page show locations of all the restrooms that are intended to conform to the Design Standards summarized in this document.
8.1.1 PURPOSE AND USE OF THIS DOCUMENT

This document has been developed to provide guidance for the design of new restrooms or modifications to existing ones based on recommendations from Port staff who operate, maintain, and clean restrooms at Aviation facilities. As a result, these standards summarize ways to reduce maintenance and janitorial costs and improve restroom operations. Additional purposes for this document include:

A. Establish consistent quality of materials, accessories, and systems for all restrooms in keeping with the vision for PDX.

B. Improve standardization of materials to reduce inventory of replacement parts and space needed for storage, and simplify employee training to fewer products and brands.

C. Assist staff in easily identifying restroom elements which do not conform to the standards. This information will expedite the process of deciding what and how a restroom is to be modified when it is scheduled for rehabilitation.

D. Assist staff in estimating costs to completely rehabilitate restrooms. These standards provide basic design criteria for all restroom elements that an engineer can use when developing an estimate. These estimates can be incorporated into a 20-year budget forecast to be used by the Service and Systems Manager.

The design standards described in Section 1.4 are based on the restrooms which were designed and constructed during the Terminal Expansion South, Phase 2 capital project.
These are the newest restrooms and they represent, with only a few exceptions, the standard for all restrooms at the PDX Terminal Complex.

This document is to be used by Port staff when planning new restrooms or rehabilitating existing ones. This document may also be used by consultants and contractors who are assisting the Port in the design or modification of restrooms.

The Design Standards are expected to evolve as better technology becomes available, as Port preferences change or as passenger demographics and expectations change. The document is expected to be updated as these changes occur.

These Design Standards do not include operational standards of performance for the restrooms. For this information, please refer to the “Airport Standards of Service and Condition” handbook.

8.1.2 GENERAL DESIGN STANDARDS

Restroom layouts should consider the unique nature of the airport and the special needs of the traveling passenger. For example, in today’s traveling experience it is not uncommon for the majority of passengers to have two carry on pieces of luggage and possibly luggage carts. In addition at certain peak traveling periods there may be a high percentage of families traveling together (i.e. parents with small children), or a high percentage of accompanied and unaccompanied elderly or individuals with disabilities. Appropriate circulation paths within the restrooms shall be considered to accommodate these needs as well as to address applicable building code and ADA requirements.

Restroom entries shall be designed to eliminate sightlines into the restrooms from adjacent public spaces. In addition, they shall be wide enough to facilitate two-way movement of passengers and ideally be door-less to accommodate passengers with luggage.

Typical water closet stalls shall be oversized to accommodate passengers with carry on luggage. The minimum width allowed shall be 3 feet – 6 inches with a depth of 5 feet. This standard may require reducing the current number of plumbing fixtures within existing terminal facilities or enlarging current facilities to accommodate this passenger need. The size and number of accessible water closet stalls are dictated by the building codes.

Janitorial rooms shall be provided for each grouping of restrooms. Ideally the janitorial room will be accessed from the public circulation corridor. If this is not possible due to other constraints then each restroom should have a small janitorial room accessible off of its entry. Janitorial rooms should include adequate shelving storage for paper products and cleaning supplies, floor sink with bucket hook, and mop rack. Wall protection shall be provided around the floor sink. In addition the janitorial rooms typically contain the hot water heaters and mixing valves required for the tempered water supplied to the restroom sinks, the electronic controls for the sensor operated fixtures, and a water supply with a backflow protection device provided for the maintenance contractors chemical cleaning dispenser units.

Sustainable design and construction concepts should be considered in any new or remodel restroom project. The Port in context of the overall terminal facility goals will evaluate project proposals.
Family restroom facilities provide needed privacy to accompanied adults or children needing assistance. New family restroom facilities should be added as existing concourse and terminal facilities are renovated or expanded.

8.1.3 ARCHITECTURAL STANDARDS, MATERIALS, AND FINISHES

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal. The relaxed and enduring conceptual palettes guide color and materials selection in the Restrooms and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

In general all restroom finishes shall be of a durable, high quality, non-porous, and easy to maintain material consistent with the overall design character of the adjacent concourse or terminal facilities.

Floor materials shall provide slip resistance for passenger safety and act as a waterproofing membrane for the spaces located below the restrooms.

Finish colors shall be coordinated with the adjacent public spaces again to maintain the overall character of the terminal facility.

All architectural work will be coordinated with the other design disciplines and the Port of Portland technical standards. Structural modifications or penetrations must be reviewed with a structural engineer prior to construction. Any penetrations through concrete shall be core drilled or saw cut. Penetrations in any existing or new fire rated walls must be treated to maintain the existing rating.

A. Materials and Finish Systems

1. Flooring
   a. Provide waterproofing membrane under flooring in restrooms. Refer to Port of Portland standard waterproofing details for all floor penetrations. Penetration details apply to all construction trades.
   b. Resinous Matrix Terrazzo Flooring: Static Coefficient of Friction: .6 when tested in accordance with ASTM C 1028.
      1) Product: General Polymers Terrazzo 1100
      2) Field Color: SW 7066
      3) Aggregate Colors: 30% Chewelah Black #0, 15% Chewelah Ivory #1, 15% Chewelah Ivory#0, 15% Mother of Pearl#0, 12.5% Eagle Grey#1, 12.5% Eagle Grey #0
   c. Floor sealer is to be coordinated with the Port of Portland maintenance contractor prior to installation. If possible slope all floors to drains. A minimum requirement is to provide a 6-foot diameter dish at each floor drain.
   d. Provide wall base from corresponding flooring material with a minimum height of 4 inches.
   e. At the restroom entries provide a carpet threshold as a transition between the public circulation and the restroom hard flooring.
      1) Carpet: Port standard walk-off mat
2. Walls
   a. Entries: Match existing wall carpet if open metal ceiling is to remain. For future project development, consider eliminating wall carpet and specifying materials which are durable and simple to maintain such as stainless steel wainscot to match adjacent column covers, crystallized glass panels or wall tile for restrooms which have acoustic ceilings.
      1) Wall Carpet: Eurotex Tretford #587; Color: Cream.
      2) Wainscot: Stainless Steel 42” high or to align with adjacent column covers and/or wainscot, 16-gage sheet, #4 finish, horizontal grain.
   b. Provide full height glazed ceramic tile at all walls for public restrooms. Provide minimum 4” x 4” tile size to minimize number of grout joints. Wall sealer is to be coordinated with the Port of Portland maintenance contractor prior to installation. Wall tile is to be mounted over cement backer board.
   c. All wall penetrations will be sealed to prevent water intrusion during wet maintenance cleaning operations. Penetration requirements apply to all construction trades.
   d. If access panels are required in walls, they shall be constructed of stainless steel and key locked to meet Port standards.
   e. Ceramic Wall Tile at all new tile installations: Dal-Tile Corp.; Size: 41/4 inch square; Finish: semi-gloss; Color: K-165, “Almond (2)”
      1) Grout: Sanded, latex by Custom Building Products; Color: Bone.
      2) Cementious Backer Board: At all wall tile. High density, glass fiber reinforced, Heat cured acrylic vapor barrier face sheet, 1/2 inch or 5/8 inch thick for rated assemblies. Product: DensGuard Dens-Shield Tile Backer manufactured by Georgia-Pacific Corporation.

3. Counters
   Countertops shall be constructed from a durable, high quality monolithic material (i.e. solid surface) to facilitate under counter mounting of the sinks. Height of counters shall be as determined by building code requirements.
   a. Solid Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with ANSI Z124.3, for Type 5 or Type 6 material and performance requirements, without a precoated finish. Fabricate tops in one piece with shop-applied backsplashes and edges.
      1) Counter and Backsplash: “Avonite “Black Ice” K3-7100, matte finish.

4. Paint
   a. Walls and Soffits: System: INT 9.2B High Performance Architectural Latex: Latex Primer Sealer MPI #50, HIPAC Latex MPI #139, gloss level 3; Color: Miller CW030W Apple Peel. or S760, White Shadow to match existing.
   b. Metal Doors and Frames: INT 5.1R High Performance Architectural Latex: Alkyd Metal Primer MPI #76 or 79, HIPAC Latex MPI #139, gloss level 3.
5. **Ceilings**

Ceilings are either a combination of veneer plaster soffits located along the perimeter of the room and a removable lay-in ceiling system in the center or the veneer plaster soffits with an open metal system in the center. The open metal ceiling system accommodates exhaust air, enhances acoustical treatment of the rooms, and allows for ease of access to above ceiling mechanical devices. The metal ceiling system shall be of high quality, durable construction and meet code requirements for open ceilings so plenum sprinklers are not required. Slat systems and perforated panel systems are acceptable options. The lay-in ceiling systems shall be moisture resistant and provide for integration of all utilities and building systems. The suspension systems for any ceiling system shall be treated to resist rust.

a. The restroom ceiling design shall be coordinated with new or existing mechanical, plumbing, and sprinkler systems located above the ceiling. If required, access panels shall be provided as determined by the Port. Access to equipment above the ceiling should be organized and located at the accessible or open metal ceiling areas to minimize or eliminate the need for access doors in the veneer plaster. All ceiling access panels at veneer plaster shall be recessed into the ceiling and finished to match the ceiling.

b. **Metal Ceiling**
   1) Interfinish Luvs-Grid open cell; color: Custom
   2) Hunter Douglas Magna Grid; Color: 5840W; 4453W

c. **Lay-in Acoustic Ceiling Panels:** 24 x 48 x 3/4 inch, Armstrong Cirrus Second Look III, fine texture with 15/16” “Beveled Tegular Edge” 1761, Fire Class A, with Bioblock Plus. Recycled content: 75%.

d. **Suspension System for Acoustic Ceiling Panels:** Armstrong 15/16” “prelude” suspension system or other compatible with panels, galvanized hangers.

e. **GFRG Soffits:** Painted Finish
f. Restroom Plan, NTS.

![Restroom Plan, NTS. Diagram](image)

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g. Restroom Ceiling Plan, NTS.

![Restroom Ceiling Plan, NTS. Diagram](image)
6. Lighting
   General illumination is provided by downlights in the ceiling. Lights are connected to motion-sensor switches for energy efficiency. New construction projects should seek to increase energy efficiency while maintaining a calming aesthetic effect.

7. Doors
   If required, provide hollow metal doors and frames with a paint finish. Kickplates shall be provided for protection. Provide 36 inch high kickplate at janitor’s room and 12 inch high kickplate for all other rooms. Door hardware shall be Schlage lever style with satin chrome finish keyed according to the Port’s standards.

8. Miscellaneous Hardware

B. Signs

   Blade signs are provided and maintained by the Port for at each restroom entry. These signs shall be positioned to easily and clearly designate entries for passengers. Accessible water closet stalls shall have signs provided on both sides of stall doors for greater visibility to disabled passengers.
   Additional signs may be required to meet other applicable building code and ADA regulations.

C. Accessories and Fixtures

   All restrooms in the terminal are compliant with ADA guidelines and planned for ease of use by all passengers. See the fixture mounting height diagram below for appropriate fixture installations; verify with current guidelines and codes.
1. Mirrors:
   Full length and full height mirrors shall be provided at all sink locations. The size of the individual mirror segments should allow for the ease of replacement if
damaged. In addition a full-length mirror as required by ADA shall be provided along the accessible path within each restroom.

a. Mirror Glass: ASTM C 1036, Type 1 transparent flat, Class 1 clear, Quality Q1 (mirror select); 6 mm minimum thick. Grind edges square with actual edges “eased,” with five year warranty against silver spoilage.

b. Install Mirror with no trim at bottom edge; maintain 1/8” clear between bottom edge of mirror and top of next adjacent surface as illustrated below:

2. Soap Dispenser
An under counter reservoir type system shall be used with individual dispensers located at each sink. The reservoir shall be located so it does not interfere with any required under counter clearances per ADA.
Soap Dispensing System: Bobrick B-830; match quantity of “stations” with number of lavatories.
Lavatory-mount Soap Dispenser: 6 inch spouts, B-82216.

3. Paper Towel Dispenser
In general, wall-mounted paper towel dispensers shall be located for passenger convenience and to minimize the amount of water dripped on floor surfaces. Wall-mounted dispensers are coupled with trash receptacles.
Paper Towel Dispenser (above counter): Bobrick B-2860
Paper Towel Dispenser with Waste Receptacle: Bobrick B-3961

4. Trash Receptacles
Trash receptacles shall be recessed mounted to minimize the depth of the unit projecting into the room. Receptacles may be coupled with paper towel dispensers or stand-alone units depending on layout and capacity needs. At least one receptacle shall be located near the restroom entry. See Paper Towel Dispenser above for catalog number of integrated Waste Receptacle unit.

5. Changing Table
Baby changing tables shall be provided in all restrooms. They shall be conveniently located near a sink and a trash receptacle. They shall be wall mounted, fold down units to minimize space requirements. They shall provide safety straps for securing infants to the table surface. Mounting heights or opening latches shall be within reach heights as required by ADA.
Baby Changing Table, horizontal: Koala KB100-00; Color: Cream.
Baby Changing Table, vertical: Koala KB101-00; Color: Cream.
6. Nursing Bench
A built-in nursing bench shall be provided for all women’s restrooms. It shall be located near a sink and if possibly out of the normal circulation flow. A nursing bench may also be included in a family restroom if space allows.
   a. Nursing Bench Diagram:

7. Feminine Napkin Dispenser
Feminine napkin dispensers shall be provided in all women’s restrooms. The dispenser shall be a one-coin operation and recessed into the wall along the circulation path. Bobrick Trimline series or other with integral locks which are compliant with ADA guidelines.
Recessed Napkin/Tampon Vendor: Bobrick B-43500-25

8. Wall Hooks
Provide wall hook strips (typically 4 hooks) in each restroom circulation path near the sinks in all restrooms and near the urinals in Men’s restrooms. Hooks shall be breakaway type if weight is excessive. Provide blocking in wall for reinforcement.
Clothes Hook Strip: Bobrick B-985

9. Toilet Partitions
Provide stainless steel floor mounted, overhead braced toilet partitions with reinforced cores. All fasteners shall be tamper proof. Provide custom coat hooks on partition doors to minimize capacity. Provide flat door bumper on partition sidewall in lieu of on door. All operating hardware shall meet the requirements of ADA. If possible swing all stall doors outward to maximize access to water closets for passengers with luggage. Urinal screens shall be wall mounted stainless steel partitions.
10. Utility Shelf
   Provide swing down utility shelf in each partition. Shelves will be through-bolted
   with oversize washers on backside. If shelves are mounted back to back then they
   must still be through bolted.
   Folding Utility Shelf: Bobrick B-287

11. Toilet Tissue Dispenser
   Provide toilet tissue dispensers mounted on sidewalls or partitions at tall water
   closet locations. If layout allows mount dispensers back to back on partitions for
   added rigidity. Specify a minimum two-roll capacity for all toilet tissue dispensers.
   Toilet Tissue Dispenser: Bobrick B-4288

12. Toilet Seat Cover Dispenser
   Provide toilet seat cover dispensers at all water closet locations. Mount recessed on
   back wall above flush valves. Alternate mounting location must be provided at
   accessible stalls complying with ADA reach requirements. Sidewall locations are
   acceptable alternatives.
   Toilet Seat Cover Dispenser: Bobrick B-4221

13. Sanitary Napkin Disposal
   Provide feminine napkin disposal units at water closet locations in all Women’s
   restrooms. Through bolt the units on side partition walls with oversize washers.
   Provide tamper proof screws in disposal box to prevent removal from wall. Janitorial
   service will use disposable liners for ease of cleaning.
   Sanitary Napkin Disposal: Bobrick B-270

14. Grab Bars
   Provide stainless steel grab bars as required to meet all building code and ADA
   requirements. Provide blocking in walls and reinforcement in partitions at all grab
   bar locations.
   Grab Bars, 36 inch: Bobrick B-6806-36
   Grab Bars, 42 inch: Bobrick B-6806-42

8.1.4 MECHANICAL STANDARDS

All mechanical work will be coordinated with the other design disciplines and the Port of
Portland technical standards. Compliance with the Oregon Energy Code if applicable shall be
demonstrated to the Port prior to permit application.

A. HVAC

1. Ventilating, air conditioning and make up air capacity for the restrooms will be
   provided from the central air handling systems. Variable volume (VAV) boxes with
   hot water reheat will be provided for each of the restrooms.
2. Ventilation rate shall be 150% of supply, minimum.
3. Heating water supply and return will be provided from the central HVAC piping
   system.
4. Automatic temperature controls will be supplied by Johnson Controls and interfaced
   with the Port’s D.D.C. building automation system according to the Port’s standards.
5. Air balancing for reconfigured restrooms will be required.
6. The ceiling space may be used as a return air plenum. All ductwork shall be
   galvanized steel. Flexible ductwork will be permitted at connections to supply air
devices. Any ductwork exposed through the ceiling to public view will be painted flat black.

B. Fire Protection

A fire sprinkler system has been provided throughout the terminal facility. Any revisions to restroom layouts may require modifications to the existing fire protection system to meet all current building codes. Any modifications or additions must maintain the integrity of the main system and be consistent with Port standards.

C. Plumbing Fixtures

1. Water Closets
   Wall hung type. Carriers should be designed for heavy use. Flexible sealant to be used at the water closet to wall connection to allow for minimal movement. Manual flush valves for all water closets.

2. Urinals
   Wall hung type. Flexible sealant to be used at the urinal to wall connection to allow for minimal movement. Electronic automatic flush valves for all urinals at public restrooms. Port office restrooms or other employee convenience restrooms to have manual flush valves.

Low-flow fixtures shall be used wherever practical. Each review of these standards shall consider water use efficiency and bring the facilities at PDX into compliance with the current environmental goals.

3. Sinks
   Stainless steel under counter mounted bowls. Coordinate overflow connection piping with ADA access requirements.

4. Faucets at public restrooms shall be controlled by electronic sensors integral within the faucet. Electronic sensor control boxes are mounted to the underside of the countertop at the wall line. Coordinate exact location with under counter soap dispenser system. Faucets at all other locations to manual controls with paddle style handles.

5. Flushable floor drains shall be installed at one accessible water closet stall within each public restroom. Locate the pushbutton actuator on the sidewall a distance of 30 inches from the chase wall and 34 inches above finished floor.

6. Electric water heater of a sufficient size to provide adequate storage capacity and water temperatures as required. Water to the public restrooms will be tempered via a mixing valve. Water heaters serving the restrooms may be located in the adjacent janitor closets.

D. Miscellaneous

1. All piping systems will be labeled identifying pipe use per Port technical standards.

2. All floor penetrations will be sealed in accordance with the Port of Portland Portland International Airport Terminal Building and Concourses Technical Guideline Specifications.

3. Exposed waste and supply piping insulation kits will be provided at all sinks and lavatories for general safety.
8.1.5 ELECTRICAL STANDARDS

All electrical work will be coordinated with the other design disciplines and Port of Portland technical standards. Compliance with the Oregon Energy Code for lighting shall be demonstrated to the Port prior to permit application.

A. Power

1. Normal power and emergency power for life safety requirements will be provided from the Port’s central electrical system.
2. Convenience outlets should be located in the restroom for maintenance use. Outlets shall be GFIC (Ground Fault Interrupter Circuit) protected as well as covered if possible for wet cleaning operations.

B. Lighting

Lighting within the restrooms shall be a combination of indirect cove lighting and ceiling recessed down lighting. Cove lighting shall be used at the fixture walls including the sinks. Recessed downlights shall be used for general area lighting in the circulation zones of the restrooms. All fixtures within the restrooms shall utilize fluorescent lamps and be connected to the Port’s lighting control system. Light fixture types and lamp types will be coordinated with Port Maintenance.

C. Fire and Smoke Alarm System

Required fire alarm detectors, fire alarm audible and visual devices, and smoke detectors shall be connected to the central fire alarm loop. Any modifications to the existing fire alarm systems including programming shall be made by a Port specified contractor. Any additions or modifications shall require an update of the fire alarm system master utility drawing by the Port’s contractor. Visual alarms shall be mounted as required by the building code.

D. Paging System

The Port’s public paging system will be provided in each public restroom for passenger information.

E. Miscellaneous

1. All wiring will be EMT conduit having a minimum size of ¾ inches. All connectors will be steel with insulated throats. Provide conduit supports from structural steel. Existing conduit supports may be used as space and loading allows. Do not use ceiling support systems. Provide a minimum of 18 inches of clearance around all mechanical equipment and above ceilings. Any conduit visible through the accent ceiling system will be painted black except for the necessary conduit labeling.
2. Label all conduits per Port technical specifications.
CHAPTER 9 - RENTAL CAR SERVICE CENTER: LOBBY, KIOSKS AND WASH / FUELING FACILITY

The Rental Car Customer Service Lobby of Portland International Airport (PDX) is designed to be an attractive, friendly, open space that greets passengers and provides them with the information and services they need to have an enjoyable, successful journey. The Port has set a high standard of quality for the Customer Service Lobby and the tenant-operated spaces within public view; all areas are professionally maintained and organized to maintain the attractiveness and friendliness of this important space. To maintain the high quality of design, the Port has adopted these Design Standards to ensure that future modifications and changes are consistent with the vision for this area and have the approval of the Port. Standards for the Rental Car Agency areas in the Parking Structure and for the Car Wash / Fueling Facility are also included within this chapter.

All new designs and all proposed modifications to existing designs shall be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources which will help guide the development of each project. For general information on the MEP and Technology systems at PDX, see those chapters in these Terminal Design Standards.

The open design of the Customer Service Lobby offers passengers easy access to the Rental Car Agency counters, and clear circulation paths to the parking areas and the Terminal. The design concept palette is primarily from the relaxed and enduring concepts; there are very enduring materials and neutral colors at the entries and vertical circulation areas. The material palette in the customer service lobby is based on colors, materials, textures and imagery from the region’s natural environment. The pattern and colors of the carpet system constitute a significant portion of the image of PDX; all other use of color in the public spaces in the Terminal Complex complements this scheme. The design of the Rental Car Agency Customer Service Lobby is intended to be as consistent as possible with the overall design of the Airline Customer Service Lobby in the Terminal.

9.1.1 EXTERIOR FINISHES/AESTHETICS

The Port of Portland is solely responsible for the design and maintenance of the exterior of the Parking Structure and Commercial Roadway Area. This responsibility will include the administration of all site planning, landscaping, signage and lighting.

9.1.2 INTERIOR FINISHES/AESTHETICS

The Port of Portland is responsible for the design and maintenance of the interior of the Parking Structure with the exception of the signs, kiosks and other Tenant equipment that is necessary to maintain daily Tenant business operations. Please refer to the subsequent sections on Tenant Public Finishes, Kiosks and the Car Wash and Fueling Facility for standards specific to those areas.

Public spaces at PDX are finished in a material palette which is durable and consistent throughout the terminal and the Rental Car Customer Service Center. The relaxed and enduring conceptual palettes guide color and materials selection in the Rental Car Customer
Service Center and reflect the range of organizing concepts within the vision for a high-quality passenger experience.

Tenants are responsible for transitions between Port materials and Tenant materials. All Tenant interior finishes are provided and maintained by the Tenant at the Tenant’s expense, unless otherwise indicated. Tenants are responsible for contacting the Aviation Facilities department and the Port’s Tenant Construction Coordinator to obtain the latest drawing information on sign location opportunities and general existing conditions information.

A. Public Space Finishes

The Port provides all flooring in the public areas of the Rental Car Lobby, including carpeting, base and transition materials, as well as appropriate wall base, wainscot in select locations, wall and ceiling finishes and general lighting. Flooring behind the customer service counter shall be provided by the Tenant at the Tenant’s expense.

1. Carpet Body: U.S. Axminster, Pattern: 31456/07/10/1, Grade A71110
2. Walk-Off Carpet: Cyrus Systems (custom product with Milliken Street Smart Face and Mannington Infinity Backing), Color: Sapphire, Roll size: 6’
3. Wall Base: Stainless Steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.
4. Wainscot: Stainless Steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.
5. Corner Guards: Stainless Steel, 16-gage sheet, #4 finish, horizontal grain.
6. Counters
   The Customer Service Counters in the Rental Car Lobby are provided by the Port. Any modifications to these counters will be limited and must be approved by the Port. Customer Service Counter displays shall not create a cluttered appearance and shall consist of Tenant materials only.
   Counter-fronts are also provided by the Port. Alterations, signs, and other displays on the counter-fronts are not permitted.
   a. Counter Top: Formica, Fog 961-58
   b. Counter Radius Edge and Sides: Formica, Brushed Aluminum 605
   c. Counter Front: Wood panels and metal trim
8. Columns and Decorative Metal Surfaces: Formed sheet steel panels with urethane finish.
9. Ceilings
   The ceiling is a combination of exposed, painted structure and painted metal panels and trim. Ceiling Paint: Miller 6023, “Dark Blue”, Acrylic Latex, Flat
10. Lighting
    Appropriate lighting is a significant design consideration in the Parking Garage and Rental Car Service Center area due to limited daylighting opportunities. In the garage, the Port provides basic general lighting equivalent to that which is currently used to illuminate the non-rental car operation floors of the parking structure. In addition to this, the Port provides direct lighting of all Port provided signs. The Port provides all other public space lighting as deemed necessary by the Port and general illumination in the Lobby interior.
General illumination is provided by recessed downlights in the ceiling. There is also a series of lights mounted over the customer service counters which provides a brighter, diffuse light near this hub of activity.

B. Public Space Furnishings and Accessories

The Port provides public seating in the Rental Car Lobby to give passengers an opportunity to pause during the rental process. The furniture materials are derived from the enduring palette concept and the design and construction of the public seating is extremely durable.


C. Tenant Public Finishes

1. Counters

Counters and counter-fronts in the Customer Service Lobby shall be provided as part of the Rental Car Agency Common Tenant Improvements (TIs). Any modifications to these counters will be limited and must be approved by the Port. Customer Service Counter displays shall not create a cluttered appearance and shall consist of Agency materials only.

2. Back Wall at Counter Areas

The back wall finish is an integral element of the design of the Tenant’s counter space and shall be provided at the Tenant’s expense. The back serves as the support for the Primary Sign/Logo. The back wall shall be professionally finished with the name, corporate logo(s), and colors of the Tenant. High quality, attractive finishes are required.

3. Wall Base: Stainless steel, 16-gage sheet, #4 finish, horizontal grain, height to match other finishes, casework and window mullions.

4. Lighting

The Port provides all general lighting in the Rental Car Customer Service Lobby. No tenant-installed accent or spotlight lighting shall be permitted on the Customer Service Counter or the back wall signs. The Agencies are responsible for all lighting which would provide direct illumination of their Agency provided signs and kiosks, including all Miscellaneous / Informational Signs and Parking Space Identification Signs. Agencies are responsible for all maintenance and installation of their lighting at Agency expense.

D. Tenant Furnishings and Accessories

1. Queuing Zone/Devices Design and Use

To provide the highest level of customer service in the Customer Service Counter area, queuing devices are required to moderate the circulation and flow of passengers through the Rental Car Customer Service Lobby. Tenants should adjust their use of queuing devices according to their peak travel periods to limit passenger congestion in the Lobby. The queuing zone begins 4’ from the front of the customer service counter, and should extend no further that that distance which allows a minimum 4’ circulation path through the lobby. Additionally, the queuing zone shall be no wider than the Tenant’s leased ticket counter space. The Port recommends the use of Tensa Barrier brand stanchions or equivalent.
2. Stanchions
   The base and stands should be rust-proof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Each Tenant is required to standardize the finish of the stands for all of their queuing areas in the Lobby.

3. Vending Machines
   A limited number of vending machines will be permitted in the Customer Service Lobby.

9.1.3 SIGNS AND INFORMATION

The following signs standards apply for signs on the interior of the Rental Car Lobby at Portland International Airport, and are provided to ensure that the Rental Car Lobby at PDX retains a high quality aesthetic and overall appearance. In general, the use of red text is discouraged, as this color is reserved for emergency purposes, and the bottom of any sign may not hang lower than 7’ 6” above the finished floor.

All internal identification and directional signs shall be provided by the Agency. With the exception of the Primary Sign with the agency logo, internally illuminated signs and/or other graphic elements are not permitted in the Customer Service Lobby. No promotional materials are allowed, except on counter displays. No banners shall be hung in the Customer Service Lobby.

Signs that are unique to the Parking Structure include: Parking Space Identification Signs, Agency Logo Signs, Miscellaneous / Informational Signs and Directional (“Wayfinding”) Signs. Standards for these types of signs are detailed below.

A. Port Directional (“Wayfinding”) Program

The Directional (“Wayfinding”) Signs program at PDX is coordinated with roadway signs and collateral. The consistent colors and appearance set this program apart from other information graphics in the Terminal.

B. Rental Car Lobby Tenant Signs General Guidelines

1. Back Wall Signs
   Rental Car Agencies shall have one Primary Sign/Logo centered on the back wall, which may be internally illuminated. No temporary signs or displays are permitted. Signs must be mounted directly to the wall, with the bottom of such letters 4’ 10” from the base of the finished floor.
   The back wall finish is an integral design element of a Tenant’s Customer Service Counter space, and an important element in a Tenant’s branding. Back wall signs shall be provided by the Tenant at the Tenant’s expense. The back wall shall be professionally finished with the name, corporate logo and colors of the Tenant; high quality, attractive finishes are required.

2. Counter Top Displays
   Promotional materials, rate and operational information are permitted on counter tops, subject to approval by the Port. Other displays are not permitted. No stickers
or decals are permitted on the counter fronts. No signs or advertisements may be attached to or hung above counter areas.

3. Queuing Control System Signs
   a. Posts
      Tensabarrier-type posts should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. Each Tenant is required to standardize the finish of their posts, either within their queuing area as a whole, or within each individual type of queue in the Rental Car Customer Service Lobby.
   b. Tapes
      Tapes should be standardized for each Tenant queue. Tenants are encouraged to use different color tapes to delineate individual types of lines. Tapes shall be a maximum of two colors. Text may be printed on the tapes, identifying the Tenant name or specific line type.

4. Queuing Control System Sign Holders
   Tensabarrier-type sign holders are mounted on top of the Tensabarrier-type posts and are typically a frame that can accept a vinyl insert.
   a. Size, Color, and Configuration
      Tensabarrier-type barrier mounted sign frames shall be a maximum of 24”x 16”, and may be mounted in portrait or landscape orientation. Frames shall match or complement the color of barrier posts to which they are mounted. Tenants may use one barrier mounted sign for each individual queue or function. Signs should be professionally produced on a durable vinyl or plastic material.
   b. Temporary Signs
      The use of paper signs is strongly discouraged. As an interim measure they may be used provided they are sandwiched between clear plastic and are printed in such a manner as to appear professionally produced. Paper signs must be printed so as to fit the sign holder for which they are intended.

5. Freestanding Signs
   a. One freestanding sign may be located at the entrance to each individual type of queue within the Tenant’s queuing zone. Signs may be a portable sign stand type or monolithic style. One style of sign is allowed per Tenant. In all cases, care should be taken to ensure that freestanding signs will not pose a hazard to the public under normal queuing conditions. In most cases, this means ensuring that the bases of the signs are of a sufficient size and/or weight to prevent them from tipping. Further, freestanding signs may not block paging telephones, fire extinguishers, other critical infrastructure or building egress.
   b. Portable Sign Stands and Inserts
      The frame and stand should be rustproof and finished in an attractive and durable material. Portable sign stands shall have a maximum frame size of 24” wide x 30” high to support the standard 22” wide x 28” high insert. The overall dimensions (base plus frame) shall be a maximum of 24” wide x 62” high. The sign shall be two sided to be visible from both
sides; sign colors, fonts, and finishes should be selected based on intended use.

c. Monolithic Signs
Monolithic signs should be rustproof and finished in attractive, durable materials, such as stainless steel, brushed aluminum, or chrome. Black, brass, or other neutral finish may also be accepted. The overall dimensions shall be a maximum of 24” wide x 72” tall. Each Tenant is required to standardize the finishes of the signs for each of their individual queues within the Lobby. Signs shall be two sided to be visible from both sides; sign colors, fonts, finishes, and materials should be selected based on intended use.

C. Temporary Signs

1. Temporary signs includes those displayed for a limited period of time (as determined by the Port), banners, computer generated and/or laminated promotional materials, paste on signs, required notifications, security changes, and any mandated governmental signs. In each case, high quality materials and finishes should still be used wherever possible. Ripped, discolored, defaced, faded, or temporary signs being used as permanent shall not be accepted.

2. Department of Homeland Security (DHS) or Port of Portland or governmentally mandated signs or temporary measures shall be installed and removed as recommended by the DHS or the Port. In all cases, when possible, signs shall be durable and attractively constructed. Each Tenant is responsible for maintaining, updating, and removing the signs as required by the issuing authority.

D. Holiday Décor

Holiday displays are allowed following specific criteria and for limited durations. Holiday décor shall be allowed two weeks prior to and should be removed within two days after the holiday, with the exception of the winter holidays which are allowed from December 1 through January 7. The Port reserves the right to require the removal of holiday décor at any time at its sole discretion.

a. Locations
   1) All holiday displays shall be limited to within tenant leasehold space.
   2) Decoration is limited to lobby desk counter tops, and 20% of back wall area in the Rental Car Center.
   3) Holiday displays are not allowed along the front surface of lobby desks, or against any windows or doors.
   4) Limited décor is permitted to be hung above the lobby desks.
   5) No displays shall block passenger visibility, sight lines, or circulation pathways.

b. Displays
   1) All décor shall be of professional quality.
   2) Tenants shall use a consistent theme for unity within their space.
   3) Individual tenants are responsible for cleaning up litter caused by their displays; confetti, artificial snow, and other like decorations are not allowed.
4) Natural lighted greenery will not be allowed unless approved through the PDX Fire Department.
5) If hanging lighting is used, cords shall be plugged into soffit (if available) or the cords masked to minimize their appearance.
6) Weapons, or toy replicas thereof, are expressly prohibited.
7) Wrapped packages are discouraged due to security regulations.

All décor requests other than for holidays shall be evaluated on a case by case basis by the Port and must be in compliance with existing agreements.

E. Parking Space Identification Signs
Each individual parking space within the Rental Car Agency area may be identified by an identification sign. Placement and attachment of these signs should create the least impact to the existing facility as possible. Options for installation include freestanding signs and signs suspended from the structure above.

1. Size
   Parking Space Identification Signs shall be 18”x18” in size and consist of the Agency colors, logo, and space identification numbering. Aluminum is the preferred signage material. Signs may not block driver views or pedestrian paths.
2. Illumination
   Direct external and/or internal illumination of the Parking Space Identification Signs is not allowed.

F. Agency Logo and Miscellaneous / Informational Signs
Throughout the Rental Car Area, the on-site Agencies may wish to use various types of miscellaneous signs such as Directional Signs to help patrons locate Kiosks, the Rental Car Customer Service Lobby, and/or individual parking spaces. Other types of signs may include Agency Logo/Corporate Identity Signs, Pavement Directional Signs and other Informational Signs.

Each Rental Car Agency is allowed one major Agency Logo Sign in each specific use area:
   One in the general parking area, one on the Kiosk, and one in the Customer Service Lobby.

G. Directional (“Wayfinding”) Signs
The Port of Portland will provide all Directional Signage that leads customers into and out of the Rental Car Agency Space, as well as to and from Port provided facilities. This will include all entrance and exit signs and signs directing customers to the Bag Claim Area, the Airline Ticket Lobby and other parts of the Terminal Complex.

The Rental Car Agencies will provide all of the Directional Signs within their operational space that directs customers to Agency provided facilities such as: the Customer Service Lobby, Agency Kiosks and individual parking spaces or rows. Agencies will install and maintain all Agency-provided Directional Signs at their own expense.
9.1.4 KIOSKS

Kiosks are small free-standing Rental Car Agency facilities ranging in size from approximately 100 to 300 square feet. These Kiosks provide quick and convenient service for rental car customers. Kiosks are located on the first and second levels of the parking structure where the Port provides an exposed ceiling and floor surface.

The Rental Car Agency shall note that the parking garage is a public area and is a place of continual movement by people and vehicles. Therefore, the placement and design of these Kiosks shall not impede circulation patterns and shall not cause endangerment to people through vehicle movement. The Port will scrutinize the placement of the Kiosks within the Rental Car Agency Space of the Parking Structure in an effort to maintain a high level of safety.

A. Materials, Finishes and Aesthetics

The design and finishes of the Kiosks are key elements which contribute to the Rental Car Agencies’ overall character and identity to the public. These standards are intended to support that identity.

Kiosks are to be designed as free standing elements, are encouraged to be creative and attractive in appearance, and shall reflect the same high quality of the Terminal Complex Design (Parking Structure and Terminal Building). Kiosk materials shall be high quality and durable and complement those used in the surrounding area of the Airport. Kiosks shall be designed, fabricated, and installed by the Rental Car Agency at the Agency's expense. For more information on the Kiosk base, window and canopy areas, see the following standards.

1. Kiosk Base Materials
   The Kiosk is to be finished with a durable, high quality material consistent with the overall proposed design image. Careful attention must be paid to detailing of proposed material and how they join together. Kiosk design shall accommodate the potential abuse these Kiosks receive from being located in the parking garage (i.e. from luggage, carts, vehicles, and etc.).
   a. Suggested materials
      1) Anodized Aluminum
      2) Stainless Steel
      3) Factory Painted Metal

2. Window Area
   The window area shall be integrated into the overall design of the Kiosk. Careful attention shall be made to the selection of glass and framework. Proposed materials, finishes and detailing shall compliment the Kiosk design and reinforce the Agency's visual identity. No signs are allowed in windows that face the public space of the Rental Car Agency area. No Plexiglas or Vinyl window frames are permitted.
   a. Suggested materials
      1) Clear Glass
      2) Lightly Tinted Glass
      3) Storefront Anodized Aluminum Window Frames
      4) Painted Hollow Metal Window Frames
3. **Canopy**
   The canopy, with its integrated signage, is an overhead structure which completes the Agency's identity and character. Each Agency is required to design and fabricate a canopy for their Kiosk. The overhead canopy is to be designed as an integral part of the Kiosk and is also intended to hold the Kiosk signage and lighting. The horizontal bottom edge of the canopy shall be a minimum of 7'-0" above the floor. The overall height shall be consistent with fire and building code requirements. Durable, high quality materials are to be used in constructing the canopy. The canopy shall be provided and maintained at the Agency's expense.

4. **Signs**
   An Agency's signs are an integral element of the overall image of their Kiosk. Signs shall be distinctive and easy to read. All signs (exterior and interior) shall be compatible with the overall Kiosk design and be of a size and color to be readily visible and legible.
   Each Agency is required to design, fabricate and install at least one Primary Sign at the Agency's expense. The sign shall be integral to the design of the canopy. Maximum letter height is 12" and the sign shall not exceed 8' in length. The method of attachment of this sign is to be a considered part of the design.

5. **Integrated Design**
   The interior and exterior portions of the Kiosk visible to the public shall present a clutter free appearance. The interior of the Kiosk is limited in size and therefore, special attention shall be given to the organization of layout, equipment and sufficient storage for supplies and accessories, all of which shall be designed as an integral part of the Kiosk. Supplies shall not be visible to the public for any extended period of time.

### 9.1.5 RENTAL CAR WASH AND FUELING FACILITY

#### A. Materials, Finishes and Aesthetics
   The Rental Car Wash and Fueling Facility is located adjacent to the Parking Structure to provide fast, turnaround vehicle availability to agency customers. Because the facility is not a true public space, the exterior presents a primarily functional design. However, due to the structure’s close proximity to the rest of the Terminal Complex, the Agencies shall use similar materials and finishes as those on the surrounding structures.

   Main exterior walls shall be comprised of 8” x 16” smooth surface concrete masonry units painted to match the existing adjacent Parking Structure. Fascia canopy panels shall be galvanized metal to match the existing structure. All steel support columns, steel and/or concrete bollards and concrete island curbing shall be of a design that is consistent with the quality and durability of the surrounding Terminal Complex.
CHAPTER 10 - GENERAL MECHANICAL, ELECTRICAL, AND ELECTRONIC BASED SYSTEM GUIDELINES

The Port has placed a high priority goal of incrementally reducing the environmental impacts associated with operating its facilities. Our partnership with our tenants is critical in meeting this goal. In addition to helping tenants run their existing spaces as efficiently as possible, improving the mechanical and electrical system efficiencies associated with the design of new tenant facilities will have far reaching impacts moving forward. Oregon State energy code continues to be one of the most aggressive codes in the nation, but The Port would like to set a voluntary goal of all new tenant spaces being designed to exceed this code by 10%. Additionally, for the comfort and well-being of our tenants and PDX visitors, the Port would also like to encourage tenant teams to design new projects to meet the ASHRAE 55 comfort standards.

Any alterations or additions to the existing structure, which are required to accommodate the Tenant’s proposed improvements, shall be at the Tenant’s expense. This includes the suspension or support of any element from the floor or roof structure of the existing building.

The utility systems which serve the Tenant spaces have been previously designed by the Port to meet recommended requirements. Any modifications to the systems due to Tenant’s requirements, which are over and above those provided, are done at the Tenant’s expense and are subject to Design Review by the Port. The following standards apply to all Tenants.

The Tenant shall use the Port standards for all mechanical and electrical equipment. All modifications to systems, due to Tenant requirements, shall comply with Port standards, at the Tenant’s expense.

The Tenant’s design and construction shall comply with all current Federal, State, and local building codes, the FAA, and the ADA. In addition to Design Review Standards, the Aviation Facilities Department will provide the Tenant with Construction Guidelines and Specifications, which are above and beyond code requirements, and shall be adhered to, by the Tenant and the Tenant’s contractor.

If the Tenant’s operation requires modification to the air handling system, hydronic hot water or chilled water system, facility management system, steam system, or other central utility, the modifications shall be consistent with the Port standards, guidelines and specifications at the Tenant’s expense. Due to the complexity of and variation in the Port system, the Port recommends that the Tenant contact the Tenant Construction Coordinator to determine the specific requirements for the Tenant’s space.

Contact the Tenant Construction Coordinator for more specific mechanical and electrical information and standards pertaining to specific locations within the terminal complex.

10.1.1 STRUCTURAL

A. Roof and Floor Alterations

1. Penetrations or installation of equipment of any kind will not be permitted without prior consultation with a structural engineer at the Tenant’s expense and written approval of the Port. The location of approved additional roof penetrations will be limited. Penetrations required by the Tenant and approved by the Port will be
performed by the Port’s contractor to maintain existing warranties in effect, and inspected by a qualified roofing consultant of the Port’s choosing. The Tenant shall be responsible for the costs and must meet all project standards and details. Any unauthorized penetrations will be removed and repaired at the Tenant’s expense.

2. All floor penetrations should be sealed at the floor during the rough-in plumbing stage. The penetrations in the concrete shall be core drilled or cut with a slab saw. Floor sinks and floor drains shall be sealed directly to the floor without a sleeve; these penetrations shall be of precise size, as to allow the body of the fixture to be sealed at the penetration.

3. In spaces with multiple plumbing fixtures, such as kitchens, dish washing rooms, or restrooms, the Tenant shall install a water-proof membrane prior to the finished floor. In addition, a 6”x6” metallic corner flashing shall be installed and sealed at all perimeter walls where the rough floor meets rough wall.

4. All plumbing and conduit penetrations shall be sleeved with a stainless or galvanized, seamless or welded seam, metallic sleeve to 3” or as indicated on Port standard details above the finished floor and flush with the bottom of the floor. The sleeve shall be precisely sized to fit the opening in the concrete. In addition to sleeving, all openings and sleeves shall be sealed with an epoxy-type, non-shrinking, water-proofing adhesive.

B. Subflooring

1. The Port will provide a flat, smooth finished concrete floor slab within the Tenant’s space at the Port’s expense.

2. The Tenant shall verify floor type and construction prior to making any floor penetrations.

3. The Tenant shall verify with a licensed structural engineer floor maximum loading, and receive Port approval, prior to installing any heavy equipment.

10.2.1 MECHANICAL

A. Heating, Ventilation, and Air Conditioning (HVAC). All HVAC systems shall be installed per code, including Chapter 13 Energy Code. If the Tenant’s operations require modifications or extensions of any HVAC system, they shall be consistent with Port standards and at the Tenant’s expense.

Mechanical drawings and specifications shall be provided for Port review, comment, and approval prior to commencement of work. All drawings and specifications shall be designed, stamped, and signed by a registered engineer licensed in the state of Oregon.

1. The Port will provide:

   a. Heating, ventilating, air conditioning and make-up air capacity for Tenant spaces from the central air handling systems.

   b. A medium pressure supply duct to the periphery of the Tenant’s space, where available; otherwise a duct from a multi-zone system to the periphery of the Tenant’s space.

   c. Heating water supply and return piping to the periphery of the Tenant’s space, for connection to variable volume box reheat coils.
2. The Tenant shall provide:
   a. Variable volume (VAV) boxes with hot water reheat coils, for connection to medium pressure supply ducts.
   b. All hook-up and distribution of conditioned air from the medium pressure supply duct or multi-zone duct to and throughout the Tenant space.
   c. All distribution of heating water from the point of connection to the hot water reheat coils, including valves and specialties per Port standards, guidelines and specifications.
   d. All automatic temperature controls shall be supplied by Johnson Controls and interfaced with the Port’s D.D.C. building automation system, consistent with Port standards at the Tenant’s expense. Johnson Controls shall be a sub-contractor to the general contractor.
   e. All roof mounted Tenant’s equipment shall be curb mounted on a minimum 8” high curb with stainless steel flashing. All roofing plans and details shall be Port approved prior to commencement of work.
   f. The ceiling space may be used as a return air plenum. All equipment, pipe, conduit, conductors, and other building materials shall be plenum rated.
   g. The Port wishes to see the high performance designs for tenant spaces perform at their intended goals after construction is completed. In addition to the typically used testing and balancing process, the Port also requires projects to use a building commissioning process with its provider, Northwest Engineering Services, consistent with Port standards, guidelines and specifications at the Tenant’s expense. Northwest Engineering Services shall be a sub-contractor to the general contractor for all testing and balancing processes as well as commissioning services. The Port also encourages projects to consider using an enhanced commissioning process, where the provider is contracted to begin their commissioning services during the design phase to identify potential performance, operational, and maintenance issues that can be corrected a lower cost prior to equipment installation and the start-up testing phase.
   h. HVAC loads in excess of those provided below must be approved through the Design Review Process and are at the Tenant’s expense.

<table>
<thead>
<tr>
<th>HVAC Internal Loads:</th>
<th>Watts/SF</th>
<th>Watts/SF</th>
<th>Watts/SF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensible</td>
<td>Latent</td>
<td>Total</td>
</tr>
<tr>
<td>Retail Spaces</td>
<td>4.8</td>
<td>1.2</td>
<td>6.0</td>
</tr>
<tr>
<td>Food Spaces</td>
<td>7.8</td>
<td>1.9</td>
<td>9.7</td>
</tr>
<tr>
<td>All Other Areas</td>
<td>Contact the Tenant Construction Coordinator to acquire specific requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return Air Plenum:</td>
<td>Any walls constructed by the Tenant that extend to structure above the</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ceiling must be approved by the Port for compatibility with the building return air plenum system. Where walls above the ceiling would block the building return air path, the Tenant shall provide openings in these walls of free area and location as determined by the Port. In some locations, Tenant space may be a path for building return air. In these cases, the Tenant shall maintain openings through walls and ceiling construction of free area and location as determined by the Port. Tenants shall provide fire/smoke dampers and related controls as required.

j. All ducts shall be of metal construction and insulated in accordance with Port guideline specifications. Flex duct will be allowed to make a connection to a diffuser. To improve performance and minimize duct leakage, per the Port’s specifications, all duct connections will be sealed.

3. Locations:
System descriptions listed below are the most common systems in the locations indicated. Some locations in the airport are served by other systems or will require special tenant build out for HVAC. Coordinate with the Port to identify specific base building systems.

a. Main Terminal:
Currently served by a variety of air handling systems depending on the location. The ceiling space may be used as a return air plenum.

b. Concourses A, B, C, D and E:
Currently served by a single duct, variable volume re-heat air handler system to a connection point within the Tenant’s space. The ceiling space may be used as a return air plenum.

c. Oregon Market:
Currently provided by a single duct, variable volume air handler system to a connection point within the Tenant’s space. The ceiling space may be used as a return air plenum.

d. Food Court:
Kitchen appliances are currently served by a grease exhaust duct riser and exhaust fan connected to a point within the Tenant’s space, unless otherwise noted. System capacity is limited, so close coordination with the Port in the design process is essential.

e. Remote Storage Areas:
Currently provided by a single duct, variable volume air handler system.

B. Exhaust Systems and Grease Hoods

1. Exhaust systems shall be provided and designed appropriately based on the application. Restaurant kitchen applications shall utilize Type I and Type II exhaust systems as appropriate. Combining Type I and Type II exhaust systems is not permitted and is not code permitted. Makeup air for kitchen exhaust hoods shall be provided as required by code. If the Tenant’s operations require modifications or extensions of any exhaust system, they shall be consistent with Port standards and at the Tenant’s expense.

2. In the case of the Main Terminal Food Court, multiple Tenant’s may be connected to a common Type I grease exhaust system. These systems are of relative complexity and modification carefully considered and designed. Once the system modifications
3. The Tenant shall provide:
   a. All required exhaust systems and equipment including kitchen hoods, exhaust ductwork, exhaust fans, controls and power connection.
   b. Controls to interface with the Port’s D.D.C. building automation system consistent with Port standards, guidelines and specifications to permit monitoring Tenant’s exhaust fan status.
   c. Grease hoods with a sprinkler or dry chemical fire suppression system.
   d. Piping and the connection to the existing fire sprinkler system to serve the sprinkler suppression system for the grease hood.
   e. Hot water wash system for the grease exhaust hoods or exhaust system is not permitted.
   f. Locations of all exhaust fans as well as routing of exhaust ducts, subject to approval by the Port.
   g. Food Tenants shall maintain negative pressure in relation to circulation area by method of exhaust.
   h. All roof mounted Tenant’s equipment shall be curb mounted on a minimum 8” high curb with stainless steel flashing.
   i. All exhaust equipment and systems shall comply with all applicable codes for the application involved.
   j. Where natural gas appliances are used, the fire suppression system shall shut down the gas line serving the protected equipment.

10.3.1 PLUMBING

A. Plumbing Piping Systems

The tenant shall provide and install all plumbing systems relevant to the Tenant operation. If the Tenant’s operations require modifications or extensions to the Port plumbing systems, they shall be consistent with Port standards and at the Tenant’s expense. The Port has provided cold water (and in some locations hot water) service to central distribution points to serve the Tenant as described below for each location. Payment for cold water consumption shall be incorporated into the lease agreement.

Plumbing drawings and specifications shall be provided for Port review, comment, and approval prior to commencement of work. All drawings and specifications shall be designed, stamped, and signed by a registered engineer licensed in the state of Oregon.

1. The Port will provide:
   a. Cold water, vent, and local vent piping to the periphery of the Tenant’s ceiling space for connection by the Tenant.
   b. Waste piping and grease waste piping below the Enplaning floor slab to the periphery of the Tenant’s ceiling space for connection by the Tenants.

2. The Tenant shall provide:
   a. All materials, installations, connections and hook-ups to Port provided piping systems to furnish complete piping systems within their space.
c. Insulation around all hot and cold water piping.
d. Any requirements for the above within the Tenant’s Deplaning Level storage space.
e. Backflow prevention devices where required (Chemical soap dispensing systems shall not be installed without code approved backflow prevention devices).
f. Floor drains required due to the installation of backflow devises.
g. Watertight conduit to enclose beverage distribution lines.
h. Labels for piping identifying Tenant’s space name and pipe use.
i. The Tenant shall not modify their plumbing systems after the initial installation without Port review and approval.
j. The Tenant is responsible for the distribution throughout their space at the Tenant’s expense.
k. The Tenant shall provide pressure reducing valves, at the Tenant’s expense, to protect the Tenant’s plumbing system from over-pressurization.

m. As required, the Tenant shall provide appropriate backflow prevention devices consistent with Port standards, guidelines, specifications and the plumbing code, at the Tenant’s expense, to protect the Port’s water system from contamination.

B. Water Heater

1. The Tenant shall provide:
   a. An electric water heater of a sufficient size to provide adequate storage capacity and water temperatures as required by code, including valves and specialties per Port standards, guidelines and specifications at Tenant’s expense.
   b. Water heater shall be located within tenant’s lease space.
   c. Water heaters shall be seismically restrained per code.

C. Toilet Facilities

1. The Port will provide:
   a. Public toilet facilities in the public areas adjacent to the concessions spaces.
   b. Water closet and urinal facilities are not permitted in the Tenant’s space, where the Tenant’s space is open to the public, unless otherwise noted.

2. The Tenant shall provide:
   a. Hand wash sinks within the Tenant’s space and all related plumbing as required by local code requirements, where tenant space is open to the public.
   b. Hand wash sink, toilet, urinal, shower, and all related plumbing as dictated by the Tenant’s operation, where tenant space is not open to the public, and as approved by the Port.
D. Plumbing Fixtures
   1. The Tenant shall provide all plumbing fixtures within the Tenant’s space. If showers are provided, maximum flow rate shall be 1.8 GPM (1.5 GPM encouraged).

E. Grease Traps
   1. The Tenant shall install grease traps as required by code and where indicated by the Port to prevent grease from entering the sanitary sewer system. If the Tenant’s operations require modifications or extensions to the grease system, they shall be consistent with Port standards and at the Tenant’s expense.
   2. The Tenant shall provide:
      a. Grease trap(s) as specified by the Port and of sizes required by code, located within the Food Tenant’s space at grease waste producing fixtures.
      b. Maintenance of the grease trap(s) in accordance with Port standards.
      c. A dedicated “grease waste” piping system connected to the Port’s closest grease waste piping main.
      d. Vent piping from the grease trap, connected to a dedicated “local vent” piping system (roughed-in by the Port to the periphery of the Tenant’s space).

F. Grease Disposal
   1. The Port will provide:
      a. A dedicated area for Tenants to deposit solidified grease for reclaim.

G. Liquefied Grease
   Manual transporting of liquefied grease from the Enplaning Tenant’s space shall not be allowed.
   1. The Tenant shall provide:
      1) A grease collection system as specified by the Port. System shall be Frontline International, as Port specified for specific installation, no substitutions.
      2) Insulated liquid grease tank located outdoors on concrete equipment pad.
      3) Insulated and heat traced piping from Tenant space to the liquid grease tank.
      4) Liquid grease pump and wand located in the Tenant space.
      5) All related materials and installation required for a complete system.

H. Solidified Grease
   1. The Tenant shall provide:
      a. Transportation of all solidified grease in a sealed, spill-proof container to the Port dedicated area for reclaim. Transfer of solidified grease shall be by Tenant’s personnel utilizing a service elevator.
I. Natural Gas

1. The Port has provided gas service to central distribution points to serve the Tenant as described below for each location. Payment for gas consumption shall be incorporated into the lease agreement.

2. Natural gas shall be used for cooking purposes only, and shall not be used for heating or water heating purposes. Connection from the existing gas distribution system to the Tenant’s space shall be at the Tenant’s expense. All routings of natural gas lines and location of gas meters shall be coordinated and approved through the Port. Natural gas is available in the Oregon Market food court and on Concourses A, C, D, and E, but only in limited locations. If the Tenant’s operations require modifications or extensions to the gas distribution system, they shall be consistent with Port standards and at the Tenant’s expense.

3. The Port will provide:
   a. Natural gas piping (2-psi service, roughed in by the Port) to the periphery of the Tenant’s ceiling space for connection by the Tenant as required.

4. The Tenant shall provide:
   a. Gas meters, purchased by the Tenant, of sufficient capacity for intended use, and interfaced with the Port’s D.D.C building automation system, consistent with Port standards, at the Tenant’s expense.
   b. All materials and installation, including connections to Port provided piping systems, to furnish a complete piping system within their space.
   c. Gas vent piping from gas appliances, and gas regulators, including gas vents through the roof.

J. Refrigeration Units in Tenant Spaces:

Tenants are encouraged to select refrigeration units that do not use superheat. Further, the Port encourages the use of energy efficient systems and the recapture of otherwise wasted heat.

1. The Tenant shall provide:
   a. All modifications to the storage room including refrigerant and drain lines, plumbing, and floor drains, at the Tenant’s expense and subject to Port approval.
   b. Remote condenser units shall be located outside of the building on the deplaning level on grade, in an area designated by the Port. Units may not attach to wall or ceiling.
   c. Use of water cooled condenser units that utilize domestic cold water as a “once-through” cooling medium are not permitted.

K. Fire Protection

The installation of the sprinkler system shall comply with Factory Mutual Standards and all code requirements based on the Tenant operation. If the Tenant’s operations require modifications or extensions to the fire sprinkler systems, they shall be consistent with Port standards and at the Tenant’s expense.
1. The Port shall provide:
   a. A fire sprinkler system for the base building.

2. The Tenant shall provide:
   a. Modifications to existing branch piping.
   b. Relocation and/or addition of new sprinkler heads as required for their space to provide total coverage.

10.4.1 ELECTRICAL

A. Electrical System

1. General
   a. The Port has provided electrical service to central distribution points to serve the Tenant as described below for each location. Payment for electrical consumption shall be incorporated into the lease agreement.
   b. All wiring, when not in a cable tray, shall be EMT conduit having a minimum size of 3/4" and labeled per Port specifications. All connectors will be steel with insulated throats. The Tenant’s contractor shall provide conduit supports from structural steel and may use existing conduit supports, as space allows. Ceiling support systems shall not be used. Clearance above ceiling systems and around mechanical equipment shall be a minimum of 18".
   c. Compliance with the current Oregon Energy Code for lighting shall be demonstrated at the time of the permit application. Tenant mechanical and electrical requirements shall be reviewed through the Design Review Process. Service capacity will be reviewed as part of Design Review. Due to the complexity of and variation in the Port system, the Port recommends that the Tenant contact the Tenant Construction Coordinator to determine acceptable/allowable watts per square foot for their space.
   d. Electrical drawings and specifications shall be provided for Port review, comment, and approval prior to commencement of work. All drawings and specifications shall be designed, stamped, and signed by a registered engineer licensed in the state of Oregon.
   e. All tenant-installed appliances or powered devices must be UL or third party listed per state of Oregon requirements.

2. The Tenant shall provide:
   a. Feeder conductors to associated circuit breakers at central electrical service point with submetering hardware and interfaced with the Port’s D.D.C. building automation system, consistent with Port standards at the Tenant’s expense.
   b. Conductors to associated circuit breaker(s) at emergency panel.
   c. Panel-board(s), associated branch circuit wiring, devices, equipment connections and lighting in space. Panel-board(s) shall be located in Tenants space.
   d. Extend emergency circuits within space and make final connections.
3. **Concourses A and B:**
   The Tenant shall provide, at the Tenant’s expense, connection to the central 480V distribution point, feeder, transformation, and 120/208V distribution. The over-current protection of the feeder connected to the 480V System shall be a GFI breaker when it feeds any device except an isolation transformer. The breaker shall be coordinated with the upstream breaker.

4. **Concourse C:**
   The Tenant shall provide, at the Tenant’s expense, connection to the 480V bus duct (located on the tunnel level), feeder, transformation, and 120/208V distribution. The over-current protection of the feeder connected to the 480V bus duct shall be a GFI breaker when it feeds any device except an isolation transformer. The breaker shall be coordinated with the bus duct main breaker.

5. **Concourses D and E:**
   The Tenant shall provide, at the Tenant’s expense, connection to the 480V bus duct (located in the utility tunnel), feeder, transformation, and 120/208V distribution. The over-current protection of the feeder connected to the 480V bus duct shall be a GFI breaker when it feeds any device except an isolation transformer. The breaker shall be coordinated with the bus duct main breaker.

6. **Northern Oregon Market and Food Court:**
   a. The Port will provide conduit from the central distribution point to a connection point within the Tenant’s space, at the Port’s expense.
   b. The Tenant shall provide, at the Tenant’s expense, connection to the connection point, including feeder to the Tenant’s space, as well as the electrical panel and the distribution through the Tenant’s space. The distance to the central distribution point varies depending on location. The Port will provide 200 amps of 120/208V, (3)-phase power available at the central distribution points.

7. **Central Oregon Market Retail:**
   The Port will provide a 120/208V wire-way above the ceiling of the Tenant’s space at the Port’s expense. The Tenant shall provide, at the Tenant’s expense, connection to the wire-way and distribution.

8. **Southern Oregon Market:**
   The Port will provide a 120/208V wire-way above the ceiling of the Tenant’s space at the Port’s expense. The Tenant shall provide, at the Tenant’s expense, connection to the distribution point as well as an electrical panel and the distribution through the Tenant’s space.

**10.5.1 COMMUNICATION**

A. **Communication Services**

1. The Port will provide a route for telephone service conduits from existing distribution points to a connection point within the Tenant’s space.

2. The Tenant shall provide, at the Tenant’s expense, all conduits, devices, cabling, equipment, connections, installation, materials and hook-up to the connection point. The Tenant is responsible for the distribution throughout their space. The distance to the distribution point varies depending on location.
3. All wiring, when not in a cable tray, will be EMT conduit having a minimum size of 3/4" and labeled per Port specifications. All of the connectors will be steel with insulated throats.

B. Paging System

The Port will provide a public paging system in all public areas of the Airport. There will be no other paging systems, with the exception of Airline Holdroom and Bag Claim paging systems.

C. Satellite Dishes

1. The Tenant shall provide:
   a. Labeled conduit.
   b. Roof top penetration (performed by the Port’s warranty approved roofing contractor at the Tenant’s expense).
   c. Mounting with a brick ballast and protective pad.
   d. Location approved by and coordinated with the Port.

10.6.1 FIRE SUPPRESSION, DETECTION, AND ALARM

A. Fire Suppression System

1. The Port will provide a fire sprinkler system throughout the terminal in accordance with requirements of all current building codes. Main sprinkler lines with upright pendants and heads will be provided at the underside of the structure throughout the Tenant’s space.

2. If the Tenant’s operation requires modification to the fire sprinkler system, the modifications shall be consistent with Port standards, guidelines and specifications at the Tenant’s expense.

3. The Tenant shall be responsible for pendant and sprinkler head modifications within their space as required by the design. Modifications must retain the integrity of the main system and shall meet all codes. Modification shall be at the Tenant’s expense.

4. The Tenant, exclusive lease spaces, shall provide fire extinguishers as required by the PDX Fire Department, in compliance with NFPA Standard 10 and/or the City of Portland Fire Department codes at the Tenant’s expense.

B. Fire Detection and Alarm System

1. The Port will provide:
   a. The Port will provide a Siemens ALS-3 alarm system in the Tenant’s space at the Port’s expense.

2. The Tenant shall provide:
   a. Relocation, modification or addition to the fire alarm system within their space as required by their design, at the Tenant’s expense.
   b. Additional smoke detectors, fire alarm audible and ADA devices within their space required by NFPA.
   c. Additional fire alarm detectors within their space as required by NFPA.
   d. Associated power and signal conduit and wiring within their space.
e. Relocation, additions, modifications, connections and programming of the existing fire alarm system shall be made by a Port specified contractor, at the Tenant’s expense.

f. Connection to a grease hood fire protection system.

g. Additions or modifications shall require an update of the fire alarm system master utility drawing, at the Tenant’s expense, by Siemens Building Technologies.
CHAPTER 11 - TECHNOLOGY

Technology is an important element of providing customer service for Portland International Airport (PDX), designed and implemented to enhance the passenger experience. Specific aspects of technology are referenced in other chapters of the document, where relevant, and the general topics are covered here. The Information Technology department is responsible for managing the technology solutions working in partnership with key terminal stakeholders; this includes the design, installation, and ongoing support, as well as the long-term planning to evaluate and implement new technology services and the ongoing renewal and replacement for existing systems.

11.1.1 ELECTRONIC SIGNS AND DISPLAYS

A. Multi-User Flight Information Display System (MUFIDS) & Flight Information Display System (FIDS)

The Port provides a system for capturing and displaying airline flight information at monitors throughout the terminal. These are designed and deployed based on customer need, and include information for all airlines operating at PDX. The system depends on airline entry and update of information, either through an automated, electronic interface with the airline or through manual updates by the airline through a computer workstation. In addition to centralized displays at key locations, flight data may be used for individual flights operations at Port common ticket counters, Port-assigned gates, bag carousels, and international arrivals locations within the Federal Inspection Services (FIS) area.

B. Visual Paging

Visual Paging is provided by the Port, on monitors distributed throughout the terminal. Standard templates as well as customer-specific messages are triggered by the Customer Services Information/Paging staff.

C. Gate Displays

For Port-provided gates, flight information is displayed on the gate podium back wall for the flight operating at a specific gate.

D. Displays in FIS

For arriving international flights, passenger information is displayed in the Federal Inspection Services arrival area.

11.1.2 COMMON USE SYSTEM

The Port provides and supports a common use system for airlines using Port ticket counters. Initially referred to as Common Use Terminal Equipment (CUTE), the current industry terminology references Common Use Passenger Processing Systems (CUPPS) to apply to evolving solutions provided by airports for airline use. As part of the common use system, the Port provides workstations (computers), printers, bag tag printers, ticket printers, and boarding gate readers for airline use.
11.1.3 CUSTOMER SERVICE KIOSKS

Customer Service Kiosks / Common Use Self-Service (CUSS) kiosks are not provided by the Port at this time. Airline-owned kiosks are subject to Port design review standards.

11.1.4 COMMUNICATIONS SYSTEMS / SERVICES

Communications Systems / Services include terminal-wide audio paging (customer-specific as well as required announcement, e.g. security-related), operated by the Information / Paging staff, courtesy phones distributed throughout the terminal, pay phones (managed through a concessions agreement), and wireless (Wi-Fi) communications provided as a free service for passengers.

11.1.5 PORT GATE PHONES

A. Purpose

To provide policy and guidance for phone systems used to support airline operations at Port-operated gates and jet-bridges.

B. Equipment

Two phones will be provided at a gate podium having three agent positions. One phone will be provided at a gate podium having two agent positions. One phone will be provided per gate jet-bridge.

C. Installation of Phone Lines

The Port will provide and maintain necessary phone lines at gates and jet-bridges. Airlines will not be allowed to install proprietary phone lines or equipment at Port gates or jet-bridges. Installation charges will be captured in the Terminal Operations budget. IT communications services staff will be responsible for phone lines and phone sets installation coordinated by Terminal Operations.

D. Removal of Phones Lines

When a leased gate is returned to Port operation, removal of any existing proprietary communication cables will be the responsibility of the airline. Any proprietary communication cables will be removed back to the source per electrical code.

E. Phone Service

Phone service will be restricted to local and toll free calling with the exception of Common Use gates. A long distance access code will be provided on request for long distance dialing.

F. Port Paging System

Gate podiums will have access to Airport’s paging system.

G. Contact for Questions Involving Port Gate Phones

Please contact the Terminal Operations Manager.
CHAPTER 12 - RETURN OF LEASED SPACE

This chapter is provided to give general guidance to tenants within the PDX terminal complex on how the Port expects spaces to be returned upon lease termination or expiration. The Port has set a high standard of quality for the terminal and tenant-operated spaces within public view, and the Port wishes to ensure that even unleased spaces within the public view meet a certain standard. As such, spaces returned to the Port must possess a certain level of finishes, as described below. Additionally, the Port is applying best leasing practices to describe how non-public spaces should be returned to the Port.

In general, these guidelines apply to all returned spaces unless otherwise agreed to in writing with the Port.

All proposed modifications to existing spaces must be approved through the Port’s Design Review Process. Detailed information on the Design Review Process is included in the appendix of these Terminal Design Standards. The Port is committed to sustainability and has included resources for sustainable design and construction practices in Chapter 13 – Sustainability, as well as a matrix of recommended sustainability performance standards and locally sourced materials. See the appendix for other resources that will help guide the development of each project. For general information on the Mechanical, Electrical, and Plumbing (MEP) and Technology systems at PDX, see those chapters in these Terminal Design Standards.

Please note that if there are conflicts between this document and a tenant’s lease agreement with the Port, the agreements shall take precedence.

In general, the following expectations apply:

1. All space must be returned to prior condition with the exception of normal wear. Normal wear shall not include deterioration that could have been prevented by proper maintenance practices.
2. All space that is given back must be accessible without modification so that it can easily be leased to another tenant. The Port cannot accept the return of a space plan that leaves uneconomic remnants that are difficult to lease to another tenant.
3. The Port expects that any spaces returned to the Port have self-contained MEP and HVAC systems. If required to meet this standard, tenants are expected to separate these systems so vacant spaces are independently controlled.
4. All equipment, branding, or other personal property must be removed prior to give back. This includes the demolition of power, data, and communications infrastructure to source. Empty conduit may not be left in place.
5. In all cases, if removal of an item is required, it is expected that any damage caused by the removal will be repaired. Walls and ceilings should be patched and painted in a professional manner, and match Port standard finishes.
6. Spaces should be returned clean. All flooring should be professionally cleaned, kitchens and bathrooms should be cleaned and sanitized, all debris/trash must be removed, light bulbs replaced (if required), and spaces should be free of dust.
7. Missing outlet covers, light switch plates, vent covers, junction box plates, etc, should be replaced to match surrounding finishes.
8. All window graphics, signage, and blinds must be removed, and glass cleaned.
9. If applicable, all discrepancies noted between occupancy condition reports and post-occupancy walkthroughs must be addressed.
10. Tenant provided fire extinguishers should be removed.

Additionally, please see the specific requirements for various space types below.

Finally, the Port is responsible for all keys and locks at PDX. Security keys must be returned to the badging office. Non-security keys can be returned to your Property Manager for recycling.

12.1.1 PUBLIC SPACES

Public spaces at PDX are defined as those areas visible or accessible to the public, whether pre- or post-security. Examples of such spaces are concessions spaces, airline gate areas, service centers, and office areas.

A. Typical Acceptable Public Space Finishes

1. Carpet: The Port requires that all carpets be clean and not excessively worn upon return of space. Carpets should be professionally cleaned, with all tears, penetrations, and staining repaired. All patches and transitions between floorings must be seamless and aesthetically pleasing. If necessary, carpet may be replaced with quality commercial broadloom or carpet tiles complementary to the overall appearance of the surrounding area. Carpets with loop pile are discouraged due to snagging; cut pile is preferred.

2. Carpet Border: In general, carpet borders that are tenant installed should be removed. The Port will make this determination on a case-by-case basis.

3. Wall Base: Typically stainless steel, 4”, 6”, 12” high, 16 gage sheet, #4 finish, horizontal grain.

4. Wainscoting: Typically stainless steel 42” high or to align with adjacent finishes, casework and window mullions, 16-gage sheet, #4 finish, horizontal grain.


8. Ceilings
   The primary ceiling system at PDX is suspended linear metal slats with a metallic paint finish. Many locations in PDX use an above-ceiling plenum for return air and this operational consideration must be included when modifications are required.
   b. GFRG Soffits: Painted finish.

9. Light Fixtures: All light fixtures and bulbs should be operational.

12.1.2 NON-PUBLIC SPACES

Non-public spaces at PDX are defined as those areas not visible or accessible to the public, whether pre- or post-security. Examples of such spaces are concessions storage areas, airline operational space, support spaces, and baggage handling areas. In order to maintain
a presentable and orderly terminal complex, the Port requires spaces returned within these areas of the airport to meet a certain finish standard.

Tenant installed hot water heaters, water filtration devices, HVAC equipment, refrigerator/freezer units, etc, will be evaluated on a case-by-case basis by the Port.

A. Typical Acceptable Finishes

1. Flooring: The Port requires that all flooring be clean and presentable upon return of space. Carpets should be professionally cleaned, with all tears, penetrations, and staining repaired. All patches and transitions between floorings must be seamless and aesthetically pleasing. If necessary, carpet may be replaced with quality commercial broadloom, carpet tiles, or VCT. Concrete will be acceptable in some operations spaces, but should be cleaned and free of debris.

2. Wall Paint: Typically, any suitable, quality paint professionally applied. Color should be neutral.

3. Wall Base: Quality base cove to match existing.

4. Door and Frame Paint: Typically, any suitable, quality, durable paint intended for high-use areas. Typically, Miller beige 5742M, Oil Enamel 6782; Miller Airport Blue, Mix M-21426, Oil Enamel 6788; or Miller Airport Black, Mix M-21456, Oil Enamel 6788.

5. Exterior Metal Panels: Alucabond, Natural Anodized Aluminum.

6. Ceilings: Ceiling tiles should be clean and free of damage, or be replaced. Missing, stained, or broken tiles should be replaced. If the ceiling is open to structure, the integrity of fire retardant finishes must be preserved and repaired if necessary.

7. Light Fixtures: All light fixtures and bulbs should be operational. Outlet covers, switch plates, vent covers, etc, should be cleaned if required, or provided if missing.

12.1.3 SPACES WITH SPECIFIC REQUIREMENTS

Some spaces within the terminal complex have specific requirements for their return. Please reference the individual categories below, the requirements of which are in addition the general guidelines listed above.

A. Airline Gates

1. Gate areas given back must have corresponding ramp areas cleared of all airline GSE equipment.

2. All jetway signage and branding, both interior and exterior, must be removed, and penetrations to the jetway walls repaired.

3. Proprietary stanchions and area carpets must be removed.

4. Airline supplied garbage and recycling cans must be removed.

5. Airline installed gate information displays, FIDS, ITMs, or other electronic signage/devices must be removed.

6. Airline millwork must be removed, and floor penetrations repaired.


8. Pre-conditioned air units will be evaluated by the Port on a case-by-case basis.
B. Airline Ticket Counters

1. Ticket counter positions and the operations space behind must be returned in a logical manner. In general, operations space cannot be given back without the corresponding ticket counters, and vice versa.

2. All airline installed ticket counters must be removed and the standard Port ticket counter reinstalled. Additionally, airline installed ITMs must be removed, penetrations patched, and carpet repaired.


4. Damage caused to ticket counters, scales, or rotating signs above positions must be repaired to previous condition, including the removal of all tape residues.

5. Airline installed ticket counter inserts must be removed, and a suitable countertop provided, if applicable.

6. Adjacent airline operations spaces should follow the guidelines provided in Section 12.1.2 (Non-public Spaces) above.

7. All airline communications equipment and antennas should be removed in their entirety (for example, air to ground radios).

C. Curbside Podiums & Baggage Service Offices

1. Curbside podiums are Port property. However, all airline equipment, stanchions, signage, and luggage carts must be removed.

2. All interior and exterior signage should be removed and any damage repaired.

3. Airline installed FIDS monitors should be removed.

4. All shelving and racks should be removed.

5. When baggage service podiums are removed, any power and data cabling should be pulled back to source and flooring finishes repaired.

D. Operations/Maintenance Spaces

1. In general, oil/water separators should be decommissioned. However, the Port will make this determination on a case-by-case basis based on anticipated future use.

2. Typically, eyewash stations, emergency showers, etc should be removed and the plumbing decommissioned. Permission to leave this infrastructure may be granted by the Port on a case-by-case basis.

3. All shelving, racks, storage cabinetry, lockers, etc, should be removed and floor penetrations fixed.

4. Airline installed FIDS monitors should be removed.

5. All airline communications equipment and antennas should be removed in their entirety (for example, air to ground radios).

E. Retail Concessionaires

1. In general, the Port expects concessions spaces to be returned to basic shell condition unless otherwise agreed to in writing with the Port and the incoming/outgoing operators.

2. Window films should be removed, unless directed otherwise by the Port.

3. Decorative fixtures should be removed. This includes aesthetic fixturing that is not branded or part of a typical suite of trade fixtures.

4. Tenant installed closed-circuit television monitoring equipment should be removed in its entirety.
5. All safes should be removed and any floors/walls patched or repaired to match existing finishes.
6. IT infrastructure and equipment should be removed.
7. Blade sign graphics should be removed and any glass panels left clean.
8. The disposition of any security grilles will be determined on a case-by-case basis by the Port.

F. Food and Beverage Concessionaires
1. In general, the Port expects concessions spaces to be returned to basic shell condition unless otherwise agreed to in writing with the Port and the incoming/outgoing operators.
2. Window films should be removed, unless directed otherwise by the Port.
3. Decorative fixtures should be removed. This includes aesthetic fixturing that is not branded or part of a typical suite of trade fixtures.
4. Kitchen areas must be returned clean. This includes floors, drains, grease traps, hoods and other fixtures and mechanical devices.
5. Tenant installed closed-circuit television monitoring equipment should be removed in its entirety.
6. All safes should be removed and any floors/walls patched or repaired to match existing finishes.
7. IT infrastructure and equipment should be removed.
8. Water lines and other plumbed utilities shall be turned off and capped, or removed to source, at the Port’s direction.
9. Blade sign graphics should be removed and any glass panels left clean.
10. The disposition of any security grilles will be determined on a case-by-case basis by the Port.

G. Rental Car Center
1. All tenant signage, graphics, stanchions, fixturing, and branding must be removed.
2. Tenant IT equipment, proprietary processing equipment, and self-service units must be removed. Power and data should be removed to source.
3. Counter areas and operations spaces should be left clean and presentable, with counters restored to condition at occupancy.
4. The back walls behind the counters should be restored to Port white (Miller 5760W, “White Shadow,” MPI INT 9.2A, MPI Gloss Level 3).
5. All kiosks located within the garage must be removed, with damage repaired and conduits for power or data removed to source. Additionally, all signage in the garage must be removed.

H. Temporary Use of Port Space
1. The Port may elect to grant tenants or project teams the temporary use of Port space, for example, to support project work or short-term storage. In general, these spaces should be returned to the Port in like or better condition than they were granted. All damage must be repaired, and the spaces left clean and presentable.
CHAPTER 13 - SUSTAINABILITY

This chapter is provided to help tenants within the PDX terminal to understand the Port’s commitment to sustainability, and to define how tenants can integrate more sustainable practices into their designs.

13.1.1 THE PORT’S VALUE PROPOSITION FOR SUSTAINABILITY

The term “sustainability” has become commonly used and typically refers to practices addressing the “triple bottom line”: environment, economics, and equity. The most frequently referenced definition for sustainable development is:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

For the Port, integrating sustainability into its operations offers the following benefits:

A. Economic Benefits
   - Supporting the local economy through working with Portland-, Oregon-, and Pacific Northwest-based businesses.
   - Operational cost savings from efficient design and use of energy and water; reduced waste and avoided disposal-related costs.

B. Regional Brand Identity & Differentiation
   - Sustainable practices used at PDX exemplify the commitment and showcase the results of Portland’s leadership role in sustainability to the millions of travelers using PDX each year.

C. Public Health & Wellbeing
   - Using non-toxic building materials and performing good indoor air quality management practices during construction contributes to a healthier indoor environment for PDX passengers, employees, and contractors.

13.1.2 HIGHLIGHTS OF THE PORT’S SUSTAINABILITY PROGRAMS

The foundation of the Port’s commitment to sustainability is the Port of Portland Environmental Policy, adopted by the Port Commission in 2000. The policy defines a comprehensive set of goals addressing compliance, planning, natural resources, pollution prevention, management commitment, government relations, community relations, performance, quality, and continuous improvement.

In addition, several aspects of the Guiding Principles of the Terminal Design Standards—including a sense of place, environmental stewardship, a connection to Pacific Northwest culture and environment, durability, and cost-effectiveness, among others—are directly related to the achievement of Environmental Goals and a positive experience for travelers.

A. A comprehensive list of the Port’s environmental initiatives is available at: http://www.portofportland.com/GreenSide_Home.aspx. Some notable highlights include:
1. Port of Portland Headquarters building: Certified LEED Platinum in 2011
   - A Living Machine (onsite ecological wastewater treatment)
   - A 10,000 square foot Green Roof helps treat rainwater runoff and provides natural habitat
   - Energy efficient design using 36% less energy than a typical comparable building
   - No- and low-toxic building materials
   - Locally-sourced materials, including reclaimed old-growth fir from Port Terminal 4 and cobblestones formerly used as ballast in ships

2. Water Efficiency
   - Throughout the PDX terminal, water efficient plumbing fixtures, including dual-flush toilets and metered lavatory faucets, use 30% less water than conventional code fixtures.

3. Green Power/Energy Efficiency
   - In 2010 the Port of Portland received the Green Power Leadership Award from the Environmental Protection Agency for purchasing 100% green power for the Headquarters building and passenger terminal.
   - The Port partnered with Nike and Delta Airlines to install solar panels on the airport’s canopy, supplying 100% of the Nike store’s energy needs.
   - The automatic start/stop feature on the moving walkways, which are the first of their kind in the nation, result in an average 43% energy savings over continuously running walkways.

Several PDX tenants also have an impressive and growing list of accomplishments related to sustainability. Some highlights of tenant sustainability accomplishments include:

1. Reuse of salvaged materials
   - Nike repurposed salvaged wood bleachers from a local high school in its Nike Store redesign.
   - Pendleton sourced and repurposed vintage furniture and factory equipment as creative merchandise fixturing.
   - The Oregonian News stores used salvaged wood for their canopy trusses.
   - Several concessions operators (The Barbers, Pendleton, Nike, and others) used the existing concrete surface as their finished floor treatment, rather than procuring tile, carpeting, or other floorcovering.
   - Several tenants follow deconstruction best practices, rather than conventional demolition, to salvage reusable materials. As possible, salvaged materials are reused onsite, and the remaining materials are donated to local non-profit retail salvage yards.
2. Waste reduction

- The PDX Recycles Program, a partnership between the Port and participating concessionaires, supports PDX-wide best waste management practices, including a food donation program, food waste composting, recycling education and signage, and other resources.
- Several News & Gift operators have installed water refill stations, inviting customers to refill water bottles emptied at the security checkpoint. This not only reduces the impact on the environment by reducing waste, but it also encourages customers to visit the stores and provides an opportunity to capture additional sales.

3. Energy Efficiency

- Most News & Gift operators have installed LED light bulbs throughout their stores to reduce energy consumption and heat output.

4. Water Efficiency

- The Starbucks locations throughout PDX swapped out their continuous flow dipper wells with units that circulate clean water only when needed, resulting in dramatically reduced water consumption.

13.1.3 SUSTAINABILITY APPLIED TO THE TDS

Given the high volume of improvement projects at PDX and their collective impact, the Port views tenant space improvements as an opportunity to integrate common sustainability practices. The Port recommends the following considerations be incorporated to the greatest extent possible:

A. Materials Selection

1. Sustainable Attributes of Materials

The selection of materials should include a preference for the following attributes:

a. Portland-, Oregon-, and Pacific Northwest-sourced and manufactured materials and products
b. Forest Stewardship Council-certified wood products
c. Recycled-content materials
d. Salvaged and reusable building materials
e. Rapidly-renewable materials,
f. Non- and low-toxic materials, including products with no or low VOCs (volatile organic compounds) and no added urea-formaldehyde
2. Sustainable Performance Standards for Materials Commonly Used at PDX

The Port recognizes the challenges of balancing multiple objectives during the materials selection process, including design aesthetics, first-time cost, maintenance and replacement cost, schedule, and sustainable attributes. The local sourcing of materials is a top priority, and other sustainable performance standards, found in the document link below, are intended to inform tenants and design teams about local providers and realistic performance standards.

Please visit the Port’s Tenant Improvement website at http://www.portofportland.com/PDX_Tenant_Imprvmts_Home.aspx for the most recent local materials matrix and sustainability performance standards.

B. Construction Best Practices

General contractors and subcontractors working at PDX play an essential role in achieving environmental goals. The Port strongly encourages all terminal construction teams to follow these best practices.

1. Construction & Demolition Waste Management

Achieve an overall project waste diversion rate of at least 75%, through the development and implementation of a construction waste management plan. Applicable best practices should include:

- Development of a construction and demolition waste reduction plan.
- Deconstruction of salvageable materials for reuse onsite, on other projects, or for donation.
- Selective demolition (only of items with no reuse potential).
- On-site source separation of major materials types (metals, drywall, cardboard, etc.).
- Directing mixed (or co-mingled) loads to efficient material sorting and recovery facilities specializing in construction and demolition waste.
- Tracking project waste diversion rates.

2. Resources for C&D Salvage and Recycling

- Construction Salvage and Recycling Toolkit. Guide by Metro Regional Government. This free list includes more than 100 Portland area recycling sites. A free download of the guide is available at: http://www.oregonmetro.gov.
- Metro Recycling Hotline. Call 503.234.3000

3. Indoor Air Quality Management During Construction

- Develop and implement an indoor air quality management (IAQ) plan based on best practices defined by the Sheet Metal and Air Conditioning Contractors’ National Association (SMACNA). The implementation of an applicable IAQ plan will protect the health and well-being of construction
workers, passengers, employees and other terminal users. Some of these best practices include:

- Protecting HVAC equipment and ductwork from construction dust and debris.
- Protecting absorptive materials from inadvertent moisture and debris.
- Properly separating and ventilating areas under construction from those that are occupied.
- Using no- and low-VOC and no added urea-formaldehyde products to minimize off gassing.
- Maintaining a clean job site by suppressing dust with sweeping compounds, vacuuming with HEPA-filtered vacuum cleaners, and cleaning-up spills or accumulated water.

b. Resources for IAQ Management During Construction

2. These guidelines are intended to supplement, not replace, the Contractors Safety Plan, and Personal Protection Equipment (PPE) should be used whenever the situation requires it.

C. Energy Systems Design

The Port has placed a high priority goal of reducing the environmental impacts associated with operating its facilities. Our partnership with our tenants is critical in meeting this goal. In addition to helping tenants run their existing spaces as efficiently as possible, improving the mechanical and electrical system efficiencies during the design of new tenant facilities can reduce recurring energy and water costs. The Oregon State energy code continues to be one of the most aggressive codes in the nation, but the Port recommends a voluntary goal of reducing Code allowances by 10%. Additionally, for the comfort and well-being of tenants and passengers, the Port encourages new tenant space designs to meet ASHRAE 55 comfort standards.

To assist tenants with the incremental costs associated with higher performance systems, we recommend investigating the various financial incentive opportunities offered by the Energy Trust of Oregon (ETO), and the State or Oregon’s Energy Incentive program. Information about these programs can be found at the following links:

- Energy Trust of Oregon - www.energytrust.org

D. Water Systems Design

Water is an important resource in the Pacific Northwest, abundant but not unlimited or free. Restroom plumbing fixtures have the largest impact within the PDX terminal and are already specified to high performance standards. The Port encourages its tenants when designing spaces that include water using cooking and cleaning equipment to investigate options that may be more water efficient than industry standard practices.
For commercial kitchen equipment, WaterSense qualified products are recommended. Refer to the US EPA’s WaterSense at Work for guidance on selecting water efficient kitchen equipment (dipper wells, commercial dishwashers, wash-down sprayers, steamers, ice machines, etc.), available at: http://www.epa.gov/watersense/.

E. Sustainability Resources Provided by the Port

1. Sustainable Attributes Material Buyout Form
2. Port of Portland Environmental Policy
3. Port of Portland Construction Master Specifications and Guidelines
PDX TERMINAL DESIGN STANDARDS

LIST OF MATERIALS FOR TENANT SPACES: RECOMMENDED SUSTAINABILITY PERFORMANCE STANDARDS & LOCAL RESOURCE OPTIONS

Last Revised: March 11, 2013

The Port provides this list as a resource to assist PDX tenant design and construction teams identify and use more sustainable building materials. It does not endorse any of the products listed below, and website accuracy cannot be guaranteed.

Additions and corrections to this list are welcomed. Please send edits to: tenantimprovements@portofportland.com.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>RECOMMENDED PERFORMANCE STANDARDS</th>
<th>LOCAL SOURCING PROVIDERS</th>
</tr>
</thead>
</table>
| Carpet                  | Carpet & Rug Institute’s Green Label Plus certified  
50% + total recycled content  
50% + rapidly renewable content  
Low-VOC Carpet Adhesive, 50 g/L or less | Streimer Sheet Metal Works, [www.streimer.com](http://www.streimer.com)  
Hanset, [www.hansetcorp.com](http://www.hansetcorp.com)  
A2 Fabrication, [www.a2fab.com](http://www.a2fab.com)  
SEALEDESIGN, [www.sealedesign.com](http://www.sealedesign.com) (decorative metal work)  
Specialty Metal Fabricators, [www.specailtymetalfab.com](http://www.specailtymetalfab.com) |
| Wall Base & Wainscot - Stainless Steel | 80% + total recycled content | SCAFCO, [www.scafco.com](http://www.scafco.com)  
Streimer Sheet Metal Works, [www.streimer.com](http://www.streimer.com)  
Hanset, [www.hansetcorp.com](http://www.hansetcorp.com)  
A2 Fabrication, [www.a2fab.com](http://www.a2fab.com)  
SEALEDESIGN, [www.sealedesign.com](http://www.sealedesign.com) (decorative metal work)  
Specialty Metal Fabricators, [www.specailtymetalfab.com](http://www.specailtymetalfab.com) |
| Tile                    | 30% + total recycled content  
FloorScore certified  
No- or low-VOC tile adhesive, 65 g/L or less  
No- or low-VOC tile grout, 0 g/L  
No- or low-VOC tile sealer, 250 g/L or less | Ann Sacks (Eco-Thinking), [www.annsacks.com](http://www.annsacks.com)  
Pratt & Larson Ceramics, [www.prattandlarson.com](http://www.prattandlarson.com)  
Clayhaus Ceramics, [www.clayhausceramics.com](http://www.clayhausceramics.com)  
Quarry Tile, [www.quarrytile.com](http://www.quarrytile.com) |
| Wall Framing - Wood      | Pacific Northwest-harvested & manufactured FSC-certified | Sustainable NW Wood, [www.snwwood.com](http://www.snwwood.com) |
| Wall Framing - Steel     | Pacific Northwest-recovered & manufactured 30% + total recycled content | SCAFCO, [www.scafco.com](http://www.scafco.com) |
| Gypsum Wallboard         | 20%+ post-consumer recycled content | Georgia Pacific, [www.gp.com](http://www.gp.com) |
| Ceilings - Metal         | If aluminum, 60% post- and 40% pre-consumer recycled  
If steel, 30%+ total recycled content | Streimer Sheet Metal Works, [www.streimer.com](http://www.streimer.com)  
Hanset, [www.hansetcorp.com](http://www.hansetcorp.com)  
A2 Fabrication, [www.a2fab.com](http://www.a2fab.com)  
SEALEDESIGN, [www.sealedesign.com](http://www.sealedesign.com) (decorative metal work)  
Specialty Metal Fabricators, [www.specailtymetalfab.com](http://www.specailtymetalfab.com) |
<p>| Ceilings - Wood          | Pacific Northwest-harvested &amp; manufactured | Sustainable NW Wood, <a href="http://www.snwwood.com">www.snwwood.com</a> |</p>
<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>RECOMMENDED PERFORMANCE STANDARDS</th>
<th>LOCAL SOURCING PROVIDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling - Panel</td>
<td>Suspension: 30%+ total recycled content&lt;br&gt;Panels: 50%+ total recycled content&lt;br&gt;25% rapidly renewable content</td>
<td>Armstrong - Cirrus and Bioacoustic, <a href="http://www.armstrong.com">www.armstrong.com</a></td>
</tr>
<tr>
<td>Doors - Wood</td>
<td>Pacific Northwest-harvested &amp; manufactured&lt;br&gt;FSC-certified&lt;br&gt;No added urea-formaldehyde (NAUF)</td>
<td>Oregon Door, <a href="http://www.oregondoor.com">www.oregondoor.com</a>&lt;br&gt;Lynden Doors, <a href="http://www.lyndendoors.com">www.lyndendoors.com</a></td>
</tr>
<tr>
<td>Countertops</td>
<td>50% + pre-consumer recycled content&lt;br&gt;No added urea-formaldehyde resins&lt;br&gt;No added urea-formaldehyde laminate adhesives&lt;br&gt;FSC-certified wood components</td>
<td>Rejuvenation, <a href="http://www.rejuvenation.com">www.rejuvenation.com</a>&lt;br&gt;Schoolhouse Electric, <a href="http://www.schoolhouseelectric.com">www.schoolhouseelectric.com</a>&lt;br&gt;Eleek, <a href="http://www.eleek.com">www.eleek.com</a></td>
</tr>
<tr>
<td>Light Fixtures</td>
<td>CFL- compatible&lt;br&gt;LED-compatible&lt;br&gt;UL-listed</td>
<td>Miller Paint (Acro Pure or Devine), <a href="http://www.millerpaint.com">www.millerpaint.com</a>&lt;br&gt;Rodda Paint (Horizon), <a href="http://www.roddapaint.com">www.roddapaint.com</a>&lt;br&gt;YOLO Colorhouse, <a href="http://www.yolocolorhouse.com">www.yolocolorhouse.com</a>&lt;br&gt;MetroPaint, <a href="http://www.oregonmetro.gov">www.oregonmetro.gov</a></td>
</tr>
<tr>
<td>Coatings &amp; Paints</td>
<td>No- or low-VOC content products with the following VOC (g/L) limits for the following categories of paints and coatings. (Reference: USGBC LEED 2009 standards, Green Seal GS-11 and GC-03, and SCAQMD Rule #1113, 2004)</td>
<td>Re rejuvenation, <a href="http://www.rejuvenation.com">www.rejuvenation.com</a>&lt;br&gt;Schoolhouse Electric, <a href="http://www.schoolhouseelectric.com">www.schoolhouseelectric.com</a>&lt;br&gt;Eleek, <a href="http://www.eleek.com">www.eleek.com</a></td>
</tr>
</tbody>
</table>

**Note:** The table is intended to provide a list of recommended performance standards and local sourcing providers for various materials used in terminal design and construction at Portland International Airport. The standards are based on USGBC LEED 2009 and Green Seal GS-11 and GC-03, as well as SCAQMD Rule #1113, 2004. The table includes specific recommendations for ceilings, doors, countertops, light fixtures, and coatings, along with links to websites for manufacturers and suppliers. The materials listed, such as 9Wood, Armstrong - Cirrus, and Bioacoustic, are examples of companies that meet the recommended standards.
<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>RECOMMENDED PERFORMANCE STANDARDS</th>
<th>LOCAL SOURCING PROVIDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shellac: Clear</td>
<td>730</td>
<td></td>
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<tr>
<td>Shellac: Pigmented</td>
<td>550</td>
<td></td>
</tr>
<tr>
<td>Stain</td>
<td>250</td>
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<td>Concrete Curing Compounds</td>
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<td>Japans/Faux Finishing Coatings</td>
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<td>Magnesite Cement Coatings</td>
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<tr>
<td>Pigmented Lacquer</td>
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<td>Waterproofing Sealers</td>
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<tr>
<td>Waterproofing Concrete/Masonry Sealers</td>
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<tr>
<td>Wood Preservatives</td>
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<tr>
<td>Low-Solids Coatings</td>
<td>120</td>
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</tr>
</tbody>
</table>

### Adhesives & Sealants

No- or low-VOC content products with the following VOC (g/L) limits for the following categories of adhesives and sealants. (Reference: USGBC LEED 2009 standard, SCAQMD Rule #1168, 2005)

#### Architectural Adhesives Applications:

<table>
<thead>
<tr>
<th>Indicators</th>
<th>VOC limit (g/L)</th>
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<tbody>
<tr>
<td>Indoor Carpet Adhesives</td>
<td>50</td>
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<tr>
<td>Carpet Pad Adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Wood Flooring Adhesives</td>
<td>100</td>
</tr>
<tr>
<td>Rubber Floor Adhesives</td>
<td>60</td>
</tr>
<tr>
<td>Subfloor Adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Ceramic Tile Adhesives</td>
<td>65</td>
</tr>
<tr>
<td>VCT and Asphalt Tile Adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Dry Wall and Panel Adhesives</td>
<td>50</td>
</tr>
<tr>
<td>Cove base Adhesive</td>
<td>50</td>
</tr>
<tr>
<td>Multipurpose Construction Adhesive</td>
<td>70</td>
</tr>
<tr>
<td>Structural Glazing Adhesives</td>
<td>100</td>
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</table>

#### Substrates:

<table>
<thead>
<tr>
<th>Substrates</th>
<th>VOC limit (g/L)</th>
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<tbody>
<tr>
<td>Metal to metal</td>
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<tr>
<td>Plastic foams</td>
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<td>Porous material except wood</td>
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<tr>
<td>Wood</td>
<td>30</td>
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<tr>
<td>Fiberglass</td>
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#### Specialty Applications:

<table>
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<tr>
<th>Specialty Applications</th>
<th>VOC limit (g/L)</th>
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<tr>
<td>PVC welding</td>
<td>510</td>
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<tr>
<td>CPVC welding</td>
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<tr>
<td>ABS welding</td>
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<tr>
<td>MATERIAL</td>
<td>RECOMMENDED PERFORMANCE STANDARDS</td>
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<tr>
<td>-----------------------------</td>
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<tr>
<td>Plastic cement welding</td>
<td>250</td>
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<tr>
<td>Adhesive primer for plastic</td>
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<td>Contact Adhesive</td>
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<td>Special Purpose Contact Adhesives</td>
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<td>Structural Wood Member Adhesives</td>
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<td>Sheet Applied Rubber Lining Operations</td>
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<td>Top and Trim Adhesive</td>
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<td>Sealants:</td>
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<td>Non-membrane Roof</td>
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<td>Single-Ply Roof Membrane</td>
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<td>Other</td>
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<td>Sealant Primers:</td>
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<td>Architectural (non-porous)</td>
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<tr>
<td>Architectural (porous)</td>
<td>775</td>
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<tr>
<td>Other</td>
<td>750</td>
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<tr>
<td>Furniture &amp; Furnishings</td>
<td>GreenGuard-certified</td>
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<tr>
<td>Salvaged Building Materials</td>
<td>Salvaged or surplus materials</td>
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<td></td>
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<tr>
<td>Deconstruction Services</td>
<td>Salvage for reuse onsite, another project, or donation</td>
</tr>
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APPENDICES

THE PORT TENANT IMPROVEMENT PROCESS
PDX BROADCAST MEDIA STANDARDS
PDX TERMINAL MAP
PDX CRITICAL BSI AREAS
AVIATION TENANT IMPROVEMENT PROCESS

Pre-Design Orientation Meeting* → Schematic Design Review (2 weeks) → Pre-Design Development Orientation Meeting* → Design Development Review (2 weeks) → Design Review (2 weeks) & City of Portland FPP construction permit review (up to 2 weeks) OR Port construction permit review (2 weeks) & standard City of Portland building permit review process (8 - 12 weeks) → Permit Issuance → Pre-Construction Meeting → Start Construction → During Construction → Construction Complete

Tasks/Steps
- Tenant meets with Facilities and Properties to discuss concept, and to review Design Review and Construction Permitting processes.
- Tenant submits basic schematic plans for review and comment. Tenant also submits materials board for review. Port reviews and gives conditions of approval. Introduction to required construction deposit fee.
- Tenant submits 50% complete construction documents, drawings, specifications, and application for Port construction permit. Port reviews and gives conditions of approval.
- Tenant submits 100% complete construction documents, drawings, specifications, and application for Port construction permit. Port reviews and gives conditions of approval.
- Tenant can submit for City FPP permit concurrently with Port permit application.

Standard Process
- Tenant and their design team meet with Facilities, Properties, Engineering, Maintenance, Terminal Ops, Airside Ops, and Construction to discuss Port technical specifications, guidelines, and operational requirements. Introduction to Port Technical Guidelines.
- Tenant can submit for City FPP permit concurrently with Port permit application.

Additional items required under Facility Permit Process (FPP)
- Tenant submits basic schematic plans for review and comment. Tenant also submits materials board for review. Port reviews and gives conditions of approval.
- Tenant submits 50% complete construction documents, drawings, specifications, and application for Port construction permit. Port reviews and gives conditions of approval.
- Tenant submits 100% complete construction documents, drawings, specifications, and application for Port construction permit. Port reviews and gives conditions of approval.
- Tenant can submit for City FPP permit concurrently with Port permit application.

*Optional steps primarily for new tenants or major redevelopments. These steps may be followed for any development, however, and it will be at the Port’s sole discretion whether these meetings are required.

Tenant can submit for City FPP permit concurrently with Port permit application.

Updated January 2007
THE PORT OF PORTLAND TENANT IMPROVEMENT PROCESS

Thank you for your interest in developing facilities at Portland International Airport (PDX). PDX is one of three airports in the Port of Portland (Port) system, and is the commercial air service gateway to Portland, northern Oregon, and southern Washington. The Port’s Aviation Tenant Improvement Process is a key component in maintaining the Port’s high standard of service to the local community and area visitors. This document provides detail on the review process and its required submissions.

The Port has developed a standardized, four-step Tenant Improvement Process to ensure that all applicants comply with Port design standards and their lease agreements, thus providing the best and most effective facilities at PDX. The four steps to the Tenant Improvement Process are as follows:

1. Pre-Design Orientation Meeting
2. Schematic Design Review
3. Design Development Review
4. Construction Document Review and Port Construction Permit Issuance

Each applicant is required to become familiar with the content and intent of the Port design standards and all other Port documents applicable to their location. Please contact the current Tenant Improvement staff listed on the Port’s website or your Property Manager for these documents. Each applicant shall require their design team and contractors to become familiar with these documents, and to monitor design and construction activities as necessary to ensure compliance. Please note that applicants are also required to comply with the applicable regulations of other governing bodies, including the City of Portland, Multnomah County, the State of Oregon, and the Federal Aviation Administration (FAA). The Americans with Disabilities Act (ADA) also applies to development at PDX.

Each step of the Tenant Improvement process must be completed as outlined on the following pages. Each step will be reviewed separately based upon the applicant’s submission package. The Tenant Improvement Process is the Port’s official review of the applicant’s proposal, and is typically mandatory process as outlined in lease agreements. All approvals and comments will be distributed to the applicant in writing. The applicant may not proceed to the next step in the Tenant Improvement Process until approval of the previous step is received from the Port. The Tenant Improvement Process is coordinated by the Site and Facilities Design Section of the Port’s Planning and Development Department, who can be contacted with questions or to make an appointment. The Tenant Improvement stakeholder team consists of various Port employees from the Planning, Business and Properties, Engineering, Operations, and Security departments, as well as others as required by the type and complexity of the project. The Port’s Tenant Construction Permit process is administered by the Aviation Tenant Construction Office; this process is discussed later in this document.

Each step of the Tenant Improvement process takes approximately ten business days to complete, provided that all required documentation in the application package is complete. All drawing submittals shall be professionally drawn to scale and to applicable industry standards.
PRE-DESIGN ORIENTATION MEETING

The Pre-Design Orientation Meeting is an opportunity for Tenant Improvement staff to meet with the applicant to discuss the proposed improvement and identify any Port, City, County, FAA, or other requirements that may apply. It is important for the Tenant or the Tenant’s representative (architect, graphic designer, etc.) to work with the Port, within the parameters of the Tenant Improvement Process, to create a unique but unified look for each operation within the Airport. The intent of this initial meeting is to familiarize Port staff with the basic design concept and enable applicants to seek answers to any questions they may have. The outcome of this meeting will be to determine whether a minor or major Design Review Process is required. In the case of minor alterations (for example, the repainting of an existing wall), the design may be approved to proceed directly to the Port Construction Permit phase. In some cases, this meeting may be waived or held over the phone for minor projects.

At the Pre-Design Orientation Meeting, no formal presentation or documentation is required of the applicant. However, the applicant should be prepared to describe the general nature of the proposal in order to take full advantage of staff comments and recommendations. It is recommended that the applicant have sufficient concept sketches and/or photos available to clearly portray the intended development. The successful completion of this preliminary step should prevent any unnecessary costs associated with designs or elements that are unlikely to be approved or function well within the airport environment.

Please note that the most up to date terminal or airfield base drawings may be obtained by placing a request with the Aviation Facilities Department.

SCHEMATIC DESIGN REVIEW

The intent of this review step is to ensure that the applicant has developed an appropriate conceptual design and adhered to the Port’s Terminal Design Standards. The Tenant Improvement staff will review the submission for compliance with Terminal Design Standards and will focus upon the major design elements of the project. All concerns, issues, and comments from the Port will be forwarded to the applicant in writing.

It is important for the applicant to be aware that submission of a conceptual design for schematic design review does not ensure plan approval. The Tenant Improvement staff reserves the right to approve plans based on the fulfillment of conditions they may determine are necessary for the project’s successful integration into Airport environs. Staff also maintains the right to deny approval and permitting due to the applicant’s failure to address stated issues by Tenant Improvement staff or criteria established in Port plans and policies.

There are two types of Schematic Design Review submissions, based upon the complexity of the project. The two reviews are Minor and Major, and are generally defined as follows:

- Minor Review – Typically, a Minor Review will consist of surface improvements that alter appearance or information, such as wall coverings, painting, parking
layout changes for less than 20 vehicles, signage alterations, and landscaping changes.

- Major Review – New developments or significant alterations to existing structures or systems.

The Port solely determines the type of submission required for any given project. This information will be determined at the Pre-Design Orientation Meeting.

The Port’s Tenant Improvement team only reviews complete application packages. Incomplete or partial Schematic Design Review submissions will not be evaluated.

A. Schematic Design Review Submittal Requirements

Submittal requirements may vary subject to the nature of the proposal, as determined in the Pre-Design Orientation Meeting. At a minimum, they should include the following for each type of submission:

Minor Review
At a minimum, the submittals for this level of review should include the following:

- A simple site plan showing location of work;
- Sketches clearly representing the work, and all dimensional information required to clearly portray the improvements;
- A recyclable materials board, materials samples, and graphics package indicating elements to be incorporated into the project;
- Additional items as identified at the Pre-Design Orientation Meeting.

Major Review
Improvements subject to major review include those projects with multiple or complex elements. At a minimum, the submittals for this level of review should include the following:

- A floor plan and reflected ceiling plan indicating proposed layout;
- Elevations of each interior wall and storefront;
- Preliminary signage plan;
- A colored rendering of the storefront and merchandise display cases, as applicable;
- A recyclable materials board and graphics package indicating elements to be incorporated into the work including, but not limited to, floor and wall coverings, cabinet and shelving materials, and other graphic materials;
- Additional items as identified at the Pre-Design Orientation Meeting.

Please note that the Port is moving towards an electronic submission process. Please see Tenant Improvement staff contact information on the Port’s website to enquire about current procedures.
PRE-DESIGN DEVELOPMENT MEETING

This optional meeting is held after the tenant and their design consultants have received comments from the Port Tenant Improvement team for their Schematic Submittal, and have had a chance to review them. The intent of this meeting is to familiarize the tenant design team with the requirements contained in the Port’s Technical Guideline Specifications. The meeting also provides an opportunity for the tenant and the Port to discuss the particular project and any unique conditions or requirements of the space prior to beginning the mechanical, electrical, and plumbing design. This meeting is usually followed by a site visit. This meeting is an optional step in the process, though the Port maintains the right to make this meeting mandatory if the Port feels it would improve project progress or outcomes.

DESIGN DEVELOPMENT REVIEW

This review step by the Port’s Tenant Improvement staff will focus more on the technical elements of design of the project, rather than the concept as a whole. Another purpose of this review is to ensure that all of the Port’s previous issues and concerns were addressed and incorporated into the applicant’s drawings to the Port’s satisfaction. It also enables the Tenant Improvement team to review preliminary drawings that will eventually constitute the final construction documents. This review step offers the Port and tenant the chance to reconcile potentially contentious issues before final drawings are produced and materials are ordered.

It is important for the applicant to be aware that progress to this stage does not ensure plan approval or the issuance of a Port Construction Permit. The Tenant Improvement team maintains the right to deny approval and permitting based on a failure to address issues raised by the Tenant Improvement team, or criteria established in Port plans and policies.

If the application adequately addresses all issues identified at the Pre-Design Orientation Meeting, Schematic Design Review, and is in conformance with all stated plans, standards, and policies, the Tenant Improvement team will approve the plan. The approval letter will be issued so that final construction documents and the Port Tenant Construction Permit Application can be completed. It is important to note, however, that all Design Review comments within the approval letter must be addressed in the Construction Permit Application submission set.

The Port recommends that drawings be submitted for Design Review when they are at approximately 50 percent completion within the applicant’s construction document production phase. Plans should adequately convey the design intent and include preliminary MEP design detail.

The Port’s Tenant Improvement team only reviews complete application packages. Incomplete or partial Design Development Review submissions will not be evaluated.

A. Design Development Review Submittal Requirements

At a minimum, submittals for this level of review should include approximately 50% complete, professionally drawn, scaled construction documents of the following:
a. Drawings of floor plans, reflected ceiling plans, wall and storefront elevations, building sections, details, etc. All drawings shall be sufficiently detailed and dimensioned to provide an understanding of all areas of construction;
b. Signage plan and details showing all connections, materials, details, and colors;
c. Mechanical, electrical, communications, plumbing, fire protection, etc. drawings and specifications;
d. Project specifications and equipment lists;
e. Updated recyclable color, material, and signage boards, if changed from previous submission;
f. Updated perspectives, renderings and/or sketches if changed from previous submission;
g. Additional items as identified in the previous Schematic Review submittal.

Please note that the Port is moving towards an electronic submission process. Please see Tenant Improvement staff contact information on the Port’s website to enquire about current procedures.

CONSTRUCTION DOCUMENT REVIEW AND PERMIT ISSUANCE

The purpose of this final Port review step is to ensure that tenants obtain the written consent of the Port prior to carrying out any alterations to Port property. This review process is also intended to ensure that all conditions of approval made during the Design Review process are implemented during the construction phase. It is important to note, however, that the approval and issuance of the Port’s Construction Permit does not negate the need for local jurisdictional permitting. The applicant must receive the approval of the Port and other applicable agencies prior commencing construction.

Processing for a Port Aviation Tenant Construction Permit (Port Permit) takes approximately ten business days, depending on the complexity and size of the project. The process will not begin until all of the following completed application materials have been submitted to the Port’s Tenant Construction Coordinator.

A. Construction Permit Document Submittal Package

The following must be submitted in order to obtain a Port Construction Permit:

a. Completed Port Tenant Construction Permit Application form;
b. Professionally drawn scaled construction documents, sealed by an Oregon registered Architect/Engineer, consisting of drawings sufficiently detailed and dimensioned to provide a complete understanding of all areas of construction;
c. Signage plan and details showing all connections, materials, details, and colors;
d. Mechanical, electrical, communications, plumbing, fire protection, etc. drawings and specifications;
e. Project specifications and equipment lists;
f. Additional items as identified at the previous design review submittal.
Please keep in mind that any changes to design, colors, or materials occurring between Design Review and the Construction Document Permit submittal package must be approved by the Tenant Improvement team. Further, all changes to design occurring during construction or after Permit issuance must also be approved by the Port prior to construction.

The applicant will be notified in writing of Permit approval and of any conditions of approval that must be met during the construction process. Again, please note that approval of the Port’s Construction Permit does not negate the need for a City of Portland building permit.

Construction will then be coordinated through the Aviation Tenant Construction Coordinator.

DRAWING SET REQUIREMENTS

The Port is currently moving towards an electronic submission process. As such, please submit scaled PDF file copies of your plan sets for both design review and construction permitting. Submissions should be made to the contact person listed on the Port’s Tenant Improvement website at http://www.portofportland.com/PDX_Tenant_Imprvmnts_Home.aspx.

PORT OF PORTLAND CONTACTS

Please see the Port’s website for the most current list of tenant improvement contacts.

ADDITIONAL RESOURCES

The following resources may also be of assistance in the Design Review and Construction Permitting processes and may be obtained online or by placing a request with the Design Review Process contact listed above.

- Portland International Airport Rules
- Broadcast Media Standards, Portland International Airport
- Concourse D Node Tenant Sign Standards
- Oregon Market Tenant Signage Standards
This section outlines the installation and broadcast of media within the PDX Terminal Complex. Broadcast media shall include television (broadcast, cable, satellite, or pre-recorded), radio, wireless communications (cellular telephones, wireless internet, and wireless audio/video connections), and text feeds. Design and installation of broadcast media is subject to the Port’s standard Design Review Process, and any approvals or variances must be granted by the Port in writing.

I. In general, the following criteria apply:

   a. Tenant installed broadcast media is not permitted within public spaces at PDX. The Port of Portland may, in certain circumstances, provide broadcast media services in public areas of the concourses. Examples include the entertainment areas at Concourse C West, the Port’s Wi-fi services, and Department of Homeland Security video messaging at the security checkpoints.

   b. Broadcast media shall be permitted in concessionaire leaseholds, and the approval thereof shall be determined during the Port’s Design Review Process. Audible broadcast media shall be kept at volume levels contained within concessionaire leaseholds.

   c. Broadcast media is not permitted within airline gate leaseholds.

   d. Broadcast media is not permitted within the PDX Ticket Lobby.

   e. Objectionable or obscene media is expressly prohibited, and the definition of these terms is at the Port’s sole discretion.

   f. All broadcast media that is permitted must be licensed in accordance with applicable laws.

   g. Permitted installations shall adhere to the PDX Technical Guidelines Specifications, latest version, and shall be constructed using high quality materials and finishes.

   h. In no case may broadcast media installations interfere with terminal wayfinding signage, visual paging, or terminal announcements.

   i. Broadcast media shall not interfere with adjacent tenant operations, terminal operations, or air navigation. Further, broadcast media should be powered off while not in use.

II. Variances:

   The Port recognizes that situations arise which may warrant modifications to these standards. A written request for an exception shall be submitted through the Port’s Design Review Process, stating the variance requested and
the Port’s applicable section of the standards. The Port will evaluate each request and will notify the tenant, in writing, of the decision within ten (10) working days.
Each concourse provides shopping, dining and traveler services.
NOTES:

- CRITICAL BSI AREAS. ANY PROPOSED IMPROVEMENTS IN THESE AREAS WILL BE SUBJECT TO STRINGENT PORT REVIEWS AND HIGHER POTENTIAL DEVELOPMENT STANDARDS.
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