



**WINNIPEG
AIRPORTS AUTHORITY**

TENANT DESIGN AND CONSTRUCTION MANUAL

FOR

**T-214 AIR TERMINAL BUILDING, 1970 WELLINGTON AVENUE,
AND T-213 PARKING STRUCTURE, 1965 WELLINGTON AVENUE**



WINNIPEG JAMES ARMSTRONG RICHARDSON INTERNATIONAL AIRPORT

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DEFINITIONS AND ABBREVIATIONS

Airport Authority – Winnipeg Airports Authority Inc.

ATB - Air Terminal Building

Airside - Airside is the secured portion of the airport, which may include outdoor/airfield areas as well as areas within airport buildings located post security (after the Security Checkpoint).

Base Building Drawings – The base building drawings are drawings provided by the Landlord that documents existing base building condition and planning information pertaining to the Leasehold.

Closure Line - Closure Line refers to the storefront entrance door (i.e., sliding, rolling, swing type) location.

Concourse - Concourse refers to the main public corridor within the air terminal building providing passenger access to aircraft gates. Concourses are always located past the passenger Security Checkpoints.

Deficiency List - Deficiency List refers to the construction items to be repaired, replaced and/or completed in the Leasehold.

Demising Wall - Is the common wall separating a Leasehold from an adjoining space. Refer to the appropriate building codes for rating information.

Demising Cap - refers to the architectural trim piece provided at the mall face of a Demising Wall. The Demising Cap is a trim element between Storefronts and is provided as part of the base building.

Design Control Zone – Area established by the Landlord within the Leasehold within which the Landlord shall approve all Tenant finishes, materials, light fixtures, fittings, signage, displays and lighting elements.

Development Plans – The Development Plans are the detailed design and construction documents prepared by the Tenant's Architect or Engineer of Record and submitted by the Tenant as part of the Facility Alteration Permit application and building permit process. This includes all relevant drawings, specifications for the proposed project including Architectural design drawings, finishes and samples, detailed engineering drawings with all relevant sections, elevations, plans and construction details.

Facilities Specialist – Reference to the WAA Facilities Specialist or assigned Engineering staff designated to assist Tenant through the facility development process.

Facility Alteration Permit – Airport Construction Permit issued by WAA. Permit process in place to approve, track, monitor and record Tenant Leasehold construction and ensure that it meets the WAA standards

Field Verification - Field verification refers to the process whereby the Tenant or Tenant's Architect and/or Engineers of record as well as Contractor physically confirm the dimensions and existing condition of the Leasehold, including the vertical height(s), prior to start of design and at completion of construction.

Groundside - Groundside is the unsecured portion of the airport, which may include outdoor areas such as curb front or public roadways as well as areas within airport buildings located pre-security checkpoint.

Landlord - Winnipeg Airports Authority Inc. is the Landlord of Winnipeg James Armstrong Richardson International Airport.

Lease - Lease is the agreement between the Tenant and the WAA. Where there is a conflict between the Lease and the Tenant Design And Construction Manual language, the language in the Lease shall prevail.

Leasehold - The area of the building leased by the Landlord to the Tenant as defined in the Lease Agreement and Lease Outline Drawing (LOD)

Lease Line - The Lease Line is the boundary of the floor area of the Leasehold. The Lease Line generally occurs at the exterior of the storefront demising wall and the centerline of the demising wall(s) between spaces.

Lease Outline Drawing (LOD) - The Lease Outline Drawing of the Leasehold shows the Lease Line. In addition to the geometrical configuration of the Leasehold, dimensions and floor area will also be indicated on the Lease Outline Drawing. The Tenant is responsible for field verifying the dimensions as well as the floor area.

Merchandising Plan - The comprehensive written plan provided by Retail Tenant defining product mix, product price points, product display strategies, store layout, store design features and revenue projections.

Passenger Holdroom - Boarding Lounge/Holdroom refers to the rooms located adjacent to an aircraft gate containing seating for passengers to use while waiting to board a flight.

Storefront - Front face of the Leasehold. A Storefront design may either be open or enclosed. When the Leasehold has more than one exposure to the Concourse the storefront refers to all facades. This may include portions of the Demising Wall that separates the leasehold from the concourse and/or a public lobby.

Tenant - The Tenant is the lessee of the Leasehold. The lessee may be a person or a legal entity.

WAA - Winnipeg Airports Authority Inc. is the governing Authority at the Winnipeg James Armstrong Richardson International Airport.

YWG – Is the International Air Transport Association airport code for Winnipeg James Armstrong Richardson International Airport.

1.0 INTRODUCTION

The Tenant Design and Construction Manual is prepared, issued and implemented by Winnipeg Airports Authority Inc.(WAA). The intent of this manual is to provide Tenants with an outline of technical design and construction requirements to be followed when undertaking a Leasehold development in the Air Terminal Building or Parking Structure at Winnipeg James Armstrong Richardson International Airport. The manual includes the minimal design and construction requirements and standards applicable to all Tenant developments, improvements, alterations and additions to their Leasehold. These requirements have been developed to allow WAA, Tenant's, Consultants and Contractors to maintain the quality, appearance, materials, methods and engineering standards for all projects undertaken in the Air Terminal Building and Parking Structure

Tenants will be required to provide Design and Construction Plans that respect the following criteria:

- To create design solutions including service counters, display cases and circulation pathways within the Leasehold that place users first.
- To provide designs in public view areas that will complement the architectural qualities of adjoining public space, as well as adjoining facades.
- To plan premises that are functionally efficient and maximize in-unit storage.

Key information provided in this manual includes:

- Requirements and procedures for making design submittals, permit applications and the development approval process.
- Design technical requirements.
- Design intent of the Retail and Concessions Program.
- Universal design guidelines.
- Coordination rules and responsibilities with WAA
- Tenant's interface with governmental agencies.
- Construction procedures, access, and restrictions.
- As-Built documentation and Project closeout requirements.

This manual is to be read in conjunction with the Lease Agreement. In case of a discrepancy between this manual and the Lease, the Lease shall take precedence and apply. Tenants shall notify the Landlord's representative of any identified discrepancies. As a Tenant of WAA the responsibility to comply with the standards in this manual is inherent in your Lease Agreement. The Tenant Design and Construction Manual shall apply to all new and existing tenants of the Air Terminal Building and Parking Structure. It is the responsibility of the Tenant to obtain and become familiar with the Landlord's guidelines and requirements in this manual prior to commencement of the Tenant's work.

WAA reserves the right to amend this manual as may be required. The Tenant is obliged to abide by such changes upon notification thereof. WAA also reserves the right to waive or modify these standards due to the specific location or characteristics of any given Leasehold. While WAA has made every effort to ensure this Manual is complete and accurate, WAA does not accept any liability arising from any deficiencies, errors or omissions. Persons using this Manual are encouraged to obtain independent advice with respect to all matters pertaining to the design and construction of their leasehold improvements.

1.1 WAA CONTACTS

- 1.1.1 Throughout the permitting and construction process, WAA's Facility Specialist or an assigned Project Manger will represent the Landlord. All correspondence, questions and submission shall be directed to:

Winnipeg Airports Authority, Inc.
Room 249, 2000 Wellington Ave.
Winnipeg MB R3H 1C2
Attention: Facilities Specialist
Phone: (204) 987-9732
Fax: (204)-987-9790
Email: permits@waa.ca

- 1.1.2 Tenant inquiries related to conditions of or proposed change, modification or revision to Lease Agreements shall be directed to;

Winnipeg Airports Authority Inc.
Room 249, 2000 Wellington Ave.
Winnipeg MB R3H 1C2
Attention: Supervisor, Real Estate Assets
Phone: (204) 987-7832
Fax: (204) 987-9790
Email: mpalmer@waa.ca

1.2 FACILITY ALTERATION PERMIT

- 1.2.1 Winnipeg Airports Authority Inc. is the Landlord of the Winnipeg James Armstrong Richardson International Airport. As set out in the Transport Canada Ground Lease Agreement, WAA has the responsibility to provide Transport Canada with information regarding any and all development on the Airport. WAA has developed the Facility Alteration Permit (FAP) process to track, monitor and record Tenant Leasehold construction and ensure that it meets the WAA standards.

- 1.2.2 Tenants shall start the Leasehold development process by applying for a Facility Alteration Permit . The FAP application form (attached in Appendix 'A') can be obtained from the WAA Planning and Development Department or downloaded on-line from the WAA web site at www.waa.ca. The FAP application form must be filled out in its entirety and returned to the WAA along with detailed design and construction drawings outlining the work that is to be performed.

Submitted FAP applications will be reviewed for completeness and a preliminary review conducted by WAA. The application and supporting documents will be circulated to WAA departments that may be affected be the work and a review of all disciplines affected by the work will be detailed. Review comments shall be forwarded to the Tenant's authorized representative. Submissions may require revisions if they do not meet the standards as detailed in this document or are incomplete. After revisions have been made to the satisfaction of WAA, a FAP may be issued to allow the tenant to begin work. Should WAA refuse an application for a FAP, the applicant will be provided with written reasons for refusal.

1.3 PERMITS FROM CITY OF WINNIPEG/UTILITY PROVIDERS

1.3.1 Additional building permits may be required from the other authorities having jurisdiction at the Airport, including the City of Winnipeg. When a City of Winnipeg permit is required a letter of authorization shall be issued by WAA to the Tenant and copied to the City of Winnipeg, Planning, Property & Development Department. This letter of authorization must be issued prior to the Tenant applying for any such permits. The City of Winnipeg will not accept or process a Building Permit application without a letter of authorization from WAA.

1.3.2 Where a City of Winnipeg permit is required a letter of authorization shall be issued by WAA to the Tenant and copied to the City of Winnipeg, Planning, Property & Development Department. This letter of authorization must be issued prior to the Tenant applying for any such permits. The City of Winnipeg will not accept or process a Building Permit application without a letter of authorization from WAA.

Tenants shall apply for City of Winnipeg Building Permits and comply with any and all requirements and conditions identified by the City. Once the Tenant has obtained a City of Winnipeg Building Permit and provided copies to WAA, WAA shall issue the FAP to the Tenant. Tenants must obtain a FAP from WAA prior to proceeding with any construction work on the airport.

1.3.3 The Tenant is herewith advised that they shall apply for and obtain additional permits and/or approvals which may be required during construction, including, but not limited to, permits from electrical and natural gas utilities, and special approvals for gas or electrical equipment. All permits issued by Authorities having jurisdiction shall be displayed at the Tenant worksite.

1.3.4 Construction shall not commence until all permits have been secured and copies have been delivered to the WAA Facilities Specialist.

1.3.5 The Tenant shall apply for and obtain an Occupancy Permit from the City of Winnipeg for the developed Leasehold prior to the occupancy and use of the space.

1.4 GOVERNING CODES, REGULATIONS & ACTS

1.4.1 It is the Tenant's responsibility to ensure that all applicable codes, regulations and acts are adhered to and that appropriate permits are obtained for the Work by their consultants and contractors. The issuance of a FAP by Winnipeg Airports Authority in no way relieves the tenant and/or their consultants and contractors from complying with applicable laws, codes, regulations and standards and the most stringent requirements of all authorities having jurisdiction.

These shall include, but are not limited to, the following:

- Manitoba Building Code (M.R. 31/2011), including Barrier Free Standards.
- National Building Code of Canada
- Manitoba Electrical Code
- Canadian Electric Code, Part 1.
- The Winnipeg Electrical By-law
- Manitoba Fire Code

- National Fire Code of Canada (Regulation 216/2006).
- Manitoba Plumbing Code.
- National Plumbing Code of Canada
- National Heating, Ventilating and Air Conditioning code
- Canada Labour Code, Part 2
- The Dangerous Goods Handling and Transportation Act (Manitoba)
- Transportation of Dangerous Goods Act and Regulations (Canada)
- CAN/CSA-B149.1-05 Natural Gas and Propane Installation Code, CSA 22.1-06.
- NFPA 96 – Regulations for Food Service Equipment.
- Canadian Environmental Protection Act
- Official Languages Act (Canada).
- The Environment Act (Manitoba)
- The Public Health Act (Manitoba)
- The City Of Winnipeg Food Service Establishment By-Law
- Manitoba Workplace Safety and Health Act and Regulation
- All applicable Environmental Laws, including CFC/HFC/Halon regulatory standards.
- Canadian Aviation Security Regulations
- Winnipeg Airports Authority Rules and Regulations for Winnipeg James Armstrong Richardson International Airport
- Winnipeg Airports Authority CADD Standards Manual
- Winnipeg Airports Authority Tenant Design and Construction Manual
- Winnipeg Airports Authority Safety and Security Manual for Contractors
- Winnipeg Airports Authority Airport Traffic Directives and Airside Vehicle Operator Permit (AVOP) Program Manual
- Regulations and practices of the Canadian Air Transport Security Authority, Canadian Border Security Administration and United States Customs and Immigration Services in areas of the terminal where their jurisdiction applies.

1.5 PROFESSIONAL SERVICES

- 1.5.1 It is the Tenants responsibility to hire qualified architects, engineers, consultants and contractors licensed to practice in the Province of Manitoba. Construction documents submitted for WAA FAP and/or City of Winnipeg building permit applications shall be signed and sealed.
- 1.5.2 In accordance with WAA's ground lease, Tenants must retain Architects and Engineers who are independent of the Tenant.
- 1.5.3 Tenant contractors must employ tradespersons properly licensed and qualified to perform the specified work.
- 1.5.4 At project closeout, the Tenant is responsible to ensure that their Architects and Engineers of record, including; Architectural, Structural, Electrical and Mechanical (if applicable), who are responsible for the Tenant's construction documents, perform a final inspection of the work and attest in sign off that the project has been constructed in general conformance with the construction documents and code requirements, and that all equipment and systems are operating as designed and specified. Tenants are responsible for submittal to WAA of as-built drawings for the completed work. As-built drawings shall be signed and sealed by the Tenant's Architect and/or Engineer of record.

1.6 WAA SUPPORT FOR TENANT DEVELOPMENT

- 1.6.1 WAA shall provide support and coordination assistance for Tenant projects and the FAP application process.
- 1.6.2 WAA shall receive FAP submissions and provide a timely review and response to Tenants.
- 1.6.3 At the Tenant's request, WAA shall provide base building reference drawings for the Leasehold to be use in development planning. The drawings may be requested through the WAA Technical Data Centre. The Tenant is responsible for field verifying the accuracy of all Leasehold drawings.
- 1.6.4 WAA shall assign, at its discretion, a project manager/coordinator to assist the Tenant with the submission process, coordination of services, construction coordination and access.

2.0 APPLICATION AND SUBMISSION REQUIREMENTS

2.1 GENERAL REQUIREMENTS

- 2.1.1 The Tenant submission shall include a completed Facility Alteration Permit application form and detailed drawings, specification and supporting documentation for the leasehold development.
- 2.1.2 WAA will review each submission on individual merit and in the context of the immediate environment of the Tenant Leasehold. WAA reserves the right to require changes to, or reject elements of the proposed Leasehold development in whole or in part.
- 2.1.3 All submissions shall include two (2) black line drawing sets and one set of electronic files unless otherwise approved by WAA. Submission shall include copies of all reports, construction specifications, and material samples boards. Additionally Architectural renderings may be required and shall be submitted at the Landlord's request.
- 2.1.4 Submittal of ACAD drawing files shall be in AutoCAD Release 2007 or higher. WAA CADD standards are provided in Appendix C for reference.
- 2.1.5 Drawings to be standard size A1 format to scale with dimensions. Drawing submittals shall conform to the following metric measurements:
- a) Key plans: 1:500.
 - b) Floor plans, reflected ceiling plans, interior elevations, sections and details: 1:50.
 - c) Electrical and mechanical drawings: 1:50.
 - d) Flow diagrams: 1:100.
 - e) Storefronts, signage, logos and lettering in elevation, section or detail: 1:25.
- 2.1.6 Submitted one hard copy of Construction specifications, design reports or other written supporting documentation detailing the scope of work. Material samples and architectural renderings to be submitted on standard 280 mm x 430 mm (11" x 17") size boards.
- 2.1.7 Construction schedule shall be provided with submission in bar chart format indicating all major elements and construction milestone dates.
- 2.1.8 Submitted Design and Construction Documents shall be signed and sealed by the Tenant's Architect and Engineer(s) of record.

2.2 DESIGN AND CONSTRUCTION DOCUMENT SUBMISSION

- 2.2.1 In support of Facility Alteration Permit application form submissions Tenants are required to submit Leasehold development design and construction documentations; the following items if applicable to the proposed development shall be included in support of FAP application submittal:
- 2.2.2 **ARCHITECTURAL**
- a) Key Plan showing location of the Leasehold within the building.

- b) Fully dimensioned Architectural Floor Plan indicating partitions, type of construction, placement of fixtures, counters, displays, furnishings and floor pattern(s), and washroom location, if applicable.
- c) Structural, Mechanical, Plumbing, Electrical and Telecommunications Design Drawings (including single line diagrams) and base building modifications, if required.
- d) Fully dimensioned interior and exterior wall elevations, sections and details necessary for construction. Include the Interior and exterior elevations (of all Leasehold walls) indicating materials and finishes, as well as signage and/or logo.
- e) Fully dimensioned sections and construction details necessary for construction.
- f) Fully dimensioned storefront wall elevation and section showing storefront design including graphics, signage, materials and finishes. Storefront wall elevation and section showing storefront design including graphics, signage, materials and finishes. (If requested by the Landlord, provide a colored perspective drawing of the premises with signage, as viewed from the passenger's perspective in the concourse.)
- g) Millwork – fully dimensioned sections and elevations of all counters and display cases indicating materials and finishes.
- h) Reflected ceiling plan(s) showing ceiling materials, various heights, location and type of all light fixtures, diffusers, grilles, sprinkler heads, emergency exit signage (if applicable), smoke detectors, fire alarms, etc. Provide fixture cut-sheets of all proposed lighting fixtures, diffusers, grilles, sprinkler heads, fire alarms, smoke detectors, etc. Include manufacturer's name, catalogue number, catalogue cut, lamp types, mounting bracket/support apparatus.
- i) Room finish, colour, door and hardware schedules.
- j) Fixture and equipment schedules.
- k) Furniture layout, Room finishes and door and hardware schedules.
- l) Sample board of proposed materials, colours, finishes and furnishings for all areas open to public view. Colour photos of fixtures and furnishings are acceptable; however, physical samples of materials and finishes are required.
- m) Technical Specifications.
- n) Details of securing the Leasehold when closed.
- o) Signage – sections, elevations and related details, along with technical information. For Sign, logo and lettering; provide fully dimensioned elevations of the overhead exterior sign(s) and flag sign(s) depicting letter style and size, and note all colours and materials. This submission shall also include signage and/or logos on the interior walls of the Leasehold.
- p) Temporary Construction Hoarding and dust control plans.
- q) Customer circulation (flow) diagram within Leasehold.
- r) Merchandising Plan (Retail)
- s) A Design Report for Leasehold shall include statement of design objectives and design attributes, systems performance criteria, supply/demand load calculations for electrical and mechanical services, hydraulic calculations for fire sprinkler system, structural analysis/confirmation of any point loads for equipment installed on floor or suspended from ceiling structure, code compliance analysis for fire exits, universal design compliance analysis, etc.

2.2.3 STRUCTURAL

- a) Drawings and specifications for proposed structural elements including Tenant fit-up point loads imposed on the base building structure.

- b) Drawings indicating size and location of floor, ceiling structure and/or roof penetrations.
- c) Base building modifications, if required.

2.2.4 HEATING, VENTILATING AND AIR CONDITIONING

- a) Floor plan background drawing showing fan coil or Variable Air Volume (VAV) units, all ductwork, locations of grilles and/or diffusers, thermostats, etc. and single line diagrams.
- b) Heat gain/loss calculations.
- c) Make-up air requirements (calculations and/or drawings).
- d) Verification of CFC/HFC/Halon free systems.
- e) Technical specifications and fixture cut sheets.
- f) Base building modifications, if required.

2.2.5 PLUMBING

- a) Floor Plan background drawing showing all plumbing, including water supply lines, floor drains, traps/clean-outs, shutoff valves, backflow preventers, etc.
- b) Riser diagrams.
- c) Venting.
- d) Hot water tank location, sizing, and technical information.
- d) Technical specifications.
- e) Base building modifications, if required.

2.2.6 FIRE PROTECTION, SPRINKLERS AND ALARMS

- a) Sprinkler distribution changes, head layout and hydraulic calculations (if applicable).
- b) Fire extinguisher locations.
- c) Smoke detectors (show on architectural reflected ceiling plan).
- d) Emergency evacuation speakers, pull stations and fire alarm wiring.
- e) Heat/smoke baffles (if applicable).
- f) All other life safety devices complete with system tie-in and interlock information.
- g) Emergency lighting.
- h) Technical specifications.
- i) Base building modifications, if required.

2.2.7 ELECTRICAL

- a) Floor Plan background drawing showing single line electrical distribution layout, receptacles, light switches, light fixture locations, electrical panels, service hook-up location, size and type of transformer, (if required), etc.
- b) Fixture schedule showing quantity and watts for each fixture.
- c) Special lighting, (i.e., signs, logo, etc.).
- d) Exit lights.
- e) Emergency lighting.
- f) Light fixture cut-sheets.
- g) Calculations of electrical demand and connected loads in table on drawing.
- h) Security system (if applicable).
- i) Equipment schedule on drawing.
- j) Technical specifications.
- k) Base building modifications, if required.

2.2.8 TELECOMMUNICATIONS

- a) IT, Voice and Data Services, Security Systems,
- b) Variable messaging signage, public display screens, monitors or televisions.
- c) Cabling diagrams.
- d) CCTV Camera placement.
- e) Technical specifications.
- f) Equipment schedule to be included on drawings.

2.3 BASE BUILDING DRAWINGS

2.3.1 Base Building drawings shall be provided by WAA for specific Tenant Leasehold, drawings can be requested through the WAA Technical Data Centre. Drawings shall include:

- a) Key Plan showing the location of the Tenant's Leasehold in the building.
- b) Architectural floor plan and, if applicable, reflected ceiling plan of the Leasehold.
- c) Structural, Mechanical, Electrical, Plumbing and Sprinkler Plans of the Leasehold. (if available)
- d) Elevations and additional details that the Landlord selects as applicable to the Leasehold.

2.3.2 **The Tenant is responsible for field verifying existing site conditions and the accuracy of all drawings provided.**

2.4 SUBMISSION REVIEW AND APPROVAL

2.4.1 WAA will review design and construction document submissions for Tenant Leaseholds on the basis of merit and in consideration of conformance with requirements contained in this manual, completeness, quality of design and project documentation, and appropriateness in the context of the immediate environment of the Tenant Leasehold. WAA reserves the right to require changes to the design, as deemed necessary, or reject elements of the proposed development plan in whole or in part, at its sole discretion.

2.4.2 WAA will provide response to Tenant following its review of FAP application submissions: This may include: request for additional information, request to revise and resubmit application, Conditional Approval or Approval with issuance of FAP.

2.4.3 WAA review and approval for Facility Alteration Permit shall not be deemed to certify that the Tenant's documents comply with all applicable legal requirements and shall not relieve the Tenant of the responsibility to verify all job conditions include code requirements, and without limitation, dimensions, locations of utilities, lease lines, expansion joints and required clearances, etc.

2.5 BASE BUILDING MODIFICATIONS

2.5.1 Should mechanical and/or electrical design loads exceed base building services provided to Tenant Leasehold, additional capacity or servicing can be requested of WAA.

- 2.5.2 On agreement to a Tenant's request for additional mechanical, electrical or telecommunication services, WAA shall, at the Tenant's expense, obtain design and construction services to provide the additional services as agreed. The Tenant shall be responsible for all costs incurred by the owner for base building modifications, additions or deletions including all related design, administration and construction costs.
- 2.5.3 The Tenant's contractors shall not be permitted to perform work outside of the Leasehold without the prior express written permission of WAA.

3.0 ARCHITECTURAL & STRUCTURAL STANDARDS

3.1 INTRODUCTION

- 3.1.1 WAA is a not-for-share corporation whose vision it is to be a leader in transportation innovation and growth. Our strategy for achieving this vision include providing safe, secure and environmentally sound facilities incorporating universal design principles. Realization of this vision will produce a variety of benefits for the community including convenient customer services, improved safety and reliability, cost efficiency, adaptability for future industry needs, as well as ongoing support of local economic development.
- 3.1.2 The Air Terminal Building (ATB), opened in 2011, is a four-level facility of approximately 51,000 square meters. It is designed to service approximately 4.2 million annual passengers, with allowance to accommodate future expansion when necessary. The 4-level Parking Structure opened in 2006 has approximately 1600 stalls for rental and public parking. The Rental Car center service counters are located on the parking structure main floor.
- 3.1.3 The ATB has been designed as a high performance building that meets or exceeds Manitoba Hydro Power Smart requirements for energy efficiency, the Model Energy Code (by more than 25%), and meets LEED certification requirements. Adhering to the sustainable design criteria improves overall affordability of tenant leasehold space by reducing the operating costs of individual tenants.
- 3.1.4 WAA has made a commitment to Universal Design and will promote accessibility aspects of the airport facilities. The design and construction of the Tenant leasehold spaces shall adhere to the referenced Universal Design Standards contained in this manual.

3.2 DESIGN CRITERIA

- 3.2.1 MISSION STATEMENT FOR RETAIL AND FOOD AND BEVERAGE FACILITIES: WAA recognizes that retail and food and beverage facilities in the ATB will be pivotal in creating positive impressions for visitors to Winnipeg, as well as local frequent fliers. In view of this, WAA will carefully evaluate Tenant design proposals/submittals to ensure that the ATB will showcase world-class service delivery of retail and food and beverage facilities. The ATB shall present the best mix of local, national and international concepts. To accomplish its mission, WAA intends to encourage creative concepts that are evocative of Winnipeg and Manitoba in a subtle and sophisticated manner.
- 3.2.2 The design of Leasehold storefronts and concession spaces shall strike a balance between variety and consistency. *Variety* in this context means that WAA welcomes creativity and diversity of Tenant designs, while understanding the requirements of brand identity. *Consistency* refers to the requirement for Tenant leasehold designs to complement the ATB architecture. Further, the design of all concession spaces must be respectful of customer needs, as well as Universal Design principles.
- 3.2.3 Tenants are encouraged to provide leading edge contemporary design solutions that capture the “essence” and feel of Winnipeg and Manitoba without resorting to a literal “theme park” approach. Tenants are also encouraged to explore the creative use of brands or sub brands, colours, forms, materials and other media.

- 3.2.4 Tenant Leasehold developments shall satisfy the following design criteria:
- a) To create top quality, cutting-edge designs consistent with the terminal architecture. Concepts and materials used in concessions should be the same level of quality to those found in the ATB.
 - b) To create concessions that will be distinctive, memorable and uniquely designed for this terminal.
 - c) To creatively plan concessions that provide passenger convenience and quality service. Interior layout shall be operationally efficient and maximize in-unit storage.
 - d) Exterior demising walls of leasehold shall be compatible with adjoining facades.
 - e) Signage on exterior demising walls fronting public space shall conform to standards contained in this manual.
- 3.2.5 A total store design concept must be developed. A total store image coordinates storefront and interior design with the store's merchandizing plan. Tenants shall provide a consistent image, signage and finishes package for the entire Leasehold. This requirement is also applicable to tenants having multiple "subtenants" such as a food court, representing more than one brand or concept in a single Leasehold.
- 3.2.6 **Design Control Zone**
- a) A design control zone is illustrated on the storefront condition drawings in the appendices. Except where shown otherwise, this zone typically extends 1200 mm inboard of the Lease Line from floor to ceiling.
 - b) Within the design control zone a minimum ceiling height of 3040 is required and the ceiling shall be constructed of drywall or other contiguous hard surface material.
 - c) Lighting within the design control zone shall comply with the fixture types described in Section 5.5 of this manual.
 - d) Tenant's floor shall transition flush to the base building floor along the Lease Line using a stainless steel transition strip (Schluter or similar).

3.3 GENERAL REQUIREMENTS

- 3.3.1 This section contains key facility design and technical requirements for use in development of Tenant Leasehold. Key points are as follows:
- 3.3.2 The ATB is classified as noncombustible by the National Building Code with requisite flame spread ratings and smoke development classification of materials. Documentation demonstrating compliance with these requirements shall be provided by the Tenant if and when requested by WAA. A copy of the Code Summary for the base building ATB will be provided upon request.
- 3.3.3 Tenant Leasehold shall utilize high quality building materials and workmanship, comparable to the base building.
- 3.3.5 Merchandizing plans shall not generate a customer queue that crosses the lease line or allow "self-serving" from the concourse side of the storefront.

- 3.3.6 Any transition in floor level shall not exceed two percent (2%) slope and shall only occur within Tenant Leasehold.
- 3.3.7 Base building Tenant space demising walls are not designed to support wall mounted plumbing fixtures or other concentrated equipment loads; therefore, adequate structural reinforcement must be provided for such items when provided in Tenant Leasehold.
- 3.3.8 Base building Tenant space demising walls are not insulated; therefore, if acoustical privacy is required within Tenant Leasehold, insulation must be provided as part of the Works.
- 3.3.9 Base building services are physically located in some Tenant Leasehold space (i.e., duct shafts with fire rated enclosures, base building services passing through the ceiling, etc.). Access panels for servicing by the Landlord shall be part of the Works. Access door(s) shall have fire-resistant rating dependent on the requirements for each enclosure. Location of the access door(s) must be suitable for the Landlord's maintenance needs.
- 3.3.10 Typically, building services are terminated at the perimeter of a Tenant Leasehold (in the ceiling).
- 3.3.11 Connection of Tenant Leasehold services to the base building services shall be at the Tenant's expense.

3.4 ARCHITECTURAL

3.4.1 **General Design Information for Air Terminal Building**

- a) Concrete and/or steel superstructure, with or without metal deck, depending on location.
- b) Exposed structure above Tenant Leasehold.
- c) Finished ceiling above open Tenant Leasehold.
- d) Flat concrete floor with smooth finish to receive Tenant's floor finish. Additional preparation of the surface may be required by the Tenant.
- e) Tenant Leasehold demising walls, where provided in the base building, will either be drywall on metal studs or concrete block. Drywall will be taped, filled, sanded and have a primer coat of paint on it up to 3040 mm above the floor, or to the underside of structure above, depending upon location.
- f) Storefront bulkheads are provided in some locations only. Field verify locations shown on base building drawings.
- g) Storefront pier/demising cap at each demising wall or column fronting public space.

3.4.2 **Air Terminal Building Base Building Finishes**

- a) Ceiling: Wood and/or lay-in mineral fissure ceiling tiles or drywall in select locations.
- b) Flooring: Carpet tile, ceramic tile and granite tiles in select locations.
- c) Demising Walls: In select locations, gypsum wall board demising walls are provided as part of base building. Base building will have stainless steel base. Tenant provided walls visible from common areas shall meet base building demising wall provided with a metal reveal.

- d) Demising Columns: Pre-fabricated fiberglass reinforced gypsum column enclosures provided at select demising column locations in the base building. At those particular column locations, stainless steel head and jamb trim to be provided as part of base building. Tenant provided walls visible from common public view areas shall meet base building column enclosure with a metal reveal.

3.4.3 Parking Structure Base Building Finishes

- a) Ceiling: Lay-in mineral ceiling tiles or drywall in select locations.
- b) Flooring: Carpet tile, ceramic tile and granite tiles in select locations.
- c) Demising Walls: Some gypsum wall board demising walls provided in base building. In select locations, base building demising walls may have stainless steel base. Tenant provided walls visible from common areas shall meet base building demising wall provided with a metal reveal.

3.4.4 General Design Guidelines for Tenant Leasehold Finishes and Materials

- a) Tenant Leasehold shall be completely fitted-up, including partitions (including storefront, where applicable), ceiling, lighting, fire protection systems, mechanical and electrical distribution and related equipment, doors and hardware, flooring, painting and/or wall coverings, millwork, furniture, signage, etc.
- b) Finishes shall be installed on demising walls and/or soffits that are visible from common-use public areas, at the Tenant's expense.
- c) All materials shall be new and workmanship shall be of high quality. All Finishes shall be durable and long lasting,
- d) All millwork and casework in public and passenger processing areas shall be constructed to AWMAC Premium Grade standards and specifications, except that back of house millwork to conform to AWMAC Custom Grade standards and specifications.
- e) Display cases shall be made of approved materials and shall be internally illuminated. Pedestal and/or freestanding display cases are acceptable only within Tenant Leasehold.
- f) Countertops shall be fabricated from solid or otherwise seamless materials; e.g., solid surface material (Corian or similar), glass, solid or edge banded wood, formed metal, stone/marble, artisan finished concrete, etc. Plastic laminate countertops will not be permitted.
- g) Plastic laminate is not permitted between 0 and 355 mm above finish floor.
- h) Food preparation areas are required to have impervious nonslip flooring materials.

3.4.5 Acceptable Materials Within the Leasehold

The materials listed below have been selected to encourage variety and creativity of storefront and Leasehold design and their usage is encouraged:

- a) Glass – etched (sealed), sandblasted (sealed), tinted, clear and glass block.
- b) Wood – natural, stained, painted.

- c) Metals – factory painted, stainless steel, bronze, copper, brass, anodized or factory painted aluminum, or perforated.
- d) Tile – high quality glazed and unglazed thin-set wall and floor tiles are acceptable.
- e) Natural stones – marble, granite, slate and limestone.
- f) Plastic laminates – solid colours are preferred. Decorative patterns and wood grained plastic laminate will be evaluated on a case-by-case basis.
- g) Solid surfacing materials – e.g., Corian or similar.
- h) Ceilings (refer to Section 3.4.7).
- i) Lighting (refer to Sections 5.5).

3.4.6 **Unacceptable Materials within the Leasehold**

The materials listed below shall **not** be acceptable as part of the design for a storefront or leasehold:

- a) Artificial versions of stone, marble, tile, wood or other natural materials.
- b) Brick or simulated brick.
- c) Indoor/outdoor carpet.
- d) Any material that would constitute a fire and/or public hazard.
- e) Any material that, in the Landlord's opinion, is low quality, nondurable and/or difficult to maintain.
- f) Fluorescent paint.
- g) Vinyl tile or sheet vinyl within the sales area.
- h) Pegboard on walls or fixture systems.
- i) Metal linear ceiling systems.
- j) Acoustic tile ceilings other than those noted in Section 3.4.7
- k) Exposed ductwork, conduits, pipes and other mechanical and electrical equipment in any area within public view.
- l) Security alarm tape on storefront windows.
- m) Any material used in a manner that exposes the unfinished edge of the material when used on casework, millwork, counters etc. (e.g. plastic laminate).

3.4.7 **Ceiling Construction and Access**

- a) Ceilings in Tenant Leasehold may be constructed of concealed spine mineral fissure tile, drywall, plaster, or other materials subject to approval. Exposed grid suspended ceilings in areas exposed to public view will be limited to 14 mm 'T' installed in a 610 mm x 610 mm configuration. Back of house locations may use 610 mm x 1200 mm grid. Colour of grid and tile shall match. Suspended ceiling tile must be finely textured with at least a tegular edge.
- b) Combustible materials are not allowed in ceiling.
- c) Ceiling design shall incorporate access to all Landlord and/or Tenant equipment requiring inspection and maintenance. Tenant's consultants shall determine the required sizes and locations of access panels.
- d) The minimum ceiling height allowed in areas of public/passenger occupancy is 3040 mm above finished floor, unless restricted by existing conditions or when approved by WAA for localized design effect.

3.4.8 **Storefronts**

a) **General Requirements**

- i) The Tenant's storefront design shall typically be open with a security grille closure. For tenancies desiring an enclosed storefront, see Clause 5.3.6c. The visible merchandising design shall incorporate individuality and creativity, which will contribute interest and character to the overall airport retail environment.
- ii) Display pedestals or free-standing storefront elements are acceptable, providing they are within the leasehold and adhere to the parameters set forth in this manual.
- iii) No surfaces or projections interfering with, or hazardous to, pedestrian traffic may be part of the design.
- iv) Merchandising plans shall be designed so that points of sale do not generate a customer queue that crosses the Lease Line. Tenants wishing to use stanchions for queue control shall use the following manufactured specialty item:
 - Lavi Industries 'Beltrac' with satin finish, black cap and tape
 - Alternates permitted only when pre-approved by WAA.

b) Closure Types

The following closure types are acceptable:

- i) **Horizontally Sliding Screens:** Screens shall stack within enclosures to conceal from public view when in open position. Door pocket closure panels are to be equipped with touch latch or a recessed lock. Ceiling tracks shall be fully recessed. Lead and trailing posts are to be equipped with top and bottom locks keyed to WAA standards. Surface mounted striker posts are not permissible. Screen curtains shall be constructed of ~ 150mm wide modules with top and bottom aluminum plates linked together by a continuous aluminum hinge and be glazed with clear polycarbonate panel. The polycarbonate panels shall be ~ 140mm wide and 1.6mm thick and panel shall be entirely recessed in the aluminum hinge throughout its full height. Aluminum finish shall be brushed clear anodized.
Acceptable folding screen shall be MobiFlex Impact. Alternates including Dynamic Closures Prestige or Metro Door Visionguard will be considered upon request. Shop drawings must be submitted for review and approval of WAA.
- ii) **Rolling overhead grilles:** grilles shall have straight lattice curtain pattern with horizontal rods at 50 mm on centre and vertical rods at 225 mm on centre. Finish to be #4 stainless steel or clear anodized aluminum finish. Grilles shall be motorized and have a lock keyed to Landlord standards and an electric safety edge and interlock switch. Acrylic or glass grille infill panels are not acceptable. Acceptable types of grilles include Series 671 by Overhead Door, or other manufacturer's model in similar pattern and dimensions. Grille and/or housing shall be independently laterally supported and shall not be supported directly from the base building structure.
- iii) **Hollow-metal (steel) doors and frames for non-public areas and fire-rated hollow-metal (steel) doors and frames in walls forming required fire separations.** Swinging frameless glass doors with top and bottom rail or patch pivots and with safety glass and polished stainless steel trim and hardware.

- iv) Swinging frameless glass doors with top and bottom rail or patch pivots and with safety glass and polished stainless steel trim and hardware.
- v) Sliding glass doors with safety glass and polished stainless steel trim and hardware. When open, these shall be stored in an enclosed space(s) concealed to the passerby. In the case where showcases extend beyond the Leasehold entrance closure, sliding doors may be stacked behind the showcase and used as the back of the showcase during business hours.
- vi) Wood closures, trim and fittings at Leasehold entrance are subject to the code limitations applicable to noncombustible buildings. Finish subject to the approval of WAA.
- vii) Sliding, folding or overhead closures shall be complete with emergency exit man doors where required by code.
- viii) Closures shall be complete with emergency exit man doors where required by code.
- ix) Closure positions shall be located as indicated on the schematic plans and sections in this manual.
- x) Cylinder locks in all leasehold closures and interior partition doors shall be supplied and installed by Security Lock and Safe Ltd. at the Tenant's expense. The standard cylinder type is CY415N mortise cylinder manufactured by Abloy. All cylinders shall also be keyed to match the base building master keying system.

c) Alternate Closed Storefront Design

- i) Typically, the Tenant's storefront is to be located on the Closure Line. All storefront entrance doors shall be located behind this line within the Leasehold.
- ii) Storefronts shall create a "show window" design with a distinct entrance and large display windows.
- iii) The minimum acceptable width of any storefront entrance is 1830 mm.
- iv) A minimum of 70% of the storefront, measured in clear storefront opening area, shall be glazing. The maximum use of clear frameless glass as a storefront material is encouraged. Edges of joints for frameless glazed storefronts shall be ground, polished and sealed with clear silicone sealant.
- v) **Acceptable Closure Types** The following closure types are acceptable at closed storefront applications:
 - Solid-core swing or sliding doors are acceptable.
 - Swinging frameless glass doors with top and bottom rails or patch pivots.
 - Sliding glass doors – when open, these shall be stored in an enclosed space(s) (or pockets) concealed to passersby. In the case where showcases extend beyond the store closure, sliding doors may be stacked behind the showcase and used at the back of the showcase during business hours.
 - Sliding of grilles as defined above.
 - Wood storefront closures, trim and fittings are subject to code restrictions for noncombustible buildings. Finish subject to WAA approval.

3.4.9 Room Tags

- a) High performance premium vinyl lettering with special low initial tac adhesive to allow repositioning
- b) Letter height 38 mm (1 ½ “)
- c) Glare free and colour contrasted by at least 70% with its background (with light on dark background preferred)
- d) Centered on door frame
- e) Room Tags will be alphanumeric. Each Room within a Tenant Leasehold will begin with the suite number, followed by an alphabetic character
- f) Refer to diagram in Appendix D.

3.4.10 Interior Window Treatment

Interior window treatments within the ATB are designed for a consistency when viewing the façade from the exterior. Any interior windows treatments must be submitted for review and approved by WAA prior to installation.

3.5 BASE BUILDING STRUCTURAL

3.5.1 Core drilling and/or cutting of floor or roof systems and/or demising walls may be required to accommodate plumbing and/or mechanical systems in a particular Tenant Leasehold. Such structural modifications shall be designed by the base building Structural Engineer of Record at the Tenant's expense.

- a) Prior to undertaking any floor penetrations approved by WAA, the Tenant shall X-ray the floor area to determine locations of any in-slab re-bar, conduit, and or heat loops. Copies of results are to be provided to WAA. X-raying of any floor area within the leasehold should be done after normal operating hours and all precautions made to protect adjacent Tenants and IT&T equipment.
- b) Mechanical coring must be undertaken for all slab penetrations greater than 25mm (1”) in diameter.
- c) Sleeves shall be installed for all wall and floor penetrations.
- d) All wall and floor penetrations must be sealed to the WAA satisfaction. All penetrations shall be fire-proofed as required to match base building fire protection rating and any floor penetrations must have watertight seal.

3.5.2 Any and all structural modifications to the base building shall only be completed by WAA or WAA selected contractor at the Tenant's expense.

3.5.3 A load on any concrete floor greater than 4.8 kPa (uniformly distributed), shall not be permitted. For floor areas on Level 0 (basement) designated as “Storage”, the imposed load shall not exceed 7.2 kPa. No unusual loads may be suspended from the underside of the roof structure without Landlord's structural consultant's prior written approval.

3.5.4 Locations of equipment suspended from the underside of the ceiling/roof structure shall be clearly indicated on design drawings. No loads may be suspended from the underside of the roof or floor structure without Landlord's structural consultant's prior written approval.

3.5.5 No electrical wiring or conduit will be allowed through or under any structural slab on-grade without written approval of Landlord.

- 3.5.6 All floor, wall and ceiling penetrations shall be fire-stopped against water, smoke and flame penetration with a CSA/ULC approved system.
- 3.5.7 Roof-mounted antenna, receivers or satellite receiving dish antenna, if required, must be pre-approved by WAA prior to installation. All antenna shall be mounted in location designated by WAA on roof top antenna mounting rails designed for such equipment.

3.6 ACOUSTICS

- 3.6.1 Tenant Leaseholds featuring background music must take precautions to ensure sound and/or vibration will not be transmitted to adjoining Tenant Leasehold, both vertically and horizontally. Acoustic baffling may be required in partitions and ceilings. Also, speakers may need to be housed in sound-attenuating enclosures.
- 3.6.2 Speaker system operation in Tenant Leasehold shall not interfere with the base building public address system or shall be automatically cancelled during announcements on building public address system.
- 3.6.3 Sound systems are not allowed in Tenant kiosks.
- 3.6.4 Locations and output directions of loudspeakers located within Tenant Leasehold shall be shown on submission drawings.
- 3.6.5 Demising walls in Tenant Leaseholds have a minimum rating of STC 48. Higher STC ratings may be required and shall be provided by the Tenant for certain Leaseholds due to noise/sound generation.
- 3.6.6 Sound systems in Tenant Leasehold shall be interlocked with the base building fire alarm system, which will terminate operation upon signal from the fire alarm. Interface work shall be carried out by WAA at the Tenant's expense.

3.7 SIGNAGE

- 3.7.1 Signage on exterior of Tenant Leasehold shall be designed to be an integral part of concourse/lobby visual environment.
- 3.7.2 Sign faces on exterior signs shall be designed as an integral part of the storefront design with letter size and location appropriately scaled and proportioned to the overall storefront design.
- 3.7.3 All signage must be professionally designed and fabricated. Designs shall be detailed and included with FAP submission. Design-build signage services will not be accepted. All store identification designs shall receive written approval from the Landlord prior to fabrication.
- 3.7.4 An illuminated overhead sign box above the storefront entrance may be installed at the Tenant's expense.
- 3.7.5 A non-illuminated flag sign projecting 90 degrees from the "exterior bulkhead" of the Leasehold may be provided at the Tenant's expense.
- 3.7.6 Signage locations within Tenant Leasehold are subject to WAA approval.

- 3.7.7 Logo and/or characters shall project no more than 100 mm from the face of walls and/or storefront enclosing Tenant Leasehold sign zone.
- 3.7.8 Tenant signage on exterior of storefront shall be limited to business name and logo only. Tag lines, bylines or advertising slogans are not allowed.
- 3.7.9 Tenants shall comply with the Official Languages Act (Canada).
- 3.7.10 Within Design Control Zone, illuminated signs shall conform to following specifications:
- a) Text is limited to individual letters/logo only and should be pin mounted or suspended with a concealed mounting system.
 - b) Tag lines, bylines or advertising slogans are not permitted.
 - c) Tenant Leasehold having corner storefront opening may request one (1) sign per elevation.
 - d) Metal face, metal return.
 - e) Pushed through acrylic, internally illuminated characters in a metal-faced background.
 - f) Metal channel with halo lighting.
 - g) Glass:
 - i) Painted, silk-screened, gold/silver leaf, applied to inside surface of glass.
 - ii) Raised or etched letters and/or logo applied to glass or solid storefront in metallic finish (i.e., brass, bronze, copper or stainless steel).
 - iii) Raised or etched letters and/or logo applied to glass or solid storefront using solid colour letters (i.e., lacquered or vinyl coated).
 - iv) Suspended neon behind glass, forming letters or logo. Neon must be easily readable and protected from public contact.
- 3.7.11 Flag signage is limited to the following types. Text is limited to face-illuminated individual letters/logo only and shall be pin-mounted with a projection from the blade not exceeding 75 mm. Lettering and/or logo shall be applied to both sides of the sign:
- a) Solid metal letters/logo; e.g., copper, stainless steel, aluminum.
 - b) Solid plastic letters/logo.
- 3.7.12 Inside Tenant Leasehold illuminated and non-illuminated signage shall conform to following specifications:
- a) Engraved, etched or sandblasted in granite, marble or stone.
 - b) Wood carved, routed, laser cut, painted with raised or etched letters and/or logo.
 - c) Artisan's plaque made of copper, stainless steel, aluminum or wood (with approved finish).
 - d) Graphics on any glass or solid panel may be in gold leaf, pressure sensitive vinyl or other method of attachment.
- 3.7.13 The following signage elements or components are prohibited:
- a) Permanent promotional signs of any type, or registered trademark other than those owned by the Tenant.
 - b) "Box" signs or "suitcase" signs.
 - c) Handwritten signs.

- d) Signage on exterior of ATB and Parking Structure.
- e) Free standing stanchion signs beyond Tenant Lease line.
- f) Simple painted signs.
- g) Nonsolid raised plastic letters.
- h) Exposed conduit, tubing, raceways, ballasts, transformers or other equipment.
- i) Labels or other identification (including sign manufacturer's label and/or trademark) are not allowed on exposed surface of signs, except any required by code. Any such labels shall be displayed in an inconspicuous location.

- 3.7.14 Decals for credit cards and hours of operation must be posted in public view. Decals shall be clustered in an area not exceed 12" x 12" (300 mm x 300 mm), which shall be shown in Final Design Submission. The area shall be remote from other signage provided in Tenant Leasehold.
- 3.7.15 Edge or back-lit translucent signs and front-lighted opaque signs shall not produce visible brightness/luminance exceeding 200 foot-lamberts.
- 3.7.16 Illuminated letters and logos (reverse channel letters, neon, etc.) shall not produce visible brightness/luminance exceeding 250 foot-lamberts.
- 3.7.17 Access must be provided within Tenant Leasehold for servicing of illuminated sign(s) mounted on exterior walls and/or storefront.
- 3.7.18 Electrical service for illuminated signage shall come from electrical panel within Tenant Leasehold.

3.8 MENU BOARD CRITERIA (FOOD AND BEVERAGE UNITS)

- 3.8.1 All menu boards must be professionally designed and fabricated, and subject to WAA prior approval. WAA encourages the display of ready-to-serve foods and the serving counter. Under no circumstances will the Tenant be permitted to display other signs, advertising or displays such as are often made available from food or beverage suppliers. Beverage dispensing units may not bear any advertisements for the beverage companies, nor may they be incorporated into the menu boards.
- 3.8.2 Menu boards shall be externally illuminated. White, backlit Plexiglas will not be permitted. Backlit or internally illuminated menu boards will not be permitted except for photographs of food items.
- 3.8.3 All permanent information must be painted, silk-screened, etched or applied to any of the following materials:
- a) Metal – neutral, painted or anodized
 - b) Wood – natural or painted
 - c) Plastic laminate
 - d) Glass – clear, translucent or painted
- 3.8.4 Changeable information may be displayed using vinyl, die-cut numerals or letters, chalkboards, etc.
- 3.8.5 Changeable menu boards available through food and beverage advertising product suppliers are prohibited and may not be used.

- 3.8.6 The Tenant must submit menu board design for WAA review and approval. Menu board selections and detailing will be reviewed by WAA on an individual basis.

3.9 FOOD STORAGE AND WASTE HANDLING

- 3.8.1 Garbage compaction and/or refrigeration equipment must be installed in the Leasehold by the Tenant if perishable items are handled or if required by applicable governing laws, codes, and/or regulations.

3.10 SUSTAINABLE DESIGN CRITERIA

3.10.1 General Requirements

- a) The ATB has been designed as a high performance building, meeting or exceeding Manitoba Hydro Power Smart requirements for energy efficiency. It will also exceed Model National Energy Code by more than 25% and satisfy LEED certification requirements.
- b) An integrated design team approach is recommended from the beginning in order to coordinate and effectively maximize energy savings opportunities within Tenant Leasehold.
- c) Design of Tenant Leasehold shall adhere to the following minimum requirements, where practical.

3.10.2 Water Conservation – Water Efficiency

- a) **Required Practices:**
 - i) Install low flow (maximum 6 Litres per flush) toilets in all washrooms.
 - ii) Use low flow fixtures and install aerators on all faucets and showerheads. Provide auto shutoff on all faucets.
 - iii) Select water-efficient Energy Star rated dishwashers. This rating means that the appliance is in the top 25% of all comparable appliances from an energy efficiency standpoint.

3.10.3 Energy Efficiency

- a) **Intent:**
 - i) Design an energy efficient project where energy consumption reductions exceed the Model National Energy Code for Buildings by 25%.
- b) **Required Practices:**
 - i) Provide individual metering of units for gas and hydro use.
 - ii) Install Energy Star rated appliances and equipment.
 - iii) Utilize programmable thermostats in individual tenancies.
 - iv) Lighting provided in nonretail space is to be controlled with occupancy sensors during noncore hours.
 - v) Utilize HVAC and air conditioning systems that contain no CFCs, HCFCs and Halons.
- c) **Encouraged Practices:**

- i) Design an energy efficient project where energy consumption reductions exceed the Model National Energy Code by 40%.
- ii) Install Heat Recovery Ventilators as part of the ventilation system.

3.10.4 Resource Efficient Materials

a) **Intent:**

- i) Specify a minimum of 25% of building materials that contain a minimum weighted average of 20% post consumer recycled content or rapidly renewable resources. Use local materials to reduce transportation related emissions and support local economy.

b) **Required Practices:**

- i) Use products containing recycled content or rapidly renewing materials, where appropriate.
- ii) Specify carpet and under pad containing recycled content.
- iii) Use local materials whenever possible from sources within an 800 km radius.

c) **Encouraged Practices:**

- i) Specify a minimum of 30% of building materials that contain a minimum weighted average of 20% post consumer recycled content.
- ii) Use durable materials.
- iii) Use reclaimed wood or rapidly renewable materials for cabinetry, millwork and finish materials for flooring (i.e., cork and bamboo).
- iv) Use wood certified as sustainable by an FSC-accredited certification body or certified as CSA SFM Z809. Use certified hardwood veneers for internal finishes.
- v) Select less endangered faster growing wood where possible (i.e., spruce or birch plywood).
- vi) Use Environmental Choice EcoLogo labeled products whenever possible.

3.10.5 Waste Reduction

a) **Intent:**

- i) Provide a construction waste recycling program that separates wood, metal, cardboard and paper, plastic, glass and drywall from other waste and recycles 75% (by weight) of all construction debris. Accommodate recycling during facility operation.

b) **Required Practices:**

- i) Provide recycling areas and facilities in all Tenant Leaseholds to enable participation in the Airport Recycling Program (glass, paper, plastic, cardboard, metals).
- ii) Include a construction waste management section in all specifications.

c) **Encouraged Practices:**

- i) Adopt a construction waste recycling program that separates wood, metal, cardboard and paper, plastic, glass and drywall from other waste and recycles 50% (by weight) of all construction debris.
- ii) Minimize wasteful damage of materials by careful storage and handling on site.

- iii) Request reduced packaging by suppliers.

3.10.6 Protection of Indoor Environmental Quality

a) **Intent:**

- i) Ensure indoor air quality through the use of low emitting products referencing EcoLogo, Green Seal Standards, and the South Coast Air Quality Management District Rules or equivalent.

b) **Required Practices:**

- i) Meet the requirements of ASHRAE 62-2004 "Ventilation for Acceptable Air Quality" and ASHRAE Standard 129-1977 for ventilation effectiveness for naturally and mechanically ventilated space.
- ii) Use low emitting materials such as composite woods, laminate adhesives, and furniture. Specify sub flooring material that is formaldehyde free.
- iii) Specify carpet glue using nontoxic glues or tack down only.
- iv) Specify low VOC paints, coatings, sealants and adhesives identified as Environmental Choice EcoLogo certified or equivalent.
- v) Specify urea formaldehyde free composite wood or agri-fibre products for casework and millwork materials (i.e., plywood, UF Free MDF, strawboard, homasote, etc.).
- vi) Seal exposed concrete work and other surfaces with a nontoxic sealer.
- vii) Meet or exceed Environmental Choice EcoLogo criteria for commercial carpets and pads.

c) **Encouraged Practices:**

- i) Use water-based finishes for all cabinetry paneling, molding and flooring.
- ii) Utilize pre-finished interior materials, where possible.
- iii) Use hard surface flooring options such as hardwood, ceramic tile or slate instead of carpet.

3.11 UNIVERSAL DESIGN GUIDELINES

3.11.1 The Air Terminal Building and Parking Structure are designed to comply with Universal Design Standards, including the airline (common-use) and governmental agency facilities. Tenant Leaseholds shall be designed to conform to these standards.

3.11.2 Accessibility requirements are contained in ***ACCESS: A Guide to Accessible Design for Designers, Builders, Facility Owners and Managers, 3rd Edition, published by The Universal Design Institute, University of Manitoba.*** Should design standards from various sources be in conflict, the more stringent requirement(s) shall be used.

3.11.3 Guidelines for **Retail Areas**

- a) Power doors or low resistance delayed action door closers shall be installed where doors are used in customer accessible areas. Doors shall have a minimum 850 mm clear opening and not swing open into the path of travel.
- b) Clear aisle widths of 1100 mm minimum shall be maintained for wheelchair access (1200 mm is the preferred clear width). In all cases, aisles shall be kept clear of displays and other protrusions.

- c) Displays shall be installed with the centerline at 1350 mm above floor providing sightlines for people seated and standing. Items that are to be touched and/or taken off a shelf shall be no higher than 1200 mm and no lower than 400 mm to be easily accessed by people with a limited range of heights and arm movements, as well as limited bending and stretching capability.
- d) Counters shall have lower sections and/or cut-outs to accommodate people using a wheelchair or scooter, who need to sit while completing transactions but do not have a mobility device, or for persons who use a laptop or pen and paper to communicate. This shall be replicated on both the public and tenant sides of the counter. Accessible sections shall be an integral part of counter design and not be a separate piece or provided in separate area. At least a portion of the work surface shall not exceed 850 mm high. Knee and toe clearance beneath accessible work surface shall be at minimum 800 mm wide x 700 mm high x 500 mm deep.
- e) Informational signage shall have a nonglare surface with high colour contrast between the background and the lettering and be mounted with the centerline at 1350 mm. use standard font Sans Serif lettering with appropriate height and width determined from the proposed viewing distance.
- f) Floor surfaces shall be slip resistant. Low pile carpet is permissible and shall be colour contrasted from the walls.
- g) Change rooms (if provided) shall have a 850 mm minimum clear opening doorway, a minimum 1500 mm x 1500 mm clear space within the change room, some clothes hooks no higher than 1200 mm, and lever door handle.

3.11.4 Guidelines for **Lounges**

- a) Bar surface shall have a lowered section for people unable to use high stools. Dimensions for knee and toe clearance listed for counters in retail areas shall also apply for tables in restaurants.
- b) Cantilevered tables or tables with straight legs at each corner are preferred over pedestals, which restrict clearance underneath the table.
- c) All tables need a minimum clearance of 700 mm from the floor to the underside of the table.
- d) Aisles between tables shall be no less than minimum 1100 mm width, with width of 1200 mm preferred.

3.11.5 Guidelines for **Restaurants/Lounges**

- a) Clear aisle widths no less than minimum 1100 mm minimum shall be maintained for wheelchair access (1200 mm clear width is preferred). In all cases, aisles shall be kept clear of displays and other protrusions.
- b) Self serve areas require a counter for trays that is no higher than 865 mm above the floor, 500 mm deep, and with 700 mm minimum clear knee height under counter. Colour contrast stops shall be provided at the end(s) of the tray slide. Food service lines shall have a minimum width of 915 mm (1200 mm clear is preferred).
- c) Shelving for self-serve food shall be no higher than 1200 mm and no lower than 400 mm. Shelving shall be no further than 600 mm deep from the edge of the counter. Non self-serve shelving can be placed as desired.
- d) Tableware and condiment areas shall be designed with 700 mm of knee space below and a maximum counter height of 850 mm.

4.0 MECHANICAL STANDARDS

4.1 HEATING, VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS

4.1.1 General Requirements

- a) Design criteria for Tenant hookup to base building equipment are presented in the following tables.

Table 1 – Design Outdoor Air Conditions

Season	Design Wet Bulb	Design Dry Bulb
Winter	Not applicable	-35.0°C
Summer	24.4°C	31.6°C

Table 2 – Indoor Design Conditions

Season	Design Wet Bulb	Design Dry Bulb
Winter	21.0°C	Variable (see item 5.2.2)
Summer	24.0°C	50% to 60%

- b) Tenant Leasehold will include appropriately sized access panels for servicing equipment concealed within ceilings or walls.
- c) Ceilings above enclosed Tenant Leasehold may be used as return air plenum.
- d) Works shall include additional heating or cooling for enclosed Tenant Leasehold, if required.
- e) HVAC noise levels in an enclosed Tenant Leasehold shall not exceed noise criteria (NC) 35, which is the rating for private offices.
- f) All penetrations around pipes, conduits, ducts, etc. between levels and through other fire and smoke separations required by code must be sealed against water, smoke, and flame penetration using fire-stop materials listed by an accredited testing agency. Shop drawings for the proposed fire stop product and methodology shall be submitted to the Landlord for review and approval prior to installation.

4.1.2 Base Building – HVAC Systems

- a) Fresh air is provided from ambient building air based on volumes required by ASHRAE 62.1-2004.
- b) Common-use and Tenant Leasehold space in the ATB are not humidified.
- c) Tenant Leasehold spaces are provided with roughed-in HVAC services to the perimeter of the space.
- d) Heating and cooling equipment in ATB Retail spaces will be in the form of hydronic heat pumps, if required. Equipment to be supplied by the Tenant is based on the WAA specified equipment. Each heat pump will provide cooling for solar transmission, lighting, miscellaneous electrical and people loads. Should Tenant Leasehold require capacities greater than those provided for in the base building, associated works shall be reviewed, and if approved carried out by

WAA, at the Tenant's expense. as well as any usage surcharges defined by the Landlord.

- d) Heating and cooling in the ATB non-concession spaces will be provided from base building ventilation system by means of VAV boxes with reheat coils located in the ceiling void. Equipment will be provided as part of the base building. Temperature sensors provided may require relocation by the Tenant's contractor. Each VAV/reheat box will provide heating/cooling for solar transmission, lighting, miscellaneous electrical and occupant loads. Should Tenant Leasehold require capacities greater than those provided for in the base building, associated works shall be reviewed, and if approved carried out by WAA, at the Tenant's expense.
- e) Heating and cooling in the Parking Structure will be provided from base building ventilation system to Tenant Leasehold by means of ductwork with reheat coils located in the ceiling void. Temperature sensors provided may require relocation by the Tenant's contractor. Each reheat box will provide heating/cooling for solar transmission, lighting, miscellaneous electrical and occupant loads. Should Tenant Leasehold require capacities greater than those provided for in the base building, associated works shall be reviewed, and if approved carried out by WAA, at the Tenant's expense.
- e) Balancing of HVAC systems within Tenant Leasehold will be done by a certified air-balancing contractor approved by WAA at the Tenant's expense. A copy of the report shall be submitted to WAA.

4.1.3 Tenant Areas – Retail Classification – HVAC Systems

- a) Retail classification areas are defined as areas used for public retail sales and/or services. Public or private food services (including preparation) are not allowed under this classification.
- b) Works by Tenant shall include supply and installation of the following:
 - i) Supply air, return air, exhaust distribution ductwork, ceiling diffusers, balancing dampers, registers, grilles, ceiling fire stop flaps, fire dampers, smoke detector, pilot light, and any other code required equipment.
 - ii) 600 mm x 600 mm minimum size access panel(s) for servicing filters, base building equipment and Tenant Leasehold equipment.
 - iii) Balancing of HVAC systems within Tenant Leasehold by a certified air-balancing contractor approved by WAA, at the Tenant's expense. A copy of the report shall be submitted to WAA.
 - iv) 25 mm foil faced duct wrap insulation for supply air ductwork.
 - v) Any new/additional HVAC services not provided as part of the base building that may be requested for Tenant Leasehold.
 - vi) Any HVAC base building system work for Tenant Leasehold shall be carried out by WAA at the Tenant's expense.
 - vii) Special condition: the floor deck above Tenant Space 'Duty Free' 2571 contains an access hatch for removal or installation of mechanical or electrical equipment in the mechanical equipment room above. Tenants of this space are required to install a removable ceiling system.

4.1.4 Tenant Areas – Food Service Classification – HVAC Systems

- a) Food service classification areas are defined as an area used for public food and beverage services and the preparation thereof.

- b) Design and construction of food service facilities shall comply with all standards and regulations of governmental authorities having jurisdiction; in particular NFPA 96.
- c) Works by the Tenant shall include supply and installation of the following:
 - i) All distribution ductwork including diffusers, grilles, balancing dampers, etc.
 - ii) 600 mm x 600 mm minimum size access panel(s) for servicing filters, base building equipment and Tenant Leasehold equipment.
 - iii) Balancing of HVAC systems within Tenant Leasehold by a certified air-balancing contractor approved by WAA at the Tenant's expense. A copy of the report shall be submitted to WAA.
 - iv) Supply air, return air, sanitary exhaust distribution ductwork, ceiling diffusers, registers, grilles, ceiling fire stop flaps, fire dampers, smoke detectors, pilot light, and any other code required equipment.
 - v) 25 mm foil faced duct wrap insulation for supply air ductwork.
 - vi) Ultra-violet kitchen exhaust hood system complete with integral fire protection system.
 - vii) Makeup air for commercial kitchen exhaust hood is provided from base building ambient air. Rooftop mounted independent makeup air units are not allowed. WAA will charge Tenant for ambient building makeup air based on operating time of kitchen exhaust hood system, calculated from the building automation system. Exhaust systems shall be designed and constructed in accordance with all applicable codes.
 - viii) Any new/additional HVAC services not provided as part of the base building that may be requested for Tenant Leasehold. Such work outside the Leasehold shall will be performed by WAA at the Tenant's expense.
 - ix) Any HVAC base building system work for Tenant Leasehold shall be carried out by WAA at the Tenant's expense.
 - x) All ductwork installed within Tenant Leasehold shall be colour-coded and labeled to match base building standards.

4.1.5 Tenant Work Areas – Nonconcession Classification – HVAC Systems

- a) Nonconcession classification areas are defined as areas for public and nonpublic administration, management, or office type work. Public food services or retail are not allowed. Limited food preparation areas for Tenant staff, such as lunchrooms, are allowed under this classification.
- b) Works by Tenant shall include supply and installation of following:
 - i) Supply air, return air, exhaust distribution ductwork, ceiling diffusers, balancing dampers, registers, grilles, ceiling fire stop flaps, fire dampers, smoke detectors, and any other code required equipment.
 - ii) 600 mm x 600 mm minimum access panel(s) for servicing filters, base building equipment and for Tenant Leasehold equipment.
 - iii) Balancing of HVAC systems within Tenant Leasehold will be done by a certified air-balancing contractor approved by the Landlord, at the Tenant's expense. A copy of the report shall be submitted to WAA.
 - iv) 25 mm foil faced duct wrap insulation for supply air ductwork.
 - v) Any new/additional HVAC services not provided as part of the existing base building that may be requested for Tenant Leasehold.
 - vi) Any HVAC base building system work for Tenant Leasehold shall be carried out by WAA, at Tenant's expense.

4.2 PLUMBING SYSTEMS

4.2.1 General Requirements

- a) Tenant Leasehold can connect to base building utilities including cold water, sanitary and storm sewers, as well as vent stacks.
- b) Works by Tenant shall include branch plumbing lines, all plumbing fixtures, grease interceptors, hot water heaters (electric only), and gas meters.
- c) Public washrooms can be used by Tenant staff.
- d) Domestic water lines within Tenant Leasehold shall be insulated with a minimum of 13 mm fiberglass insulation and vapor barrier.
- e) Copper piping shall be types 'K' or 'L'. All vent stacks shall be DWV copper or cast iron. Plastic piping is not allowed.
- f) Hot water tank pan and relief valve shall be piped to a floor drain within Tenant Leasehold. Floor drain supply and installation shall be included in Tenant Works.
- g) Under no circumstances shall Tenant's contractor(s) install additional plumbing through floor. Connection(s) to under-floor plumbing services and/or other plumbing work *outside the boundaries* of a Tenant's leasehold shall be done by WAA at the Tenant's expense.
- h) All penetrations around pipes, conduits, ducts, etc. between levels through other fire and smoke separations required by code must be sealed against water, smoke, and flame penetration using fire-stop materials listed by an accredited testing agency. The Tenant's contractor shall provide shop drawings for the proposed fire stop product and methodology for review and approval by the Landlord prior to undertaking work.
- i) Connections to base building domestic water lines shall be installed with backflow prevention valves, where required by code.
- j) All piping installed within Tenant Leasehold shall be colour-coded and labeled to match base building standards.

4.2.2 Retail Classification – Plumbing Systems

- a) Retail classification areas are defined as areas used for public retail sales and/or services. Public or private food services or preparation are not allowed under this classification.
- b) Retail areas are provided with the following roughed-in plumbing services:
 - i) A drainage line either capped-off below the floor, or roughed-in to the surface of the floor.
 - ii) A domestic cold water supply line valved-off and capped-off, typically located in ceiling void at the perimeter of Tenant Leasehold or below floor.
 - iii) A plumbing vent line capped-off, typically located in ceiling void at perimeter of Tenant Leasehold.
- c) Works by the Tenant shall include supply and installation of the following:
 - i) All domestic water distribution plumbing, all waste drainage and vent plumbing.
 - ii) Condensate drain for each heat pump.
 - iii) Domestic hot water heaters (electric only), as required.
 - iv) Plumbing fixtures and backflow preventers.

4.2.3 Food Service Classification – Plumbing Systems

- a) Food service classification areas are defined as an area used for public food and beverage services and the preparation thereof.
- b) Food service areas are provided with the following roughed-in plumbing services:
 - i) A drainage line either capped-off below the floor, or roughed in to the surface of the floor.
 - ii) A domestic cold water supply line valved-off and capped-off, typically located in ceiling void at the perimeter of Tenant Leasehold or below floor.
 - iii) A plumbing vent stack capped-off, typically in ceiling void at the perimeter of Tenant Leasehold.
- c) Works by Tenant shall include supply and installation of the following:
 - i) All domestic water distribution plumbing, all waste drainage and vent plumbing.
 - ii) Condensate drain for each heat pump.
 - iii) Domestic hot water heaters (electric only), as required.
 - v) For a food service Tenant Leasehold in an open area without access to a ceiling void, a sanitary vent cap-off is located below the floor for installing an island vent system for connection of the sanitary vent in accordance with applicable code requirements.
 - vi) Tenant Leasehold with drainage from food and beverage operations will be required to install grease interceptors, which shall be mounted above the floor.
 - vii) Plumbing fixtures and backflow preventers.

4.2.2 Nonconcession Classification – Plumbing Systems

- a) Nonconcession classification areas are defined as areas for public and nonpublic administration, management, or office type work. Public food services or retail are not allowed. Limited food preparation areas for Tenant staff, such as lunchrooms, are allowed.
- b) Nonconcession areas are provided with the following roughed-in plumbing services:
 - i) A drainage line either capped-off below the floor, or roughed-in to the surface of the floor.
 - ii) A domestic cold water supply line valved-off and capped-off, typically located in ceiling void at perimeter of Tenant Leasehold or below floor.
 - iii) A plumbing vent line capped-off, typically in ceiling void at perimeter of Tenant Leasehold.
- c) Works by Tenant shall include supply and installation of the following:
 - i) All domestic water distribution plumbing, all waste drainage and vent plumbing.
 - ii) Condensate drain for each heat pump that is required.
 - iii) Domestic hot water heaters (electric only), if required.
 - iv) Plumbing fixtures and backflow preventers, if applicable.

4.3 NATURAL GAS SERVICE

- 4.3.1 Gas services may only be installed on approval of WAA. Tenant gas services are to be extended from the base building to Leasehold at Tenant expense.

4.4 METERING

- 4.4.1 Tenant Leasehold with water requirements greater than that of a nonpublic two-piece washroom are required to install a water check meter. This meter shall be capable of being read remotely electronically, and will be connected to IT infrastructure by WAA at the Tenant's expense.
- 4.4.2 The cost of gas used in Tenant Leasehold shall be charged on a metered basis. The Tenant shall install a gas check meter capable of being read remotely electronically, connected to IT infrastructure by WAA at the Tenant's expense.
- 4.4.3 Works involving gas piping extensions and/or alterations shall be performed by the Tenant's contractor. Final connections to base building piping and all work through demising walls, floor and roof structure, shall be performed by WAA at the Tenant's expense.
- 4.4.4 Meter maintenance and repairs will be performed by WAA at the Tenant's expense.

4.5 SPRINKLERS & FIRE PROTECTION

- 4.5.1 Base building system includes sprinkler mains, branch lines, and sprinkler heads in grid layout to cover all public and Tenant spaces in accordance with code requirements. Modifications to the base building sprinkler system to add and/or change sprinkler head locations for Tenant Leasehold, as well as testing and verification, shall be at the Tenant's expense.
- 4.5.2 The Tenant's fire protection system design shall comply with all fire regulations stipulated in the National Fire Code of Canada and the Manitoba Building Code, latest version.
- 4.5.3 All sprinkler system work shall be in accordance with applicable bylaws, including requirements of the latest edition of NFPA 13.
- 4.5.4 All sprinkler heads in public/passenger areas shall be recessed.
- 4.5.5 Fire extinguishers shall be provided in Tenant Leasehold, as required by code, and in accordance with NFPA 10, latest version.
- 4.5.6 All life safety devices within Tenant Leasehold shall comply with applicable code(s). Tie-in of Tenant Leasehold fire suppression system to the base building fire alarm system will be performed by WAA at the Tenant's expense.
- 4.5.7 Location of Fire Prevention Control Panel (if any) in Tenant Leasehold shall be indicated on electrical floor plan drawing.
- 4.5.8 Fire protection equipment/systems provided in Tenant leasehold shall be the same equipment and components used in the base building.

4.6 EXHAUST AND ODOUR

- 4.6.1 Proposed locations of exhaust systems for Tenant Leaseholds shall be included in design submissions.

- 4.6.2 Objectionable odours shall be mechanically exhausted to prevent release into building interior space, as well as short-circuiting into fresh air vents. Exhaust systems may be required to incorporate activated charcoal filter(s) or other similar device, requiring ongoing maintenance.
- 4.6.3 Works for food service Tenant Leasehold shall include kitchen exhaust ducts, exhaust hoods, and kitchen equipment. **Tenant to install and maintain Ultra-violet kitchen exhaust hood system and provide maintenance records for WAA inspection.** All kitchen exhaust systems shall conform to NFPA 96.
- 4.6.4 Where required, exhaust capacity shall not exceed fresh air supplied to Tenant Leasehold.
- 4.6.5 Air handling equipment for Tenant Leasehold shall not, under any circumstances, exhaust air into the building's interior space.
- 4.6.6 No exhausting will be allowed from freestanding island kiosks.
- 4.6.7 All exhausting will be horizontal. No rotating ventilators or exhaust hoods will be allowed on the roof.
- 4.6.8 Where necessary provision of HVAC outside of the Tenant's space shall be supplied and installed by the WAA, at Tenant's expense.
- 4.6.9 Kitchen exhaust fans shall be cleaned by the Tenant on a regular basis in accordance with NFPA guidelines.

4.7 COLOUR-CODING OF BUILDING SYSTEMS

- 4.7.1 A matrix of approved colour-coding of all base building services and systems shall be used. The uniform colour-coding shall be maintained throughout the building. The colour-coding matrix shall be provided to the Tenant by WAA.

4.8 EQUIPMENT MAINTENANCE

- 4.8.1 The Tenant, at their expense, shall maintain all mechanical equipment installed in the Leasehold. Maintenance activities and frequency shall be sufficient to maintain all equipment at designed operating capacity and condition. Record of maintenance activity shall be provided to WAA upon request.
- 4.8.2 WAA shall provide maintenance of base building services provided to the Leasehold and for sprinkler and fire alarm systems within the space.

4.9 THERMOSTATS AND CONTROLS

- 4.9.1 All computer automated control connections shall be completed by a WAA approved contractor at the Tenant's expense.

- 4.9.2 Computer automated controls shall be of the same type and manufacturer as the base building systems. Building HVAC controls are to be connected to the building EMCS to allow for display, monitoring and control by WAA.
- 4.9.3 Control valve and dampers shall be equal to the base building systems type unless otherwise approved by WAA.

4.10 GREASE INTERCEPTORS

- 4.10.1 Grease interceptors are to be at minimum inspected weekly and cleaned monthly. All cleaning shall be performed by qualified personnel during afterhours.
- 4.10.2 In accordance with City of Winnipeg Sewer By-law Tenants shall ensure that maintenance activities for an oil, grease or sediment interceptor are performed regularly and the records kept for 12 months following the date of maintenance .The records shall be maintained at the Leasehold and made available for review by WAA upon request

4.11 PERMITS

- 4.11.1 Obtain from the City of Winnipeg all necessary permits, at the Tenant's expense.

4.12 INSPECTIONS

- 4.12.1 Upon completion of Leasehold construction and mechanical installations, the Tenant shall provide WAA with copy of Certificate of Inspection.
- 4.12.2 The Tenant shall provide access to Leasehold for inspection by City of Winnipeg inspectors and WAA maintenance personnel.

5.0 ELECTRICAL STANDARDS

5.1 GENERAL REQUIREMENTS

- 5.1.1 Electrical work must not be carried out on energized equipment.
- 5.1.2 Shut down requests for Base Building services are to be submitted to WAA a minimum of 72hrs in advance.
- 5.1.3 All electrical materials, products and electrical work performed in Tenant Leasehold shall comply with all applicable codes.
- 5.1.4 All wiring must be installed in rigid metal conduit or EMT and as required by code, except as indicated herein. All conduit and wiring shall be concealed from public view.
- 5.1.5 Power transformers are to be located in enclosed rooms and provided with vibration isolating bases.
- 5.1.6 Tenant shall supply and install all electrical equipment for Tenant Leasehold including check meters, disconnect switches, transformers, splitter boxes, panel boards, wiring, rigid metal conduit or EMT, lighting and related power distribution, etc. This shall include connection to or relocation of distribution panel and related conduits, branch wiring, panel breakers, outlets, Connections to mechanical equipment controls such as heat pumps, etc., if required.
- 5.1.7 Tenant shall supply and install all electrical equipment and cabling for all washroom equipment within Tenant Leasehold, including hot water heater(electric only), baseboard heater (if provided), and lighting.
- 5.1.8 All wiring for lighting, power, fire alarm, telephone, data and television within walls and ceiling spaces shall be installed in rigid metal conduit or EMT. Exposed wiring (not in conduit) may be accepted only for telephone/data/television in ceiling spaces, if permitted by code.
- 5.1.9 All electrical equipment, materials and devices shall be new, CSA/ULC approved or equivalent. Electrical equipment and devices are to be CEMA or NEMA rated.
- 5.1.10 All wiring shall be copper.
- 5.1.11 Branch wiring shall be #12 gauge (minimum) solid stranded for #8 or larger. BX cable may be used in partition walls with no horizontal runs around corners (of walls) and in ceilings for drops (maximum 3 m) from junction boxes to light fixtures. Daisy chaining with BX wires between light fixtures shall not be permitted.
- 5.1.12 Each circuit shall be provided with its own ground conductor installed in rigid metal conduit or EMT.
- 5.1.13 Exposed cabling shall be FT4 rated and be supported by proprietary cable supports. The use of tie wraps will not be allowed unless approved by WAA for this purpose.

- 5.1.14 Where the Tenant is installing nonlinear loads with “switch mode power supplies” in electronic equipment (such as appliances, computers, printers, etc.) separate neutrals conductors are to be provided for each circuit.
- 5.1.15 A balanced electrical load must be provided in all three phases of the distribution system to within 5%.
- 5.1.16 All equipment and light fixtures shall be energy efficient.
- 5.1.17 Electrical hardware such as switchgear for roll down grilles shall not be visible from public areas.
- 5.1.18 Installation of electronic security system at the entrance(s) to Tenant Leasehold shall not obstruct access.
- 5.1.19 Cooking equipment for food and beverage Tenants shall be natural gas. Electrical capacity for cooking equipment will not be provided unless it can be provisioned within the allowable service size provided to Tenant Leasehold.
- 5.1.20 Redundant, unused and/or abandoned wiring, cabling, conduit and equipment shall be removed from the Leasehold by the Tenant, unless otherwise instructed by WAA.
- 5.1.21 Non corrosive permanent barriers and/or a ½ inch air space shall be provided between dissimilar metals (such as at copper and galvanized conduits or supports.).

5.2 ELECTRICAL SERVICE

- 5.2.1 Electrical power requirements shall be requested for Tenant Leasehold during design process. Service provision or additions to existing services to leasehold if approved by WAA shall be completed at the Tenant’s expense.
- 5.2.2 Where provided, metered 600V/3-phase/3-wire electric service terminated at disconnect in Leasehold are sized to accommodate electrical loads based on the following load allowances:

Type of Tenant Space	Electrical Load Allowance
Food and Beverage less than or equal to 60 m ²	15kW minimum; i.e., greater than or equal to 250W/m ²
Food and Beverage greater than 60 m ²	250W/m ²
Non Food and Beverage less than or equal to 150/m ²	15kW minimum; i.e., greater than or equal to 100W/m ²
Non Food and Beverage greater than 150 m ²	100W/m ²

- 5.2.3 Electric service for life safety systems and building protection systems is supported by base building emergency generators. Electrical service for these systems will be maintained to Tenant Leasehold during hydro power outage providing compounding failures do not occur in other power distribution systems connected to emergency generators.

5.3 FIRE ALARM SYSTEM

- 5.3.1 Tenant Leasehold fire prevention system(s) shall be connected to base building fire alarm system and comply with all codes.
- 5.3.2 WAA shall connect Tenant Leasehold “dry contacts” to base building fire alarm system and complete additional programming and modifications at the Tenant’s expense.
- 5.3.3 Exhaust fans in Tenant Leasehold must be interlocked and interfaced with the base building fire alarm system by WAA at the Tenant’s expense.
- 5.3.4 Works by Tenant shall include all additional fire alarm evacuation speakers, detection devices, break glass pull stations and all associated testing and verification required by code. All added components are to be the same type as base building fire alarm system components. Tenant contractors must be pre-approved by WAA. Approved Contractors: Siemens, Phone (204) 774-3411
- 5.3.5 All life safety devices within Tenant Leasehold shall comply with applicable code(s). Tie-in of Tenant Leasehold fire suppression system to the base building fire alarm system will be performed by WAA at the Tenant’s expense.
- 5.3.6 Location of Fire Prevention Control Panel (if any) in Tenant Leasehold shall be indicated on electrical floor plan drawing.
- 5.3.7 All fire alarm wiring within walls and ceiling spaces shall be installed in rigid metal conduit or electrical metal tubing (EMT).
- 5.3.8 Fire protection equipment/systems provided in Tenant leasehold shall be the same equipment and components used in the base building.

5.4 EMERGENCY AND EXIT LIGHTING

- 5.4.1 Base building emergency and exit lighting meets National Building Code requirement for an open space.
- 5.4.2 Electric service to Tenant Leasehold is supported by building emergency generating system, which supplies emergency lighting.
- 5.4.3 Tenant shall supply and install additional emergency and exit lighting within Leasehold to meet National Building Code requirements. Additional exit lighting components shall match the base building components.

5.5 LIGHTING

- 5.5.1 In order to keep the electrical and AC loads within allowable Tenants service loads, Tenants are encouraged to use low voltage lighting and other energy efficient fixtures.
- 5.5.2 Stores with merchandise display(s), either freestanding or in a display window, shall adhere to and/or incorporate the following:

- a) High quality quartz halogen and/or metal halide specifically designed for retail application illumination within the storefront display area. Examples of acceptable lamp types include:
 - i) 37 Watt O/S True-Aim IR MR-16
 - ii) AR-111
 - iii) Par 20, 35 Watt Master Colour Metal Halide
- b) Within the Leasehold, if floor lamps (incandescent or fluorescent) are used, the Tenant must shield these fixtures with a baffle designed to shield the lamps from the concourse/lobby at eye level height of 1650 mm, unless otherwise approved. WAA reserves the right to adjust such baffles after installation is complete.
- c) Energy efficient LED signage is encouraged within the Leasehold in lieu of neon. Neon will only be considered where the Tenant demonstrates that a particular brand image or desired atmosphere is dependent on the proposed neon. The use of neon is at the discretion of the Landlord.
- d) For other merchandising uses, such as cafes, bars and/or other uses that require a specific mood type lighting to create the desired atmosphere, approval of the design concept and fixtures must be obtained from the Landlord.
- e) Where tenancies are open to above, low voltage lighting will be required.
- f) Tenant lighting may be installed inside the Leasehold only, except for signage lighting as approved by the Landlord.
- g) No lighting on arrivals level shall be visible from above.
- h) The Tenant shall be responsible for the installation and connection of all exit lights in accordance with code requirements. All exit lights shall match the building standard specification.

5.5.3 Luminaire ballasts to be low noise electronic type. Maximum voltage for lighting shall be 120 V, unless otherwise approved by WAA.

5.5.4 The following lighting types **will not be accepted**:

- a) Exposed or undiffused tube fluorescent or H.I.D. lamps in any areas visible to passengers or public.
- b) Sodium or mercury vapor lamps of any type.
- c) Exposed or undiffused fluorescent lamps in areas visible to passengers or public.
- d) Incandescent lighting except as per Clause 5.5.2b

5.5.5 Except as indicated above, the Tenant shall provide:

- a) All lighting fixtures, lamps and related equipment.
- b) All additional emergency lighting and additional exit lights required by the Tenant's design.

5.6 METERING

5.6.1 WAA has provided a check demand/consumption meter for all 600V electric services.

5.6.2 Meter maintenance and repairs will be performed by WAA at the Tenant's expense.

5.7 PERMITS

5.7.1 Obtain from the City of Winnipeg all necessary permits, at the Tenant's expense.

5.8 INSPECTIONS

5.8.1 Upon completion of Leasehold construction and electrical installation work, the Tenant shall provide WAA with copy of Certificate of Inspection.

5.8.2 The Tenant shall provide access to Leasehold for inspection by City of Winnipeg inspectors and WAA maintenance personnel.

5.9 EQUIPMENT MAINTENANCE

5.9.1 The Tenant, at their expense, shall maintain all equipment installed in the Leasehold. Maintenance activities and frequency shall be sufficient to maintain all equipment at designed operating capacity and condition. Record of maintenance activity shall be provided to WAA upon request.

5.9.2 WAA shall only provide maintenance of base building services provided to the Leasehold.

5.10 EQUIPMENT AND CIRCUIT IDENTIFICATION

5.10.1 Identify electrical equipment with identification nameplates. Lamacoid labels to match existing. Embossed plastic labels with 6 mm high letters, black face, white core, and adhesive back. Wording in nameplates to be approved by WAA prior to manufacture.

5.10.2 Nameplates for terminal cabinet and junction boxes to indicate system and/or voltage characteristics. Labels for receptacles, switches and lighting fixtures to indicate panel and circuit designation.

5.11 COLOUR-CODING OF BUILDING SYSTEMS

5.11.1 A matrix of approved colour-coding of all base building services and systems shall be used. The uniform colour-coding shall be maintained throughout the building. The colour-coding matrix shall be provided to the Tenant by WAA.

6.0 TELECOMMUNICATION STANDARDS

6.1 IT VOICE AND DATA SERVICES

- 6.1.1 The voice and data services to Tenant Leasehold space are categorized as:
- a) IT Infrastructure.
 - b) IT Services.
- 6.1.2 IT infrastructure refers to the physical conduit, cables and termination panels supplied and installed in the base building. IT infrastructure is owned by WAA. IT infrastructure distributes and transports IT services throughout WAA controlled spaces within the base building. IT infrastructure does not distribute or transport IT services within a Tenant Leasehold space.
- 6.1.3 IT services refers to the data and voice signals carried by the IT infrastructure. Examples of IT services are data transport service, Internet transport service, telephone services, and cable television service.
- 6.1.4 WAA provides IT infrastructure to each Tenant Leasehold, terminating at a Tenant Demarcation. The basic Tenant Demarcation consists of two (2) Category 6 copper cables connected to one (1) wall mounted duplex data outlet (in one location, and in one faceplate) installed within the Tenant Leasehold space. Because telephone is considered a data type service, one outlet can be used for phone and one for data such as Internet connectivity. NOTE: Damages to the basic Tenant Demarcation, or modifications performed by the lease holder in the Leasehold that render the basic Tenant Demarcation inaccessible, will be rectified by the WAA at the Tenant's expense.
- 6.1.5 Upon Tenant request, WAA will provide an upgraded IT infrastructure and Tenant Demarcation as necessary to support the IT service requirements of the Tenant. Generally, the upgraded IT infrastructure will include a single wall mounted Tenant Demarcation cable termination enclosure located within the Tenant Leasehold space at a location to be agreed between the Landlord and the Tenant, and connected by appropriate copper and/or fibre-optic cabling to the base building telecommunications infrastructure. Modification or additional service related to the IT systems shall be made by WAA at the Tenant's expense.
- 6.1.6 Tenants or their agents are not permitted to install any IT infrastructure or any other data or voice cabling outside of their Leasehold. Tenants are not permitted to run cabling outside their Leasehold area. If there is a need to run cable from one leasehold space to another, WAA provides data transport services.
- 6.1.7 Tenants are not permitted to operate WiFi equipment without the direct permission of the WAA.
- 6.1.8 Where horizontal cabling is run in the ceiling void, it shall be neatly dressed and supported. Acceptable cable pathways in the ceiling are conduit, cable tray, and Caddy CableCat J-Hooks. Cabling shall not be run unsupported in the ceiling void. All cabling paths must be approved by WAA prior to installation.
- 6.1.9 Where conduit or cable tray is placed in the ceiling void, it shall be supported independently, run parallel or perpendicular to building grid lines and shall be run so as not to obstruct access to base building mechanical equipment access points.

- 6.1.10 Where Caddy CableCat J-Hooks are used, the cabling path shall run parallel or perpendicular to building grid lines. J-hooks shall be fastened to structural elements in ceiling void. J-hooks shall not be attached to electrical conduit, T-bar pencil rods, or other nonstructural elements.
- 6.1.11 The Tenant will be provided with a matrix of approved colour-coding of all building system elements within Tenant Leasehold including all wiring and conduit. Additional IT system elements provided in Tenant Leasehold, if any, shall match the base building system colours.
- 6.1.12 Work shall adhere to all EIA/TIA 568 and EIA/TIA 569 standards.

6.2 SECURITY, CCTV AND ACCESS CONTROL SYSTEMS

6.2.1 Access Control

- a) Tenant provided independent system. Access control card readers, locks and related devices may be applied to interior partition doors to suit design requirements.
- b) Access control, if desired to form a part of the base building access control system, shall be supplied and installed by WAA, at the Tenant's expense.

6.2.2 Intrusion Detection

- a) Within Tenant Leasehold, installation of passive volumetric motion detectors is allowed. Radiating devices such as ultrasonic motion detectors are not allowed.
- b) Foil type glass breakage sensors are not allowed for glazed surfaces including doors, windows or demising partitions. For these applications, only passive acoustic glass break sensors are allowed.
- c) Doors, windows or sliding partitions may be equipped with surface mounted magnetic contact devices or may be equipped with concealed magnetic contacts of a diameter no greater than 25 mm. All wiring shall be concealed. Where surface run of wiring is necessary for a limited distance to connect moveable components to a fixed surface, such wiring shall be protected in a flexible metal sleeve.
- d) Intrusion detection control keypads shall be located inside the tenant leasehold and shall not be visible from outside the leasehold space.

6.2.3 CCTV

- a) Works for Tenant Leasehold can include procurement and installation of a proprietary system including CCTV cameras, mounts, monitors, and related devices. For such a system, no interconnection with base building CCTV system(s) will be allowed.
- b) Works for Tenant Leasehold can include procurement of a CCTV system compatible with base building CCTV system, If approved the installation shall be by completed WAA or WAA approved contractor at the Tenant's expense.
- c) CCTV cameras and drive mechanisms shall operate only on an extra low voltage (less than 30V) electrical supply.

6.2.4 **Security Wiring**

- a) All wiring and installations shall conform to applicable building and fire codes.
- b) Wiring shall be installed parallel to building gridlines.
- c) Work shall conform to all other wiring and installation requirements described in this manual.
- d) Security system elements provided in Tenant Leasehold, if any, shall match the base building system colours.

7.0 CONSTRUCTION RULES AND PROCEDURES

7.1 WORKING ON AIRPORT PROPERTY

7.1.1 Tenant's representatives, design team and contractor shall recognize that their Work is being conducted in an environment contiguous with an operating airport, the functioning of which may not be disrupted for any reason. WAA reserves the right to stop the Tenant's Work at any time and for any reason WAA deems necessary to maintain the operations, standards or requirements of the airport.

7.2 PRE-CONSTRUCTION REQUIREMENTS

7.2.1 Unless otherwise permitted by WAA, no Leasehold construction or modification Work shall be undertaken and the Tenant shall not have possession of the Leasehold until the following conditions have been satisfied;

- a) WAA has approved the Leasehold design and issued to the Tenant a WAA Facility Alteration Permit (FAP).
- b) The Tenant has submitted to WAA one (1) copy of the City of Winnipeg Building Permit for the Tenant's Leasehold. No application for a permit will be processed by the City unless WAA has consented to the development in writing.
- c) WAA has approved the Tenant's contractors.
- d) The Tenant has submitted construction documentation to WAA including; Project contacts with 24-hour Emergency contact list, and a construction schedule. Two (2) hard copy sets and one (1) electronic .pdf copy and one (1) .dwg copy on Compact Disk (CD) of the "Issued for Construction" contract documents.
- e) Lease Agreement has been fully executed.
- f) The Tenant has submitted one (1) copy of Insurance Certificates in compliance with the requirements of the Lease. An insurance certificate must be submitted for each space to be leased, with proper notation on certificate.

7.2.2 A Tenant Pre-construction Checklist is provided in Appendix E

7.2.3 **Pre-Construction Meeting**

A pre-construction meeting will be scheduled with WAA, the Tenant's project manager and the Tenant contractor's site superintendent.

Purpose of meeting will be to review and discuss Airport rules, regulations and procedures for conducting work on site, scheduling and coordination, project administration guidelines and procedures during construction, emergency procedures, safety and security, review of logistical items such as deliveries and waste removal, and parking.

- a) Tenant's Contractor shall submit:
 - i) Name and telephone number of Site Safety Representative and listing of 24-hr emergency contacts for the work.
 - ii) Construction base line schedule in bar chart format. The schedule shall identify and include all work components, trade permit procurement, shop drawing submittals, owner furnished items,

- interfaces with pertinent agencies and/or base building work, project milestones, substantial performance, and final acceptance date.
- iii) Material Handling Plan and any special provisions required to coordinate work.
 - iv) List of proposed subcontractors and written confirmation of good standing with the applicable Workers Compensation Board.

7.3 SAFETY AND SECURITY

- 7.3.1 A safe, secure and healthy workplace shall be maintained at all times during construction. This applies to construction and public safety related to the work to be performed by the Tenant's contractor.
- 7.3.2 The Tenant and its contractor(s) have sole and complete responsibility for safety while working in the ATB. A safety representative or delegate shall be on-site at all times. The Tenant and its contractor(s) shall comply with all health and safety requirements or standards stipulated by the Federal Government, Province of Manitoba, City of Winnipeg, and WAA.
- 7.3.3 The Tenant contractors and employees will be subject to and must conform to WAA safety and security requirements while on site.
- 7.3.4 Security of Tenant Leasehold during construction shall be the sole responsibility of the Tenant. WAA will not be liable for any loss or damage, including theft of building materials, equipment, supplies, fixtures, etc.
- 7.3.5 Tenant representatives, design team and contractors who will be working within the airport's security restricted areas are required to be escorted by a Security Escort, at the Tenants expense, and/or obtain a Restricted Area Identification Card (RAIC). Procedural information for obtaining a RAIC may be obtained from the Airport Pass Office.
- 7.3.6 **Accident Reporting**
- a) **All accidents/incidents requiring an emergency response must be reported to the Airport Emergency Line, phone 987-9797.**
 - b) All accidents resulting in injury and/or damage to property not requiring an emergency response must be reported immediately to the Airport Data Centre (phone 987-9408)

7.4 CONSTRUCTION RULES AND PROCEDURES

7.4.1 General Construction Requirements

- a) All construction work at the Airport shall be performed by skilled workers using new material, to the highest standards and best construction practice.
- b) Workmanship on Tenant Leasehold may be inspected by WAA staff at any time.
- c) The Tenant's contractor shall adhere to rules and regulations of the WAA, which have been established to promote safe and timely completion of projects.
- d) The Tenant's contractor shall comply with the Manitoba *Workplace Safety and Health Act and Regulations*.
- e) The Tenant's contractor shall comply with the requirements of WAA Environmental procedures and all applicable environmental laws.

- f) Noise and dust control shall be maintained for to normal airport operations.

7.4.2 **Construction Working Hours**

- a) The Tenant's contractor and suppliers (vendors) will be subject to restrictions which may be imposed by WAA, such as normal working hours, scheduling, access to site, deliveries and coordination of work.
- b) Tenant contractor request(s) to work other than the normal working hours shall be made not less than 7 calendar days before work is to start.
- c) For work done other than during normal working hours, the Tenant's contractor shall pay any and all extraordinary costs (i.e. security, fire watch, etc.), as may be required.

7.4.3 **Health and Safety Regulations**

- a) The Tenant's contractor has sole and complete responsibility for safety during construction of Leasehold. The Tenant is responsible to ensure that its contractor exercises caution in all matters relating to public and construction safety and adheres to Federal, Province of Manitoba health and safety regulations.
- b) WAA may issue to the Tenant's contractor from safety instructions that require immediate compliance.
- c) The Tenant's contractor shall designate a safety representative for the monitor and to enforce safety and security standards.
- d) Fire protection shall comply with all fire regulations in effect under legislation of the Federal Government, Province of Manitoba and City of Winnipeg.

7.4.4 **Access to Leasehold and Deliveries**

- a) Access, staging and schedule arrangements for delivery of construction materials must be pre-approved by WAA.
- b) Tenant Leasehold with rear service doors shall utilize these doors exclusively during construction. Tenant facilities without rear service doors shall be accessed from public circulation space. Restricted access routes will be designated by WAA.
- c) Motor vehicles associated with Works will not be allowed to park on sidewalks, landscaped areas, throughways or along the perimeter of the building. WAA will advise the Tenant's contractor of available parking locations.
- d) The location of the Tenant contractor's dumpster(s) at WAA's Saskatchewan Avenue loading dock shall be coordinated with WAA prior to delivery. Carts, bins, etc. for deliveries or construction must have non-marking rubber tires.

7.4.5 **Construction Hoarding**

- a) Prior to commencing work the Tenant shall provide temporary construction hoarding to isolate the Leasehold from public or shared common areas during construction. The hoarding shall remain in place until removal is approved by WAA at completion of Leasehold construction works.
- b) All hoarding designs shall be submitted to WAA for approval.
- c) Full height hoardings at Leasehold limits shall be provided for construction projects, which will produce excess noise, dust and/or odours. Provide a totally

sealed polyethylene sheet membrane at the top of the partition to prevent the spread of dust, and odours. Hoarding for work in open holdroom spaces with raised ceiling shall be a minimum of 2400 mm in height.

d) Hoarding Materials:

- i) Metal Stud Wall with Gypsum drywall, taped and painted a neutral colour (as approved by WAA) with a 100 mm (4 inch) black vinyl base and 25 mm x 100 mm head trim painted black. The use of wood studs or combustible materials shall not be permitted.
- ii) A hollow metal door and frame, including stops around frame, and locking hardware shall be installed to swing into the space under construction.
- iii) Partitions, framing and bracing shall be designed to be self-supporting and shall require minimal attachment to existing surfaces within the leasehold. Any damage to existing surfaces shall be repaired to a finished condition acceptable to WAA. No mechanical fastening to base building floor or structure is permitted.

7.4.6 Temporary Services, Elevator and Escalator Use

- a) Use of elevators and escalators must be authorized by WAA. Any damage will be repaired by contractor selected by WAA at the Tenant's expense.
- b) Escalators shall not be used by the Tenant's contractor to transport materials and/or equipment.
- c) During construction, the Tenant's contractor will have access to electrical power and water connections at the Tenant's expense.
- d) Construction workers on site shall use only washroom facilities and water resources designated for their use by WAA.

7.4.7 Base Building Services/System Shut Downs

- a) Shut downs of base building systems shall be re-arranged with WAA. The Tenant's contractor shall submit a request for service shut downs to WAA Work Requests at 987-9736 for approval three (3) days in advance of the required system shutdown. WAA will perform any associated work, at the Tenant's expense.

7.4.8 Protection of Existing Conditions

- a) The Tenant's contractor shall protect all existing conditions. Any damage will be repaired by either the Tenant's contractor or by WAA at the Tenant's expense.
- b) The Tenant's contractor may not work or store material in any part of the building other than the Tenant Leasehold without prior written approval from WAA.

7.4.9 Waste Handling

- a) Waste handling shall conform to the rules and regulations of WAA.
- b) Airport Waste bins or dumpsters shall not be used for construction trash/debris disposal. The Tenant is responsible for providing completely enclosed garbage containers and recyclable waste containers and for ensuring that its contractor

removes all garbage and debris from the Leasehold on a daily basis and places it in the Tenant's waste containers.

- c) All debris removal must be legally disposed of as set forth by federal, municipal and provincial standards and/or ordinances. Under no circumstances will any dumping on airport property be allowed.
- d) The Tenant's contractors will be required to remove all construction debris and waste on a daily basis.

7.4.10 **Storage of Materials**

- a) All materials must be stored in the Tenant Leasehold within the limits of Temporary Construction Hoarding, and/or in areas agreed by WAA. Unless specifically authorized, materials shall not be held or stored outside Tenant Leasehold.
- b) No *Hazardous Materials* may be stored on job site or on airport property.

7.4.11 **Construction Site Maintenance**

- a) Construction site must be kept in broom clean condition at all times.
- b) Painting with noxious or hazardous materials should be avoided wherever possible or be scheduled outside of normal working hours. The Tenant's contractor shall effectively seal off work area when over spray (from painting) may occur and whenever dust is generated.
- c) Upon completion of Work, storage sites and work areas shall be cleaned by the Tenant's contractor.

7.4.12 **Monitoring of Construction Projects**

- a) WAA shall will monitor construction of Tenant Leasehold on a regular basis, typically during normal working hours.
- b) The Tenant's contractor may be required to attend progress meetings with WAA to discuss construction schedule, deliveries, safety, security, airport operations and/or other issues, as required.

7.4.13 **Work on Tenant Leasehold in Base Building**

- a) The Tenant's contractor shall coordinate work activities with the WAA so as not to impede, hinder, or delay Airport Operations or other contractors working on site.
- b) Should the Tenant's contractor adversely impact performance of Airport Operations or other contractors working on site, the Tenant shall be responsible for damages due to delay.
- c) The WAA or WAA approved Contractor shall perform the following types of work at the Tenant's expense:
 - i) Roofing modifications or penetrations
 - ii) Exterior wall modifications or penetrations
 - iii) Alterations or penetrations (coring) through existing slabs, decks, steel beams and/or walls
 - iv) HVAC balancing
 - v) HVAC work outside the boundaries of Tenant leasehold
 - vi) Water balancing
 - vii) Cleaning and flushing chilled and hot water systems
 - viii) Cleaning and disinfecting potable water systems

- ix) Connection to base building electrical system for temporary power and lighting
 - x) Connection and/or upgrades to the base building communication system and/or fibre optic cables
 - xi) Modification or additional service to IT systems
 - xii) Connection to base building automation (temperature control) system
 - xiii) Connection to base building paging system
 - xiv) Connection to base building fire alarm system
 - xv) Connection to base building security system
 - xvi) Connection to base building fire protection system
- d) WAA shall make all reasonable efforts to coordinate base building and development support activities so as to avoid construction delays. WAA shall not be responsible for any loss, costs or damages incurred by a Tenant arising out of any delay in construction.

7.4.14 Testing and Verification Requirements

- a) The Tenant's contractor must obtain prior permission from WAA before testing plumbing, gas and fire protection systems (excluding the sprinkler system). The Tenant will be responsible for any damage resulting from such tests.
- b) Except where noted herein, the Tenant's contractor shall provide functional testing and verification that shall demonstrate each system is operating according to the Contract Documents. Functional testing shall bring the system(s) from a state of individual completion to full dynamic operation. Additionally, during the testing process, areas of deficient performance shall be identified and corrected, thereby improving the operation and function of the system(s).

7.4.15 Roof Work

- a) Roof work associated with Leasehold (if any), including openings and mounting equipment, will be performed by WAA approved Contractor at the Tenant's expense.

7.4.16 Hot Work Permits

- a) Prior to undertaking cutting, welding, soldering or other hot work involving use of flame, arcs, or sparking devices, obtain a WAA hot work permit from the Airport Duty Manager, phone 987-7834. There are no costs to the Contractor for the permits. Tenant's contractor shall submit Hot Work Permit Application to WAA for approval a minimum of forty-eight (48) hours in advance of performing work.
- b) No welding, flame cutting, or other operations involving use of flame, arcs, or sparking devices shall be allowed without adequate protection in place prior to commencing operations.
- c) For all proposed arc welding, WAA shall notify NAV Canada of such request and confirm approval due to its potential interference with on-airport radar, radio and instrument systems. NAV Canada must approve the request in advance of the execution of the arc welding.
- d) Additional requirements to be observed by the Tenant's contractor include:
 - i) All combustible or flammable material shall be removed from immediate working area prior to commencing Hot Work. If removal of all such materials is not possible, flammable and/or combustible materials shall be protected with a fire blanket or other suitable noncombustible shield

- to prevent sparks, flames or hot metal from reaching flammable or combustible materials.
- ii) Provision of necessary fire watch personnel and response equipment to control fires from welding, flame cutting, etc. due to flame, arcs, or sparking devices.
 - iii) Protection of workers and other persons on the jobsite in accordance with applicable code and/or legislative requirements.
 - iv) Welders must have been certified within the past eighteen (18) months for the type of welding to be performed.
 - v) The Tenant's contractor will be responsible for obtaining special permits, if any are required.

7.5 DESIGN MODIFICATIONS DURING CONSTRUCTION

- 7.5.1 Subsequent to WAA's final design approval, design changes envisioned for a Tenant's Leasehold must be resubmitted to WAA. Design/contract document revisions must be reviewed and approved by WAA in writing prior to implementation.
- 7.5.2 WAA will respond to design change requests accompanied with appropriate documentation within ten (10) work days.
- 7.5.3 Should Leasehold changes be implemented without WAA approval, the Tenant Leasehold must be restored to its original approved design at the Tenant's expense.

7.6 OCCUPANCY PERMIT

- 7.6.1 The Tenant shall be responsible for obtaining a City of Winnipeg Occupancy Permit for Leasehold. Copy of Occupancy Permit shall be submitted to WAA prior to commencing business operations in Leasehold.

8.0 PROJECT CLOSEOUT

8.1 GENERAL INFORMATION

- 8.1.1 This section contains information pertaining to project closeout of Tenant work, including:
- a) Inspection and Declaration
 - b) Project Closeout Manual
 - d) Operation and Maintenance Manuals
 - e) As-built Record Drawings

8.2 INSPECTION AND DECLARATION

- 8.2.1 Tenant contractor's inspection: The Tenant's Architect and Engineers of record, contractor and subcontractors shall conduct an inspection of the Work, identify deficiencies and defects, and repair as required to conform to the contract documents.
- 8.2.2 The Tenant shall notify WAA in writing of satisfactory completion of the Tenant contractor's inspection and corrections that were deemed necessary have been made.
- 8.2.3 Request that WAA inspect the Work. WAA shall inspect the Work to identify obvious defects or deficiencies. If defects or deficiencies are noted, WAA shall provide a list to the Tenant.
- 8.2.4 Completions: the Tenant's contractor shall submit a written certificate that following have been performed:
- a) The Work has been completed and inspected for compliance with the Contract Documents.
 - b) Defects have been corrected and deficiencies have been completed.
 - c) Equipment and systems have been tested, adjusted, balanced and are fully operational.
 - d) Certificates required by Manitoba Labour (Mechanical and Engineering Division), City of Winnipeg Departments, Health Departments (including Manitoba Health, if applicable), and utility companies have been submitted.
 - e) Operation of systems have been demonstrated to the Tenant's personnel and maintenance provider (refer to Appendix G).
 - f) Works are complete and ready for final inspection. The Tenant's contractor shall notify WAA in writing for a final inspection forty-eight (48) hours minimum, prior to requested inspection.
 - g) The Tenant will schedule final inspections with all appropriate governmental agencies, such as the Winnipeg Building Department and Health Department(s) for occupancy permit(s). WAA will be invited (with two (2) days advance notice) to attend all final inspections.
 - h) During final inspection, WAA' will compile a deficiency list of items and will transmit it to Tenant's contractor.
 - i) The Tenant will complete all deficiency list items within thirty (30) days. After thirty (30) days, WAA reserves the right to complete remaining items on the deficiency list at the Tenant's expense.

- 8.2.5 Upon Substantial Performance of the Tenant Leasehold, the Tenant shall deliver to WAA written confirmation of inspections, along with a Statutory Declaration confirming that there are no liens pertaining to the Works, Worker's Compensation Claims, or other encumbrances pertaining to the Work. Further, the Tenant shall provide evidence that all accounts for work, services, materials and equipment have been paid in full. Occupancy shall not occur until this documentation has been delivered to WAA.

8.3 PROJECT CLOSEOUT MANUAL

- 8.3.1 The following project documentation shall be included in the Project Closeout Manual:

- a) Contract Drawings.
- b) Specifications.
- c) Addenda.
- d) Change Orders and other modifications to the contract.
- e) Reviewed shop drawings, product data, and samples.
- f) Field test records.
- g) Inspection certificates.
- h) Manufacturer's certificates.
- i) City of Winnipeg Building permit(s)
- j) City of Winnipeg Occupancy permit.
- k) Final site survey certificates, certifying that completed Works are in conformance or nonconformance with the contract documents.
- l) Deficiency list (and deficiency list closeout verification).
- m) Design Report
- n) Operations and Maintenance Manuals (See Section 8.4)
- o) As-Built Record Drawings (See Section 8.5)

- 8.3.2 Project closeout manual shall include final design report signed and sealed by Engineer and/or Architect of record for project, the design report shall include;

- a) Statement to confirm design objectives and design attributes.
- b) Statement to confirm compliance with WAA design guidelines.
- c) Statement to confirm compliance with Universal Design standards.
- d) System performance criteria, if applicable.
- e) Code compliance analyses, including, but not limited to:
 - i) Fire exits.
 - ii) Travel distance to fire exits.
 - iii) Fire protection systems.
 - iv) Fire separation.
 - v) Fire alarm system.
 - vi) Fire detection.
 - vii) Emergency and exit lighting.
 - viii) Emergency power.
 - ix) Building materials, including flame spread and smoke rating.
 - x) HVAC and plumbing systems, if applicable.
- f) Capacity/demand analyses (calculations) for mechanical and electrical design.
- g) Structural analyses for point loads of equipment installed on the floor and/or suspended from the ceiling structure, if applicable.
- h) IT voice and data services.
- i) Security systems.

- j) Public address systems.

8.3.3 The Project Closeout Manual submission shall be submitted to WAA in hard copy and electronic format. Submit of three (3) hard copies and electronic version on CD.

- a) Organize data in the form of a manual.
- b) Binders: vinyl, hard covered, a three D-ring, letter size 219 x 279 mm with spine and face pockets.
- c) Cover and spine: identify each binder with type or printed title, 'Design Report Document', list title of the Project and identify the subject matter of the contents.
- d) Arrange contents by systems, under section numbers and sequence of Table of Contents.
- e) Drawings shall be in both original electronic digital (.dwg) format AutoCAD Release 2010 or newer and .pdf format on CD.

8.4 OPERATION AND MAINTENANCE MANUALS

8.4.1 Submissions

- a) Prior to Substantial Performance of the Work, submit to WAA, three (3) final copies of Operation and Maintenance Manuals in English.
- b) Note in the document the type, source and quality of products provided.
- c) Typewritten text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- d) Along with the hard copies of the manuals that are submitted to WAA, submit an electronic version of the manual on CD.

8.4.2 Format

- a) Organize data in the form of an instructional manual.
- b) Binders: vinyl, hard covered, a three D-ring, letter size 219 x 279 mm with spine and face pockets.
- c) Cover and spine: identify each binder with type or printed title 'Project Record Documents', list the title of the Project and identify the subject matter of the contents.
- d) Arrange content by systems, under section numbers and sequence of Table of Contents.
- e) Text: manufacturer's printed data or typewritten data.
- f) Drawings: provide with reinforced punched binder tab. Bind in with text and fold larger drawings to size of text pages.

8.4.3 Submission of Electronic Version

- a) Submit an electronic version of the Operation and Maintenance Manual on CD.
- b) Electronic version shall have data in "searchable and retrievable" format.
- c) Drawings shall be AutoCAD Release 2010 or newer in electronic digital (.dwg) format.
- d) All drawing submissions in .dwg format shall have "X-References" bound into the drawing.

8.4.4 Operation and Maintenance Manuals Content

a) Product Data

- i) Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for reordering custom manufactured products.

b) Equipment and Systems

- i) For each item of equipment and each system, include the description of the unit or system and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- ii) Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- iii) Include installed colour-coded wiring diagrams.
- iv) Operating procedures: include start-up, break-in, and routine normal operating instructions and sequences. Also, include regulation, control, stopping, shutdown, and emergency instructions and include summer, winter, and any special operating instructions.
- v) Maintenance requirements: include routine procedures and guide for trouble-shooting: disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- vi) Provide servicing and lubrication schedule, as well as a list of the lubricants to be used.
- vii) Include manufacturer's printed operation and maintenance instructions.
- viii) Include sequence of operation from the controls manufacturer.
- ix) Provide installed control diagrams from the controls manufacturer.
- x) Provide charts of valve tag numbers with location and function of each valve, keyed to flow and control diagrams.
- xi) Include Testing and Balancing Reports.
- xii) The Tenant's contractor shall submit a data sheet in a format as required by WAA for each piece of maintainable equipment and building material, including, but not limited to: 1) General equipment/material information including manufacturer's name, model, drawing reference number, warranty start and expiry dates, installed date, vendor name, brief description; and 2) Particular equipment information for the following, including, but not limited to electrical equipment including motors, circuit breakers, transformers and other maintainable apparatus, mechanical equipment including pumps, valves, heat exchangers, diffusers, heating/cooling coils, filters, heat exchanger, heat pumps, fire dampers, actuators, etc.
- xiii) The Tenant's contractor shall submit the equipment/material data sheet information noted above in a Microsoft® Excel® spreadsheet.
- xiv) Provide a summary of warranty expiry dates for all equipment and systems. (Appendix F form to be used for warranty period reporting).

c) Other Documents

- i) List of all mechanical and electrical equipment, including manufacturers' names, model numbers and installer, as well as the installation date.

- ii) Manufacturer's certifications, inspection certifications, field test records that are required by individual construction specification sections.

8.5 AS-BUILT RECORD DRAWINGS

- 8.5.1 Regardless of the scope of the project or work, all modifications or alterations must be documented on As-built record drawings for the Leasehold construction. Tenants shall submit at the end of the construction period and within the time period specified by the Lease, As-built record drawings to WAA documenting complete as-constructed condition of the Leasehold. If the required as-built documentation is not received by WAA within the specified time frame, WAA shall employ engineering/architectural firm to complete as-built drawings at the Tenant's expense.
- 8.5.2 Tenant contractor shall record as-built record information concurrently with construction progress by red line markup on a set of black line opaque drawings.
- a) Contractor shall not conceal work until required information is recorded.
 - b) Legibly mark each item to record actual construction locations on Construction and Shop Drawings, including:
 - i) Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - ii) Field changes of dimension and detail.
 - iii) Details not on original Construction or Shop Drawings.
 - iv) References to related shop drawings and modifications.
 - v) Tenant's contractor shall label each sheet with notations including 'Record Drawings Complete' with a signature and date.
 - c) Legibly mark each construction specifications item to record as-built construction conditions, including:
 - i) Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - ii) Changes made by addenda, change orders and field instructions.
 - iii) Other documents: manufacturer's certifications, inspection certifications, field test records that are required by individual specification sections.
- 8.5.3 Tenants are responsible to ensure that the Architect(s) and Engineer(s) of record, including; Architectural, Structural, Electrical and Mechanical (if applicable), who are responsible for the Tenant's construction documents, perform a final inspection of the work and attest in sign off that the project has been constructed in conformance with the construction documents, code requirements, and that all equipment and systems are operating as designed and specified.
- 8.5.4 Tenants are responsible for submittal to WAA of as-built drawings for the completed work. As-built drawings shall be signed and sealed by the Tenant's Architect and/or Engineer of record. Drawings shall record in electronic format the final as-built conditions as verified by site inspection and Tenant contractor record drawing markups.
- a) As-built record drawings submittal shall include one copy hard copy paper format (size A1 preferred) to scale and both original electronic digital (.dwg) format AutoCAD Release 2010 or newer and .pdf format on CD.
 - b) Drawings will be reviewed by WAA for accuracy. Drawing errors, if any, shall be corrected by the Tenant at the Tenant's expense.

APPENDIX A

WAA FACILITY ALTERATION PERMIT APPLICATION FORM

APPENDIX B

WAA BUILDING SERVICE SHUTDOWN REQUEST FORM

APPENDIX C

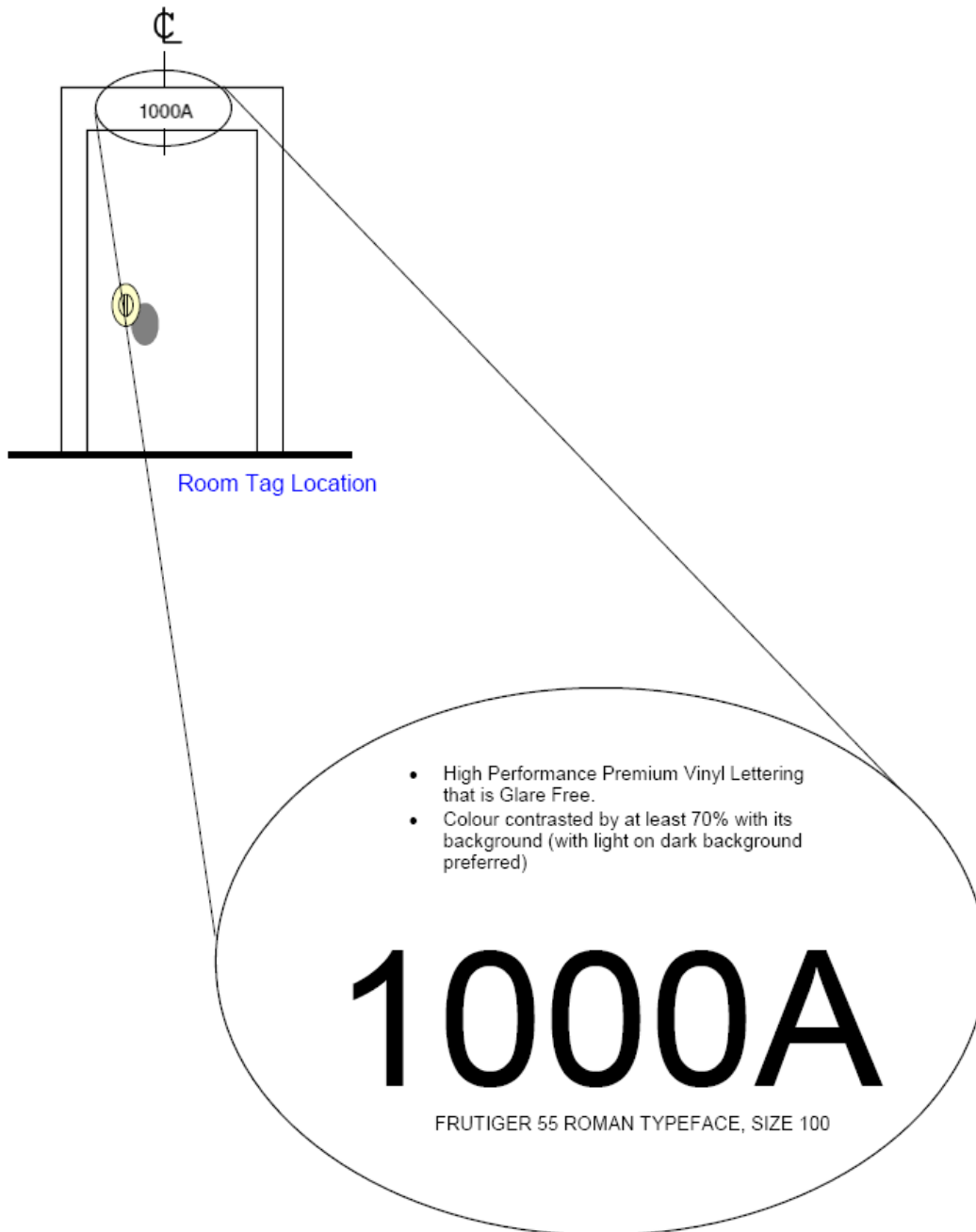
WAA CADD STANDARDS

APPENDIX D

ROOM TAG DIAGRAM

Appendix D - Room Tag Diagram

Room Tag for Tenant Space



APPENDIX E

PRE-CONSTRUCTION CHECKLIST

Appendix E - Pre-Construction Checklist

Tenant construction work shall not be allowed to proceed until the items noted in the following Table have been submitted and/or completed.

Item No.	Item	Date Received	Complete		Comment
			Yes	No	
1	Letter of authorization to proceed				
2	Facility Alteration Permit (FAP)				
3	A&E services during construction				
4	Construction contract				
5	List of sub-contractors				
6	Signed & Sealed Contract Documents				
7	List of base building modifications				
8	Contractor's Insurance Certificates				
9	Performance and Labour and Material Bonds				
10	Construction Schedule				
11	Pre-Construction Meeting				
12	City of Winnipeg building permits				
13	Tenant Contractor Project Health and Safety Plan				
14	Tenant Contractor Emergency call list				
15	Letter confirming good standing of Tenant Contractor from Worker's Compensation Board				

APPENDIX F

WARRANTY REPORT FORM

Appendix F – Warranty Report Form

Report No. _____

Re: **Air Terminal Building**
1970 Wellington Avenue
Winnipeg, Manitoba R3H 1C2

Please print all information; insert name of Tenant's Contractor or maintenance service provider below:

Name: _____ Date: _____

Fax no: _____ Telephone: _____

1. Name and position of Tenant's representative reporting: _____

Telephone: _____ Fax: _____

2. Name and location of Tenant Leasehold: _____

3. Date problem first noticed: _____

4. Was this problem reported previously (yes or no)? _____

If answer is "yes", when was it reported and what action was taken previously?

5. Action required:

a. Area of building or site (give room number and name, if applicable): _____

b. Description of problem: _____

6. Action taken by Contractor / Subcontractor / Supplier:

Date: _____ Representative: _____

APPENDIX G

RECORD OF TENANT TRAINING FORM

Appendix G – Record of Tenant Training Form

Report No. _____

Re: **Air Terminal Building**
1970 Wellington Avenue,
Winnipeg, Manitoba R3H 1C2

Please print except for signatures

Description of system/equipment:

Related Specification Section No: _____

Description of training/briefing: _____

Date(s) of training/briefing:

Number of hours of training:

Name(s) of **Contractor(s) / Manufacturer(s)** conducting training/briefing:

1. _____ 2. _____ 3. _____

Name of individual(s) conducting training/briefing:

Print Name 1. _____ 2. _____ 3. _____

Signature(s): 1. _____ 2. _____ 3. _____

Telephone: _____, Fax: _____

Date report submitted: _____

I, (name of **Tenant's representative(s)** receiving training/briefing):

1. _____ 2. _____ 3. _____

confirm that I/we have received the training / briefing described above:

Signature(s): 1. _____ 2. _____ 3. _____

Telephone: _____, Fax: _____