



TORONTO PEARSON INTERNATIONAL AIRPORT  
TERMINALS 1 & 3

# TENANT DESIGN STANDARDS

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# 1. GENERAL INFORMATION

## 1.1. INTRODUCTION

### The Company

On December 2, 1996, the GTAA assumed management, operation, and maintenance of Toronto Pearson – Canada’s largest and busiest airport – from Transport Canada. Since taking over management, the GTAA has gone through a three-stage evolution. Initially our focus was that of a construction company as we oversaw the massive Terminal 1 development project, along with the enhancement of our existing facilities. As those project were completed, we shifted more our every and resources toward setting new standards of excellence as an airport operator.

Now we’re once again adjusting our strategic priorities to focus on one key goal: better serving the needs of all Toronto Pearson passengers. Our efforts to constantly refine and enhance quality of service are vital to achieving long-term success in a fiercely competitive air travel marketplace.

### Vision

Toronto Pearson to be the best airport in the world: Making a difference, connecting the world.

### Mission

Passengers are our passion

### Values

Respect and Integrity

### Behaviours

Execute Flawlessly, Lead People, Improve and Innovate, Influence

### Rules of the Runway

- Results First- Safety Always
- Act Now – Be Transparent – Be Accountable
- Win as a Team
- Relationships Matter

### Design Intent

The design program has taken the philosophical position that the design of storefronts and concession spaces should strike a balance between variety and consistency. “Variety” in this context means the GTAA welcomes creativity and diversity of Tenant Design Submissions. “Consistency” in this context means that Tenant Design Submissions are to complement the Terminal Architecture. The design of all Tenant spaces shall be respectful of the terminal architecture and shall be consistent with the design standards and criteria embodied in this manual.

These standards are intended to be met by proposing contemporary design solutions which may be achieved by a combination of branding, materials, colours, textures and forms consistent within the standards.

The GTAA and the design team are committed to achieving the following goals with the Tenant Program. Tenants will be required to implement design solutions consistent with these aims.

- To create design responses that supports the Mission Statement above.
- To create innovative and unique designs from all tenants, which communicate distinctive and memorable images consistent with these Standards. Design concepts which have been “parachuted” in from other projects without regard to the specific criteria established in these standards will not be accepted.
- To creatively plan Tenant spaces that are compatible with the operational requirements of the airport and with passenger convenience.
- To create Tenant spaces which complement the architectural qualities of the Terminal or the building the tenancy is located in and are compatible with adjacent tenancies.

### **Intent of this Manual**

This Tenant Design Standards, hereinafter referred to as the TDS, is intended to provide Tenants, their designers, and contractors with information required for the design and construction of their leasehold improvements at Toronto Pearson International Airport. It contains:

- Landlord's criteria for design
- Procedures for obtaining the required approval of design
- Guide to regulations covering design and construction procedures throughout the project

It is the responsibility of the Tenant and its contractor to obtain and become familiar with the Landlord's standards and requirements as embodied in the Lease Agreement and the TDS prior to commencement of the Tenant's Work. In case of discrepancy between the TDS, Airport Construction Code, and the Lease, the Lease shall take precedence and shall apply.

This document should be read in conjunction with the Airport Construction Code.

## 1.2. DEFINITIONS

### **ACTIVITY NOTICE –**

GTAA form describing planned construction/project activities, which is required to be completed and submitted for GTAA approval prior to commencement of any such work, for the purpose of confirming stakeholder acceptance.

### **AIRSIDE –**

The portion of the airport that is located post security (after the security gates or security walls).

### **CLOSURE LINE –**

Line of storefront entrance door (sliding, rolling, swing).

### **CONCOURSE –**

Pre security, the public circulation and queuing area associated with airline check-in and ticketing positions. Post security, the main public corridor that runs through the Terminal. Retail concession spaces are generally located on one side of the concourse. Customer queue lines, seating areas including furnishings, accoutrement counters, waste containers, merchandising displays, promotional signs, and merchandise shall not extend from the lease line into the concourse.

### **CONSTRUCTION COMPLIANCE & PERMIT OFFICE (CCPO) –**

Authority having jurisdiction and issuer of the Facility Alteration Permit (FAP) for all airport construction.

### **DEFICIENCY LIST –**

A list of deficiencies, prepared by the LANDLORD or its designated representative, prior to Substantial Performance and prior to occupancy being granted by CCPO.

### **DESIGN CONTROL ZONE-**

An area inside the PREMISES that extends from the LEASE LINE 1.5 meters back into the space. This zone, where it occurs, will be noted on the LOD. Defined in Lease as “Soft Retail Control Zone.”

### **DEMISING WALL –**

Any wall separating a tenant’s space from another tenancy or common area. Refer to National Building Code, latest edition, for required rating.

### **HOLDROOM-**

A room or area located adjacent to a Boarding gate, with seating for passengers to wait for departing flights.

### **LANDLORD –**

The Greater Toronto Airports Authority (GTAA) or its designated representative.

**LANDSIDE –**

The portion of the airport located pre-security (before the security gates or security walls).

**LBPIA –**

Lester B. Pearson International Airport

**LEASE–**

Agreement between the Tenant and the Landlord. Tenant design shall be in accordance with this manual and the Lease. Where there is a conflict, the Lease shall be the governing document.

**LEASE LINE –**

The perimeter line which delineates and surrounds the PREMISES. The lease line generally occurs at the exterior face of a glass storefront, the centreline of a demising wall between tenancies, or the centreline of a common area, concourse or exterior wall and will include the Soft Retail Control Zone (if applicable). Work within the PREMISES is considered tenant unless otherwise noted.

**LEASE OUTLINE DRAWING (LOD) –**

A drawing of the PREMISES that shows the LEASE LINE, utility stub-out locations, and the Design Control Zone (if any). The LOD will be furnished to the Tenant by the LANDLORD prior to the signing of the Lease. All information provided on the LOD shall be field verified by the Tenant prior to start of design.

**MATERIAL MOVEMENT FORM –**

GTAA form describing planned deliveries of materials and/or equipment, which is required to be completed and submitted to the Airport Logistics Service Provider for approval, for the purpose of scheduling such deliveries into the Terminal buildings, in compliance with the Airport Logistics Plan.

**PREMISES -**

The area of the airport that has been leased by the Tenant. See LOD.

**SOFT RETAIL CONTROL ZONE -**

The zone beyond the hard retail zone, as defined by the Lease Line, that is unique in that specific elements – flooring, enclosed or open space and/or architectural elements are base building elements. These have specific rules as to their elements use/articulation by the Tenant.

**TDS – Tenant Design Standards**

### 1.3. APPLICABLE CODES

#### List of Relevant Codes

The codes listed herein supplement the design documents requirements and the requirements of the applicable acts, legislation and regulations. The design and construction shall comply and be in conformance with the more stringent standard of the current edition of:

#### 1.3.1 General Application to all Trades

- National Building Code of Canada and its supplements
- Ontario Building Code
- Canada Labour Code
- National Fire Code of Canada
- National Fire Protection Association Standards
- Ontario Fire Code
- Water Supply for Public Fire Protection, FUS
- Occupational Health and Safety Act and Regulations
- Workplace Hazardous Material Information System (WHMIS) and Material Safety Data Sheets (MSDS)
- Hazardous Material Act
- Expropriation Act
- Canadian Human Rights Act
- Canadian Standards Association (CSA)
- Environmental Protection Acts both national and provincial
- Canadian Environmental Assessment Act
- Canadian Environmental Protection Act
- Fisheries Act
- GTAA ISO 14001, Environmental Management Manual and associated requirements
- GTAA Airport Construction Code
- American Society for Testing and Materials, ASTM
- GTAA Commissioning Manual and procedures
- GTAA Standard Drawings and Specifications
- GTAA CADD Standard Guide
- GTAA Maximo System (RMAX) – *Asset Management System*
- Canadian National Master Construction Specifications (NMS)



### 1.3.2 Architectural

- GTAA Signage Standards and Guidelines Manual
- GTAA Exterior Building Materials Guideline
- Federal Identity Program Manual (For Regulatory and Prohibitory and Employee Identification)

### 1.3.3 Structural

- Design of Concrete Structures for Buildings, A National Standard of Canada, CAN3-A23.3
- Methods of Test for Concrete, Canadian Standard Association, A23.2
- Pre-cast Concrete- Materials and Construction, A National Standard of Canada, CAN3-A23.4
- Canadian Welding Bureau (CWB)

### 1.3.4 Electrical and Electronics

- Canadian Electrical Code, CSA Standard C22.1, C22.2 and C22.3
- Ontario Electrical Safety Code, latest edition
- Underwriters' Laboratories of Canada, ULC Standards
- National Electrical Manufacturers Association (NEMA) Standards
- Illuminating Engineering Society of North America (IESNA) Standards
- GTAA Identification and Labelling Standards Manual

### 1.3.5 Mechanical

- Canadian Plumbing Code
- American Petroleum Institute (API)
- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- Sheet Metal and Air Conditioning Contractor's National Association, SMACNA Standards
- Boiler, Pressure Vessel and Pressure Piping Code, CSA B51
- Natural Gas and Propane Installation Guide, CSA B149.1

### 1.3.6 Civil

- Aerodrome Standards and Recommended Practices TP 312
- ICAO, Aerodrome Design Manual, Doc 9157-AN/901 and Annex 14
- Land Use in the Vicinity of Airports, TP 1247
- Airport Drainage Manual Design, AK-70-16
- Pavement Construction Records, AK-68-24
- Pavement Construction: Materials and Testing, ASG-06

- Manual of Pavement Structural Design, ASG-19
- FAARFIELD Pavement Design by FAA
- Pavement Construction: Methods and Inspection, ASG-20
- American Association of State Highway and Transportation Officials, AASHTO
- L.B.P.I.A. Storm Water Management Master Plans
- Airside Development Project, Environmental Impact Statement
- Concrete Materials and Methods of Construction, Canadian Standard Association, A23.1

## 2. GENERAL PROCEDURES AND RESPONSIBILITIES

### 2.1. The TDS are to be read in conjunction with:

- The Lease Agreement (hereinafter referred to as the Lease)
- Request for Proposal (RFP) or Call for Expression of Interest issued by GTAA (where applicable)
- Facility Alteration Permit (FAP) process prescribed by the Landlord
- GTAA Airport Construction Code
- GTAA CADD Standard Guide

Due to the uniqueness of the Airport environment, it is important that the Tenant be familiar with the construction standards outlined in the GTAA Airport Construction Code.

### 2.2. Base Building Drawings and Specifications

2.2.1. The Landlord will provide a copy of the GTAA CADD Standard Guide along with appropriate electronic settings and resource files.

2.2.2. Where available, the Landlord will provide electronic files of the following documents, for the Tenant's information. The Landlord will make available the best information at its disposal, but takes no responsibility nor warrants the accuracy of information, Record Drawings etc. provided for the purposes of design and construction. Verifying the accuracy of such information, records and drawings is the responsibility of the Tenant, the Tenant's consultants and/or contractors.

2.2.2.1. Key Plan, for locating the Tenant's premises on GTAA Property or in the Terminal.

2.2.2.2. Architectural floor plan, and, if applicable, reflected ceiling plan of the Tenant's premises.

2.2.2.3. Mechanical, electrical, plumbing and sprinkler plans of the general location indicating existing services and/or general locations of capped off or terminated services, if known.

2.2.2.4. Such elevations and additional details that the Landlord believes to be applicable to the Tenant's premises.

2.2.2.5. Description of Tenant's sustainable design approach, listing materials, methods and systems described in accordance with section 3.22 Sustainable Design Criteria.

In addition, other base building drawings and specifications are available for review. Copies of selected sections will be provided on request.

### 2.3. Tenant Requests To Modify The Base Building

- 2.3.1. Services will be provided to the Tenants' Lease Line, generally located as per the base building drawings. Such services will be capped or terminated in the Premises ceiling space, or below the slab (known as the Demarcation Point). In some circumstances, connection by the Tenant to the termination points may require the use of the base building sub-trades; Proponents are referred to 'Article 2.7 Work by Base Building Contractors' of the TDS and to the engineering design criteria contained in Section 3 of the TDS, for more detailed description of these requirements.
- 2.3.2. If the Landlord agrees, the Landlord will supply a quotation to the Tenant for the GTAA to do such upgrade work, for the Tenant's agreement and authorization. Such quotation shall include all related costs, including those of the GTAA's consultants, plus 21% for GTAA coordination, supervision and administration.
- 2.3.3. Work performed by the Landlord on behalf of Tenant or to accommodate Tenant design requirements or base building modifications shall require a Tenant Authorization Form. The Tenant Authorization Form shall be prepared and issued by the GTAA, and signed and submitted by the Tenant prior to commencement of the affected work.
- 2.3.4. Costs authorized by the Tenant, under the Tenant Authorization Form, shall be paid by the Tenant directly to the GTAA, on demand, following completion of the work by the GTAA's contractor. At the GTAA's option such costs may be invoiced, due and payable on a monthly basis, pro rata.
- 2.3.5. The GTAA, in its sole discretion, may require the Tenant to provide an irrevocable Letter of Credit as security against all of the Tenant's obligations for work performed under the Tenant Authorization Form.
- 2.3.5.1 The GTAA, in its sole discretion, may require the Tenant to provide a refundable Letter of Credit as security against data and drawing submission obligations as laid out in Section 4.
- 2.3.6. Under no circumstances will the Tenant's contractor be permitted to make modifications to the base building systems.
- 2.3.7. Occupancy shall not be permitted until the agreed account is paid up to date.

### 2.4. Pre-Construction Requirements

Following the design approval process there are several mandatory requirements prior to commencement of construction. Refer to the following:

- 2.4.1. Refer to Airport Construction Code for all Health and Safety requirements.
- 2.4.2. Refer to Airport Construction Guide for Permit and Inspections requirements.

### 2.4.3. Security Identification Badge – Restricted Area Identification Cards (RAIC)

All personnel working in a post security area shall either be a holder of a valid RAIC or be accompanied by someone with a valid RAIC at all times. No one is allowed in a designated airport restricted or controlled area at any time unless wearing the proper RAIC or accompanied by a person with a valid RAIC at all times. Questions regarding RAIC requirements for construction personnel can be directed to GTAA Pass Permit Office at (416) 776-7277. Refer to the Airport Construction Code Part 6 for “Security/ Access Control Procedures”

## 2.5. Safety and Security

2.5.1. Security for the Premises during the Tenant’s Fixture Fit-up Period shall be the sole responsibility of Tenant, who shall take all necessary steps to secure the Premises. The GTAA shall have no liability for any loss or damage including theft of building materials, equipment, supplies, fixtures or stock. Tenant shall become familiar with and conform to the standards set out in the Airport’s "Safety and Security Manual."

## 2.6. GTAA Commissioning Interface/Coordination

2.6.1. Tenant contractor’s responsibilities related to testing and commissioning shall adhere to the “Airport Construction Code – Occupancy/ use of Construction”

## 2.7. Work by Base Building Contractors

Tenant improvement work for any of the following items shall be performed by the Landlord’s base building subtrade contractors under contract to the Tenant at the Tenant’s expense. Requests for such work shall be made by the Tenant to the Landlord or its designated representative via the Tenant Authorization form. Such work will not proceed until all required forms (Activity Notice, Material Movement, etc) have been processed by the Landlord or its designated representative and returned to the Tenant and such work shall include and shall not be limited to:

- Roofing modifications or penetrations.
- Exterior wall modifications or penetrations.
- Alterations or penetrations (coring) through existing slabs, decks, steel beams and/or walls.
- HVAC balancing.
- Water balancing.
- Cleaning and flushing of chilled and heating hot water systems.
- Cleaning and disinfecting of potable water systems.
- Tie-in to base building electrical system for temporary power and lighting.
- Tie-in to base building communication systems and fiber optic cables.
- Building automation (temperature control) system.

- Repair of fire proofing and fire-stopping penetrations.
- Paging system work.
- Fire alarm system work.
- Security system work.
- Sprinkler system work.

## **2.8 Sign-Off Procedure for Occupancy**

2.8.1 Refer to the “Airport Construction Code” for sign-off procedures

## **2.9. Reference to Hoarding Standards**

2.9.1. Refer to GTAA Airport Construction Code, Section 7.7.5. “Construction Hoarding and Barriers”.

## **2.10. Reference to Core Drilling Standards**

2.10.1. Refer to GTAA Airport Construction Code, Section 7.13.3. “Core Drilling and Cutting of Floor Slab”.

2.10.2. Refer to “Core Drilling Guidelines at Toronto Pearson”

### 3. DESIGN CRITERIA

#### 3.1. Terminal Layout

##### 3.1.1. Terminal 1

Terminal 1 is composed of two primary building areas; a main building accommodating both public and passenger processing facilities (“the central processor”) and a series of piers accommodating the gate facilities. The western most pier, Pier D accommodates domestic flights including a commuter facility. Pier E and Hammerhead E accommodate primarily domestic gates with swing domestic / transborder gates on the East Side of the pier. The liner area flanking the south side of the main processor building as well as Pier F accommodates primarily transborder flights. Hammerhead F accommodates primarily international flights with the capability to accommodate transborder swing gates in the areas adjacent to the pier.

Curbside access to Terminal 1 is provided at three levels; level 3 for departure / passenger drop-off, level 1 for arrival / passenger pick-up and level Ground/Service for public transportation and group processing along with service access. Two pedestrian bridges connect the Terminal to two levels of the parking garage that are dedicated short term parking. The bridges connect to the Terminal at level 2, with easy circulation to both the departure and arrival levels.

There are four levels in the Terminal 1 central processor area:

- Level 3            Check-in, ticketing and departures processing
- Level 2            Primary immigration area for arrival processing, various support facilities/offices for airlines and GTAA, pedestrian bridge connection between terminal and parking garage
- Level 1            Baggage claim hall, Canadian customs processing and greeters hall
- Level G/S        Public Area – ground transportation facility  
Support facilities – Mechanical and electrical service rooms, loading dock, various support spaces and storage

There are five levels in the piers and Airside perimeter of the central processor:

- Level 4            At the head of Pier E – corporate offices for the GTAA  
At the head of Pier F – transborder airline lounge
- Level 3            Security for departing passengers, circulation mezzanines providing separate circulation for departing international passengers and arriving international & transborder passengers
- Level 2            Holdrooms/gate access, retail and passenger support facilities
- Level 1            Baggage handling, airline ramp support and mechanical services
- Level S            Service corridors and mechanical rooms

## Passenger Flow

The main ticketing hall is arranged to serve the three sectors. The central area of the hall is dedicated to transborder check-in and also accommodates the primary US preclearance facilities.

**Domestic** -The departing domestic passengers check-in at level 3, move through the passenger security facilities overlooking the airside and then descend to level 2. Passengers circulate easily at level 2 to all domestic departure gates and retail facilities in piers D and E. The domestic commuter facility is located at level 1, on the apron, at the north side of pier D. The arriving domestic passengers deplane at level 2 and circulate through piers D and E back to the central processor. They arrive at a mezzanine overlooking the claim hall where they descend to the hall to collect their baggage and proceed directly to the domestic greeters area.

**International** -The departing international passengers check-in at level 3, move through passenger security facilities overlooking the airside and then proceed along separate mezzanines at level 3 on the west side of pier F. The passengers circulate at level 3 until they arrive at the hammerhead where they descend to level 2 to reach the holdrooms and retail facilities. The arriving international passengers deplane at level 2 and proceed directly up to level 3 in circulation pods connected to the passenger bridges. Once at level 3 the passengers circulate in separate mezzanines, through the hammerhead and along the east side of the pier back to the central processor. The passengers then descend to level 2 to be processed through the Canadian primary immigration facility and then descend again to level 1 where they reach the international baggage claim hall. After collecting their baggage the passengers pass through the Canadian customs facility and reach the international greeters hall.

**Transborder** -The departing transborder passenger checks in at the center of the departure hall, proceed directly to the US preclearance and then to passenger security facilities all on level 3. The passenger then descends directly to level 2 where the holdrooms and retail facilities are located along the south side of the processor and in the neck of pier F, and the swing gates on the east side of pier E. The arriving transborder passenger deplanes at level 2, circulates through a separate vestibule and then ascends to level 3 where they join the international arriving passenger flow.

## Transfers Between Sectors

The terminal design facilitates easy transfers between sectors. Domestic passengers transferring to international circulate from the gates at level 2 to node E where they circulate up to level 3 and then circulate along the mezzanine to Hammerhead F. Domestic passengers transferring to transborder circulate from the gates to node E where they circulate up to level 3, along the processor and cross into the US preclearance facility. An In-Transit facility shared between domestic and international passengers is located adjacent to the preclearance facility.



Transborder and international passengers transferring to domestic go through the immigration and customs facilities and then proceed back up to the domestic gates. The transborder passengers transferring to international ascend to level 3 where they circulate back to the international hammerhead and then join the international departing passengers. The international passengers transferring to transborder proceed along with the other passengers to the Canadian primary inspection facility where they ascend directly to the In-Transit and US preclearance facilities.

### 3.1.2. Terminal 3

Terminal 3 is composed of two primary building areas; a main building accommodating both public and passenger processing facilities (“the central processor”) and a series of piers (piers A, B and C) accommodating the gate facilities.

There are four levels in the Terminal 3 central processor area:

- Arrivals Transfer      Landside office area
- Departures Level      Check-in, ticketing and departures processing  
Retail court  
Pedestrian connection to Sheraton Hotel and inter-terminal APM station
- Arrivals Level      Baggage claim hall, Canadian customs processing and greeters hall  
Public Area – ground transportation facility
- Service Level      Support facilities – Mechanical and electrical service rooms, loading dock, various support spaces and storage

There are three levels in the piers:

- Arrivals Transfer      Skywalk for arriving international & international transfer passengers, airline lounges, airline service areas
- Departures Level      Holdrooms/gate access, retail and passenger support facilities
- Arrivals Level      Baggage handling, airline ramp support and mechanical services

Terminal 3 is also arranged to serve the three sectors, with the US preclearance facilities located at the west end of the central processor at the departures level.

## Summary

The design and planning of the Terminals have created high capacity, efficient and flexible facilities serving multiple sectors with tremendous swing capabilities able to support varied growth and development for Toronto air travel.

### 3.2. Concept for Design of Public Areas surrounding the Retail Areas

The public areas that surround the retail areas occur where several pedestrian flows converge and disperse. Much like main intersection or "town squares". The public areas create a location for passengers to orientate, meet, dine and shop. Also, similar to public squares, public art is featured as a visual marker to the space. Thus, circulation is enhanced by public art, dining, shopping, and identity.

In order for these public areas to be successful, it is important that retail kiosks or signage are not permitted to impede circulation or reduce the width of passenger flow in these areas.

Furthermore, retail signage must not detract from wayfinding signage and retail architecture must not compete with the intent of the public art.

### 3.3. "Hard" and "Soft" Zones

In the Terminal there are two basic categories of Tenant space:

- "hard" in-line spaces that are contained behind a storefront, where Tenants are free to select their floor and ceiling finishes (consistent with these standards), and
- "soft" spaces within control zones also referred to as "Soft Retail Zone", in front of a storefront, where the floor and ceiling finishes are provided by the Landlord, and Tenants may place merchandising and various items of furniture (consistent with these standards).

Tenants are encouraged to make creative use of the "soft" zones in this terminal for the purposes of creating an urban sidewalk character and establishing their own identity. The "soft" zones should also be designed to form an inviting "soft" transition zone between public circulation and store interiors.

The "soft" zones must be designed to maintain openness and visibility through the area and adhere to the vertical zoning parameters set out in Section 7.4 - Kiosks Type K-3.

### 3.4. Toronto Pearson Thematic Guidelines

It is intended that the concession program as a whole be integral in conveying Toronto Pearson's design themes in a memorable, unique and distinctive manner. The creative challenge posed to Tenants and their designers is to achieve this character in a manner that is contemporary, subtle and sophisticated.

The Central Theme established by the GTAA is:

- **Celebrate Toronto's Cultural Possibilities and World Connections**

The Sub-Themes which are variations of the Central Theme are:

- Innovation Happens Here
- Arts & Performance
- Beyond Toronto
- World Connections

In meeting this challenge and working with the above themes, it is important to stress that “Theme park” superficiality will not be acceptable. The GTAA is looking for creativity, ingenuity and sophistication from Tenants and their designers in their interpretation of these themes.

The terminals will be organized into various zones, where each zone will be designated to focus on one of the sub-themes. In concert with their own brand identity, Tenants are therefore required to explore and express the theme of their respective zone, as defined by the GTAA.

### 3.5. General Architectural Design Criteria

- Design criteria have been developed to maintain design quality and consistency while encouraging designers to be imaginative and innovative.
- The Landlord will review each design submission on an individual basis and in the context of neighboring *Premises*, and reserves the right to require changes to, or reject elements of the design in whole or in part.
- Concessions shall provide a consistent image, signage, and finishes package for the entire *Premises*. This requirement is equally applicable to single concessions and to those having multiple “sub-Tenants”, representing more than one brand or concept in a single Premise.
- Tenants proposing branded concepts shall require and ensure that the brand makes available the full range of their latest concept designs to the GTAA Concessions Program.
- Tenants are reminded that submitted designs will be evaluated against the overall Design Goals and Concepts described in the Introduction Section of this manual.
- Any damage to the Premises or the Building, caused by Tenant or any of its employees, agents, visitors, contractor(s) or workers shall be repaired forthwith by parties designated by the GTAA at its sole discretion and at the expense of the Tenant.
- Merchandising plans shall be designed so that points-of-sale do not generate a customer queue that crosses the Lease Line.
- Store aisles shall be of adequate width to accommodate luggage carts and shoppers on foot as well as minimum wheelchair barrier free paths of travel and required exit routes.

#### **Glazed walls within Tenant Premises:**

- Concession areas with glass walls facing holdrooms, public circulation and exterior glazing are required to maintain openness and visibility into the Premises from public spaces. Trash receptacles, back of counters, cash wraps, display cases, surface applied/self-adhesive signage or graphics, refrigerated dispensing or other equipment along the glass walls is unacceptable. The vertical zoning requirements set out in Section 7.4 Kiosks Type K-1 and K-2 are to be maintained in these areas.

- Exterior curtainwall is considered “no construction zones”. Storage/racking placed against exterior glazed walls is unacceptable, unless reviewed and approved by the GTAA. In such cases, application of adhesive film to the glass is required by the Tenant to create an opaque semi-transparent enclosure. Adhesive film colour, type and installation information is to be provided to the GTAA for review and approval. Adhesive film is to be applied to the Tenant’s side of the glass.

### 3.6. Project Materials and Details

- The Tenant shall provide interior partitioning, painting and decorating, floor coverings, store fixtures and furnishings as accepted by the Landlord. The Landlord reserves the right to reject any Tenant proposed finishes and materials which in the Landlord’s opinion are considered to be not aesthetic, pose a risk, affect life safety and maintenance, conflict with the base building finishes, and/or adjacent approved Tenant finishes.
- All work by the Tenant within the Premises shall be completed with new or acceptable recycled materials. All materials and workmanship shall be of a uniformly high quality consistent with a first class international airport and performed in accordance with the very best standards of practice (and in any event not less than Landlord’s base building standards).
- Airport finishes are subjected to substantial abuse and shall be selected accordingly. Only high quality, durable finishes will be accepted.
- Any material between 0 and 1200mm minimum above finish floor is susceptible to wheelchair, baggage and floor cleaning machine damage.
- Any material between 0 and 250 mm above finish floor is susceptible to baggage cart damage and shall therefore be very durable. Areas such as cash counters require 250mm high base of brushed stainless steel.
- Countertops shall be fabricated from solid or otherwise seamless materials; e.g. solid surface material, glass, formed metal, stone/marble, artisan finished and sealed concrete etc. Plastic laminate countertops will not be permitted.
- Storefront corners between 0 and 1200mm minimum require concealed fastened, brushed stainless steel 1.3mm thickness or GTAA approved alternate corner protection.
- Overall design should minimize appearance of corner protection.
- Doors of stores with fixed glass display windows are to be swinging frameless with a top and bottom rail.
- When opaque materials are used within the storefront design, the proportion between opaque and transparent materials will be subject to approval by the GTAA.
- Sliding glass doors, which stack one behind the other, are permitted when pocketed in an opaque enclosure.
- Door tracks shall be flush with the finished floor and soffit. Floor tracks are not recommended.

- All millwork and casework shall be fabricated to the latest AWMAC standards, premium grade.

### 3.6.1. Acceptable Materials Within the Leased Premises:

The materials listed below have been selected to encourage variety and creativity of storefront design and their use is encouraged.

- Glass – etched (sealed), sandblasted (sealed), tinted, clear. Glass shall be 6mm minimum safety glass as per Airport Construction Code.
- Metals - stainless steel, bronze, copper, light bronze, anodized aluminum, perforated, gun metal.
- Painted Metals – acceptable with the following finishes resinous coating – 2 coat system (e.g., Kynar and Duranar type).
- Natural Stones – marbles, granites, slate, and limestone.
- Plastic Laminates –solid colours, acceptable decorative patterns; wood grained laminate will be evaluated on a case by case basis.
- Solid surfacing material.
- Ceilings – see 3.6.7.
- Wall covering.
- Architectural concrete with proper sealant.

### 3.6.2. Unacceptable Materials Within the Leased Premises:

The materials listed below will not be accepted as part of the design for a storefront or Leased Premise.

- Artificial versions of stone, marble, tile, wood, brick or other natural material.
- Indoor/outdoor carpet.
- Any material that would constitute a fire and/or public hazard.
- Any material that, in the GTAA’s opinion, is of low quality, non-durable and/or difficult to maintain.
- Fabrics.
- Paints – “zolutone” types or fluorescent (textured multi-colored paint systems)
- Vinyl tile or sheet vinyl within the sales area.
- Mirrored finish linear ceiling systems.
- Acoustic tile ceilings other than as described in paragraph 3.6.7.

- Exposed ducts, conduits, pipes and other mechanical and electrical equipment in any area open to public view, unless thematically appropriate, (to be evaluated on a case by case basis).
- Security alarm tape on storefront windows.
- Neon lighting used as signage, in ceiling systems or used as accents.
- Glass Floor Tile.
- Mosaic Floor Tile – other than small areas of accent.
- Floor Tile smaller than 200mm x 200mm.
- Wall Tile smaller than 150mm x 150mm.
- Brick.
- Use of any Hazardous materials.

### 3.6.3. Materials Subject to GTAA review

- Many building materials and systems can be incorporated in different ways to produce diverse architectural expressions. The goal of the GTAA as outlined in section 3.5, is to achieve a retail character that is contemporary, subtle and sophisticated. To that end, several materials and systems are subject to GTAA review for design intent and appropriate architectural application.
- Wood – The use of wood is permissible if it meets all applicable codes and is used in a manner that adheres to the goals outlined in Section 3.5. Expression should not be rustic or rural, rough or unfinished.
- New or Innovative Materials – The GTAA encourages the use of products that are new to the construction industry. As new products have short track records for durability or maintainability, the GTAA may require test samples for mock-ups or review.
- Ceramic Floor Tile – Floor tile shall comply with all no-skid requirements in Section 3.6.8. as well as adhere to the aesthetic goals outlined in section 3.5.

3.6.4. GTAA approved finish materials are to be extended along demising wall(s) and/or soffit where exposed to the common area at the Tenant's expense.

3.6.5. Showcases or displays shall be in an approved material and shall be internally illuminated with LED lighting.

3.6.6. Any transition in floor level shall not exceed 2% in slope and shall only occur at the interior side of the Tenant's closure line. Tenant's threshold/transition strip to base building finishes to be compatible to base building materials and subject to GTAA approval. Sample shall be provided before installation. Installation and future removal must be able to be performed without damage to base building finished flooring.

### 3.6.7. Ceiling Construction and Access

- The ceiling membrane may be constructed of acoustic tile, gypsum board, plaster, or other materials approved by the GTAA. There shall be no combustible materials in the ceiling space. Ceiling design shall incorporate access to all above ceiling space-mounted GTAA and Tenant equipment requiring inspection and maintenance. The required sizes and locations of access points shall be determined by the Tenant's designer and approved by the GTAA.
- The minimum ceiling height as noted in sections and drawings in Section 7.4. No elements may hang or project below 2440mm above finish floor.

### 3.6.8. Flooring

All new Tenant flooring areas are required to have impervious, non-slip flooring. Appropriate Testing Requirements are as follows:

- A minimum *Dynamic COF of 0.42* is required for all flooring, however 0.6 is preferred.
- The ANSI A137.1-2012 Specifications for Ceramic Tile standard shall be followed.
- The ANSI A1264.2-2006 Provision of Slip Resistance on Walking/Working Surfaces shall be followed.

In addition,

- Provide copies of all current test results under wet, dry and treated conditions on all the specified flooring as per ANSI A137.1-2012 for review and approval by Corporate Risk.
- Hard surface flooring shall be properly installed, in a stable, firm and slip resistant manner.
- The tile supplier shall provide details, procedures and/or training for the proper maintenance and floor care of their products which shall be followed by the Tenant going forward.

All transitions between the different flooring types need to be smooth and level to ensure no tripping hazard is created.

### 3.6.9 Soft Retail Zones

Elements permitted within Soft Retail Control Zones:

- Approved railings – all railings to be modular clear glass railings with a 250mm high brushed stainless steel base. Where areas are required to be screened, translucent or opaque glass is acceptable.
- Approved seating and tables.
- Movable merchandizing cases – maximum 1300mm in height.

- Approved recycling/ waste station.
- Base building flooring.
- Approved Kiosks - conforming to locations and requirements as described in the drawings provided in Sections 7.1-7.4.

Elements Not Permitted Within Soft Retail Control Zones:

- Structures and Elements that enclose the space.
- Table umbrellas.
- Additional equipment that heat, ventilates, or cools the air.
- Alterations of the existing base building flooring.
- Loose lighting or overhead lighting if not within footprint of soft retail millwork.
- Free-standing signage.

### 3.6.10. Sliding Security Gates- Required Type

Horizontally Sliding Screens: Screens shall stack within approved enclosures that conceal them from view when in the open position. Door pocket closure panels are to be equipped with a touch latch or a recessed lock. Door pocket closure panel shall be in the closed position when store closure is exposed. Ceiling tracks shall be fully recessed. Lead and trailing posts to be equipped with top and bottom locks keyed to Landlord standards; surface mounted strike posts are not permissible. Screens shall have vertical lattice curtain pattern on 50mm centres with connecting horizontal links. Finish shall be #4 stainless steel or natural brushed/anodized aluminum. Acrylic or glass grille infill panels are not acceptable.

## 3.7. Structural Design Criteria

3.7.1. Core drilling and/or cutting of floors, ceilings and or walls may be required for tenancies needing plumbing and/or additional mechanical HVAC provisions. Under no circumstances shall the Tenant or its contractor(s), at any time be permitted to drill, or cut conduit, or pipe sleeves, or chases, or duct equipment openings in the floor, columns, ceilings, walls or roofs of the structure without prior review and written acceptance of the proposed locations and sizes by the GTAA. The consultant's fees for these reviews are at the Tenant's expense. The GTAA may, at its option, perform the work at the Tenant's expense plus 21% administration. The tenant shall adhere to these procedures for all core drilling: "GTAA Core Drilling T1" and "Terminal One Parking Garage-Anchoring and Drilling".

3.7.2. Under no circumstances shall the Tenant, its employees, or its contractor(s) enter onto any roof or steel deck of the building, or make any opening in the roof without the prior written approval of GTAA. No roof-mounted antenna or satellite receiving dish antenna is permitted unless approved in writing by the GTAA with respect to location, installation and detail.



- 3.7.3. The Tenant and its contractor(s) shall not impose a greater load on any concrete floor than the design live load or point loads as approved in writing by the GTAA's structural consultant. No unusual loads may be suspended from the underside of the roof or floor structure without GTAA's structural consultant's prior written approval. The consultant's fees for these reviews are at the Tenant's expense.
- 3.7.4 No electrical wiring or conduit will be permitted through or under floor slabs without written approval by the GTAA.

### **3.8. Heating, Ventilating and Air Conditioning Equipment**

#### **3.8.1. General Requirements**

- 3.8.1.1. All installation, servicing and maintenance of HVAC systems must adhere to Federal Halocarbon Regulations, 2003.
- 3.8.1.2. Design and installation of Tenant's HVAC system shall be in accordance with latest ASHRAE design guidelines and all applicable Codes and Standards.
- 3.8.1.3. GTAA will provide heating, ventilating and air conditioning (HVAC) system ductwork to the perimeter of the leased premises. The Landlord system will provide approximately 1.5 CFM per square foot of conditioned air for all spaces. Tenants are responsible for all tie-in connections, variable air volume (VAV) terminals, re-heat coils, exhaust, controls and distribution of conditioned air within the premises
- 3.8.1.4. If served by a variable air volume air handling system, the cooling equipment in the Tenant's space will be in the form of variable air volume (VAV) terminal.
- 3.8.1.5. All modifications to the base building HVAC system within tenant area shall be performed by licensed contractor at the tenant's expense. Installed equipment and/or workmanship that does not meet the GTAA design standards or comply with applicable Codes shall be replaced at the Tenant's expense.
- 3.8.1.6. If the Tenant requires additional capacity that is greater than what is provided under the Landlord's base building standard, where possible and feasible, this work shall be carried out by the Landlord's contractor at the Tenant's expense. If required, the Landlord shall supply and install a revenue grade BTU meter which will be connected to the building management system.

- 3.8.1.7. Exceptionally high cooling loads resulting from tenant equipment, lighting or person loads shall require a dedicated cooling unit separate from the base building HVAC system installed and monitored by BMS at the Tenant’s expense.
- 3.8.1.8. Tenant spaces with IT/Communications room that require cooling all year round shall be provided with dedicated direct expansion (DX) split air conditioning units installed and monitored by BMS at the Tenant’s expense.
- 3.8.1.9. The Tenant shall provide suitable sized access doors within its Premises for all base building HVAC equipment requiring servicing such as but not limited to damper controls, fire dampers and valves.
- 3.8.1.10 Insulate all chilled water piping as per base building standard.
- 3.8.1.11. All floor penetrations around pipes, conduits, ducts, etc. between levels shall be sealed against water, smoke and flame penetration using ULC listed fire stop system to meet fire resistance of floor and installed by approved GTAA contractor at Tenant’s expense.
- 3.8.1.12 All condensate lines shall be insulated to prevent condensation on piping.
- 3.8.1.13 All HVAC equipment that only serve the tenant premises including but not limited make up air units, cooling fan coil units and ecology units must be maintained by the tenant.

3.8.2. Design Criteria

- 3.8.2.1. Tenant HVAC system(s) shall be designed to harmonize with the existing base building design criteria and to prevent adversely affecting the performance of adjacent base building HVAC systems. The design of the HVAC systems shall be based on the following design criteria:

<b>Indoor Design Conditions</b>	
Winter	22 +/- 1°C
Summer	24 +/- 1°C at 50 -60% RH
<b>Outdoor Design Conditions</b>	
Winter	- 20°C
Summer	32°C Dry Bulb (DB), 23°C Wet Bulb (WB)

- 3.8.2.2. With approval from the GTAA, the Tenant may add chilled water fan-coiled units to offset high internal cooling loads. Capped chilled water and condensate drain connections can be provided for this purpose. Chilled water supply temperature will vary based on outdoor temperatures.
- a. Summer: 7°C to 12°C
  - b. Winter: 12°C to 16°C
- 3.8.2.3. Acoustic criteria: Acceptable HVAC noise levels in the public areas and/or the Premises shall be noise criteria (NC) 35-40 for Tenants and NC-40 for Retail.
- 3.8.2.4. Where connections are made to base building capped piping services, the new services shall be cleaned and flushed to prevent contamination of the base building services.
- 3.8.3. Exhaust Systems
- 3.8.3.1. Exhaust systems are required for any Tenant occupancy that may produce odours and/or utilize smoke generating appliances during their operation. The Tenant is responsible for the complete design and installation of exhaust system distribution, kitchen exhaust and make up air within their demised premises in accordance with the applicable Codes and Standards (NFPA 96).
- 3.8.3.2. Food and Beverage Tenants with grease-laden cooking appliances shall provide kitchen equipment exhaust system including ULC listed exhaust hood (Ultra-Violet type) and all ductwork and fire suppression systems, as well as fire alarm tie-in by the GTAA's contractor at the Tenant's expense. System shall be installed and tested to meet NFPA 96 and requirements of GTAA fire prevention.
- 3.8.3.3. Food and Beverage Tenants with grease-laden cooking appliances must provide a ULC listed ecology unit before discharging kitchen exhaust to the outdoors unless otherwise approved by GTAA Engineering. Ecology unit shall be connected to BMS to provide general alarm at Tenant's expense. Refer to Section 3.16 for additional details.
- 3.8.3.4. Provide duct access and clean-outs in accessible locations where required by Code to allow for cleaning and servicing of equipment. Fire rated access door to be provided where required. The kitchen exhaust hood shall incorporate filters to control grease accumulation in the ductwork.
- 3.8.3.5. In specific Tenant kitchen zones, GTAA has approved make-up air to the Tenant space. Tenant is responsible to confirm with the GTAA the amount of fresh air supplied to the space. If make-up air is not supplied by the

GTAA, the Tenant is responsible for providing their own make-up air systems including ductwork, fans, heating equipment and controls at the Tenant's expense.

- 3.8.3.6. Tenant make-up air equipment shall be interlocked with the kitchen exhaust system to ensure simultaneous operation. Make-up air system shall be monitored by BMS.
  - 3.8.3.7. The make-up air system shall be designed such that the total make-up air quantity is at least 80 percent of the exhaust air quantity. The tenant's space is to be under negative pressure with respect to the terminal area to prevent migration of odours outside the kitchen space.
  - 3.8.3.8. All exhaust fans and ecology exhaust shall discharge to the outside at an approved location or building exhaust plenum as per GTAA approval.
  - 3.8.3.9. When through-wall exhaust is permitted by GTAA, the exhaust piping shall extend 900mm beyond the face of the wall.
  - 3.8.3.10. If the exhaust and ecology system is existing, the tenant must verify that the unit is suitable for the tenant's operation and adheres to the requirements of NFPA 96. Cleaning and smoke seal test of the existing ductwork may be required as determined by GTAA Fire Prevention.
  - 3.8.3.11. There is a limited network of sanitary exhaust available for Tenant spaces. If required, and available, sanitary exhaust ductwork services shall be installed by the Landlord's contractor at the Tenant expense.
- 3.8.4. Controls
- 3.8.4.1. The existing HVAC system is monitored and controlled by Johnson Controls Metasys Building Management System (BMS). This system provides automatic control of all heating, ventilation and air conditioning equipment at the airport, and is maintained and operated by the GTAA.
  - 3.8.4.2. All tenants' HVAC equipment shall be equipped with compatible DDC controls and connected to the base building BMS. All connections to GTAA BMS shall be performed by the Landlord's designated controls contractor.
  - 3.8.4.3. Provide a temperature sensor within each tenant space. Individual tenant controls are not permitted without written approval from GTAA.

### 3.8.5. System Balancing

- 3.8.5.1. HVAC systems in the Tenant's space shall be balanced by a certified air-balancing contractor approved by the GTAA, at the Tenant's expense under contract to the Tenant.
- 3.8.5.2. The balancing report must be reviewed by the Tenant's consultant prior to final submission to the GTAA Mechanical Engineer.

## 3.9. Plumbing

### 3.9.1. General

- 3.9.1.1. The Landlord will provide capped connections for cold water, sewer and vent lines to the lease line of tenant premises, as follows:
  - a) 19mm (3/4") for retail/office spaces (where water supply is required by tenant)
  - b) 38mm (1.5") cold water supply (shut-off valve and capped line) for food and beverage spaces
  - c) 100mm (4") sanitary line terminated (capped sanitary sewer) below the floor within the tenant space.
  - d) 50mm (2") vent line (capped vent line)
- 3.9.1.2. The Landlord shall supply and install a revenue grade 38mm (1.5") pulse output Neptune T-10 water meter with remote reader pad installed at eye level and shall be connected via data cable to a remote sub metering system. Remote reader to be installed at 1500mm above finished floor.
- 3.9.1.3. The design and the installation of the Tenant's plumbing system shall be in accordance with the National Plumbing Code.
- 3.9.1.4. The Tenant shall provide and pay for all tie-ins to the capped plumbing connections and all branch lines complete with plumbing fixtures required by the Tenant to serve its premises including grease interceptors and gas information meters.
- 3.9.1.5. Tenant design drawings shall include a detailed plumbing fixture schedule with fixture connection sizes and fixture unit demands.
- 3.9.1.6. The Tenant shall provide and pay for installation of hot water heater(s) complete with all related plumbing, mechanical and electrical. Gas fired hot water heaters are not permitted. The hot water tank pan and relief valve shall be piped to a floor drain.
- 3.9.1.7. Connections to base building domestic water lines shall be installed with backflow prevention devices where required by the applicable plumbing code. Tenant piping shall be flushed to Region of Peel Standards before tie into base building services.

- 3.9.1.8. The Tenant shall provide access panels for all valves, cleanouts, and any other equipment requiring servicing. All clean outs must come up to the floor and be readily accessible from within the tenant space.
- 3.9.1.9. All new piping, clean outs and traps shall be structurally supported with appropriate hangars and/or clamps as per Plumbing Code. "Y" clean outs and cast iron "P-traps" shall be accessible at all times.
- 3.9.1.10. All copper piping shall be type 'K' or 'L'. All waste/drain and vent lines shall be DWV copper or cast iron except for food and beverage outlets. In food and beverage spaces, all drain lines shall be System XFR unless water temperature exceeds 180°F. System XFR shall not be installed in any vertical service shaft as per National Building Code.
- 3.9.1.11. All piping that penetrates a fire rated assembly shall be sealed and fire stopped against water, smoke, and flame using ULC listed fire stop system. For combustible piping such as System XFR, use approved fire stop collar or sealant system with appropriate rating in compliance with ULC-S115 latest edition. Utilize an approved GTAA Contractor at Tenant's expense.
- 3.9.1.12. System XFR pipes that pass through an occupied office space must be provided with acoustic insulation.
- 3.9.1.13. All domestic water lines and drain lines shall be insulated with a minimum of 13mm fiberglass insulation and a vapor barrier.
- 3.9.1.14. Any water or drain lines located in an unheated space need to be provided with heat tracing complete with all related control panels, thermostats and electrical connections at Tenants expense.
- 3.9.1.15. All new piping to be clearly identified and labeled with pipe markers showing direction of flow to match the base building standard. Label all waste lines below floor with tenant name and room number.
- 3.9.2. Grease Recovery System
- 3.9.2.1. Tenants with drainage loads from food and beverage or related operations will be required to install a grease recovery device within their premises, to prevent substances from entering the sanitary drain lines.
- 3.9.2.2. Tenant shall provide floor mounted fully automatic grease interceptor also known as a grease recovery device for all fixtures where discharge sewage includes any fats, oils, grease or coffee grinds. Dishwasher discharge shall also be connected to a grease recovery device where permitted by Code.

- 3.9.2.3. All grease recovery devices to be a Goslyn unit or approved equivalent.
- a) Goslyn Specifications: Grease removal device/immiscible liquid separator which continuously operates under hydrostatic pressure with no moving parts. Is made of 2.5 mm, 304 stainless steel and comes standard with an immersion heater and two (2) oil recovery cassettes.
- b) Where an alternate product is proposed, submit specifications and cut sheets of proposed product to GTAA Engineering for review and approval.
- 3.9.2.4. All grease recovery devices shall be located as close to fixtures or drains as possible and installed such that they are fully accessible. Provide floor drain adjacent to silt valve.
- 3.9.2.5. Tenant shall provide design calculations to verify size/capacity of grease recovery device is appropriate for intended use and kitchen loads. Drainage times should not exceed 2 minutes.
- 3.9.2.6. The installation, testing, maintenance and performance of the interceptor shall comply with CAN/CSA B-481 and manufacturer requirements. The Tenant shall maintain grease interceptors at their expense and keep inspection records; provide documentation of maintenance upon request by GTAA.

### **3.10. Life Safety Systems and Equipment**

#### **3.10.1. Sprinklers & Suppression Systems**

- 3.10.1.1. The GTAA has provided base building sprinklers with upright heads to suit undemised open space and standpipe coverage within all Tenant areas in accordance with the National Building Code, and applicable NFPA Standards.
- 3.10.1.2. All required Tenant revisions to the base building sprinkler and/or standpipe coverage within their areas shall be by licensed sprinkler contractors at the Tenant's expense.
- 3.10.1.3. All Tenant revisions to the base building sprinkler and/or standpipe systems shall be in conformance with the latest versions of NFPA 13 and/or NFPA 14. Sprinkler/standpipe shop drawings, hydraulic calculations and equipment cut sheets shall be submitted to GTAA Life Safety and the Construction Compliance & Permits Office for review, prior to the start of any work on site.
- 3.10.1.4. All work on site on GTAA life safety systems shall be coordinated with GTAA's Life Safety Systems Maintenance Group (416) 776-4455.
- 3.10.1.5. Upon completion of the project, the Project Manager shall ensure that updated system Record Drawings that reflect all As-Built changes or revisions to the

existing systems are provided by the systems contractor. In addition to any other submission requirements, the contractor shall provide As-Built drawings, final hydraulic calculations and Contractor's Test Certificates to GTAA's Life Safety Engineer. As-Built submission to GTAA Life Safety should include: two (2) sets of hardcopies, one (1) set in PDF format and one (1) set in CAD format.

### 3.10.2 Fire Alarm and Detection Systems

- 3.10.2.1. The GTAA has provided base building fire alarm coverage within all Tenant areas in accordance with the National Building Code and applicable CAN/ULC Standards. The fire alarm and monitoring equipment includes:
- 3.10.2.1.1 For **Terminal 1** – Siemens MXL Fire Alarm Network with NCC Fire Alarm Monitoring Graphic Workstations. The T1 FA System is integrated with the building IED Paging System to utilize the PA amplifiers & speakers for delivering the fire alarm tones & voice messages throughout the Terminal 1 Building. Remote emergency voice communication capability has also been provided from the ADMIN-CCC & T1-CCC remote monitoring locations.
- 3.10.2.1.2 For **Terminal 3, T3 Satellite & T3 Parking Garage** – SimplexGrinnell 4100U & 4100ES Fire Alarm Networks with TrueSite Fire Alarm Monitoring Graphic Workstations. The Terminal 3 FA System is integrated with the building IED Paging System which utilizes the FA amplifiers & speakers for delivering the PA functions throughout the Terminal 3 Facilities. Remote emergency voice communication capability has also been provided from the ADMIN-CCC & T1-CCC remote monitoring locations.
- 3.10.2.1.3 **For All Other Facilities On Airport Lands** – Notifier Fire Alarm Panels monitored by the Campus ONYXWorks Fire Alarm Monitoring Network & Graphic Workstations. The T1 Parking Garage, Viscount Parking Garage, APM Stations and the Infield Hold Terminal have been provided with local emergency voice communication capability within each building and remote emergency voice communication capability from the ADMIN-AOC & T1-IOCC remote monitoring locations.
- 3.10.2.2. All required Tenant revisions to the base building fire alarm and monitoring systems requiring programming changes shall be by the system manufacturer of an authorized contractor approved by the GTAA at the Tenant's expense. Contractors' authorization includes:



- 3.10.2.2.1 Siemens Authorized Contractors, defined as fire alarm contractors that are authorized by Siemens to completely install and service Siemens Fire Alarm & Monitoring Systems.
  - 3.10.2.2.2 SimplexGrinnell Authorized Contractors, defined as fire alarm contractors that are authorized by SimplexGrinnell to completely install and service SimplexGrinnell Fire Alarm & Monitoring Systems.
  - 3.10.2.2.3 Notifier Level-A Engineered Systems Distributors (ESD), defined as fire alarm contractors that are authorized by Notifier to completely install and service Notifier Fire Alarm Systems.
  - 3.10.2.2.4 Notifier Fire Alarm Systems Integrators (FASI), defined as fire alarm contractors that are authorized by Notifier to completely install and service Notifier Fire Alarm Systems plus authorized to program and service the ONYXWorks Fire Alarm Monitoring Systems.
  - 3.10.2.2.5 IED Authorized Contractors, defined as contractors that are authorized by IED to completely install, program and service IED PA Systems.
- 3.10.2.3. All Tenant revisions to the base building fire alarm system shall be in compliance with CAN/ULC-S524 and verified in compliance with CAN/ULC-S537 Standards. Shop drawings indicating locations of devices, conduit/conductor types and runs and all other fire alarm system components shall be submitted to the GTAA Life Safety for review, prior to the start of any work on site.
- 3.10.2.4. All work on site on GTAA life safety systems shall be coordinated with GTAA's Life Safety Systems Maintenance Group (416) 776-4455.
- 3.10.2.5. Upon completion of the project, the Project Manager shall ensure that updated system Record Drawings that reflect all As-Built changes or revisions to the existing systems are provided by the systems contractor. In addition to any other submission requirements, the contractor shall provide As-Built drawings, final hydraulic calculations and Contractor's Test Certificates to GTAA's Life Safety Engineer. As-Built submission to GTAA Life Safety should include: two (2) sets of hardcopies, one (1) set in PDF format and one (1) set in CAD format.

### 3.10.3. Emergency and Exit Lighting

- 3.10.3.1. The GTAA has provided base building emergency and exit lighting within all Tenant areas in accordance with the National Building Code.

- 3.10.3.2. All required Tenant revisions to the base building emergency and exit lighting within their areas shall be by GTAA approved contractors at the Tenant's expense.
- 3.10.3.3. All Tenant revisions to the base building system shall be in conformance with the National Building Code and National Electrical Code. Drawings indicating locations of devices, conductor types and conduit runs shall be submitted to the GTAA Facilities Systems Engineering – Electrical Systems for review, prior to the start of any work on site.
- 3.10.3.4 Upon completion of the project, the Project Manager shall ensure that final Record Drawings are provided. In addition to any other submission requirements, the contractor shall provide Record Drawings to GTAA's Electrical Engineer. As-Built submission to GTAA Electrical Engineer should include: two (2) sets of hardcopies, one (1) set in PDF format and one (1) set in CAD format.

#### 3.10.4. Fire Extinguishers

- 3.10.4.1. The GTAA has provided general fire extinguisher coverage throughout all public building areas in accordance with the National Building Code, National Fire Code and NFPA 10.
- 3.10.4.2. All additional fire extinguishers to provide coverage within Tenant areas or to provide coverage for Tenant specific hazards shall be provided in accordance with the National Fire Code and NFPA 10 at the Tenant's expense.
- 3.10.4.3. Final extinguisher location, size and type shall be coordinated with and approved by GTAA Emergency Services – Fire Prevention.

#### 3.10.5. Kitchen Fire Suppression Systems

- 3.10.5.1 All commercial cooking equipment shall be provided with fixed suppression systems in accordance with the National Fire Code, applicable NFPA Standards and Manufacturers' Guidelines at the Tenant's expense.
- 3.10.5.2 All new cooking equipment fixed suppression systems shall be monitored by the base building fire alarm system. Installation, verification & testing of the new equipment must be in accordance with the National Building Code, CAN/ULC-S524, CAN/ULC-S537 and any manufacturer's guidelines at the Tenant's expense.
- 3.10.5.3. Where fixed suppression system is existing, the fire alarm monitoring descriptor must be reviewed and updated to reflect the new restaurant name. This work shall be completed by an authorized fire alarm contractor at the Tenant's expense.

- 3.10.5.4 In addition to any other submission requirements, shop drawings indicating types and locations of all related system components shall be submitted to the GTAA Facilities Systems Engineering for review, prior to the start of any work on site.
- 3.10.5.5 All work on site on GTAA life safety systems shall be coordinated with GTAA's Life Safety Systems Maintenance Group (416) 776-4455.
- 3.10.5.6 Upon completion of the project, the Project Manager shall ensure that final Record Drawings are provided by the systems contractor. In addition to any other submission requirements, the contractor shall provide As-Built drawings and final system testing and associated fire alarm verification reports to GTAA's Life Safety Engineer. Record Drawings submission to GTAA Life Safety should include: two (2) sets of hardcopies, one (1) set in PDF format and one (1) set in CAD format

### **3.11 Gas Services**

- 3.11.1. Gas meters have been provided by the GTAA for metering retail restaurants and food courts. See section 3.12 Metering.
- 3.11.2. If required, the Landlord shall supply a 38mm (1.5") gas line, terminated (shut-off valve and capped line) in the tenant's space. The Landlord shall supply and install a revenue grade 38mm (1.5") pulse output gas meter which may be connected via data cable to a remote read sub metering system.

### **3.12. Metering**

#### **3.12.1. General**

Electricity Metering entails capital costs for initial installation and ongoing monthly costs for meter reading, billing and collection. Metering however is desirable for all tenants connected to GTAA distribution system for the purpose of cost recovery and to ensure that tenants are not overcharged. For smaller loads, or where metering is not justified or where usage can be estimated with reasonable accuracy, cost recovery will be based on estimated usage and incorporated into lease agreements.

Water and Natural Gas usage will be metered as given below. Integral type meters will be used for metering electricity, water and gas.

All meters will be supplied and installed by the GTAA.

### 3.12.2. Electricity

Tenants should be familiar with the GTAA Greenhouse Gases Policy and adhere to its content to ensure that a greenhouse gas reduction program is put in place.

#### 3.12.2.1. Tenants on Standalone Facilities on the GTAA Distribution

System Facilities will be equipped with approved revenue class metering with remote reading capability and compatible with regulatory requirements.

#### 3.12.2.2. For tenants purchasing energy under the GTAA energy purchase agreement the energy cost, the non-energy cost and metering costs will be recovered as given below.

- The energy cost will be based on the tenant's electricity usage and GTAA cost for purchasing electricity. GTAA purchasing cost will include the energy supplier's charges and costs incurred in buying and selling electricity in the spot market.
- The non-energy cost will include items such as the distribution charge, debt recovery charge and the customer charge billed by the LDC.
- The metering charge will be based on the usage and will include cost of a service provider and a GTAA administration charge.

#### 3.12.2.3. For tenants not coming under the GTAA energy purchase agreement the energy cost will be recovered based on the tenant's electricity usage and the market price charged by the LDC.

The non-energy cost and the metering charge will be recovered as given under the last 2 bullets above.

Such tenants who wish to be excluded from GTAA energy purchase agreement shall request the GTAA in writing stating their intention to be excluded. GTAA will reserve the right to accept or reject such a request subject to OEB regulations.

#### 3.12.2.4. Tenants within GTAA buildings

##### 3.12.2.4.1. General Office Type Occupancy

Such tenants having constant, predictable load patterns will not be metered. The electricity costs will be estimated and included in the rent. The electricity usage will be periodically reviewed and the rent adjusted as required subject to conditions of the lease agreement. A blended rate for energy and non-energy components will be used for estimating purposes.

##### 3.12.2.4.2. Tenants without meter

Under the provision of the lease agreement, the electricity costs will be estimated and included in the rent. The electricity usage will be periodically reviewed and the rent adjusted as required subject to conditions of the lease agreement. A blended rate for energy and non-energy components will be used for estimating purposes.

#### 3.12.2.4.3. Tenants with meter installed

Such facilities will be equipped with approved revenue class metering with remote reading capability and compatible with regulatory requirements.

- The energy cost will be based on the tenant's electricity usage and GTAA cost for purchasing electricity. GTAA purchasing cost will include the energy supplier's charges and costs incurred in buying and selling electricity in the spot market.
- The non-energy cost will include items such as the distribution charge, debt recovery charge and the customer charge billed by the LDC.
- The metering charge will be based on the usage and will include cost of a service provider and a GTAA administration charge.

#### 3.12.2.4.4. Other Airport Tenants not connected to GTAA Distribution System

- GTAA does not intend to impose restrictions on the manner in which such tenants purchase the electricity.
- However, if such tenants wish to purchase energy from the GTAA under GTAA bulk purchase agreement, the tenants shall make a request in writing stating their energy requirements. GTAA will discuss the request with GTAA energy supplier and will have the right to accept or reject the request.

#### 3.12.3. Natural Gas

Natural Gas will be metered where appropriate based on the expected demand. Approved type metering with remote reading capability will be provided where metering is required. GTAA will recover the cost of natural gas based on gas usage and the cost of gas to the GTAA.

#### 3.12.4. Water

Water Meters will be provided in all cases. Cost of water will be recovered based on tenant water usage and the cost of water to the GTAA.

### 3.13. Electrical Power Service

- 3.13.1. The GTAA has allowed for electrical service based on 100 watts/m<sup>2</sup> for each Premise, up to a maximum of 100A, 600V, 3-phase, 4-wire power supply. The service will be terminated at a 600V disconnect switch in the Tenant's space. Associated with this supply, the GTAA will provide and install a revenue grade pulse output electric meter(s) which will be connected via data cable to a remote read sub-metering system. It shall be the Tenant's responsibility to balance all their loads within their electrical panels. If the Tenant requires additional power requirements that necessitate an increase in the power supply to the Tenant's space the Tenant shall be responsible for the incremental cost of the upgrade.
- 3.13.3. The following requirements shall be at the Tenant expense:
- 3.13.3.1. Connection to and/or relocation, (if required in the Premises) of disconnect switch, and above ceiling conduits (if any), transformation, branch wiring and associated panel breakers, outlets, and receptacles.
  - 3.13.3.2. The Tenant shall ensure that all wiring for lighting, power, fire alarm, systems within walls and ceiling plenums is installed in metal conduit **or** metal raceways or cable trays. No exposed wiring is allowed.
  - 3.13.3.3. Wiring for all washroom equipment in the Premises as required by the Tenant, including hot water heater, baseboard heater, and lighting.
  - 3.13.3.4. All materials shall be new, CSA approved or equivalent, and shall be of a standard not less than GTAA's base building.
  - 3.13.3.5. All wiring shall be copper. Branch wiring shall be minimum #12 gauge solid (stranded for #8 or larger). All wiring shall be installed in conduit. BX cable may only be used for final connections to luminaries for a maximum length of 1800mm (6 ft.). Use insulated throat connectors and anti-short sleeves at all dressed ends.
  - 3.13.3.6. Tenant shall provide balanced electrical load in all three phases of the distribution system to within 5%.
  - 3.13.3.7. Exhaust fans and make-up air units if required by Tenant shall be interlocked and interfaced with the base building fire alarm system by GTAA's contractor under contract with Tenant, at Tenant's expense.
  - 3.13.3.8. All equipment and light fixtures shall be energy efficient to the latest ASHRAE 90.1/ IES standards.
  - 3.13.3.9. All coring through the base building slab must be preceded by scanning the slab, at tenant's expense and approval to proceed must be obtained from the Airport Authority.

- 3.13.3.10 All wall/floor penetrations within the Premises must be fire stopped as required using only firestop products that have been ULC or cUL tested for specific fire-rated construction assembly type, penetrating item type, annular space requirements, and fire-rating involved for separate instance.
- 3.13.3.11 Panel directories shall be updated by the Tenant for all existing and/or new panels in type-written format.
- 3.13.3.12 Electrical As-Built drawings showing conduits, cable runs, receptacles, panels, lights, circuit numbers, etc. are to be submitted to GTAA by the tenant's Contractor.
- 3.13.3.14 Electrical Record drawings showing conduits, cable runs, receptacles, panels, lights, circuit numbers, etc. are to be submitted to GTAA by the tenant's Consultant.

#### 3.13.4. Demolition and Removal

- 3.13.4.1. Any electrical services and equipment which are no longer required by the Tenant must be removed from the Premises.
- 3.13.4.2. All panel knock-outs shall be plugged with appropriate plugs, and all breaker locations shall be turned off and marked as SPARE.
- 3.13.4.3. All panel directories and junction box labels shall be updated.
- 3.13.4.4. All redundant circuits/wiring/conduits shall be removed back to the Base Building source panel.

### 3.14. Lighting Criteria

- 3.14.1. A variety of Tenant types are created by the merchandising mix, therefore a multiplicity of lighting designs to suit various uses may be employed.
  - 3.14.1.1. In order to keep the Tenant's electrical and AC loads within their allowable loads, Tenants are encouraged to use low voltage lighting and other energy efficient fixtures.
  - 3.14.1.2. Stores with merchandise display, either free-standing or in a display window will be required to observe and/or incorporate the following:
    - 3.14.1.3. Within the Premises, the Tenant shall be responsible to shield all lamps with a baffle designed to shield the lamps from the Concourse at an eye level height of 1500mm, unless otherwise approved by the GTAA. The GTAA reserves the right to require adjustment to such baffles after installation is complete at Tenant's expense.
  - 3.14.1.4. Neon will not be permitted within the Premises.

- 3.14.1.5. 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 shall be obtained from the GTAA.
- 3.14.1.6. Where tenancies are open to above, low voltage lighting will be required.
- 3.14.1.7. All branch circuits must be identified on the interior of the fixture and marked to indicate power source type (normal or emergency).
- 3.14.2. The following types of lighting will not be accepted as part of any Tenant's design for the Premises; unless thematically appropriate. (To be evaluated on a case by case basis):
  - 3.14.2.1. Fluorescent lighting within the storefront.
  - 3.14.2.2. Exposed tube fluorescent, LED or H.I.D. lamps in any other public or retail area.
  - 3.14.2.3. Incandescent lighting.
  - 3.14.2.4. Sodium or mercury vapour lamps of any type.
- 3.14.3. Tenant lighting may be installed inside the Premises only, except for signage lighting as approved by the GTAA.
- 3.14.4. The Tenant shall be responsible for the installation and connection of all exit signage in accordance with code requirements. All exit signage shall match the building standard specification.
- 3.14.5. Except as indicated above, the Tenant shall provide:
  - 3.14.5.1. All lighting fixtures, lamps and related equipment.
  - 3.14.5.2. All emergency lighting and additional exit signage required by the Tenant's design.

### **3.15. Acoustics and Sound Speaker Systems**

- 3.15.1. Stores having speakers for the purpose of providing ambient music for their patrons' enjoyment shall take precautions to ensure that any sound or vibration is not transmitted to the concourse and to adjoining tenancies, including those above or below. Acoustic baffling may be required in partitions and ceiling, or the speakers themselves will have to be housed in sound-attenuating enclosures. Speaker systems shall not interfere with building public safety, public information announcements and fire alarm signals.



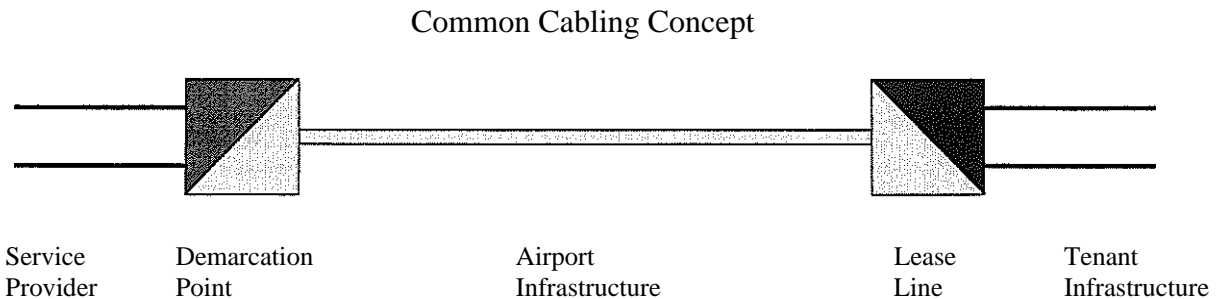
- 3.15.2. Extension/modification of the GTAA's public address system may be used for Tenant public address or background music subject to the GTAA's approval. Work within the Premises for the PA system, shall be carried out by the GTAA's forces at the Tenant's expense. Tenants requiring this service shall obtain review and written acceptance of the proposed locations and requirements by the GTAA's electrical consultant.
- 3.15.3. Locations and output directions of loudspeakers located within Tenant's premises shall be shown on the Tenant's drawings.
- 3.15.4. Tenancies that generate loud noises shall provide, at their expense, acoustic insulation full height in all demising walls to the roof deck above with a rated construction of STC 55 or better.
- 3.15.5. All Tenant sound systems shall be interlocked with the base building fire alarm system to terminate operation upon a signal from the fire alarm or other emergency life safety system.

### **3.16. Exhaust and Odours**

- 3.16.1. The location of any exhaust system will be subject to GTAA's approval.
- 3.16.2. Objectionable odours shall be exhausted in such a manner as to prevent their release into the Building, or short circuit back into the building through any outdoor intake. Where deemed necessary by the GTAA, such exhaust systems shall incorporate activated charcoal filter(s) or other suitable device, fully and properly maintained.
- 3.16.3. Food service Tenants and restaurants shall provide all necessary kitchen exhaust ducts, exhaust hoods and kitchen equipment in accordance with the Lease. All kitchen grease exhaust systems shall conform to NFPA 96. The Tenant shall provide ecological unit(s) required for their cooking and grease exhaust system(s).
- 3.16.4. The Tenant is responsible for the provision of the required exhaust fan, the ductwork in the Tenant space and adjacent to the exhaust fan, and for grease-bearing exhaust, the required ecological unit.
- 3.16.5. Where exhaust is required by the Tenant, the capacity of such exhaust shall not exceed the amount of fresh air supplied by the GTAA for the Premises for this purpose.
- 3.16.6. There shall be no exhausting permitted from free-standing island kiosks.
- 3.16.7. Tenant's air handling equipment shall not, under any circumstances, exhaust air into the building's interior space.

**3.17. IT Voice and Data Infrastructure**

- 3.17.1. In order to manage the airport and terminal effectively, the GTAA will provide the telecommunication infrastructure in all common areas. This infrastructure consists of:
  - 3.17.1.1. Ducts and conduit
  - 3.17.1.2. Common Cabling System (CCS) – refer to Communications Cabling Manual
  - 3.17.1.3. Campus Area Network (CAN)
  - 3.17.1.4. Wireless Access System (WAS)
- 3.17.2. No privately owned installations will be permitted outside of exclusively leased spaces.
- 3.17.3. IT, Voice and Data infrastructure will be made available to Tenants and service providers under the appropriate commercial terms and conditions as set out by the GTAA. For detailed descriptions and commercial offerings pertaining to each of the services described below, contact the GTAA Manager - IT&T Strategy.
- 3.17.4 Connecting to the Common Infrastructure
  - 3.17.4.1. The GTAA has created demarcation points at the entrance to the campus. Service Providers with customers on the airport will connect to the GTAA infrastructure at their points. The concept is illustrated below:



- 3.17.4.2. Within the Tenant’s exclusively leased area, Tenant will be permitted to install horizontal voice and data cabling for their own use. The Tenant will provide a Telecommunications Closet (TC) or demarcation point which will function as a central termination point for the Tenant’s horizontal voice and data cabling, and will also be the termination point for backbone cabling originating from the GTAA CAN over which voice and data services are carried.

- 3.17.4.3. The TC should be in a clean, dry, well lit area, and shall not be subject to high temperature or large swings in temperature. The size of the TC will generally be at the Tenant's discretion, but shall be reviewed by the GTAA to determine suitability. Depending on the Tenant's requirements for services and horizontal cabling, the size of the TC could range from a small closet possibly shared with an electrical panel to a large dedicated telecommunications room.
- 3.17.4.4. The Tenant is responsible for providing all cabinetry, as required, to support equipment to be housed in the TC. Customer owned IT electronic equipment installed by the Tenant in the TC shall be maintained and controlled by the Tenant.
- 3.17.4.5. Where horizontal cabling is run in the ceiling space, it shall be neatly dressed and supported in the ceiling. Acceptable cable pathways in the ceiling are: conduit, cable tray, or supported with Caddy Cable Cat J-Hooks. Cabling shall not be run unsupported in the ceiling space.
- 3.17.4.6. Where conduit or cable tray is placed in the ceiling, it shall be properly independently supported, run parallel or perpendicular to building lines, and shall be run so as not to obstruct access to base building mechanical and electrical equipment access points.
- 3.17.4.7. Where Caddy Cable Cat J-Hooks are used, the cabling path shall be run parallel or perpendicular to building lines. J-hooks shall be fastened to the ceiling slab or to other structural feature intended for this purpose. They shall not be attached to electrical conduit, T-bar pencil rods, or other non-structural elements.

### **3.18. Common Campus Area Network (CAN)**

- 3.18.1. The Campus Area Network (CAN) will enable Tenants wanting to connect dis-contiguous areas such as offices in different buildings, areas within the same building or to make connections between on-airport and off-airport centres.
- 3.18.2. The GTAA will deliver CAN services to a network port in the requested leased space or a telecommunications closet within the leased area.
- 3.18.3. Unless otherwise specified by the GTAA or its designate, all installations, moves, adds, changes, and corrective maintenance must be performed in accordance with the specifications and procedures outlined in the GTAA's Communications Cabling Requirements document.

### **3.19. IT Voice and Data Systems and Services**

- 3.19.1. High quality systems and services are needed by the GTAA to manage and operate the airport. Tenants also need high quality systems and services to manage and operate their businesses. This creates the opportunity to the GTAA to lever its telecommunication installations by offering a range of telecommunication services to Tenants. The benefits include:

- Increased control.
  - Reduced need for third party facilities.
  - Provide access to services that individual Tenants might not be able to afford on their own.
- 3.19.2. Quality Assurance of the GTAA service offering will be achieved through a robust design, proven equipment vendors such as Cisco and Nortel, Service Level Agreements (SLAs) and a Customer Support Centre providing a single point of contact. The services will be delivered over the GTAA infrastructure and be supported by Bell Canada and its affiliated companies. The product offering will consist of:
- 3.19.2.1. Private Line Services – DS1-DS3, Ocxx, Integrated T1
  - 3.19.2.2. Ethernet Services – basic Ethernet connectivity, individual PC on a port, scalable bandwidth options include 10mb, 100mb & 1000mb)
  - 3.19.2.3. PBX voice services – basis POTS, voicemail and VoIP
  - 3.19.2.4. Wireless Services – Trunked Radio, Cellular Service Coverage and Wireless LAN
  - 3.19.2.5. Dedicated Internet Access
  - 3.19.2.6. Applications – FIDs, BIDS, PA, Common Use Passenger Processing Systems, Baggage Tracking\Reconciliation, and GPS Master Time Signal
  - 3.19.2.7. Security and Access Control – Cameras and Access Control to all public and specific shared areas. Subject to the discretion and approval of the GTAA, Tenants may share some CCTV monitoring of Tenant operational spaces – this will be co-coordinated through GTAA Security. Tenant is responsible for access control and other security within Tenant areas.

## 3.20. Signage Criteria

### 3.20.1. Tenants Main Signage Identification

- 3.20.1.1. Imaginative designs that depart from traditional methods are encouraged. Tenants shall have identification signs designed in a manner compatible with and complementary to adjacent and facing storefronts and the overall design concept of the terminal. Size of signs and extent and location of signage shall be as per the drawings included in section 7.4 of this manual.
- 3.20.1.2 All signs and logos shall conform to the Landlord's design criteria and shall receive written approval from the landlord prior to fabrication. All signage shall be professionally designed and fabricated. Designs shall be complete prior to tender. Design-build signage arrangements will not be accepted. Retrofitting of used signage is not permitted.

- 3.20.1.3. Tenant signage is limited to a maximum of 80% coverage of the designated sign zone as measured by overall dimensions and shall maintain neutral margins of 200mm to the sides of the signage zone. Character height is limited 700mm unless otherwise noted. Letters shall project no more than 90mm from the base building sign band.
- 3.20.1.4. The non-illuminated signs proposed for the Tenant's storefront shall be of a high quality. Formed plastic letters, simple painted signs, and vinyl signs will not be allowed.
- 3.20.1.5. Signs comprising the main Tenant signage are limited to the following types. External illumination is acceptable provided the visible brightness/luminance does not exceed 250 foot lamberts. Text is limited to individual letters only:
- Metal face, metal return, with raised or etched letters and/or logo.
  - Glass: Painted, silk-screened, silver leaf, applied to inside surface of glass
  - Raised or etched letters and/or logo applied to glass or solid storefront in metallic finish (i.e., bronze, copper, stainless steel. Note: gold and brass finish not acceptable).
  - Raised or etched letters and/or logo applied to glass or solid panel using solid colour letters (i.e., lacquered or vinyl coated)
  - Signs engraved, etched or sandblasted in granite, marble or other stone
  - Wood carved, routed, laser cut, painted with raised or etched letters and/or logo.
  - Artisan's plaque (bronze, copper, stainless steel, wood with Landlord approved finish).
- 3.20.1.6. "Box" or "suitcase" images are not permitted.
- 3.20.1.7. Moving signs or moving lights shall not be permitted. No advertising slogans shall be permitted. The Landlord reserves the right to require the removal of any store advertising, displays, or decorating that in its sole opinion is offensive, distasteful or in any way in conflict with the best interest of the Terminal environment.
- 3.20.1.8. No travelling or flashing lights or any signs, or other audio-visual or mechanical devices, shall be used that is visible from the Public Concourse. No loudspeakers, phonographs, radio or other audio-visual or mechanical devices shall be used if it is audible outside of the Leased Premise.
- 3.20.1.9. Digital Messaging: Televisions, which enable relevant messaging, marketing, etc. shall not be visible from the Public Concourse, outside of the Leased Premise; unless written approval is granted at the discretion of the GTAA. It should be noted that audio from television/ video screen shall comply with 3.20.1.8.

- 3.20.1.10. Decals for credit cards, Hours of Operation and surface applied/ self-adhesive signage are not permitted.
- 3.20.1.11. No exposed conduit, tubing, raceways, ballasts, transformers or other equipment shall be permitted.
- 3.20.1.12. Labels or other identification (including sign manufacturer's label) are not permitted on the exposed surface of signs, except those required by code. Such labels or other identification shall be in an inconspicuous location.
- 3.20.1.13. The Tenant shall provide access from within Leased Premises for the servicing of sign components (except for the blade sign.)
- 3.20.1.14. The installation of all Tenant storefront signs shall be conducted in accordance with the Landlord's sign criteria, whether during initial store construction or as a sign replacement during the term of the Lease.
- 3.20.1.15. Permanent promotional signs of any type, or registered trademark other than those owned by the Tenant, will not be permitted on the Tenant's storefront.
- 3.20.1.16 Free-standing signs are not permitted.
- 3.20.1.17 Blade signs and Blade sign frames are to be manufactured and installed by Tenant.

### 3.20.2. Menu Board Criteria

- 3.20.2.1. All menu boards shall be bilingual, professionally designed and fabricated, and subject to the Landlord's approval prior to installation. The Landlord encourages the display of ready-to-serve foods at the serving counter.
- 3.20.2.2. Under no circumstances shall the Tenant be permitted to display other signs, advertising or displays such as are often made available from food or beverage suppliers or franchises. Beverage dispensing units shall not bear any advertisements for the beverage companies, nor shall they be incorporated into the menu boards.
- 3.20.2.3. Menu boards shall be externally illuminated. Backlit or internally illuminated menu boards shall not be permitted except for photographs of food items.
- 3.20.2.4. All permanent information shall be painted, silk-screened, etched, or applied to:
  - Metal – neutral, painted or anodised.
  - Wood-natural or painted.
  - Plastic laminate.
  - Glass-clear, translucent or painted.
- 3.20.2.5. Changeable information may be displayed using vinyl, die-cut numerals, or letters, chalk boards, etc.

- 3.20.2.6. Changeable Menu Boards available through food and beverage advertising product suppliers are prohibited and shall not be used.
- 3.20.2.7. Menu Board selections and detailing shall be reviewed by the Landlord on an individual basis.
- 3.20.2.8. The Tenant shall submit Menu Board design for the Landlord's review and approval.

### 3.20.3. Regulatory Signage

- 3.20.3.1. Display LCBO and Public Health signage in inconspicuous locations within the requirements of the issuer.

## 3.21. Colour Coding of Building Systems

- 3.21.1. GTAA will provide Tenant with a matrix of approved colour coding of all building system elements within the Tenant space. Colour coding of building system elements is required by GTAA and shall be implemented by Tenant.

## 3.22. Sustainable Design Criteria

- 3.22.1. The GTAA request that Tenants develop a design approach that follows good sustainable design practices. To achieve this, the GTAA is developing a standard to be used for evaluation of submissions. In the meantime, design proposals shall adhere to the following standards:

### 3.22.2. Water Conservation – Water Efficiency

- 3.22.2.1. Installation of individual metering is required as per section 3.12.
- 3.22.2.2. Install low flow (maximum 6 litres per flush) toilets in all washrooms.
- 3.22.2.3. Install aerator on all faucets and showerheads timed.
- 3.22.2.4. 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 perspective.
- 3.22.2.5. Select front-loading horizontal axis washing machines. These appliances use between 25% and 50% less water than those with an upright axis.

### 3.22.3. Energy and Atmospheric Impacts:

#### Required Practices:

- 3.22.3.1. Adopt an integrated design team approach where all consultants are involved in the design process from the beginning in order to coordinate and maximize the effectiveness of energy savings measures.

- 3.22.3.2. Design an energy efficient project where energy consumption reduction exceed the Model National Energy Code for Buildings by 25%.
- 3.22.3.3. Provide individual metering of units for gas and hydro use.
- 3.22.3.4. Install only Energy Star rated appliances.
- 3.22.3.5. Design lighting to a maximum of 10.0 w/sq.m in all areas, Retail display excepted.
- 3.22.3.6. Utilize programmable thermostats in individual tenancies.
- 3.22.3.7. Utilize HVAC and air conditioning systems that contain no CFC's, HCFC's and halons.

Encouraged Practices:

- 3.22.3.8. Design an energy efficient project where energy consumption reduction exceeds the Model National Energy Code by 40%.
- 3.22.3.9. Install Heat Recovery Ventilators as part of the ventilation system or design the ventilation system to allow for the addition of an HRV unit.

3.22.4. Resource Efficient Materials selection and installation is a critical component in creating projects that are more healthy and sustainable. Selecting materials containing recycled content from a readily renewable resource base can positively impact the environment by preserving habitat and natural beauty.

Required Practices:

- 3.22.4.1. Use engineered wood products where appropriate.
- 3.22.4.2. Use durable materials for cladding.
- 3.22.4.3. Select carpet and underpad containing recycled content, from manufacturers that take back the material for recycling.

Encouraged Practices:

- 3.22.4.4. Use local materials whenever possible from sources within a 500km radius.
- 3.22.4.5. Specify a minimum of 30% of building materials that contain a minimum weighted average of 20% post consumer recycled content.
- 3.22.4.6. Utilize rental forms or forms constructed from reclaimed wood for foundation forms.
- 3.22.4.7. Utilize concrete with high flash or slag content greater than 30%.
- 3.22.4.8. Use reclaimed wood or rapidly renewable materials for cabinetry, millwork and finish materials for flooring (i.e., wood, cork and bamboo).



- 3.22.4.9. Use certified hardwood veneers for internal finishes.
- 3.22.4.10. Select less endangered/faster growing wood where possible (i.e., Spruce or Birch plywood).
- 3.22.4.11. Use wood certified as sustainable by an FSC-accredited certification body or certified as CAN/CSA Z809 SFM.
- 3.22.4.12. Use Environmental Choice EcoLogo labelled products whenever possible.

### 3.22.5. Waste Reduction

Construction and demolition waste makes up over 40% of landfills. As these landfills reach capacity the disposal of waste becomes a more severe problem. In addition, diverting materials from the landfill and using them in products that contain recycled content saves the use of other natural resources.

Required Practices:

- 3.22.5.1. 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.
- 3.22.5.2. Include a Construction Waste management section in all specifications.
- 3.22.5.3. Provide recycling areas and facilities in all tenancies.
- 3.22.5.4. Minimize wasteful damage of materials by careful storage and handling on site.
- 3.22.5.5. Request reduced packaging by suppliers.
- 3.22.5.6. Develop and implement a hazardous materials management program to reduce, reuse and/or recycle construction waste.
- 3.22.5.7. Create a program to ensure that hazardous and electronic waste are disposed of properly.

### 3.22.6. Indoor Environmental Quality

Intent: To design and construct projects that are healthy for their occupants. This is achieved by reducing the source of potentially harmful contaminants through materials selection and provision of adequate ventilation resulting in improved indoor air quality (IAQ).

Required Practices:

- 3.22.6. 1 Meet the requirements of ASHRAE 62.1-2007, “Ventilation for Acceptable Indoor Air Quality”.
- 3.22.6.2. Include a Construction Indoor Air Quality Management Plan in the project specification that includes:

- On site protection of absorbent construction materials from moisture damage.
  - Protection of all HVAC systems and components during construction.
  - Clean interiors, building cavities, ventilation systems and components prior to occupancy.
  - Replace filtration media prior to occupancy.
  - Building flush out with 100% outdoor air for fourteen days prior to occupancy.
- 3.22.6.3. Use sealed combustion fireplaces and domestic hot water boilers (where applicable).
- 3.22.6.4. Provide exhaust fans in all bathrooms and kitchens.
- 3.22.6.5. Utilize sub-flooring material that is formaldehyde free.
- 3.22.6.6. Tack down carpets instead of gluing. Carpet in all other areas to be adhered using non-toxic glues.
- 3.22.6.7. Install carbon monoxide detectors in tenancies. These sensors are the responsibility of the tenant to maintain, calibrate and ensure appropriate documentation is kept on file.
- 3.22.6.8. Specify low VOC paints, coatings, sealants and adhesives that are Environmental Choice EcoLogo certified.
- 3.22.6.9. Utilize urea formaldehyde free composite wood or agrifibre products for cabinetry materials (i.e., exterior grade plywood, UF Free MDF, strawboard, homasote).
- 3.22.6.10. Use water based finishes for all cabinetry paneling, molding and flooring.
- 3.22.6.11. Seal exposed concrete work with a non-toxic sealer.
- 3.22.6.12. Design building and service area layouts to minimize contamination of occupied areas by pollution sources.
- 3.22.6.13. Meet the requirements of latest ASHRAE Standard 129 “Measuring Air Change Effectiveness” for ventilation effectiveness for naturally and mechanically ventilated space.
- 3.22.6.14. Provide CO2 monitor in all commercial spaces. These sensors are the responsibility of the tenant to maintain, calibrate and ensure appropriate documentation is kept on file.
- 3.22.6.15. Utilize pre-finished interior materials where possible to reduce the amount of off gassing of volatile organic compounds (VOC’s).
- 3.22.6.16. Meet or exceed Environmental Choice EcoLogo criteria for commercial carpets.

- 3.22.6.17. Use hard surface flooring options (i.e., hardwood, ceramic tile, slate etc.) instead of carpet.
- 3.22.6.18. Mechanically ventilate all areas.
- 3.22.6.19. Include filtration in the ventilation system (HEPA, pleated filter) or design to permit it in future additions.
- 3.22.6.20. Commission all mechanical and heating systems and include commissioning requirements in the contract documents.

## 4. DRAWING SUBMISSIONS

### 4.1. General

The design and submitted documents and materials shall be prepared by design professionals registered to practice in the province of Ontario, examples of whose previous design work shall be of a standard acceptable to GTAA at its sole discretion.

For the benefit of the Tenant's design team, attention is drawn in particular to the non-combustible classification of the building, related flame spread ratings and smoke development classification of materials and the seismic restraint of construction components. Documentation demonstrating compliance with these requirements shall be provided by the Tenant if requested by the GTAA.

All digital and drawings submissions shall be in accordance with the GTAA CADD Standard Guide.

Tenant documentation required shall, for all submissions, be provided in metric measurement at the following scales:

- Key location plans; 1:500
- Floor plans, reflected ceiling plans, merchandising plans, interior elevations, sections and related details; 1:50
- Flow diagrams and adjacency plans at 1:100
- Storefronts, signage, logos and lettering, in elevation, section or detail; 1:25
- Material samples in duplicate on standard 610 mm x 915 mm size boards, complete with legend. Cross reference to drawings. Product data sheets should include Canadian testing standards indicated (CAN/CSA ULC, cUL and WHI) for combustibility and flammability.
- Renderings on minimum 275mm x 425 mm stock.

### 4.2. Submission Documentation and Schedule

4.2.1. Conceptual Design is considered part of the Proposal.

4.2.2. Preliminary Design (30%)

The following indicates the minimum requirements of the Preliminary Design Submission (30%).

- Key Plan showing the location of Premises within the Terminal.
- Flow diagram showing all passenger movements in the immediate vicinity of the Premises.
- Proposed Merchandising Plan showing fixture layout and product displays. Plan to indicate Construction North.
- Coloured perspective of the proposed store design complete with signage as viewed from the passengers perspective on the concourse or adjacent holdroom.

- Sample board of proposed materials, colours and finishes.
- Key mechanical, electrical and telecommunication systems proposed.

#### 4.2.3 Tenant's Final Design Submission (60%)

- Key plan showing the location of Premises within the Terminal.
- Preliminary Floor Plan(s) showing interior design including material and finishes. Seating plans to show barrier-free accommodations. Plans to indicate Construction North.
- Reflected Ceiling Plan(s) showing ceiling materials, various heights, location and type of all light fixtures and other mechanical or electrical ceiling mounted devices.
- Storefront elevation and section showing storefront concept including graphics and signage, materials and finishes.
- Sample board (if revisions to Preliminary Submission were required by GTAA).
- Mechanical and electrical design including base building modifications.
- Tenant hoarding and dust control plans.
- Storefront model if requested.
- Fixture cuts of all proposed lighting, furnishings diffusers, grilles, sprinkler heads and accessories.
- Flow diagram showing all passenger movements including barrier-free, in the immediate vicinity of the premises.
- Proposed Merchandising Plan showing fixture layout and product displays.
- Coloured perspective of the proposed store design complete with signage as viewed from the passengers perspective on the concourse or adjacent holdroom.
- Key mechanical, electrical and telecommunication systems proposed.
- Menu Boards (where applicable).
- Identification of Liquor Licensing Board of Ontario (LLBO) perimeter railing location and design (if applicable).
- Outline of sustainable design approach, including proposals for materials, finishes, lighting and ventilation strategies.
- Preliminary GTAA sustainable design submission.

#### 4.2.4. Contract Documents (100%)

##### 4.2.4.1. General

- Proposed construction schedule showing all major elements of the Work.
- Complete CADD documentation of the submission.

- Assurance of professional design, documentation and commitment for Field Review as described in this manual.

#### 4.2.4.2. Architectural

- Key Plan showing the location of the Premises within the Airport.
- Floor Plan(s) indicating closure locations of partitions and type of construction, placement of fixtures, furnishings, floor patterns, material selections, and washroom location (if any). Floor plans to indicate Construction North.
- Reflected Ceiling Plan(s) showing ceiling materials, various heights, location of all light fixtures, diffusers, grilles and sprinkler heads.
- Interior Wall Elevations, sections and details sufficient for construction.
- Storefront Elevation showing ceiling materials, various heights, location of all light fixtures, signage and emergency exit(s).
- Sign, logo and lettering details showing elevation and section views, letter style and size, all colours and materials, methods of illumination, installation, colour of illumination and voltage requirements. This shall include signage for the Blade Sign, as applicable. Signs shall be professionally designed and fabricated. Designs shall be complete as part of the working drawing submission. Including official languages compliance and sign-off. Design build signage arrangements will not be accepted.
- Specifications, interior finish and colour schedules.
- Confirmed fixture cuts of all lighting, and plumbing fixtures including manufacturer's name, catalogue number, catalogue cut, lamp types, mounting and custom designs.
- Details of securing the Premises when closed.
- Sample board of materials, finishes and colours if revised from previously approved Final Design Submission.
- Complete description of sustainable design approach, including samples of materials, specifications, of finishes, lighting, and ventilation systems.
- Complete GTAA sustainable design submission.
- Tenant hoarding and dust control plans and sections.
- Roof or exterior wall penetration details (if applicable).

#### 4.2.4.3. Structural (if applicable):

- Drawings identifying means of seismic restraint for all code required applications.
- Drawings and specifications for elements of fixturing or construction applying atypical point loads to the base building structure.
- Drawings indicating size and location of all intended floor or roof penetrations.

#### 4.2.4.4. Heating, Ventilating and Air Conditioning:

- Floor plan, fan coil or VAV units, duct layout, size and manufacturer of grilles and diffusers, thermostats where applicable.
- Specifications and fixture cuts.
- Heat gain/loss calculations.
- Venting, make-up air requirements.
- Mechanical equipment schedules.

#### 4.2.4.5. Plumbing (if applicable):

- Floor Plan of services.
- Specifications and fixture cuts.
- Venting requirements.
- Riser diagrams.

#### 4.2.4.6. Sprinklers and Fire Protection:

- Sprinkler distribution changes, head layout and hydraulic calculations (if applicable).
- Heat baffles (if applicable).
- Fire extinguisher locations.

#### 4.2.4.7. Electrical:

- Electrical single line distribution diagram, including the upstream Base Building source panel, main breaker size, feeder size, disconnect switch size, Tenant transformer size, Tenant electrical panel, etc.
- Electrical load summary – including all connected and demand load calculations.
- Electrical panel schedule – including all circuit breaker # and sizes.
- Electrical floor plan – showing the power layout and locations of all electrical equipment.
- Lighting layout and reflected ceiling plan.
- All circuits shown on both Power and Lighting Layouts shall include circuit # and be cross-referenced to panel schedule.
- Luminaire schedule – showing quantity, type, lamps, mounting, voltages, wattages, manufacturer catalog #, model #, etc.
- Special lighting, i.e. signs, logo, etc.
- Specifications of fixtures.
- Completed table of electrical loads and total load requirement.
- Provide lighting controls and energy management issues.

- All electrical distribution equipment are to include a lamacoid nameplate stating its unique designations, supply source, location, circuit number.

#### 4.2.5. Submission Schedule:

- 4.2.5.1. Within 14 days of the GTAA's notice to the Tenant of the GTAA's intent to enter into a lease agreement a design start-up meeting shall be convened to review the GTAA's design standards and thematic context of the premises.
- 4.2.5.2. Within 30 days of date of the GTAA's notice to the Tenant of the GTAA's intent to enter into a lease agreement, the Tenant shall prepare and submit its preliminary design to the GTAA as set out in paragraph 4.2.1. of this section, for the GTAA's review and acceptance.
- 4.2.5.3. After review by the GTAA, the Tenant will receive written comments and marked drawings from the GTAA. Received comments shall be responded to in writing and incorporated into the Tenant's next design submission.
- 4.2.5.4. If a resubmission is required by paragraph 4.2.5.3. above, the Tenant shall resubmit the design within 21 days thereafter, addressing all concerns. This process shall continue until a review without comments is achieved.
- 4.2.5.5. Within 21 days of an "Accepted" response to the Tenant's preliminary design submission, the Tenant shall submit its proposed final design, as set out paragraph 4.2.3. of this section, for the GTAA's review and acceptance. The Tenant's final design submission shall include revisions to and incorporate the GTAA's comments on the preliminary design as well as any agreed base building modifications required to accommodate the Tenant's final design.
- 4.2.5.6. Within 30 days of the Tenant's receipt of the GTAA's acceptance of the Tenant's final design, the Tenant shall prepare and submit design/working drawings and specifications for review, as set out in paragraph 4.2.4. of this section. The GTAA shall notify the Tenant of its acceptance or request for revision of the Tenant's working drawings.
- 4.2.5.7. The GTAA will use reasonable efforts to expedite the reviews of the Tenant's submissions, however the Tenant should be aware that the GTAA will review the submissions in the context of adjacent and other premises and that this may affect the schedule of the reviews.
- 4.2.5.8. Within 30 days of the Tenant's notice of completion to the GTAA, the Tenant shall submit to the GTAA complete as-built documentation as described in paragraph 4.2.6. of this section.



#### 4.2.6. Post Construction Submissions

The following items are to be submitted post construction.

- 4.2.6.1. Complete and accurate As-Built drawings signed by the contractor/builder of all work provided within the Premises.
- 4.2.6.2 Record Drawings must be submitted within 30 days from Substantial Performance.
- 4.2.6.3. Completed documentation as required by the GTAA Construction Compliance & Permits Office before occupancy of the Premises is permitted.
- 4.2.6.4. Certified statement of construction costs, prepared in conformance with generally accepted accounting practices.
- 4.2.6.5. Refer to Airport Construction Code for detailed information.

### 4.3. Construction Permit Approvals

Refer to the GTAA Airport Construction Code and the GTAA Airport Construction Guide for information pertaining to the application of Facility Alteration Permit (FAP), an equivalent to a building permit, available from:

Construction Compliance & Permits Office  
Greater Toronto Airports Authority  
Toronto Pearson International Airport  
P.O. Box 6031, 3111 Convair Drive  
Toronto AMF, Ontario, Canada L5P 1B2

### 4.4. Submissions and CADD Policy

#### 4.4.1. General Requirements

The designer and/or Consultant should make arrangements through the GTAA Project Manager or Coordinator, as early as possible for the following:

- Make request for a data provision containing existing technical data for the work site, the GTAA CAD Standard, CAD resource files and GTAA standards relevant to the project.
- Make request for GTAA drawing numbers.
- Make request for any room and door numbers to be assigned for new construction.

Ensure relevant elements of the project are in compliance with the following GTAA standards:

- Drawings and data comply with the GTAA CADD Standard Guide and 'GTAA Record Data Submissions' document.

- Any core drilling is done in compliance with the facility Core Drilling standards
- Ensure new systems or equipment to be maintained by the GTAA are named and labelled using the standards laid out in the GTAA 'Identification and Labelling Standards Manual'
- Refer to Airport Construction Code for detailed information.

#### 4.4.2. Data Submissions

Data submissions are required at various stages of construction on all GTAA construction projects.

Refer to the GTAA CADD Standard Guide and GTAA Record Data Submission Requirements. An overview of the requirements is laid out below.

##### 4.4.2.1. Design Data Submissions

*Design submissions are at the discretion of the GTAA Project Manager or as dictated by stakeholder requirements. The following are Design submission standards.*

- During design, drawings in CAD format will be submitted by the consultant for review by GTAA at 30, 60 and 90% completion, or as required by the GTAA Project Manager or Project Coordinator.
- Each required submission will also include the contiguous data for each discipline, to the extent of the design for the phase of construction underway, if not in its entirety.
  - The contiguous data will be supplied in Microstation or AutoCAD format and comply with the GTAA CADD standard as detailed in the DDMSM.

##### 4.4.2.2. Construction Data Submissions

When Construction documents are complete, but prior to issuance of a Facility Alteration Permit (FAP) for construction, the following data and documents will be required:

- A **drawing list** file will be provided in Excel format identifying all drawings supplied Drawing Numbers (Assigned by GTAA) and descriptions of each.
- All **construction drawings** will be supplied in **both** CAD and PDF format.
- A **CAD reference** sheet will be provided in Excel format listing all CAD files supplied listing their name and a description and include the Xref or referencing relationships between them and all other CAD drawings submitted.

- For any equipment, systems or building components to be maintained by the GTAA, **both** Excel format and PDF format **MAXIMO inventories**, following the GTAA Identification and Labelling Standards, will be submitted.
- Any renderings or 3-dimensional data including Building Information Models (BIM) generated as part of the design will be supplied in its native format or an agreed universal exchange format (.ifc, .dxf, etc).
- **Managed Datasets** for each discipline to the extent of the design in CADD format as defined in the GTAA CADD Standard Guide. Each dataset should be geo-referenced to the existing GTAA Managed Datasets.

#### 4.4.2.3. As-Built and Record Data Submissions

Upon completion of construction the following submissions will be required.

Consultant will validate information from the Contractor/s and supply:

- **As-Built drawings** (the red line copies as marked by the constructor) scanned and supplied to the GTAA in colour PDF format upon acceptance by the project Consultant.
- For any equipment, systems or building components to be maintained by the GTAA, **O&M manuals** will be supplied in hardcopy and PDF format.
- For any equipment, systems or building components to be maintained by the GTAA, **any warranties** will be supplied in hardcopy and PDF format.
- For any equipment, systems or building components to be maintained by the GTAA, **both** Excel format and PDF format **MAXIMO inventories**, following the GTAA AMMS, naming, numbering and labeling standards, will be submitted, where changes from construction submissions have occurred.

Consultant will provide:

- Updated construction drawings reflecting final as-constructed condition based on contractor's As-Built drawings in CAD and PDF or format agreed to by the GTAA Project Coordinator. These will be the Final **Record Drawings**. The supplied files should allow the GTAA to reproduce a complete, accurate and fully legible set of all final Record Drawings.
- Provide a **final drawing list** file in Excel format identifying all drawings supplied including the drawing numbers (as assigned by GTAA) and descriptions of each.
- A **final CAD reference** sheet in Excel format listing all CAD files supplied including their file name, drawing title, description and include any Xref or reference file relationships between them and other drawings submitted.
- Update and return **Managed Datasets** for each discipline to the extent of the design in CADD format as defined in the GTAA CADD Standard Guide. Each dataset should be geo-referenced to the existing GTAA Managed Datasets.

- Final renderings, 3-dimensional data or Building Information Models (BIM) modified since design will be supplied in their native formats or an agreed universal exchange format (.ifc, .dxf, etc).
- A single Excel format **document list** will be provided listing the name and description of all documents (including O&M Manuals, Warranties) submitted. This listing should include the document file names, titles and descriptions as stored on digital media.

## 5. BARRIER FREE DESIGN REQUIREMENTS

### 5.1. General

As a part of this manual, standards for barrier free design have been included. It will be every Tenant's responsibility to ensure that its design conforms to current code requirements for barrier free access as laid out in the CAN/CSA B651.

The GTAA has made a commitment to persons with disabilities. The design and construction of the Tenant's installation and fit-out, including communications services, choice of finishes, furniture selection, as well as the overall management approach will be reviewed specifically to ensure that people with disabilities will have full use of facilities. More than just a social commitment, the GTAA has recognized that as our society ages and as people with disabilities become more and more integrated into the activities of normal daily living, facilities such as Terminals will need to support people of all abilities as a practical reality. Accessible design will also allow the Tenants to benefit from an increase in the number of special needs travellers. By example, more than 80% of the vacation-travelling public are older adults that will benefit from a barrier free approach and one of five people in North America has a disability. The GTAA recognizes that persons with disabilities represent a rapidly growing market force in our economy, and that they will play a large part in the activities at the terminal.

The GTAA intends to promote the accessibility aspects of its facilities, and encourage persons with disabilities to use its services; maintaining good access for persons with disabilities within each Premises is required. Following are standards for providing a barrier free environment within a Tenant's Premises.

### 5.2. Tenant Access Recommendations

#### 5.2.1. Retail Areas

- 5.2.1.1 Power doors, or low resistance doors, where doors are used.
- 5.2.1.2 Minimum aisle widths should be 920mm, and aisles kept clear.
- 5.2.1.3 Allow for 1500mm diameter wheelchair turning.
- 5.2.1.4 Displays should be generally kept at eye level.
- 5.2.1.5 Counters shall have low sections or cutouts to accommodate wheelchair users, on both the public side and the employee side.
- 5.2.1.6 Informational signage should be high contrast lettering generally mounted at eye level.
- 5.2.1.7 Floor surfaces should be slip resistant (refer to Section 3.6.8).

#### 5.2.2. Lounges

- 5.2.2.1 Bars should have lowered section for wheelchair users and/or people unable to use high stools.
- 5.2.2.2 Small tables need a minimum clearance of 760mm under the table and a diameter of approximately 610mm to be accessible to persons with disabilities.
- 5.2.2.3 Disability Awareness Training is recommended for lounge servers and greeters.

### 5.2.3. Restaurants/Lounges

*Specific recommendations will depend on the exact nature of the restaurant and its decor. However what follow are basic "rules of thumb" for restaurant design as it relates to persons with disabilities:*

- 5.2.3.1. Menus (approximately five) are provided in alternate formats- large print, Braille and/or audiotape, for persons with low vision or blindness. Where possible, wall mounted menu boards should be at a convenient height for wheelchair users and be well lit with spot lights from track lighting.
- 5.2.3.2. Seating for persons with disabilities should be dispersed throughout the restaurant. Fixed seating such as booths are generally difficult for people with poor mobility, older adults and, are inaccessible for wheelchair users. If booths are integral to the design concept, additional moveable seating shall be incorporated, as well as wider aisles to allow wheelchair users and persons using the seating to sit at the table.
- 5.2.3.3. Clear, well-lit directional signage (indicating washrooms, etc.) shall be placed at the entrance.
- 5.2.3.4. Chairs should be light and easy to reposition, except when within proximity to a guardrail, chairs shall be fixed a distance of 1000mm minimum away from the guardrail.
- 5.2.3.5. Seat height should be 450 mm from the floor, approximately 420 mm deep x 420 mm wide, and most chairs should have armrests.
- 5.2.3.6. Supports or cross bracing may not interfere with kickspace under the chair.
- 5.2.3.7. An aisle width of 920 mm minimum needs to be maintained to allow wheelchair access.
- 5.2.3.8. To accommodate wheelchairs, a minimum clearance of 760 mm under tables and 760 mm between legs is important. Tabletops should be a minimum 915 mm x 760 mm, with any sharp square corners rounded off.
- 5.2.3.9. Corner legs on tables are preferred, however if round tables with centre posts are used for dining, the minimum diameter of these tables should be 1220 mm.
- 5.1.3.10. In consideration of older adults and others with limited strength and/or poor dexterity, tableware and accessories should be selected that is easy to use, or be available on request, e.g. flatware with larger diameter handles, four pronged forks - not three prong, glasses and cups should have broad stable bases, glasses with pattern or texture are easier to grip, etc.
- 5.1.3.11. Drinking straws should be available on request.
- 5.1.3.12. Pre-packaged condiments are difficult for people with poor dexterity. Alternatives should be available on request.

- 5.1.3.13. To serve wheelchair users, people with walkers, or people with balance and/or agility difficulties, self-serve areas require a counter for trays that is 860 mm from the floor, 760 mm wide, provides knee space under the counter and be continuous from entrance to cashier.
- 5.2.3.14. To be within reach for wheelchair users, people with limited range of motion and others, food on shelves should be no higher than 1350 mm, and placed no further than 500 mm from edge of the counter. Duplicate items may be placed to suit designer's choice.
- 5.2.3.15. Disability Awareness Training is recommended for restaurant servers and greeters.

## 6. LIST OF REFERENCE MATERIAL

- 6.1. The Tenant shall be responsible for reviewing, understanding and implementing, as part of their design, all codes and regulations applicable to the work. Review of Tenant documents by Landlord does not relieve the Tenant of responsibility to satisfy all applicable regulations.
- For a complete listing of governing agencies and regulations see Section 4.1 “Applicable Codes and Standards” of the GTAA Airport Construction Code.