TENANT

DESIGN

MANUAL



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TERMINAL D

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1

1.1 Introduction

The purpose of this **DFW Concession Tenant Manual (Manual)** is to familiarize concession tenants with airport construction and to provide guidelines for the design and construction of Terminal D concession spaces. Additionally, this Manual will provide your design and construction team with a step-by-step system for preparing and submitting design compliant plans for review and approval.

Tenants are encouraged to be innovative and creative in the design and layout of their spaces. The Airport does not intend to design your space, but it does intend to maintain continuity in design image of a consistently high level.

Dimensions and details shown in this Manual define anticipated building conditions and are for reference only. It is the responsibility of the tenant to field verify as-built conditions of the lease space.

Further, it is the tenant's responsibility to fully review the most current version of all the materials referenced, as this Manual does not contain all of the Airport's requirements. It is the tenant's responsibility to become familiar with the design intent and objectives outlined within the Manual.

1

1.2 Definitions

Following are definitions of terms used throughout this Manual.

| ADA | Americans with Disabilities Act | Kiosk | An individual, freestanding, self-contained concession unit that provides preparation, display, or selling space as well as storage. |
|-------------------------------------|--|---------------------------------------|--|
| Airside | The secured side of the terminal. | Landside | The unsecured side of the terminal. |
| AOA | Air Operations Area: The airfield area with any aircraft operations. This is a controlled and secured area. | Neutral Band | A metal band on the two story Village frames. This band is 2'-6" high and occurs between the Departures Level and Mezzanine Level. |
| CCTV | Closed circuit television | Neutral Frame | A metal reveal at the storefront that provides the demarcation between tenant and base building finishes. |
| Storefront Control Zone (SCZ) | The transition area at the storefront of the tenant lease area. Elements within the SCZ shall also comply with the Manual guidelines for storefront, signage, lighting requirements, and merchandise display, and are subject to Airport approval. | Storefront Enclosure | The public façade within the neutral frame. |
| DFW Code Enforcement | Airport authority having jurisdiction over all matters pertaining to establishment and enforcement of building and construction requirements and standards at DFW International Airport. | Supplemental Signage | Additional signage provided by the tenant, which must be approved by the Airport. Signage shall comply with the Manual guidelines. |
| DFW Design Criteria Manual | Guidelines and parameters for any design and construction within the boundaries of the Airport. | Tenant Project Manager (TPM) | A person from the Airport Development Department serving as the single point of contact for tenants on issues of design and construction. |
| INS | Immigration and Naturalization Service. | | |

2.1 Building Conditions

Departures Level

The departures level includes a "U" shaped public concourse with open departure lounges and in-line concessions. Concession tenant spaces are zoned as either North Concourse or South Concourse, with the demarcation line at the center of the Terminal. Also, along the airside departures level, there are two villages located at the northwest and southwest terminal corners. (Reference Section 6.10, "Departures Level Floor Plan".)

Village Mezzanine / INS Level

Concession tenant spaces are also located on the mezzanine levels of the north and south village centers. These areas, on the same floor elevation as arriving international passengers, allow a view into the village centers. Elevators, escalators, and stairs from the departures level access the mezzanine level. (Reference Section 6.11, "Mezzanine Level Floor Plan.")

Arrivals - Meeter/Greeter Level

Tenant spaces are located near the baggage claim area on the arrivals level. (Reference Section 6.9, "Arrivals Level floor Plan.")

Service Level

This level contains leasable storage space for concessions tenants and is the terminal's designated area for deliveries and trash removal. (Reference Section 6.8, "Service Level Floor Plan.")

2.1.1 In-Line

A distinct wall grid system exists in Terminal D, which is reflected in the in-line concession design guidelines. Ceiling heights in the concourse vary from 12'-0" to 68'-0".

Material finishes such as terrazzo floors, phenolic resin panels, glass, and stainless steel are the basis of the design standards developed for the Terminal D concession tenant spaces and their finishes.



Figure 2.01

2.1.2 Villages

The two village centers have been designated as the north village and the south village. A cool material palette of clear blue glass accents and stainless steel unit frames distinguishes the north village base building finishes. Clear green glass and bronze unit frames characterize the warm material palette of the south village base building finishes. Although the base building finishes are specific to each village, the Manual standards are common to both villages.

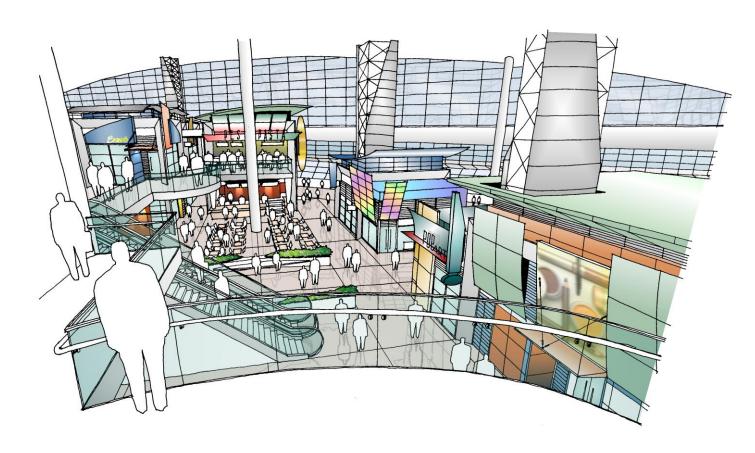


Figure 2.02

2.1.3 Tenant Storage

The Service Level of Terminal D contains concessions storage spaces. Deliveries are designated to arrive at this level and may be temporarily stored in the storage area adjacent to the truck dock. This room contains designated areas for dry goods as well as products requiring refrigeration or freezer storage. (Reference Section 6.8, "Service Level Floor Plan" and Section 6.1, "Provisions Summary", and Section 6.19, "Service Level Concessions Storage Plan".)

The main trash area for the terminal is located on the Service Level. This area contains a conditioned room for wet trash, provisions for cooking grease disposal, as well as compactors and trash containers for normal and recyclable trash.

2.2 Storefront Control Zone

The Storefront Control Zone (SCZ) is the transition area at the entrance of the tenant lease area. In addition to the lease area behind the storefront, elements within the SCZ shall also comply with the Manual guidelines for storefront, signage, lighting requirements, and merchandise displays. The tenant's design solution is subject to Airport approval and the Airport reserves final judgment as to the acceptability of proposed finishes. (Reference Section 3.1.1, "Storefront" and Section 3.1.2, "Merchandise Displays".) The ceiling material in the SCZ shall be the same finish as the canopy soffit material or gypsum board. The tenant shall install recessed lighting from the Airport's approved list of light fixtures within this zone. (Reference Sections 2.3, "Design Conditions" and Section 3.3, "Lighting Criteria".)

2.3 Design Conditions

The design image of the in-line and village center concession tenant spaces is created through standard neutral frame details, common storefront requirements, and respective storefront and signage zones. These design elements create a consistent image for the users of Terminal D while allowing tenants to express their identity within the SCZ and tenant lease space.

Terminal D has a strong grid layout apparent in the wall panels and curtain wall system. It is recommended that tenants relate to this grid when designing their storefront. Various design guidelines for Terminal D have been established to successfully achieve a consistent image throughout the terminal. Each lease space will fall into a general design condition that is outlined on the following pages. Refer to Section 6.2, "Responsibility Matrix" for the design condition associated with each lease space. (Reference Section 6.7, "Storefront Opening Guidelines for Smoke Management," for additional requirements for open storefronts. Note that the requirements within Section 6.7 only apply to Departures level in-line and village tenants.)

Design conditions covered in this section include:

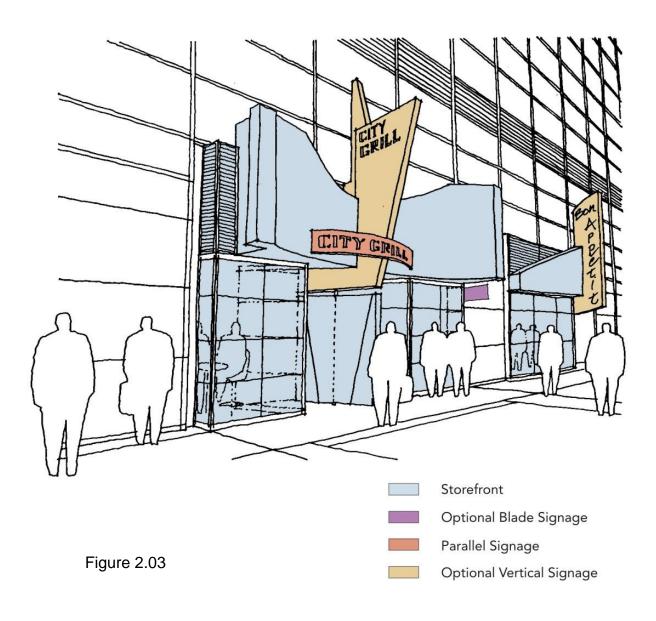
Design Condition A – In-line

Design Condition B – Villages

Design Condition C – Kiosks

2.3.1 Design Condition A – In-line

The In-line design conditions are distinguished by a standard neutral frame, storefront, and signage zones. They also feature lighting to highlight the storefronts and an optional blade sign projecting into the concourse for tenant identification.



2.3.1.1 Design Condition A1 – 12'-0" Ceiling Height

In-line design condition A1 is identified by the presence of a 12'-0" ceiling condition and a storefront and signage zone.

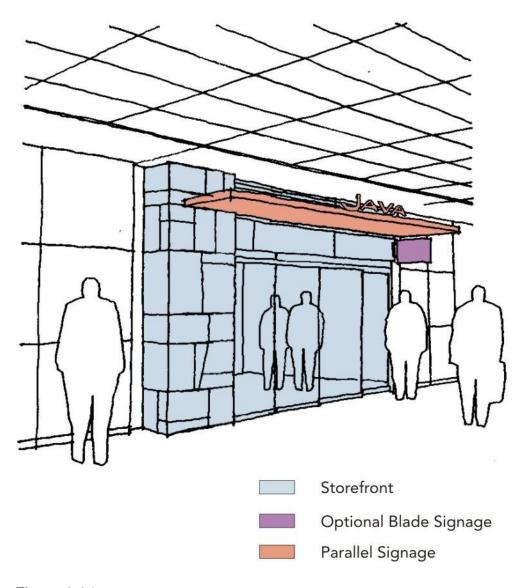


Figure 2.04

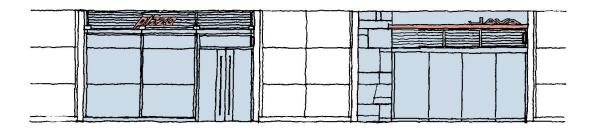
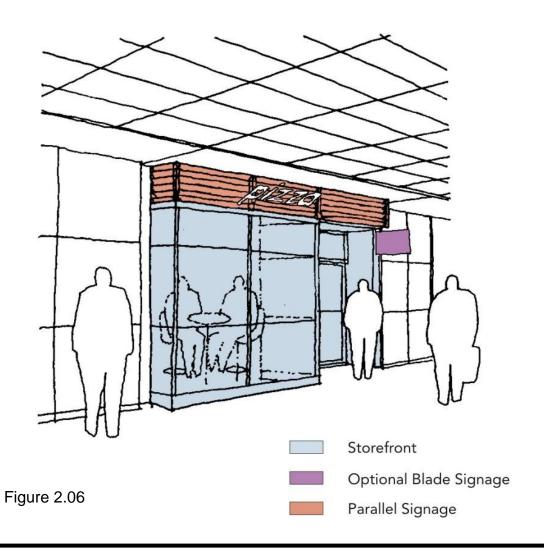
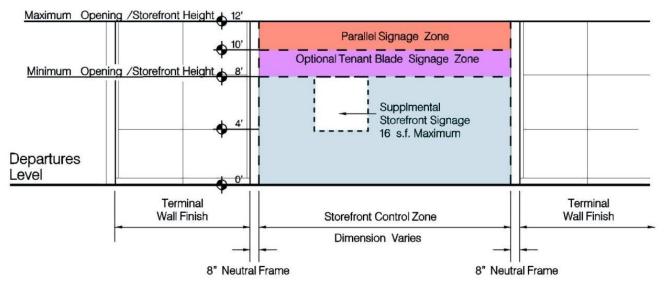
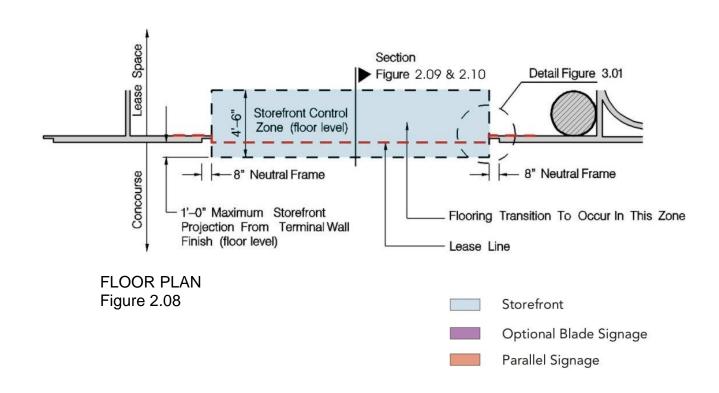


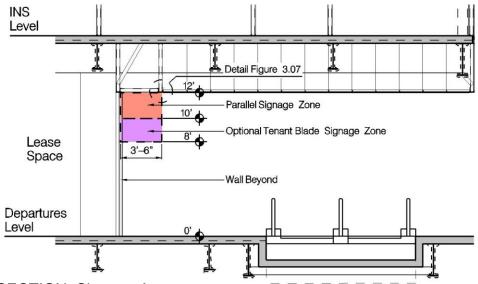
Figure 2.05





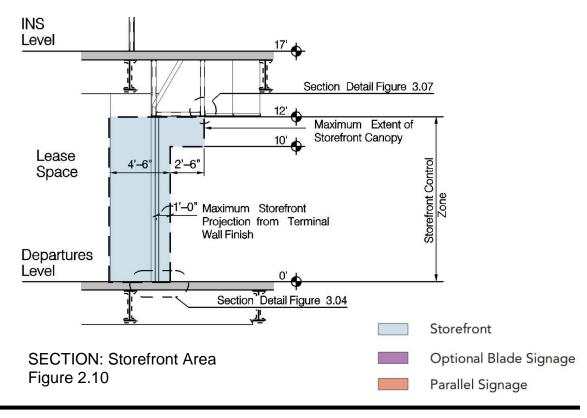
ELEVATION Figure 2.07



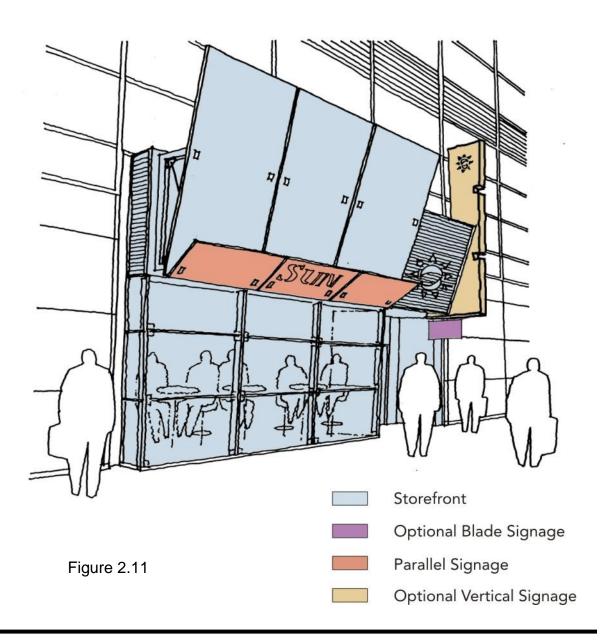


SECTION: Signage Area

Figure 2.09



In-line design condition A2 is distinguished by a tall ceiling condition that varies from a high point of 68'-0" at the concourse. The storefront and signage zone may extend beyond the height of the neutral frame. The backside of the storefront and signage will be visible from the Immigration and Naturalization Service corridor above; therefore the tenant is also required to finish out this side. Refer to design conditions B1, B2, and B3 for information on conditions opposite of design condition A2.



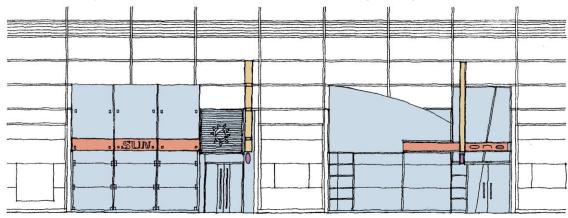
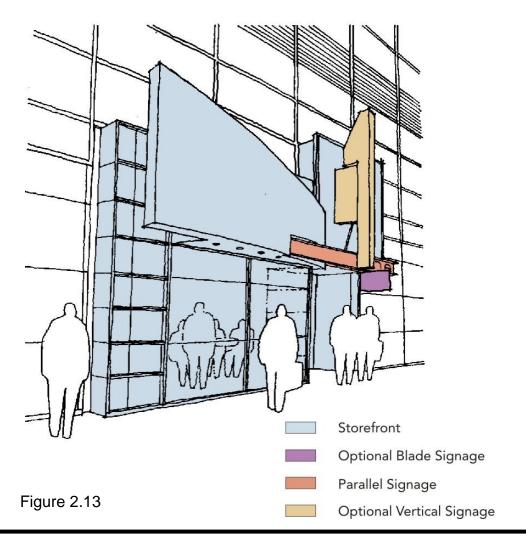
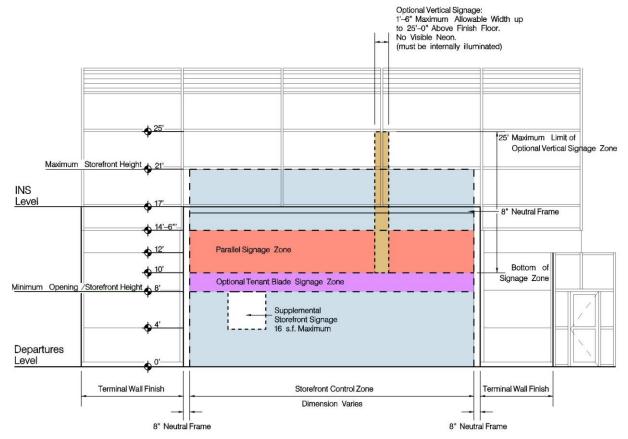
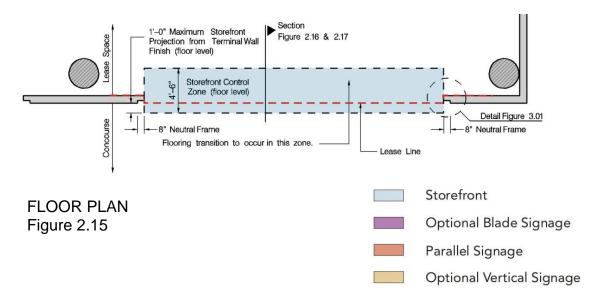


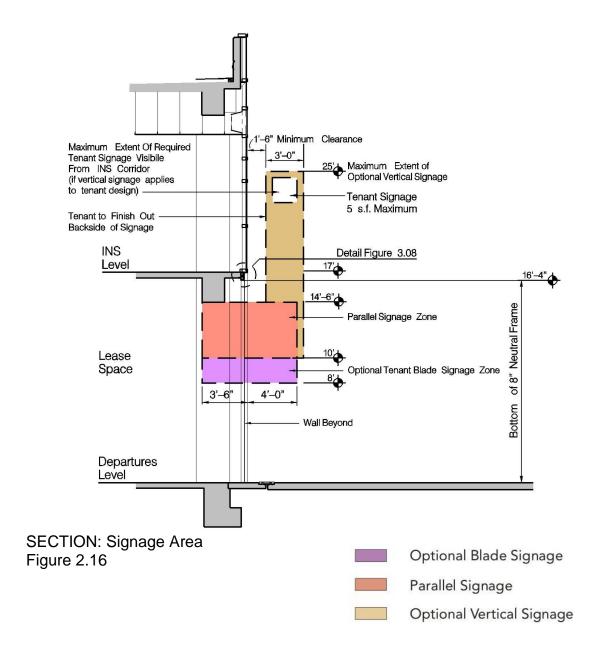
Figure 2.12

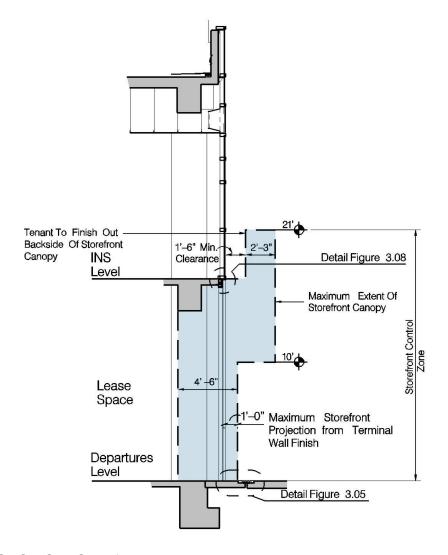




ELEVATION Figure 2.14







SECTION: Storefront Area

Figure 2.17

Storefront

2.3.1.3 Design Condition A3 – 25'-0" Ceiling Height

In-line design condition A3 is similar to the design condition A2, except the concourse ceiling height is 25'-0". Due to the building condition in these areas, the tenant is required to finish out the top of the storefront and signage but not required to finish out the backside.

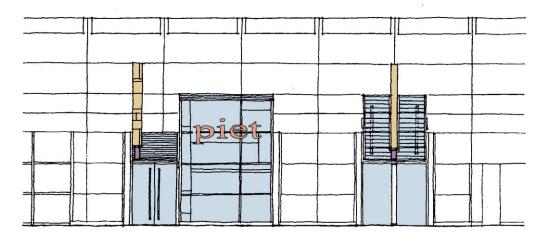
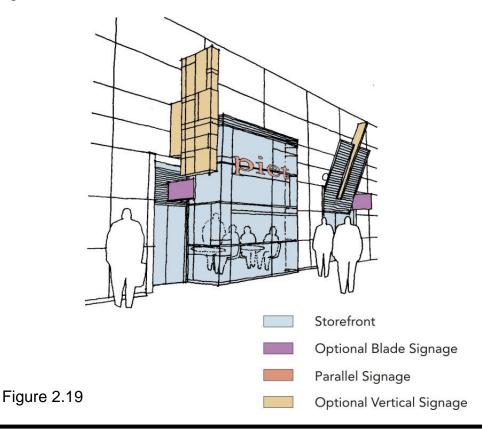


Figure 2.18



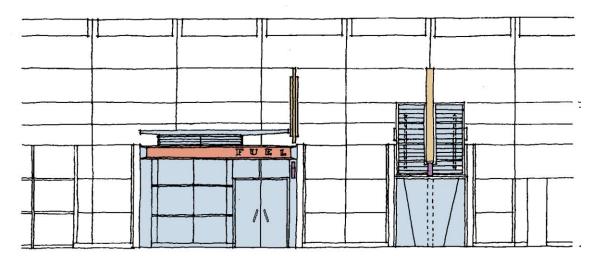
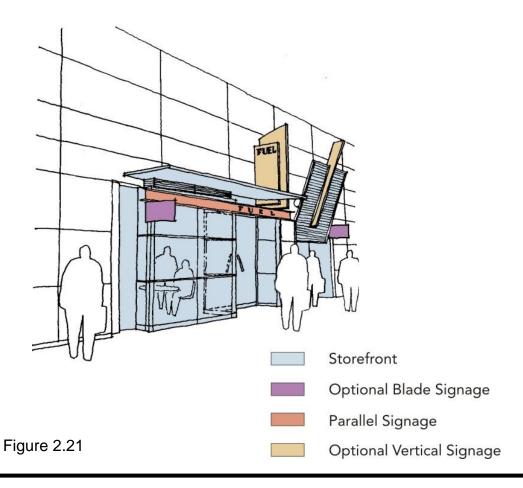
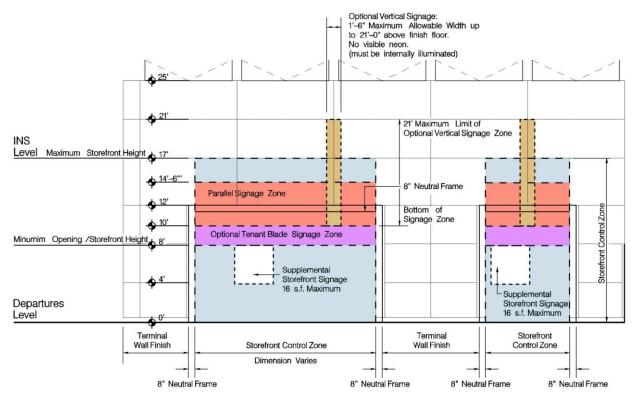
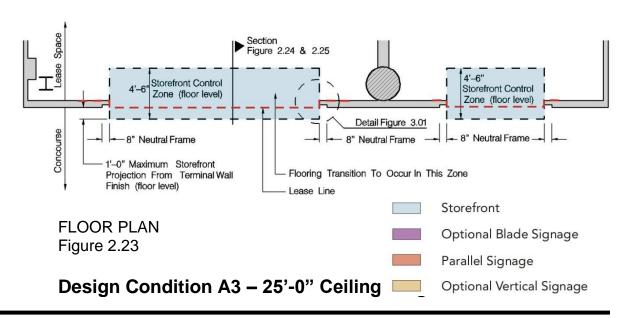


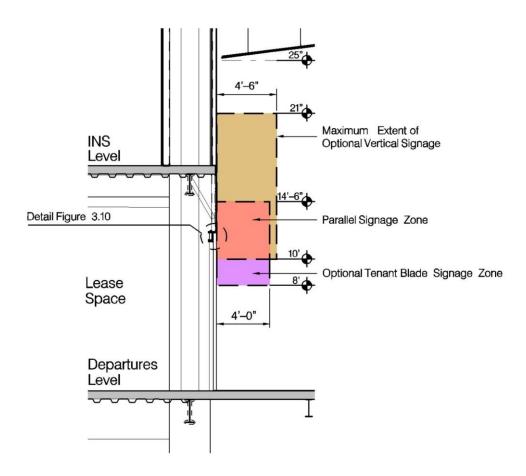
Figure 2.20





ELEVATION Figure 2.22

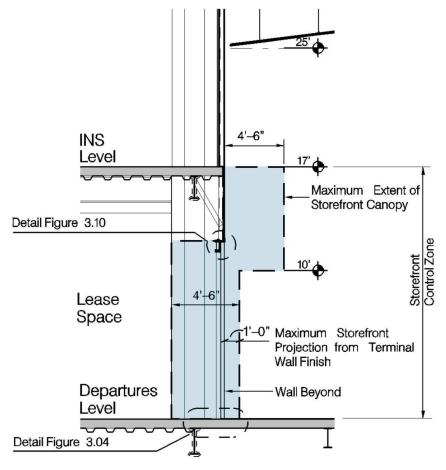




SECTION: Signage Area

Figure 2.24





SECTION: Storefront Area

Figure 2.25

Storefront

2.3.1.4 Design Condition A4

This lease space is located on the landside of the terminal on departures level. Terminal finishes and a neutral frame surround the storefront openings, similar to the in-line conditions. Due to low ceiling height conditions and specialized wall finishes, signage is limited to tenant blade signs and supplemental storefront signage (with Airport approval).



Design Condition A4

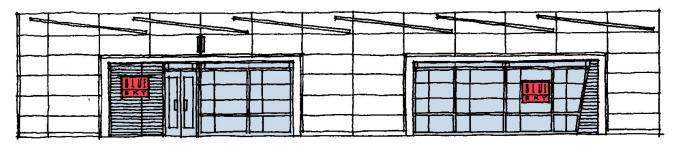
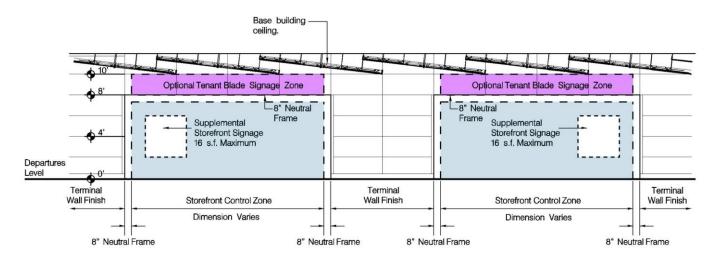
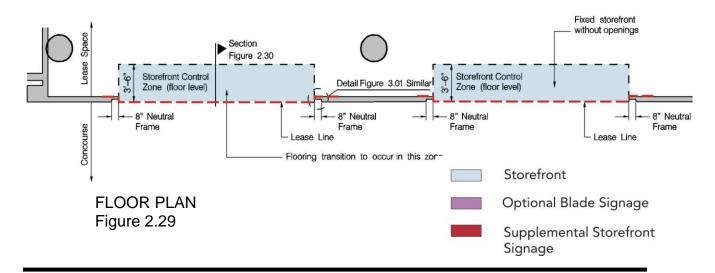


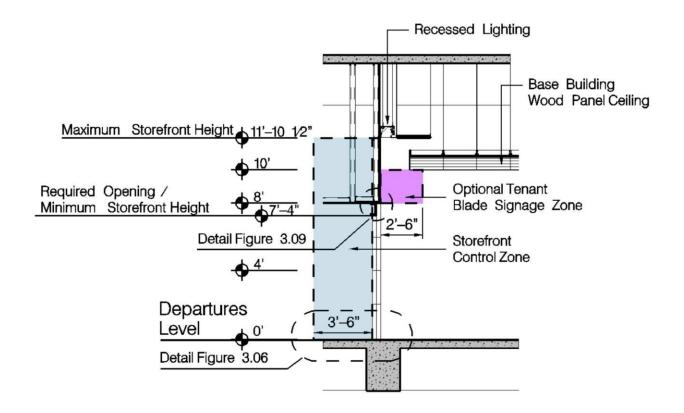
Figure 2.27



ELEVATION Figure 2.28



Design Condition A4



SECTION: Storefront and Signage Area

Figure 2.30

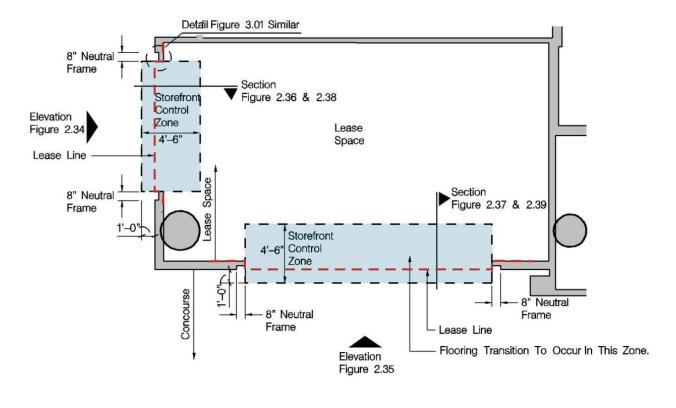
Storefront
Optional Blade Signage

2.3.1.5 Design Condition A5

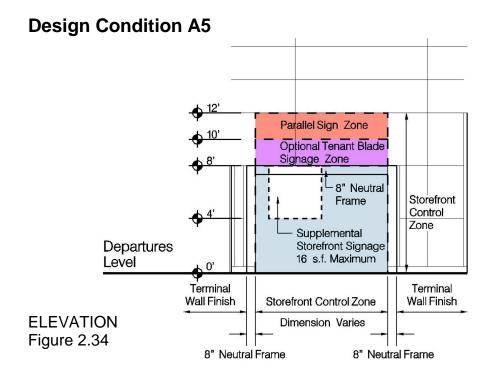
This lease space is located on the landside of the terminal on departures level and has the opportunity for entry on two sides.

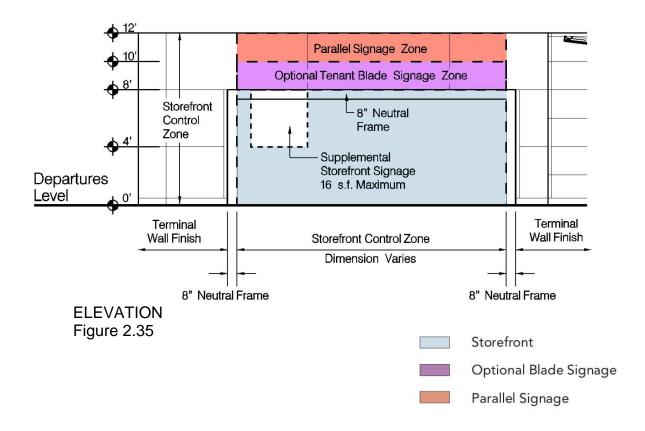


Design Condition A5



FLOOR PLAN Figure 2.33 Storefront





Design Condition A5

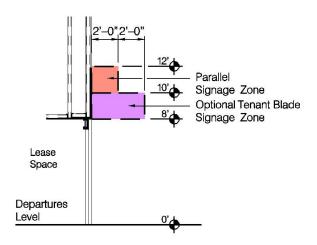


Figure 2.36

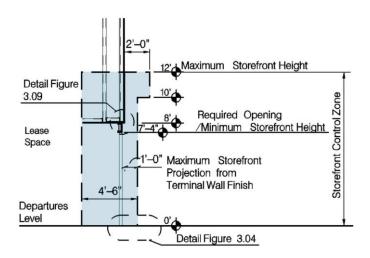


Figure 2.38

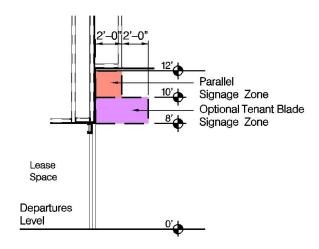


Figure 2.37

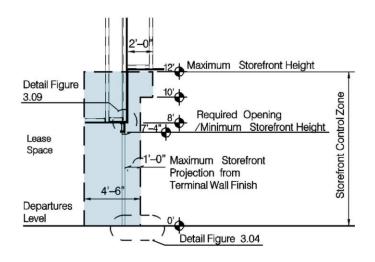
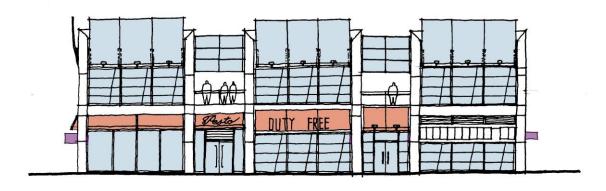


Figure 2.39



2.3.2 Villages – Design Condition B

The villages are distinguished by a modular system of metal frame structures, or "unit frames." The horizontal grid of the concourse wall panels is to be reflected in the modulation of the storefront system. Like the in-line design conditions, tenants in the Villages will have a neutral frame, storefront, and signage zone standards. Although similar in concept, the elements will be a variation of the in-line standards. Village tenants will also have a neutral band located 2'-6" below the Mezzanine floor level elevation. Village tenants should refer to their leasehold documents to determine responsibility for cladding construction of the unit frames and neutral band.



Storefront
Optional Blade Signage
Parallel Signage

2.3.2.1 Design Condition B1

Village design condition B1 is a single level or two-level unit frame occupied by a single tenant. The footprint of this design condition may be the whole 30′ X 30′ (nominal) frame unit, or a combination of whole and half unit frames. A tenant with two levels is required to provide a storefront entry on both levels. Storefront entry may occur on one or more of the unit faces exposed to public circulation. Exception: Some units will require Airport provided permanent wall structure, thus no storefronts or entries will be allowed in these walls. In addition to the storefront and signage zones, the tenant will have a roof element zone that extends beyond the top of the unit frame.

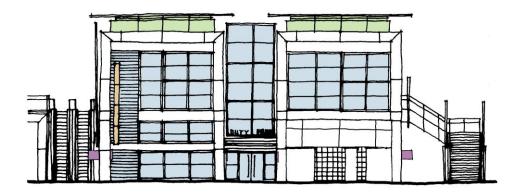
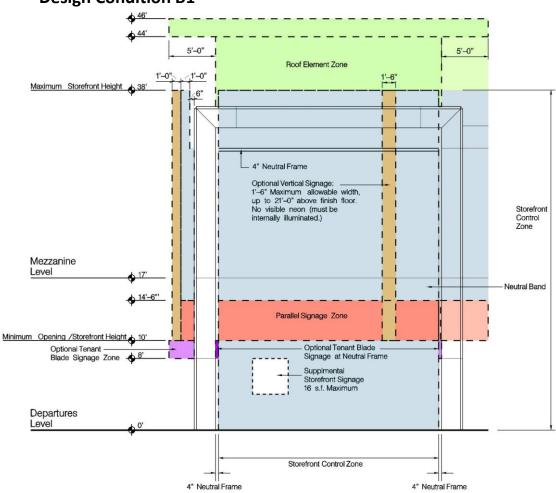


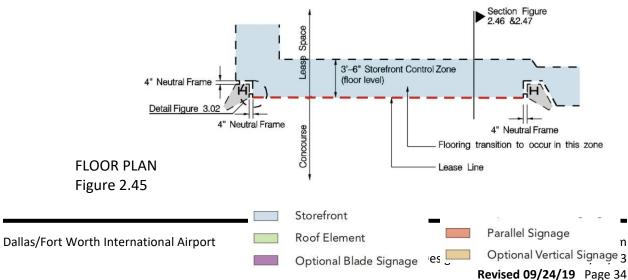
Figure 2.42

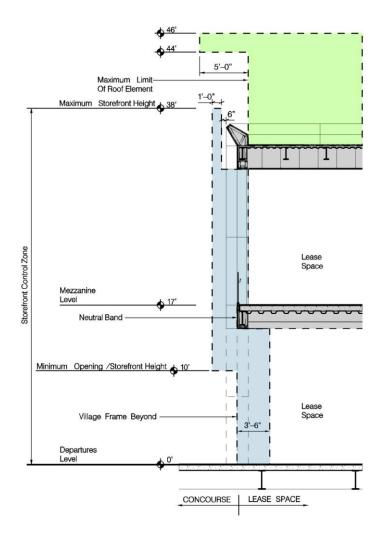


Figure 2.43 **Design Condition B1**



ELEVATION Figure 2.44





Maximum Limit Of Roof Element 2'-0" Optional Vertical Signage Zone Mezzanine Level Neutral Band **♦** 14'-6"' Parallel Signage Zone Optional Tenant Blade Signage Zone + 8 5'-4" Village Frame Beyond Departures Level CONCOURSE LEASE SPACE

SECTION: Storefront Area

Figure 2.46

SECTION: Signage Area Figure 2.47



2.3.2.2 Design Condition B2

Village design condition B2 is a lower level or upper level unit frame occupied by multi-tenants on each level. This village condition consists of one or more unit frames. The design guidelines are similar to condition B1, with the exception that the roof element zone applies only to the mezzanine level tenant.

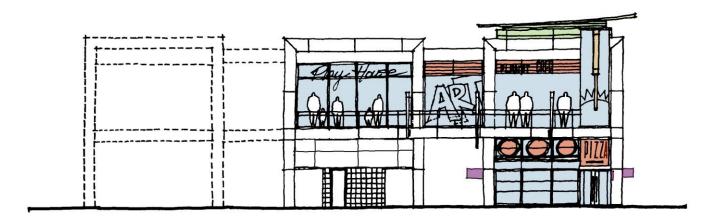


Figure 2.48



Figure 2.49 **Design Condition B2**

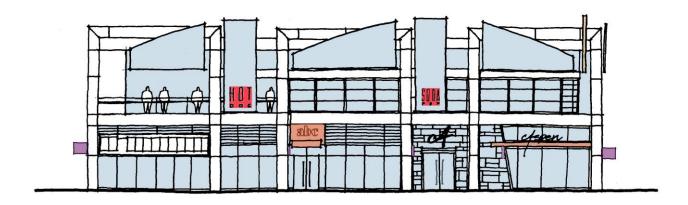
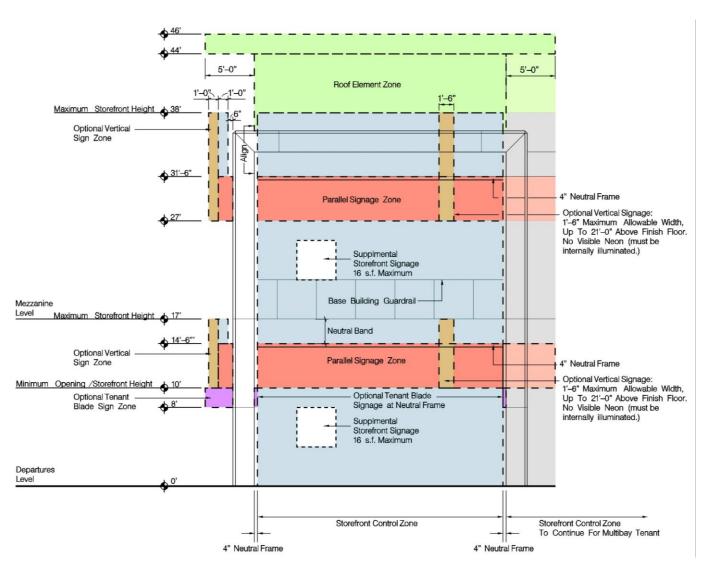
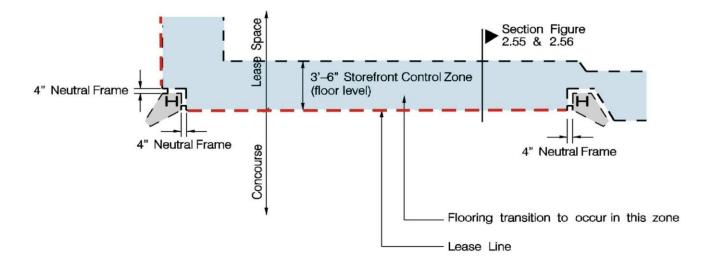


Figure 2.50

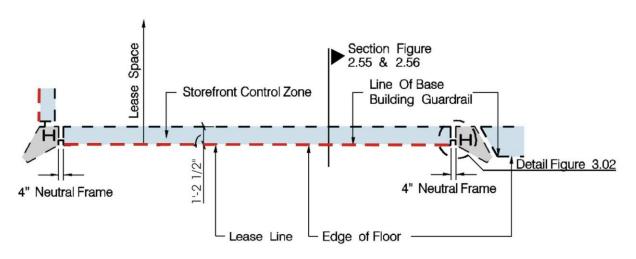








FLOOR PLAN: DEPARTURES LEVEL TENANT (TENANT A) Figure 2.53



FLOOR PLAN: MEZZANINE LEVEL TENANT (TENANT B)

Figure 2.54

Storefront

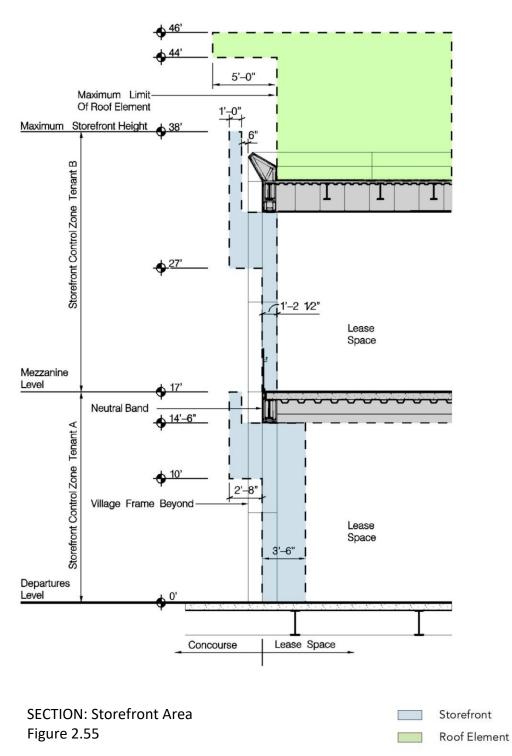
Storefront

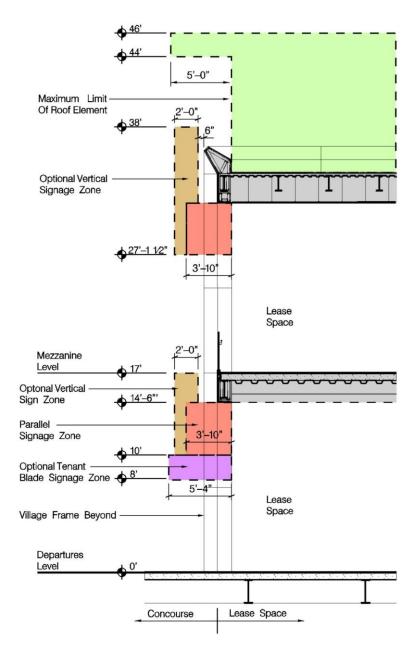
Roof Element

Optional Blade Signage

Parallel Signage

Optional Vertical Signage







2.3.2.3 Design Condition B3

Village design condition B3 is a lower level or upper level unit occupied by multitenants on each level. This village condition consists of one or more unit frames. This design condition is characterized by a mezzanine level public circulation space in front of a lease space on one or more sides of the unit frame. Blade signage for the upper level of this condition is only permitted along the mezzanine walkway. Vertical signage will not be permitted in this condition on the mezzanine level.

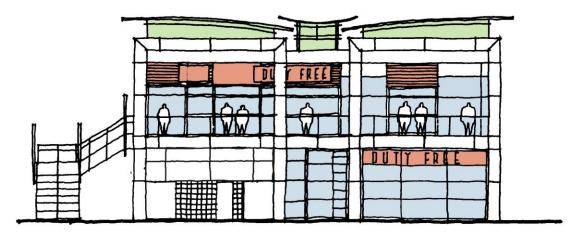
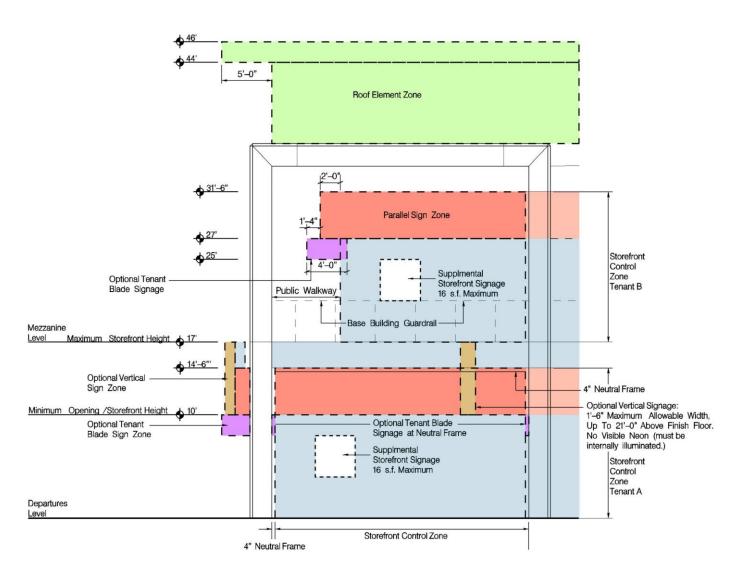
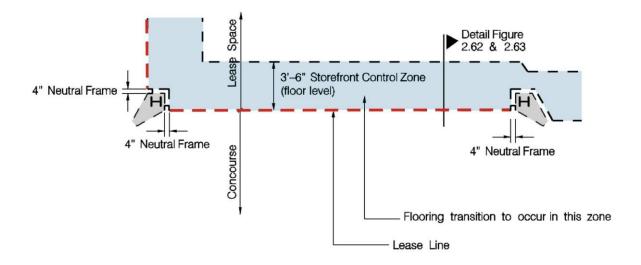


Figure 2.57

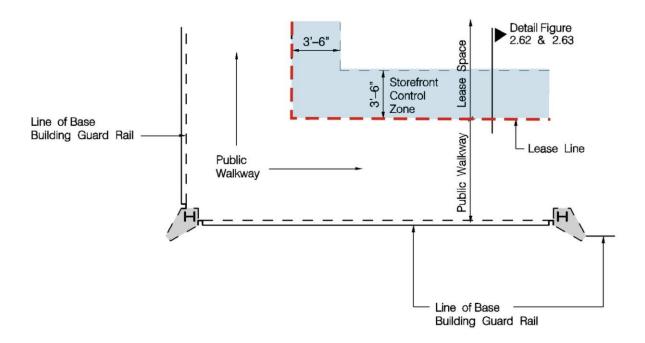








FLOOR PLAN: DEPARTURES LEVEL TENANT (TENANT A) Figure 2.60



FLOOR PLAN: MEZZANINE LEVEL TENANT (TENANT B)

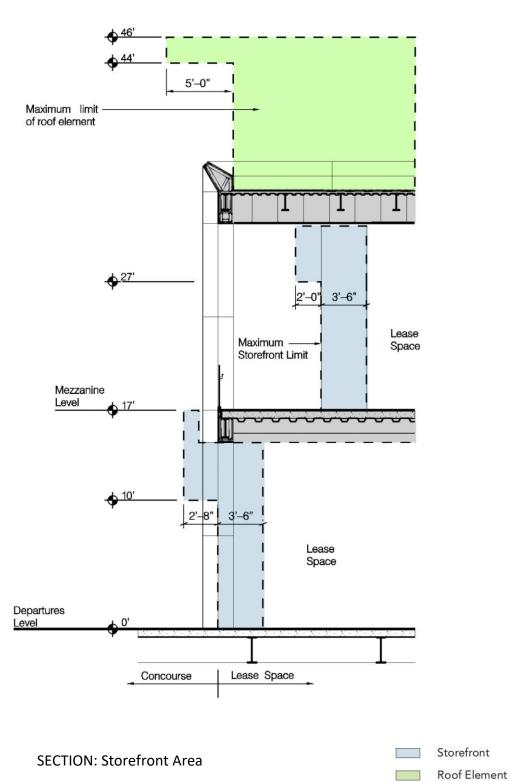
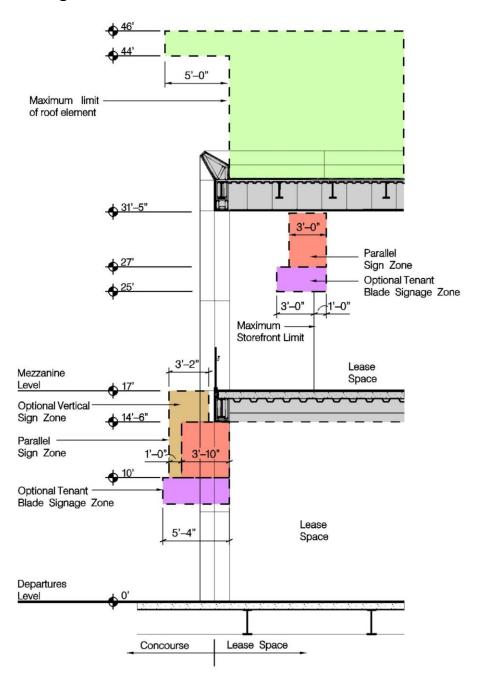


Figure 2.62



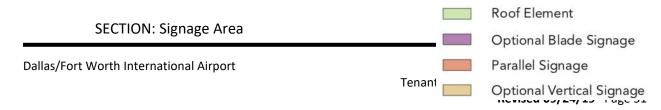


Figure 2.63

2.3.2.4 Design Condition B4 - Retail

Design condition B4 lease spaces are typically small, enclosed spaces and are strategically located in high traffic areas within the villages. Transaction counters, if provided by tenant, must comply with accessibility guidelines. Additional security requirements that are needed by tenant must be coordinated with the Airport. Minimum storefront opening and storefront height is 8'-0" in this condition.

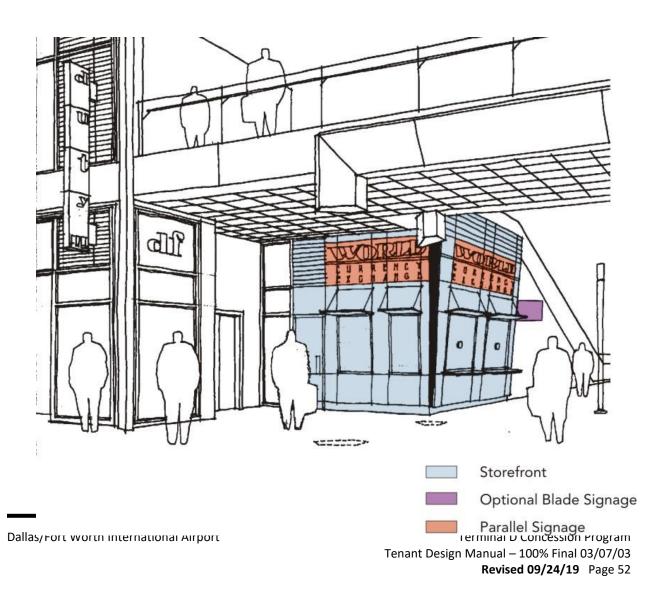
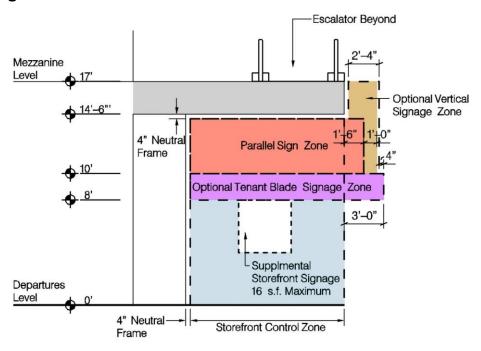
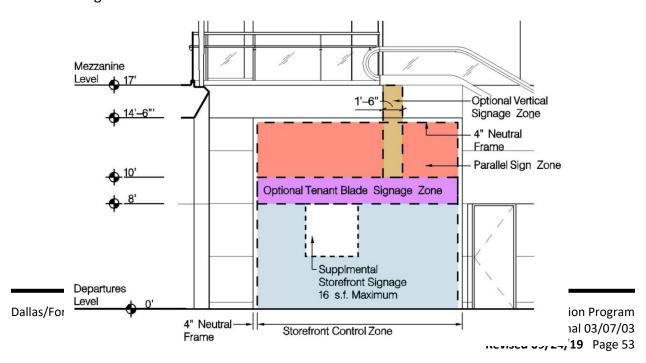


Figure 2.64

Design Condition B4 - Retail



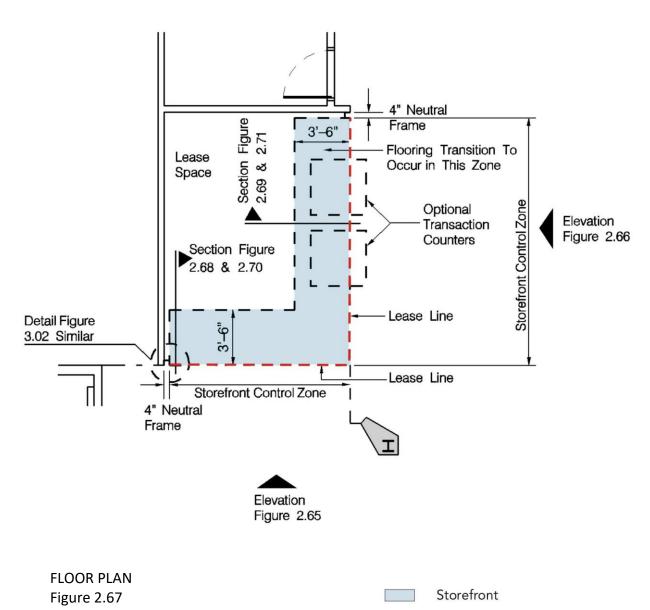
ELEVATION Figure 2.65



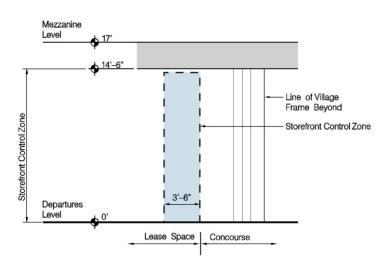
ELEVATION Storefront Parallel Signage

Figure 2.66 Optional Blade Signage Optional Vertical Signage

Design Condition B4 - Retail



Design Condition B4 - Retail

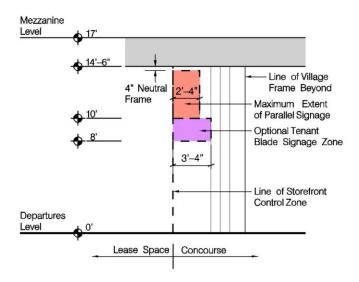


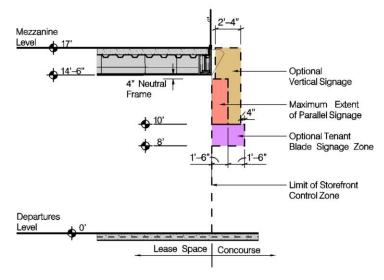
Storefront Control Zone
Storefront Control Zone
Flush With Terminal Wall
Finish Beyond

Lease Space Concourse

SECTION: Storefront Area Figure 2.68

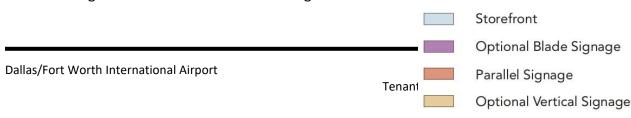
SECTION: Storefront Area Figure 2.69





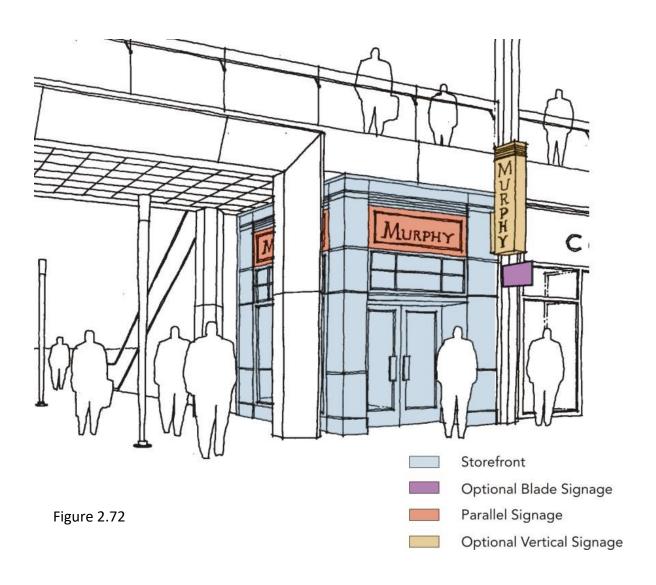
SECTION: Signage Area Figure 2.70

SECTION: Signage Area

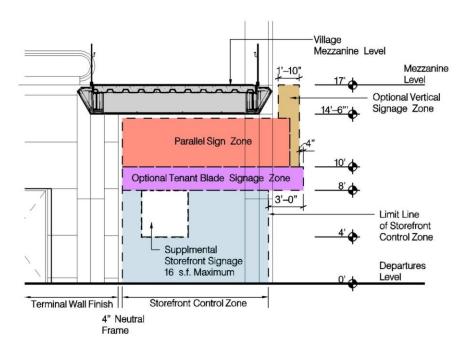


2.3.2.5 Design Condition B5 - Village Gateway

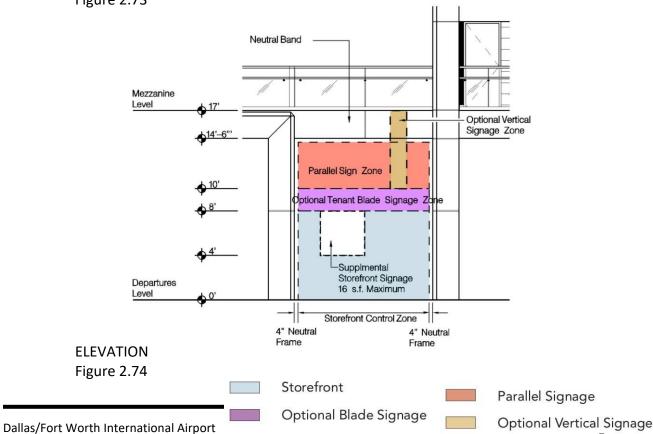
These lease spaces are located adjacent to the main entrance of the villages and one underneath the bridge at the mezzanine level. Minimum storefront opening and minimum storefront height is 8'-0" in this condition



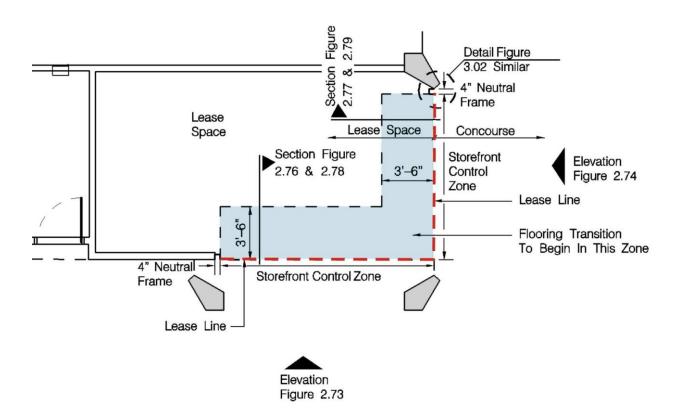
Design Condition B5 - Village Gateway



ELEVATION Figure 2.73

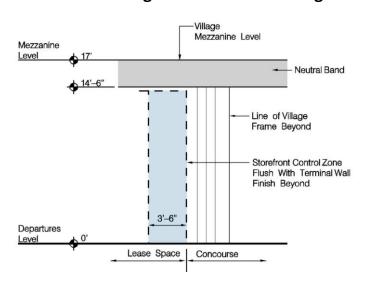


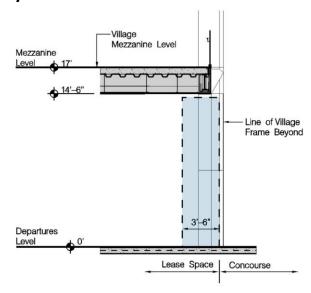
Design Condition B5 - Village Gateway



FLOOR PLAN
Figure 2.75
Storefront

Design Condition B5 - Village Gateway



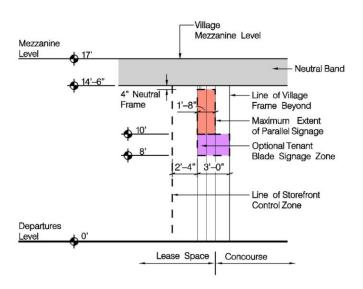


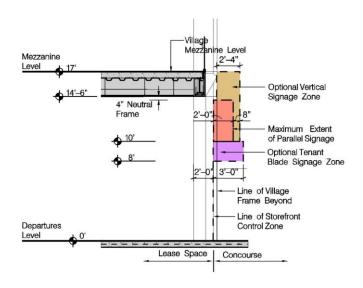
SECTION: Storefront Area

Figure 2.76

SECTION: Storefront Area

Figure 2.77





SECTION: Signage Area

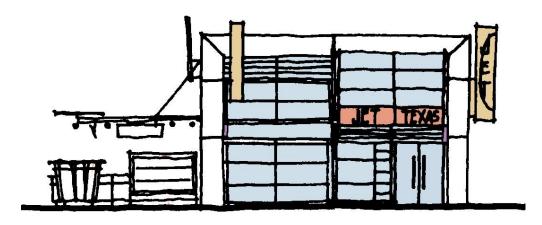
Figure 2.78

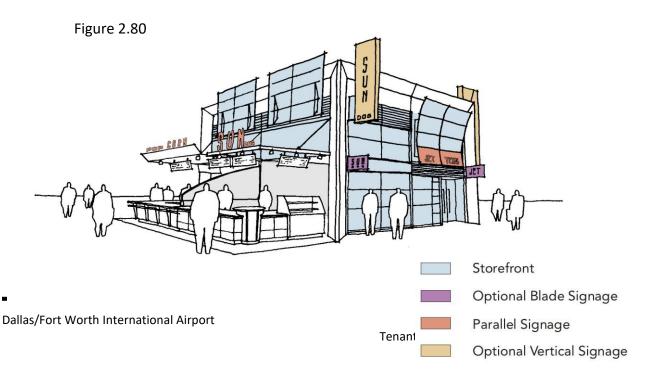
SECTION: Signage Area



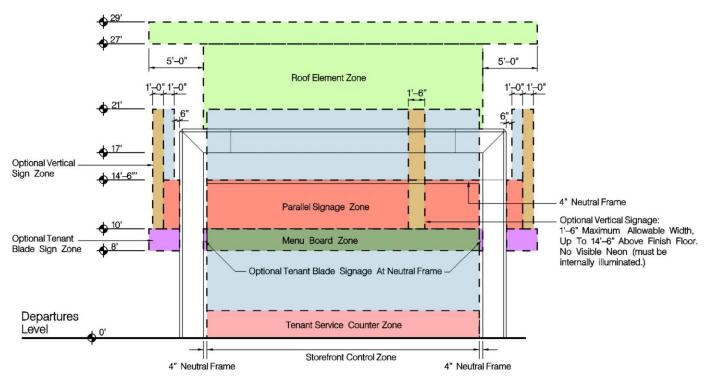
2.3.2.6 Design Condition B6 - Walk-Away

These lease spaces are located on the Departures level of the villages. Two tenants share a one-story village unit frame and are separated by a demising wall. Each lease space protrudes from the perimeter of the unit frame to allow for an open counter, with the counter set back 3'-6" from the lease line to allow for queuing. In addition to General Criteria for Storefront, Signage, and Lighting, this condition must also comply with the guidelines for Food and Beverage Tenants (Reference Section 3.8, "Food and Beverage Tenants".)

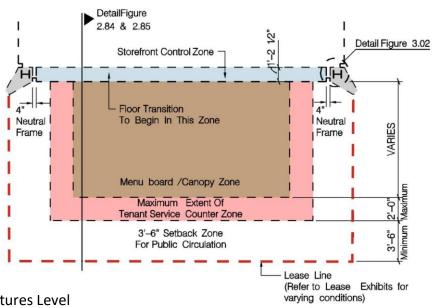




Design Condition B6 - Village Gateway



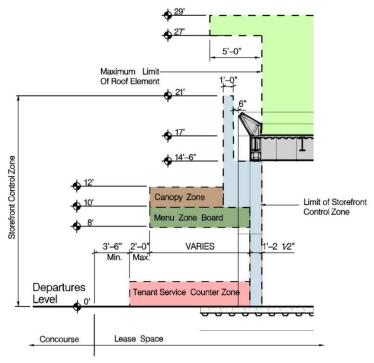




FLOOR PLAN: Departures Level

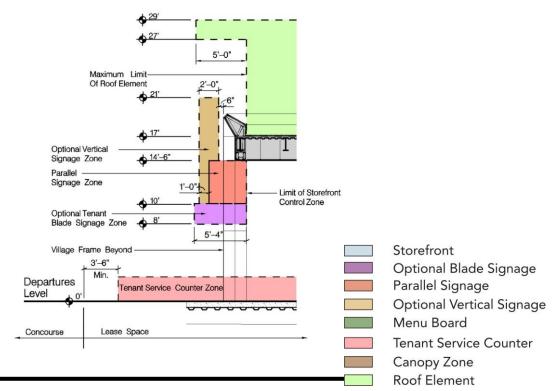
Storefront Menu Board
Optional Blade Signage Tenant Service Counter
Parallel Signage Canopy Zone
Optional Vertical Signage Roof Element

Design Condition B6 - Village Gateway



SECTION: Storefront Area

Figure 2.84



SECTION: Signage Area

2.3.3 Kiosks – Design Condition C

A Kiosk is an individual, freestanding, self-contained concession unit that provides preparation, display, or selling space as well as storage. (Reference Sections 6.1, "Provisions Summary" and 6.3, "Utility Assumption Matrix".)

2.3.3.1 Canopy Elements

The design of the overhead element, or canopy, must be integrated with that of the kiosk and of the surrounding building. The overhead element is to be a light, open structure that defines the kiosk and provides for integrated signage. Vinyl awnings are not permitted, nor are internally illuminated boxes around the perimeter. The bottom of the canopy must be at least 8'-0" from the floor. Depending on where the kiosk is located, the overall canopy height and maximum square footage for the signage zone may vary and are subject to TPM approval. Vertical elements are included as part of the design criteria when conditions allow.

2.3.3.2 Counters

Counter heights must comply with the Americans with Disabilities Act and Texas Accessibility Standards and provide a toe space 6" high and 4" deep. Display cases may compose 25% of the counter frontage when not exceeding 4'-6" in height above finish floor. Lower display cases may compose up to 75% with TPM approval.

All kiosks are to consist of durable, high quality material. Acceptable materials include:

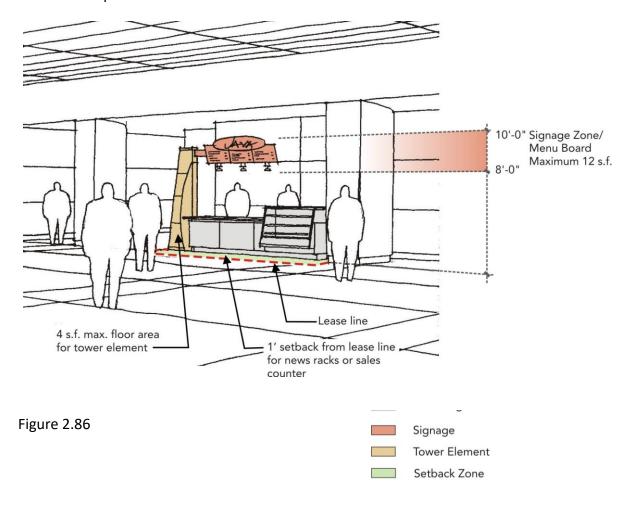
- 1. Solid surfacing plastics
- 2. Marble and other kinds of stone
- 3. Stainless steel and other kinds of metal
- 4. Wood

2.3.3.3 Security

Kiosk tenants must provide means of securing property. The securing system must be integral with the design and must not extend beyond or above the lease line. Lockable display cases and secured storage areas are recommended.

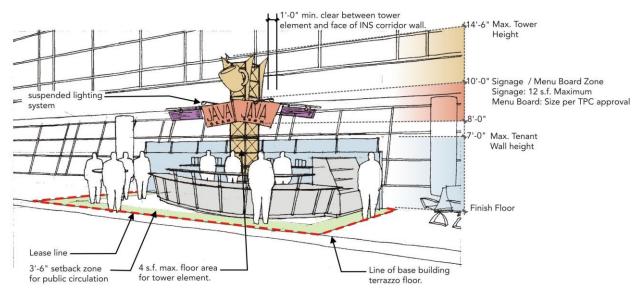
2.3.3.4 Design Condition C1

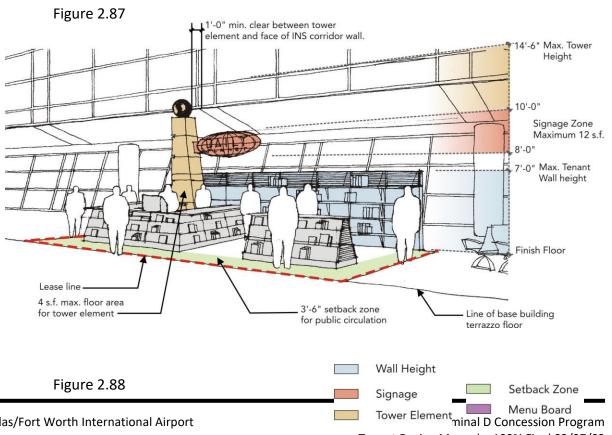
These lease spaces are located in the Meeters and Greeters area on Arrivals level.



Design Condition C2 2.3.3.5

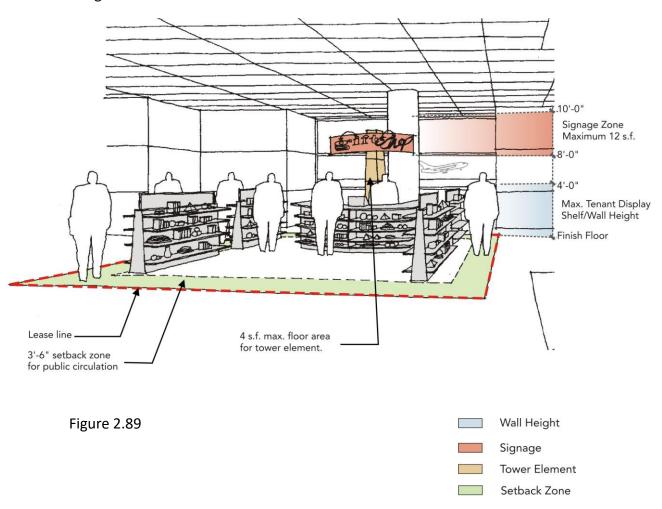
These lease spaces are located within the hold room seating areas on the Departures level. The tenant has the opportunity to include a tower element to a maximum height of 14'-6" in this design condition.





2.3.3.6 Design Condition C3

This lease space is located directly across from the main security checkpoint at the center of the Terminal on the Departures level. Seating or counters may be located in this area, but obstructions to the window glazing must be kept to a minimum per the guidelines noted below.



The following information is intended to assist the tenant in developing design documents for review and approval.

3.1 Storefront, Merchandise, Leaseable Space, and Security Criteria

3.1.1 Storefront

The storefront consists of the neutral frame and store enclosure. A SCZ has been established as a transition zone between the concourse and the tenant store interior. (Reference Section 2.2, "Storefront Control Zone".)

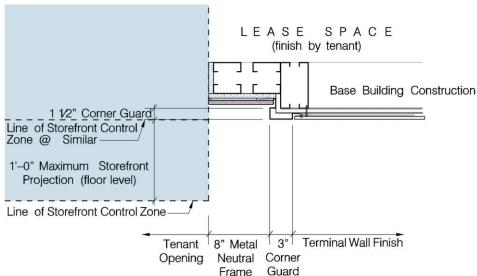
Use of the following materials on the storefront and within the Storefront Control Zone is strictly prohibited.

- 1. Simulated versions of any material such as brick, stone, or wood.
- 2. Plastic laminates.
- 3. Pegboard, slat board walls, or fixture systems.
- 4. Vinyl wall covering, fabric, or wallpaper. Decorative murals are subject to Airport approval.
- 5. Large areas of plain, smooth, painted gypsum board.
- 6. Simulated paneling, pre-finished or scored plywood products, or diagonal wood siding.
- 7. Re-used or recycled lumber must be milled to smooth finish and sealed.
- 8. Siding composed of vinyl, aluminum, or Masonite.
- Highly textured paint or stucco.
- 10. Shingles, cork, or wall mounted carpet.
- 11. Masonry with highly textured surfaces or sharp corners.
- 12. Rough sawn cedar or other unfinished woods.

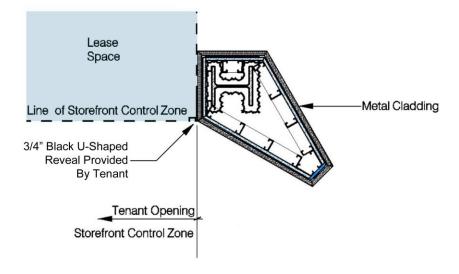
All storefronts, excluding doors, must have a 6" minimum base of durable material such as granite, marble, stone, terrazzo, brass, stainless steel, or other durable material adhered to a solid backing. Vinyl, rubber, or wood bases are not allowed.

3.1.1.1 Neutral Frame

The neutral frame is a metal reveal at the in-line and village unit storefronts that provide the demarcation between tenant and base building finishes. The Airport provides the neutral frame. (Reference Section 2.3, "Design Conditions" and Figures 3.01, 3.02.)



PLAN DETAIL: Design Condition A Figure 3.01



PLAN DETAIL: Design Condition B

Figure 3.02

3.1.1.2 Store Enclosure and Entrance

- Desirable treatments for storefronts are butt joint glazing or multi-pane clear, beveled, etched, or sandblasted glass in metal framing. Recesses, angles, and other devices designed to break up the length of the flat storefront are acceptable. All interior storefront glass is to be clear; the location and appropriateness are subject to Airport approval. (Reference Section 2.3, "Design Conditions".)
- 2. Fully open storefronts are not allowed. A maximum of 80% of the storefront width may be open (without glazing). Upon request, the Airport may give special consideration for wider openings.
- 3. A maximum of 20% of the total store enclosure area may be opaque. This percentage applies to each side of a lease space for tenants with more than one storefront side.
- 4. Swinging doors must not extend beyond the lease line.
- All storefronts are required to be self-supporting. Storefront construction can attach to the Neutral Frame and base building, but cannot suspend from it or be braced by it.
- 6. For fire department access, doors and panel systems must be keyed for access from the concourse and be furnished with cores and keys matching the Airport's master key system. Keys are to be tagged with tenant name and a space identifier that will be provided by the TPM. (Reference Section 3.1.4, "Security".)

The following types of store entrances are permitted:

- 1. Sliding doors must be enclosed in a pocket or become the rear enclosure of display windows when in the open position. Tracks may not be cut into floor structure. Vertical and horizontal sliding grilles not allowed, extenuating circumstances are subject to TPM approval.
- 2. Hinged doors must be fully recessed and out-swinging.
- 3. Glass storefront systems with metal mullions.

3.1.2 Merchandise Displays

The SCZ allows for merchandise displays when behind the storefront enclosure. It is critical that special attention be paid to the area through the use of fixturing, raised platforms, props, furniture, mannequins, lighting, etc. These elements are to be consistent with the space in both design and materials.

All materials and merchandise display casework within the SCZ, as well as the lease space, are subject to Airport approval.

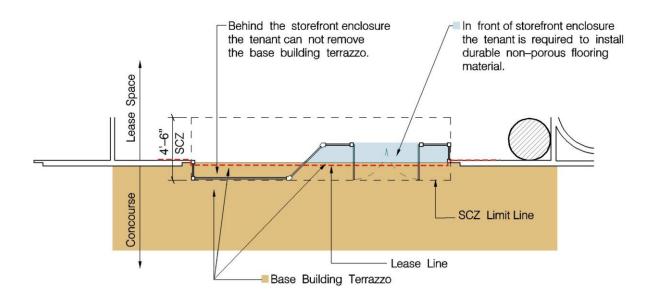
3.1.3 Leasable Space

The following requirements apply to the basic components of all concession spaces.

3.1.3.1 Flooring and Base

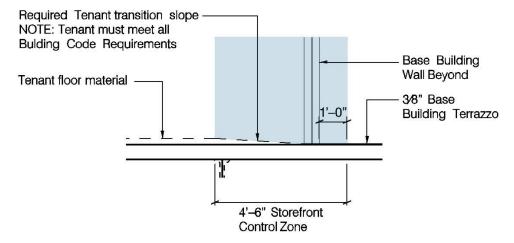
- The tenant should choose a flooring material within the lease space that matches the building floor level at the lease line. Should the tenant choose to install a flooring material that is of a different height than the adjacent building floor level, the tenant is responsible for providing a code compliant transition between the lease space floor level and the building floor level. Depressed floor slabs will not be permitted. All structural modifications and infills must be approved by the Airport and installed by a qualified contractor.
- 2. Stone, ceramic tile, or marble are acceptable flooring materials. The use of vinyl, VCT, wood, floor paint, sealed concrete, or cork is not permitted in public areas. Epoxy grout is highly recommended.
- The tenant must provide a durable, continuous base around the perimeter of the lease space. The material must compliment the flooring and must be compatible with the storefront. Rubber, vinyl, and carpet base are not acceptable. (Reference Section 2.2, "Storefront Control Zone".)
- 4. In all food preparation areas, bars, and grab & go areas, a continuous waterproofing membrane must be installed prior to the finish floor material. This material must wrap 12" up on the cement board of adjoining walls. There must be waterproofing under bars and Grab & Go areas. A flood test will be conducted before tile is allowed to be installed.

- 5. Within the SCZ, the tenant must provide a durable, non-porous flooring material on the concourse side of the storefront enclosure. (Refer to Figure 3.03) In some conditions, the base building has provided a portion of terrazzo flooring within the SCZ. Refer to the Lease Exhibits for the extent of base building terrazzo. Tenants may not remove the base building terrazzo.
- 6. New tenants are responsible for filling-in/patching the floor with matching terrazzo if the configuration of the storefront will differ from the previous tenant.
- 7. Terminal Floors are not consistently level throughout the terminal which can affect the installation of equipment. The tenant is responsible for correcting the floor level in their space.

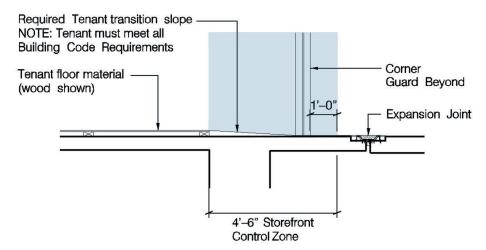


PLAN DETAIL Figure 3.03

Floor Transition Details

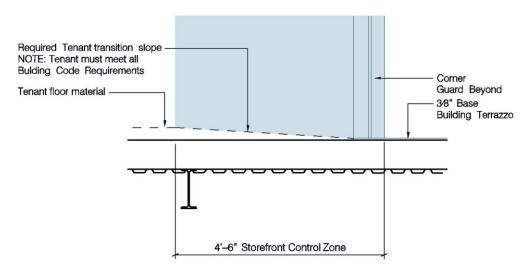


SECTION DETAIL: Design Condition A1, A3, A5 Figure 3.04



SECTION DETAIL: Design Condition A2 Figure 3.05

Floor Transition Details (continued)



SECTION DETAIL: Design Condition A4 Figure 3.06

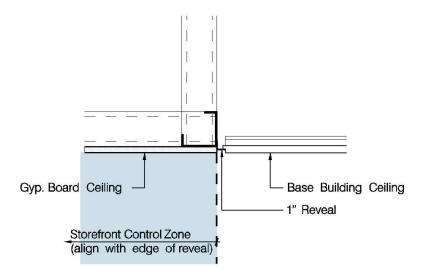
3.1.3.2 Ceilings

The overall ceiling height within the lease space is to be a minimum of 9'-0". Open ceilings or exposed structure treatments will be allowed when mechanical return-air plenums and existing structure are addressed properly. Ceiling systems at plenums are required to be accessible. (Reference DFW Design Criteria Manual.)

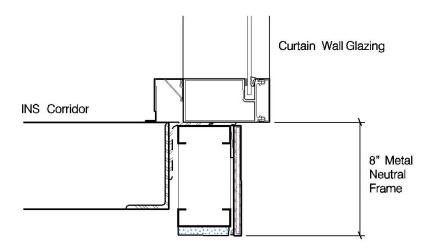
A gypsum board soffit is acceptable around the perimeter of the lease space if conditions allow. Ceiling furrdowns or bulkheads are permitted. However, furrdowns or soffits must not restrict access to plumbing or HVAC equipment.

Following are specific requirements for ceiling conditions:

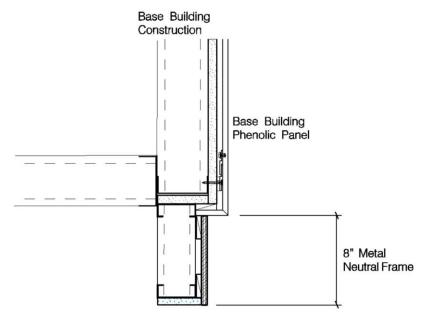
- Tenants are to limit gypsum board to soffits and ceilings that are furred down. Stained wood beams, clouds or gridded soffits are possible ways to add interest to the ceiling. Ceilings must be accessible for maintenance.
- 2. A 2' x 2' tegular grid system is a minimum standard for lay-in ceilings. All ceilings are subject to Airport approval.
- 3. All access panels, grills, and diffusers are to be mounted in the ceiling and painted to match.
- 4. All lease spaces, which have existing base building ceilings, are restricted from altering ceiling finishes unless approved by the TPM.



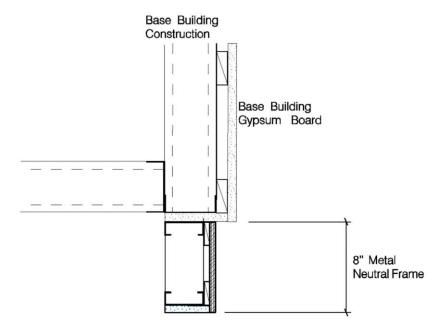
SECTION DETAIL: Design Condition A1 Figure 3.07



SECTION DETAIL: Design Condition A2 Figure 3.08



SECTION DETAIL: Design Condition A4 and A5 Figure 3.09



SECTION DETAIL: Design Condition A3 Figure 3.10

3.1.3.3 Interior Walls and Doors

Tenants are to use high quality, durable products for walls and doors. All finishes are subject to Airport Approval.

- 1. Materials are to be impact resistant, soil resistant, have a permanent lasting appearance.
- 2. The following materials are not permitted:
 - Imitation natural materials, such as simulated wood, brick, or laminate.
 - b. Pegboard walls or fixturing systems.
 - c. Painted gypsum board surfaces below 9'-0".
 - d. Window coverings.
 - e. Slat wall material.
 - f. Re-used or recycled lumber.
 - g. Siding composed of wood, vinyl, aluminum, or Masonite.
 - h. Rough sawn cedar or other unfinished woods.
- Interior doors must be solid core or hollow metal and the quality of the finish should be similar to that of the walls. Kick plates and door closers are recommended.

3.1.3.4 Demising Walls

The base building will provide demising walls as indicated on the lease exhibits. The tenant is required to maintain separation requirements as reflected in the lease exhibits. If fire rated walls or other existing construction must be opened or cut through to extend services to a lease space, the tenant must preserve the original rating and construction.

All tenant walls are to be finished. Tenants requiring security protection may install expanded wire mesh or weld wire fabric within the return-air opening.

Tenants must comply with acoustical requirements in the demising wall per **Section 3.4.2, Sound Transmission Class (STC) Planning Matrix**.

Permanent attachment to structure must be approved by the TPM. Tenants are permitted to furr-down around columns with systems that are self-supporting or free standing within their lease space. If heavy shelving or attachments are to be installed, the demising wall must be reinforced.

3.1.3.5 Terminal Roof

The Terminal D roofing systems are highly specialized. Tenant is to insure that any work required on the Terminal D roof does not void roofing warranties. All tenant equipment must be located within the designated mechanical wells. Storage of equipment and materials on the roof during construction is prohibited.

The tenant must consider the following in planning for rooftop equipment:

- 1. Roof access.
- 2. Equipment shut-offs.
- 3. Existing walkway access.
- 4. Existing screen walls.
- Concealed piping.
- 6. Existing equipment clearances.
- 7. Roof protection during construction.
- 8. Temporary weatherproof protection of openings during construction.
- 9. Lifting and hoisting of equipment.
- 10. Structural calculations of penetrations and reinforcing of openings if required.
- 11. Effects on roof drainage.
- 12. Protection of roofing material from oil and grease emitted by kitchen exhaust equipment.
- 13. Existing lightning protection system and recertification of existing system should additional protection be required on new equipment.

Modifications or installations of equipment requires consultation with an MEP engineer, a structural engineer where required, and the approval of the Airport. The TPM must be notified of such work and written approval must be obtained from the TPM prior to construction. (Reference DFW Design Criteria Manual.)

3.1.3.6 Concession Village Roofs

Since the roofs will be visible from the floors above, the appearance of the roof must be clean, uncluttered, and absent of construction debris and mechanical equipment. Design and materials used for concession village roofs are subject to TPM approval. Tenants are responsible for maintenance and for providing access to concession village roofs. (Reference Section 2.3.2, "Design Conditions B – Villages - B1, B2, B3 and B6".)

3.1.4 Security

Tenants are required to provide a means of securing the leasehold during non-operational hours. This requirement is for any walled or enclosed spaces within the leasehold. Food and Beverage Open seating areas are not subject to this requirement.

All doors or enclosure panels must be either glass or framed glass and must match or complement the airport provided neutral frames and transitions at each storefront. No security gates or grilles will be allowed.

Enclosed storefronts are encouraged to provide either hinged doors or pivoting doors in keeping with the material and visual requirements within this section.

Open storefronts will have folding, sliding, pivoting or hinged doors and panels in keeping with the material and visual requirements within this section.

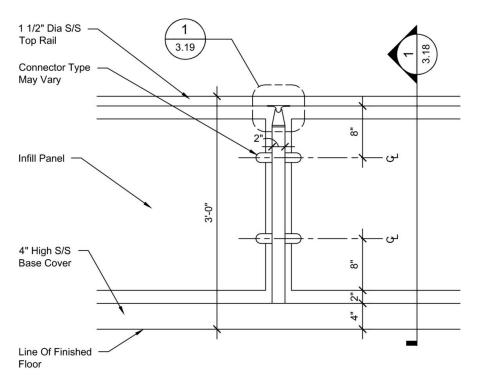
Fire Department access requires that all doors and accesses be keyed for admittance from the Concourse. The tenant must furnish cores with keys that match the Airport's Master Key System.

3.1.5 Railings

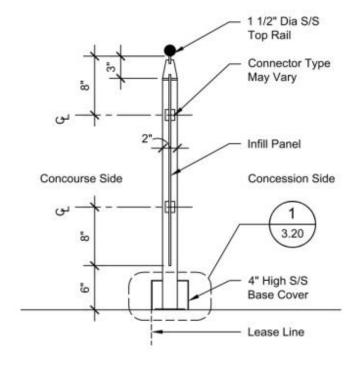
Where the tenant lease line extends past the neutral frame, tenants shall be required to provide railing to define the seating area or merchandise display area. Food and Beverage tenants serving alcohol will be required to meet Texas Alcoholic Beverage commission railing requirements.

The railing shall be procured and installed by the tenant at the tenant's expense and comply with the railing construction criteria below.

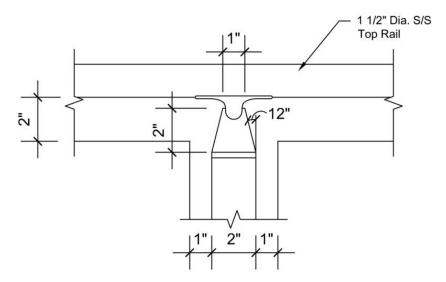
(Reference Section 6.8 Specifications / Section 05 73 00)



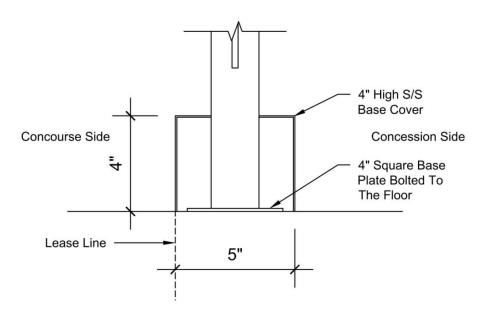
Plan Elevation Figure 3.11



Plan Section Figure 3.12



Plan Detail Figure 3.13



Plan Detail Figure 3.14

Related Requirements: Reference Section 3.2.3.4
Signage "& 3.2.3.5 "Railing Signage Criteria"

"Railing

3.2 Signage Criteria

Signage is an integral part of the overall design of the concourse and plays a key role in the retail environment. Tenants are permitted to use their corporate logo, sign type, and lettering styles, when compatible with Terminal D signage criteria and this Manual. Tenants are required to coordinate mandatory and supplemental signage into a complementary design. Tenants must be aware of the Airport directional signage in Terminal D and they must avoid obstructing or confusing the Airport's way finding message.

Concession signage standards define zones for signage, maximum size of fonts, materials, and lighting requirements.

Regardless of location, all signs, including colors, materials, and designs are subject to Airport approval. The Airport reserves the right to reject any signage.

3.2.1 Mandatory Signage

Each tenant is required to design, fabricate, install, and maintain primary signage above the storefront. Required signage includes the parallel sign element. Refer to **Section 2.3 "Design Conditions"** for guidelines on the sign elements required for each design condition. This signage is solely at the tenant's expense.

Signage shall be limited to the tenant's trade name and logo only. All signs within the Storefront Control Zone are subject to Airport approval. (Reference Section 2.3, "Design Conditions".)

Space Identification markers are required by DFW Fire and Life Safety, these markers should match the Space ID tags utilized throughout the Terminal. Consult a TPM for details or questions regarding Space ID markers.

3.2.1.1 Parallel Sign Element

The parallel sign element is located along the storefront and is displayed parallel to the face of the storefront. Refer to the design conditions for parallel sign location guidelines. (Reference Section 2.3, "Design Conditions".)

3.2.1.2 Menu Boards

Food and Beverage tenants are to provide one or more menu boards designed as an integral part of the design concept.

Menu boards must be digital, with changeable price and menu graphics. Additional signage on menu boards is limited to a designated logo, point-of-sale graphics, and trade name only. Text on the menu boards must be legible from the front counter. Tenants are encouraged to use electronic menu boards consisting of one or more flat-screen monitors (max depth 4") integrated into the rear wall design.

Menu boards are not permitted within the Identity Control Zone. DFW Concessions must approve the use of menu board photographs. The graphic design of the menu board is to match the storefront identity in type style and colors.

"Daily Special" signs or signs for seasonal or temporary promotions may be integrated into the overall design of the menu board and the back wall.

The board must be a minimum of 1'-6" from the adjacent demising wall.

3.2.2 General Criteria

In addition to specific signage criteria available through the TPM, tenants must comply with the following general criteria:

- Mandatory signage is required on storefront elevations per the guidelines outlined in the design conditions. On elevations in excess of 40 linear feet, additional signage may be permitted only with the Airport's approval. Any tenant having storefronts on two or more sides of the concourse may use one sign on each storefront as allowed by the Airport.
- 2. Length of signage shall not exceed 60% of signage zone.
- 3. Brand names, product names or phrases may not appear on the storefront or store enclosure unless approved by the Airport.
- 4. Letter height The maximum cap height for horizontal and vertical text letters is 12". Tenants requesting letters over 12" must have prior approval from the TPM. Capital letters may be 18" when lower case letters are 12". Signage of all capital letters must all be 12".
- 5. Logos may be up to 24" tall, must have approval from the TPM.
- 6. Decals or other signing indicating product lines or credit card acceptability shall not be permitted on the storefront.

- 7. Temporary signs, banners, sales notices, etc. are not permitted on the storefront.
- 8. All attachment devices, wiring, clips, transformers, lamps, tubes and other mechanisms required for signs shall be concealed.
- 9. Electrical service to tenant's signs shall be from tenant's electrical panel.
- 10. The location of all openings for conduits and sleeves in sign panels shall be indicated by the tenant's sign contractor on signage shop drawings submitted to the TPM for review and approval. The sign contractor shall install the product(s) in accordance with the approved drawings.
- 11. Any damage, to any other work, caused by the tenant's sign contractor shall be repaired at the tenant's expense.
- 12. The tenant will be fully responsible for the workmanship and installation of tenant's sign and coordination of the tenant's sign contractor.
- 13. No sign fabricator labels or other identification will be permitted on the exposed surface of the signs, except those required by local ordinance. If required by local ordinance, such labels or other identification shall be in an inconspicuous location.
- 14. "Operated By" signage will only be allowed inside the location, not on the storefront or in the SCZ.

3.2.3 Optional Signage

Special graphics and temporary displays may be placed within the SCZ when behind a storefront enclosure, but only with approval by the Airport. Approval for any special and temporary sign programs within the lease space must be obtained each time the program or the signs themselves are revised. Initial approval for a specific program does not constitute blanket approval for subsequent temporary signs or sign programs.

No displays or signs are permitted outside the lease line.

3.2.3.1 Supplemental Sign Element

Tenants have the option, with Airport approval, to integrate supplemental signage into the storefront design to support the overall store image and give greater visibility from the concourse. Supplemental signage, if approved, will be located on the storefront and cannot exceed 16 square feet. (Reference Section 2.3, "Design Conditions".)

3.2.3.2 Vertical Sign Element

The optional vertical sign element is also located along the storefront and functions much like a store marquee. It is displayed perpendicular to the storefront. In design condition A2, the vertical sign element may extend up to 8'-0" above the finish floor of the INS level and offers an invitation to

international passengers to the retail environment on the Departures level below. The other design conditions also have guidelines for the overall height and location of the signage. In the design conditions where the vertical signage is visible from above, the backside and the top of the vertical signage will be required to be finished out. (Reference Section 2.3, "Design Conditions".)

3.2.3.3 Tenant Blade Sign

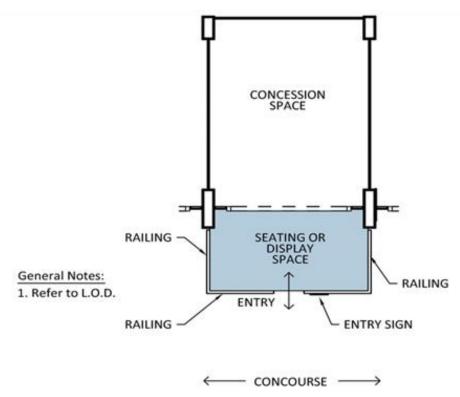
The tenant blade sign is an optional sign element. The sign is located outside the store enclosure and displayed perpendicular to concourse circulation. The sign has a maximum square footage as indicated by the tenant blade signage zone within the design conditions. As with the parallel and vertical sign element, the sign face will be limited to the tenant's trade name and logo. (Reference Section 2.3, "Design Conditions".)

3.2.3.4 Railing Signage

Open "un-walled" customer seating areas or merchandise display areas must be enclosed by concessionaire provided railings. One "entry sign" is allowed within the railing module immediately adjacent to the main entrance of the concession unit. (Refer to Diagram 3.15)

In the event these enclosed areas are shared between two tenants, design and locations for shared signage opportunities must be mutually agreed upon between the tenants and approved by DFW Concessions. Costs for railing signage are the sole responsibility of the concessionaire(s).

All signage is subject to concessions approval and must comply with criteria in **Sections 3.2.3.5**



Railing Signage Figure 3.15

3.2.3.5 Railing Signage Criteria

Tenants are encouraged to be creative with the design of railing sign panels and are permitted to use their corporate logo, graphics and lettering styles. All signs, including colors, materials, and designs are subject to DFW Concessions approval.

Tenants must comply with the following general criteria:

- 1. Each sign panel must fit within one railing module.
- 2. Brand names, product names or phrases may not appear on the sign panel unless approved by DFW Concessions.
- 3. Decals or other signage indicating product lines or credit card acceptability is not permitted on the sign panel.
- All attachment devices, wiring, clips, transformers, lamps, tubes and other mechanisms required for signs must comply with railing specification (Refer to Section 6.8 Specifications)
- 5. The sign contractor is to install the product(s) in accordance with the approved drawings.

- 6. Any damage to any other work caused by the tenant's sign contractor will be repaired at the tenant's expense.
- 7. The tenant will be fully responsible for the workmanship and installation of tenant's sign and coordination of the sign contractor.
- 8. No sign fabricator labels or other identification will be permitted on the exposed surface of the signs, except those required by local ordinance. If required by local ordinance, such labels or other identification should be in an inconspicuous location.

The following sign materials are appropriate and their use is permitted with DFW Concessions approval:

 Wood, metal, acrylic, glass (etched, beveled, sandblasted or stained) or other material with a permanent appearance that fits within prescribed mounting system.

The following sign types, sign components and devices will not be permitted:

- 1. Dimensional letters
- 2. Noise making.
- 3. Odor producing.
- 4. Exposed labels of manufacturers, underwriters, etc.
- 5. Veneer or plywood products.
- 6. Pre-molded plastic letters with reflective coatings.
- 7. Hand lettered non-professional signs

3.2.4 Specialty Signage

All signage on and within the tenant's space is subject to design review and approval, including all signs for sale and seasonal promotions, and for product displays. The Airport must approve signage of this type before being installed.

Signage must be professionally designed and produced in colors and materials consistent with the overall store image.

No free-standing floor signs (stanchion signs, A-frame signs, etc.) will be allowed.

3.2.5 Sign Types

The following sign types are appropriate and their use is permitted with Airport approval.

- 1. Dimensional, wood, metal, plastic, glass or other material with a permanent appearance.
- 2. Dimensional, illuminated, halo or back-lit individually mounted letters.
- Dimensional letters must not be less than one inch nor more than three inches in depth, and must project from the storefront with one-inch spacers.
- 4. Etched, beveled, sandblasted or stained glass.
- 5. Internally illuminated channel letters with opaque metal sides and plastic face. Internally illuminated letters must not be less than one inch nor more than four inches in depth.
- 6. Moving, rotating, or animated signs may be used in the SCZ if behind the storefront and with Airport approval.

The following sign types, sign components and devices shall not be permitted:

- 1. Boxed or cabinet type.
- 2. Exposed neon tube forming letters or logo in public areas (allowed within tenant spaces and subject to Airport approval)
- 3. Formed plastic.
- 4. Cloth, paper, cardboard or similar stickers or decals.
- 5. Noise making.
- 6. Odor producing.
- 7. Flashing.
- 8. Exposed labels of manufacturers, underwriters, etc.
- 9. Veneer or plywood products.
- 10. Pre-molded plastic letters with reflective coatings.

3.2.6 Illuminated Signs

Where illuminated signs are considered, the following restrictions apply:

- 1. All illuminated signs must be turned on during the terminal's retail operating hours. The use of an automatic timing mechanism for signage, SCZ lighting, and show window lighting is mandatory.
- 2. The Airport must approve any use of neon.

- Signs must be constructed so lamps are easy to replace. Ballasts should be accessible from within the lease space and must be concealed.
- 4. Video equipment used for illustrating products or for advertising is restricted if located within the SCZ. All video equipment is subject to Airport approval. All video media is subject to airport approval.

3.2.7 Non-illuminated Signs

Non-illuminated signs are viewed as decorative as well as informative and are subject to Airport approval. Note the following:

- 1. Letters or logos applied or painted directly on the inside face of glass storefronts are not permitted unless they are being used as a safety band. Height for safety band name or logo shall not exceed 4" unless required by code.
- 2. Super graphic treatment of large amounts of storefront is not permitted.
- 3. Hand lettered non-professional signs and newspaper advertisements are not permitted in the SCZ.
- 4. Additional signs or advertising for brand names (e.g., soft drinks) are not permitted without Airport approval.

All graphics must have a non-glare, matte finish. The type must be large enough and its style simple enough to make the text clearly legible.

Both quantity and quality of light is to be considered in store design. Lighting should be energy-efficient and suitable to a retail environment. All lighting locations, specifications, product data sheets, including light source selection, must be submitted for review.

3.3 Lighting Criteria

3.3.1 Lighting Technology

High efficacy lamps with color temperatures between 2700 degrees Kelvin and 3500 degrees Kelvin with a Color Rendering Index of 80CRI or higher, are required. Standard sources are linear and compact fluorescent, ceramic metal halide, quartz halogen incandescent, shielded neon, fiber optic and light-emitting diode (LED). Electronic ballasts, low voltage transformers, switches and dimming equipment shall be used as required for a complete installation.

Lighting design must conform to the codes adopted by DFW code department. See TPM for additional information.

3.3.1.1 Storefront Control Zone

Ambient lighting from the public concourse will not be sufficient for tenant lighting. The tenant lighting will be seen against a background of varied natural and artificial light, and must maintain high standards of quality, which are critical to the effectiveness, and operating efficiency of the overall facility. (Reference Section 3.3.2, "General Tenant Lighting Standards".)

General ambient light levels at the floor in the concession halls will be approximately 60-120 foot-candles during daylight hours and 20 foot-candles after daylight hours. Contrast ratios listed below should be in relation to these ambient levels.

| Storefront Lighting Level Matrix | | |
|---|---------------------------|-----------------------------------|
| | Maximum Contrast Ratio | Minimum Maintained Illuminance |
| Show Windows - General | 3:1 | 150fc |
| Shop Windows - Display | 5:1 | 300fc |
| Floor at Shop Entry (Storefront Control Zone) | 3:1 | 100fc |

Lighting in the Storefront Control Zone is restricted as follows:

- 1. Lighting must be installed in the storefront as an entry "apron" to the store.
- 2. Light sources utilized for this purpose must be quartz halogen incandescent, compact fluorescent, linear fluorescent, or ceramic metal halide.
- 3. Track lighting is prohibited.
- 4. Provide a minimum of 100 foot-candles (fc), maintained at the floor level of the SCZ.
- 5. Lights must be selected and placed to avoid glare to the public concourse.

3.3.1.2 Light Fixture Types

The following light fixtures have been approved for use within the SCZ. The use of other fixtures within the SCZ shall be submitted and will be subject to Airport approval.

- Quartz Halogen Incandescent Downlight Kurt Versen C7301, alternate manufacturers -Zumtobel/Staff and Lightolier.
- 2. **Compact fluorescent Downlight** Kurt Versen P926, alternate manufacturers Zumtobel/Staff and Lightolier.
- 3. **Metal Halide Downlight** Kurt Versen R7301, alternate manufacturers -Zumtobel/Staff and Lightolier.
- 4. **Linear fluorescent direct fixture** Linear recessed 45 and 66, alternate manufacturers-Focal Point and Lightolier.

3.3.2 General Tenant Lighting Standards

General lighting refers to interior lease-space lighting that is beyond the SCZ. Lighting must be compatible with the design of the lease space.

If linear fluorescent lighting is used, parabolic diffusers with metallic coatings or a white paint finish must be used. Egg crate and prismatic acrylic diffusers are prohibited; however, acrylic prismatic lenses are allowed in kitchen and food preparation areas.

Exposed and surface-mounted lamps are prohibited. All surface mount fixtures including decorative and track mount fixtures are subject to approval by the TPM. All showcases and display cases must be adequately lit and ventilated.

Track lighting is prohibited, recessed/hidden tracks may be used if approved by the Tenant Project Manager. Recessed directional fixtures may be used in paralled to achieve an equivalent illumination affect.

Non-L.E.D. lighting may be used only for design/feature lighting. General lighting and task lighting must be LED.

3.4 Acoustics and Public Address System

3.4.1 Acoustics

Tenants are required to minimize the transmission of sound from their lease space to the concourse and adjacent tenants.

The Tenant must provide the following as a minimum:

- Noise Criteria (NC) Values from the Heating, Ventilation, and Air Conditioning (HVAC) systems as generally accepted practice by the American Society of the Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Sound and Vibration Chapter 46, Table 34 Design Guidelines for HVAC-Related Background Sound in Rooms, 1999 Edition. NC Level outside a tenant space as a result of the HVAC system should be limited to NC 40 in any adjacent occupied space or landlord lease space.
- 2. HVAC systems and equipment will be installed with vibration isolators as accepted practice by ASHRAE, Sound and Vibration Chapter 46, Table 45 Selection Guide for Vibration Isolators, 1999 Edition.
- 3. The minimum Sound Transmission Class (STC) value between tenant spaces for non-critical noise intrusion is STC 47.
- 4. Minimum partition STC for critical noise adjacencies such as beverage tenants, food preparation, cleaning areas, and dish washing adjacent to sensitive tenant STC 55 with consideration for plumbing noise vibration isolation. Higher STC values may be required based on space planning. See the STC planning outlined below.
- 5. Space planning for adjacent tenants will need to be considered and the Tenant's Design Team should inquire as to adjacencies.
- 6. Impact Isolation Criteria (IIC) will be a minimum of 50 for all hard surfaced floor areas above occupied spaces.
- 7. Hard surfaced floor materials such as wood, stone, ceramic tile, etc. for tenant spaces on the concessions mezzanine level will be installed using an impact isolation underlayment material and appropriate thin set product to adhere the hard surface to the isolation product.
- 8. All waterproofing underlayment material must also be rated to increase the IIC class of the floor assembly.

Examples of isolation underlayment material manufacturers are:

- a. Noble Seal
- b. NCA Products
- c. Ekasonic
- d. Kinetic Noise Control
- An isolated lay-in ceiling may be required to achieve a sufficient Impact Isolation Class for the construction between the concessions performance platform or concessions mezzanine seating area and the tenant space below.

Music and background paging systems are permitted with Airport Concession approval. However, the volume of sound must be controlled to limit the levels to the lease space boundaries and not intrude into the adjacent lease spaces or the concession aisle ways, so that the Terminal Background Paging System and Emergency Messaging System can be clearly heard without interference from lease space sound systems. The noise from any lease space to the exterior shall not exceed 6 dBA above the ambient level. The ambient level is scheduled to be 50 dBA; therefore, the maximum level for the lease space will not exceed 56 dBA.

3.4.2 Sound Transmission Class (STC) Planning Matrix

Tenants will be required to maintain a minimum STC rating for the demising walls per the following matrix.

| | Business Center | Café | Concessio n Storage | Duty Free | News | Passenger Service | Quick Serve | Retail | Sit Down | Terminal | Toilet |
|-----------------------|--------------------|------|------------------------|-----------|-----------------|----------------------|-----------------|--------|----------|----------|-----------------|
| Business Center | | 50 | | | | | | 45 | | 45 | |
| Café | 50¹ | | | 45 | 45 | | | | | 45 | |
| Concession Storage | | | 40 | | | | | | | 40 | |
| Duty Free | | 45 | | | | 45 | | 45 | | 45 | |
| News | | | | | | | | | 45 | 40 | 50 ¹ |
| Passenger Service | | | | | | | | | | 40 | 50¹ |
| Quick Serve | | | | | | | | | | 40 | 50¹ |
| Retail | 45 | | | | | | | | | 45 | 50¹ |
| Sit Down | | | | | 45 | | 45 | 45 | | | 50 |
| Terminal | 45 | 45 | | | 40 | | 40 | 40 | 45 | | |
| Toilet | | | | | 50 ¹ | | 50 ¹ | 50¹ | | | |

¹⁾ Double wall to isolate plumbing noise

3.4.3 Public Address and Voice Evacuation (P.A.V.E.) System

The Airport utilizes the Public Address and Voice Evacuation (PAVE) System as the audible portion of the Voice Evacuation System. A tie-in point will be available within or adjacent to the lease space to connect into the Terminal PA/VE system.

The tenant is responsible for locating the speakers and circuiting to distribute the VE messages. Speaker placement and circuiting shall be in accordance with all required codes and standards in Section 1.4 "Codes and Standards", including NFPA 72 and the DFW "Construction and Fire Prevention Standards Resolution and Amendments to the Codes".

Specifically, speaker quantities and placement must ensure a Speech Intelligibility Index (STI) of not less than 0.50. Speaker cabling shall be installed in conduit and cabling shall be connected to each speaker in series. Each tenant space shall have a series speaker cabling; there shall be no T-taps, or branch distribution. Therefore, the speakers within the tenant space shall loop back to the original tie-in point so the circuit can extend beyond the tenant space in series. The tenant contractor shall coordinate the design and installation of connections to the tie-in point with DFW DPS, the DFW Fire Marshal's office, DFW Life Safety, and DFW ITS. All devices shall be compatible with the Terminal PA/VE system and be provided by the vendor installing the Terminal PA/VE System.

Speakers cannot be mounted to the unit frames at the villages.

Ford Audio-Video will design the space PA/VE system to work with and tie-in to the base building system. The tenant will be required to have the PA/VE system designed and installed by Ford Audio-Video at the tenant's cost.

Reference 3.9.2 "Fire Alarm" for further definition regarding electro-acoustic requirements.

3.5 Mechanical, Electrical, and Plumbing Requirements

The terminal MEP system will satisfy standard project needs, meeting requirements in the design standards for the Airport. Supplemental requirements or unusual circumstances caused by tenant development may demand that supplemental equipment be installed by a contractor qualified to perform work at the tenant's expense. (Reference DFW Design Criteria Manual.)

Plans must show all routing and connections of new services to existing lines, ductwork, piping, telephones, distribution switchboards, or distribution panels. The Tenant is responsible for verification of all infrastructure above and below the tenant lease space; the tenant is responsible for avoiding conflict of M.E.P systems. The installation and maintenance of tenant infrastructure cannot impact the neighboring tenants; the tenant is solely responsible for correcting conflict issues resulting from new/old/damaged or failing infrastructure. The tenant must demonstrate that existing utilities will support new lease space design loads, and provide to the TPM completed heat loss/gain and electrical power calculation forms provided in this Manual. (Reference Sections 6.4 "Heat Loss Schedule", 6.5 "Heat Gain Schedule", and 6.6 "Electrical Review Schedule".)

3.5.1 HVAC

Terminal D is served with chilled and heated water from a central utility plant. Air handling units are currently in place for Departures level lease spaces, Mezzanine level lease spaces, Arrivals level lease spaces, and Service level storage spaces, to provide a standard design capacity in the terminal building. Medium pressure supply air ductwork is provided to each lease space. For village concession spaces, the Airport has provided rough-in for chilled and heated water that will serve horizontal air handling units that will be tenant contractor installed. (Reference Sections 6.1, "Provisions Summary", 6.2, "Responsibility Matrix", and 6.3, "Utility Assumption Matrix".)

The tenant must verify the existing air supply to the lease space and determine how much more, if any, is needed.

The HVAC design of each lease space must meet the following criteria.

- 1. Heating winter inside comfort design temperature: 72°F db.
- 2. Cooling summer inside comfort design temperature: 72°F db.
- 3. Outside design temperatures As indicated in the current edition of the ASHRAE Handbook of Fundamentals, 2½% conditions.
- 4. Chilled water coils should be designed for a 28°F temperature differential.
- The existing maximum supply air to lease areas is calculated at 2.4 cfm/s.f. The tenant is responsible for supplying supplemental HVAC if additional air-conditioned air is required because of increased loads in the lease space.

The tenant shall provide the engineering design and installation of the HVAC system including the following:

- All medium pressure ductwork from the main trunk ducts to the VAV boxes, including duct taps and control dampers.
- 2. Fan powered VAV boxes and modifications to the temperature control system, depending on the existing system in the lease area.
- 3. All low-pressure ductwork, including that necessary for supply, return air, exhaust, and make-up air.
- 4. All grilles and diffusers for supply, return air, exhaust, and make-up air.
- 5. Make-up air units should be tempered and connected to the base building hydronic system. In Terminal D Fresh air is pulled from the concourse and the base building system determines the fresh air mix.
- 6. All required controls. Controls will need to be updated, and cannot be re-used. All equipment must be compatible with existing direct digital and direct analog controls (DDC and DAC); used in the terminal. Controls must be compatible with the Johnson Control System and must be fully adjustable to control the temperature in the space. Building Automation System control modules on VAV and fan powered terminal unit must be included in the HVAC designs to include the following data points: Space or zone temp, VAV Box set point temp, VAV Box Primary Airflow (CFM), VAV box supply air temp. Tenant must coordinate with mainframe administrator to update base building system graphics with HVAC layout.
- 6. A heating system using fan powered VAV boxes with hot-water coils and the required heating-water piping with strainers on incoming water lines.
- 7. For village concession lease spaces, chilled and heated water piping taps have been provided. The tenant shall be responsible for the extension of the chilled water piping with strainers on incoming water lines. No base building medium pressure duct tap is provided in the village locations.
- 8. All supplemental cooling and heating service must be designed by the tenant's engineer and installed by a qualified contractor. Supplemental chilled and heated water air-handling units may be installed within the tenant's lease space or, with special Airport approval, may be installed at locations as directed and approved by the TPM. Air handling units shall be Temtrol, Haakon, Trane I.S.M., or approved equal double-walled, insulated units.
- Air balance tests are required to verify the installation of the designed system CFM is sufficient and accurate. The test results are required prior to TCO issuance.

3.5.2 Electrical

The tenant is responsible for the engineering design and installation of a complete and functional electrical service for the lease space. Panels and transformers are to be located within the lease space, unless otherwise approved in writing by the TPM. Service voltage will be 277/480v, 3-phase.

The tenant design should include the location of the designated switchgear supplying power. Tenants must connect to the switchgear assigned to their location unless otherwise approved by DFW.

Each lease space is provided with an empty conduit from a 277/480V 3-phase distribution panel. The size of the conduit is indicated on the "Utility Assumption Matrix." The location of the referenced conduit will be shown on the Terminal D construction drawings. (Reference Sections 6.1, "Provisions Summary", 6.2, "Responsibility Matrix", and 6.3, "Utility Assumption Matrix".)

3.5.3 Plumbing

The tenant is responsible for the engineering design and installation of a complete and functional plumbing system for the lease space.

All sanitary, vent, and cold-water piping must connect to existing lines in the immediate tenant area and be furnished and installed by the tenant. New construction and remodeling projects must include all new plumbing lines. (Reference Sections 6.1, "Provisions Summary", 6.2, "Responsibility Matrix", and 6.3, "Utility Assumption Matrix".)

For food service areas, all tenant drainage piping must be connected to existing grease waste lines extending to grease interceptors. Additional requirements are available through TPM. (Reference Sections 6.1, "Provisions Summary", 6.2, "Responsibility Matrix", and 6.3, "Utility Assumption Matrix".)

Tenant will install a Continuous Enzyme Treatment System as outlined below:

1. The tenant shall provide and install a complete Enzyme Treatment System on all Grease Waste Drains located within the lease space. The tenant is responsible for supplying all materials, to include but not limited to, plumbing, electrical and mounting hardware. The following type of Enzyme equipment shall be installed on all Grease Waste Drains:

- 1.1. Full Grease Eradication Systems by Environmental Plumbing Systems (EPS), Chemsearch and/or OWNER'S APPROVED EQUIVALENT
 - 1.1.1. The tenant shall provide a microbial growth system which automatically discharges/dispenses active bacteria into the grease waste system stream over a 24 hour period by means of a programmable unit.
 - 1.1.2. The tenant shall control the dosing at each location and shall ensure that the dosing levels meet the performance standards at all times.
- The tenant shall assume all responsibility for all costs to install, maintain, and repair or replace systems or system components. The tenant shall bear the cost increase of materials or service as necessary to meet the performance standards.
- The tenant shall install their Enzyme system in suitable places where water is continuously introduced at the point where bacteria is released into the grease waste system.
- 4. The tenant shall install their Enzyme system in suitable places where all grease waste drains lines within the lease space will receive bacteria.
- 5. The tenant shall place a label on a place on the systems apparatus in a visible location with the company's name and system identification. Labels are required at each location
- 6. Bulk materials shall not be stored in the Terminal.
- 7. The tenant shall supply and maintain materials to provide Enzyme Treatment services 24-hours per day and seven (7) days per week.
- 8. Ice machines and walk-in coolers/freezers must be connected to base building chilled water system.
- 9. "Remove-me-not" strains must be installed and maintained at all floor sinks.
- 10. Tenant is responsible for heat tracing all exposed plumbing lines where required to prevent freeze.

3.5.4 Natural Gas

Natural gas is available for tenant use. Propane or bottled cooking gas is prohibited. Gas pipe located in a wall, under a floor or outside of the tenant space must be welded, painted appropriate color and labeled with flow direction, pressure and tenant location being serviced. Tenants using gas appliances must provide a gas detection device connected to the fire alarm as required by the Fire Marshalls office. Gas appliances must have electric pilot starters.

3.6 Fire Protection and Life Safety

The tenant is responsible for designing, performing all work in accordance with, and installing all fire protection and life safety features required by the DFW International Airport Construction and Fire Prevention Resolution and Amendments to the Codes as modified by the most current version of the 'Fire Strategy Report'. Systems should be properly maintained and serviced in accordance with the fire safety management plan. Tenants should refer to the overall final version of the fire protection plan and applicable specifications and system drawings, etc. for additional information or detailed requirements of the systems.

The tenant shall provide the engineering design, modification and installation of the fire sprinkler and alarm system, which shall comply with design standards prepared for Terminal D. In general, the fire protection system shall include:

- 1. The design, modification, and installation of wet-pipe fire sprinkler systems.
- 2. The design, modification, and installation of new and/or existing fire sprinkler heads for lease space layout.
- The design and installation of adequate fire protection systems for such kitchen equipment as required.
- 4. The design, modification and installation of new closely spaced sprinklers (spaced 6'-0" on center) to protect glazing and openings, where openings or glazing are provided.

The kitchen hood fire protection systems shall be connected to the building fire alarm system, for supervision of the system only.

If the tenant adds supplemental air handling units to the lease space, the tenant must install duct-mounted smoke detectors that are connected to the building's fire alarm system. If the supplemental air handling unit provides over 2000 CFM, a smoke detector shall be installed in the unit or the space served by the supplemental unit shall be protected by a system of area smoke detectors.

The Airport terminal is equipped with an audible and visual fire alarm system. The requirement for and location of these same devices within the tenant lease space will be handled on a case-by-case basis through the TPM. **Section 3.6.2** ("Fire Alarm") provides details of the fire alarm and voice communication system.

Lease spaces are not independent fire protection zones. Fire protection zones are based on column locations, and several leases may be in the same fire protection zone.

The tenant shall provide one-hour, fire rated partitions, with appropriate fire rated opening protection between tenant spaces.

The tenant shall be responsible for maintaining fire rated partitions, walls, roofs and ceilings along tenant lease lines.

3.6.1 Smoke Control

No automatic smoke control system is required; however, if openings are provided at storefront, the openings shall be in accordance with the storefront opening criteria found in **Section 6.7** "**Storefront Opening Guidelines for Smoke Management**".

Compliance with the opening criteria is not required if the storefront consists of fire-rated walls that completely separate the tenant from the concourse or if glass partitions that completely separate the tenant from the concourse are provided. A water curtain must protect the glass partitions as described in **Section 3.6.3 "Automatic Sprinklers".**

3.6.2 Fire Alarm

The base building will be provided with a networked, fully addressable fire alarm and voice evacuation system.

The tenant contractor is responsible for installing required new and modifying the location of existing devices, wiring, conduit and other required features within the least space. All connections to the building's fire alarm system are to be coordinated through the TPM and DFW fire alarm personnel and will be handled on a case-by-case basis through the TPM. The same installer used for the base system shall be used and devices shall be installed on the system loop.

The tenant is responsible for locating spot type smoke detectors in all public tenant spaces as required by the current edition of the International Fire Code. The initiating devices will be zoned to correspond with automatic sprinkler, fire alarm and mechanical smoke management zones and will activate the smoke control system in the concourse when appropriate.

The tenant is responsible for locating audible and visual notification devices (strobes) as required by the current edition of the International Fire Code at

their storefront and inside the lease space. Audible and visual notification devices cannot be mounted to the unit frames at the villages but may be mounted to the storefronts. Note that horn and horn/strobes may be acceptable for storage areas.

Hood alarm systems shall also be installed by the base system installer on the system loop.

3.6.3 Automatic Sprinklers

Sprinklers shall be installed based on an ordinary hazard Group I classification with a sprinkler density and design area of .15/2000. The sprinkler system shall be coordinated with the main system.

When the tenant storefront consists of a glass partition or when the tenant storefront is open to the concourse, the tenant areas will be separated from the concourse by a water curtain consisting of sprinklers spaced 6'-0" on center at the perimeter, within each tenant space. The water curtain will be sized in accordance with the current edition of the International Fire Code. If the storefront is open to the concourse, the openings shall be in accordance with the opening criteria found in **Section 6.7** ("Storefront Opening Guidelines for Smoke Management") and a minimum of a 12-inch draft curtain shall be provided.

3.6.4 Fire Strobes and Speakers

The tenant is responsible for complying with Fire Protection and Life Safety Requirements as related to strobe and speaker locations at their storefront and inside the lease space. Strobe lights and speakers cannot be mounted to the unit frames at the villages but may be mounted to the storefronts.

3.6.5 Compartmentation

A minimum one-hour wall to all adjacent spaces shall be provided unless protected openings comply with **Section 6.7** ("Storefront Opening Guidelines for Smoke Management"). If glass is used, a sprinkler water curtain shall be provided on the tenant side as described in **Section 3.6.3** "Automatic Sprinklers".

3.6.6 Emergency Lighting

Emergency lighting and exit signage are required throughout the terminal and tenant spaces in accordance with the current edition of the International Building Code. Additionally, emergency and stand-by power will be provided

for all fire and life safety systems, per the current edition of the International Building Code.

3.6.7 Means of Egress

The occupant load for tenant spaces and the required number and location of exits shall be determined by using current and applicable building codes.

3.6.8 Interior Finishes

Interior finishes shall be in accordance with the current edition of the International Building Code.

3.7 Telephone / Data

Concessionaires are responsible for contracting with the airports Managed Services Support Center (MSSC) for phone/data services. If not already existing (from previous tenant), the tenant will contract with an approved cabling installer to provide a service demark panel located within each concession space and a wired connection to the nearest terminal distribution panel. Each demark panel must have (1) 20 amp dedicated circuit originating from tenants electrical panel. This demark is where DFW will extend fiber communication services to the tenant space. The ONT device located inside the service demark panel are the property of DFW ITS and must not be altered by the tenant. Each tenant will be responsible for procuring Phone/Data/CATV service. including connectivity infrastructure installation, as required, through the DFW ITS managed service provider. The tenant will provide media wiring from the DFW Demark to a separate demark for their own internal network, their own service equipment, end devices and device wiring within the tenant lease space. Contact your designated TPM for acceptable demark panel locations. Contact MSSC for available services and pricing.

3.8 Food and Beverage Tenants

3.8.1 General Design

Following are specific storefront design guidelines:

- 1. Food and beverage tenants are required to meet all Health Department Requirements.
- 2. Food and beverage tenants are required to use nonporous, cleanable materials for ceilings above the preparation and serving areas.
- 3. If the food tenant preparation area is an integral part of the visible service area, it must meet all storefront criteria for finishes and lighting. If the food

- tenant preparation area is not intended to be part of the visible service area, a separation wall is required, and all doors must have automatic closers. Any food pass-through openings are to be minimum in size and are subject to Airport approval.
- 4. Any clutter or unsightly equipment such as boxes, shelves, sinks, etc. shall be fully concealed from public view.
- 5. Particular attention shall be given to the visual organization of the rear and side walls of the preparation and serving area. Equipment catalog cut sheets and layout shall be submitted for approval.
- 6. Floors in kitchens, food preparation and storage areas, counter and beverage service areas must be installed over a membrane waterproofing system that will result in a fully waterproofed surface, including a 6" high cove base backed with the membrane waterproofing. Flood testing is required for all food and beverage tenants. The wet areas will be flood tested to guarantee the integrity of the waterproof membrane. This must be coordinated with the TPM. Tenant is responsible to make safe the building systems before any work may commence.
- 7. Walls around mop sinks are required to have waterproofing and stainless steel around mop sink to 48" a.f.f.
- 8. Must provide a location for the yellow grease cart inside the b.o.h. area as prescribed by the concessions department.
- 9. Tenant must provide an area for trash staging in b.o.h. area to prevent overflow of dining area trash receptacles.
- 10. All alcohol must be secured in-place with permanent locking mechanism, nightly relocation of alcohol to b.o.h. areas are not acceptable.
- 11. The tenant is responsible for verifying what is below, beside and above the tenants space and to avoid conflicts and adverse adjacencies.
- 12. Convenience power is required at bars, booths and community tables.

3.8.2 Tenant Service Counter Zone

A tenant counter shall be designed within the following requirements:

- Counters must be set back a minimum of 3'-6" from the lease line to provide adequate circulation and queue space. The design should require customer queuing to be parallel to the storefront and <u>not</u> perpendicular into the concourse.
- All counters and back walls visible to the public shall be restricted to durable, non-porous, easily cleanable materials. Counter front and countertop materials are limited to the following:
 - a. Stone
 - b. Metal
 - c. Solid surface materials
 - d. Glass

- e. Ceramic tile
- 3. Simulated natural products and metal and plastic laminates are not acceptable materials for counter tops and counter fronts.
- 4. Counter recesses, angles, and other devices can be used to break up the length of the flat front.
- 5. All counter fronts are to have a 6" high recessed toe space by 4"deep. The face of this base should be covered in the same material as the adjacent floor or other durable material.
- 6. Trash receptacles for customer use must be concealed and built into the countertop millwork.
- 7. Napkins, condiments, utensils, straws, and trays must be set back a minimum of 6" from the front of the counter and must be dispensed from permanent holders recessed into the front countertop.
- 8. A personnel access door in a counter front is permissible where no rear entry is available. It must be concealed by matching the adjacent counter front and countertop materials. Hinges and hardware must be concealed.
- 9. All take-away counters must have a section that meets TAS/ADA Accessibility requirements.
- 10. The design of the vertical surface of the counter must be consistent all the way across, and may not be interrupted by reach-ins or other equipment.

3.8.3 Grab & Go Units

Grab & Go areas may be built-in as a part of the overall concept or freestanding. All built-in areas and freestanding units must be approved by DFW Concessions Department.

Built-in Grab & Go Areas design guidelines:

- 1. A Grab & Go area incorporated into the overall concept must have a setback of 3'- 6" or more from the lease line or more; this allows for queuing area and does not impede with the normal operations in the terminal.
- 2. Additional signage for the Grab & Go area will require approval from the DFW Concessions Department.
- 3. Maximum counter height is 34" AFF.
- 4. All units must have a 6" high recessed toe space by 4"deep. The face of the base should be covered in the same materials as adjacent floors, materials which are a part of the overall concept, or stainless steel.
- 5. All walls and surfaces visible to the public are restricted to durable, non-porous, easily cleanable materials. Materials are limited to the following:
 - a. Stone
 - b. Metal
 - c. Solid surface materials

- d. Glass
- e. Ceramic or porcelain tile
- 6. Simulated natural products, metal and plastic laminates are not acceptable materials for counter tops.
- 7. High impact laminates may be used on the unit side and front if edges and corners are properly treated with corner guards or metal edge trim. All materials are subject to approval by DFW Concessions.
- 8. Laminates are not permitted on toe-kick areas of displays, counters or other furniture unless formal permission is given in writing.
- If provided, trash receptacles for customer use must be concealed or built into countertop millwork or enclosed in furniture that is in-keeping with the design of the space and meets the design requirements for counters.
- 10. Counter top displays, trays, racks, shelving must be set back a minimum of 6" from the front of the counter and must remain neat and orderly and properly stocked.
- 11.A personnel access door in the countertop is permissible. It must be concealed by matching the adjacent counter front and countertop materials. Hinges and hardware must be concealed.
- 12. Freestanding units may be incorporated into the design; however, they must be finished or clad in the same materials as the overall concept. See specific requirements for freestanding units below.
- 13. The design of the vertical surface of the counter must be consistent all the way across, and may not be interrupted by reach-ins or other equipment.

Freestanding Units must use the following guidelines when designing:

- 1. All units are to have a 6" high recessed toe space by 4"deep. The face of this base should be covered in stainless steel.
- 2. All Grab & Go units must meet TAS/ADA Accessibility requirements.
- 3. Units may be no more than 48" tall unless they are a standalone unit placed against a solid full height wall.
- 4. To maintain proper circulation and queuing, unit must be set back 3'- 6" or more from the lease line, unless it is a standalone unit placed against a solid full height wall. This allows for queuing and does not interfere with normal operations in the terminal.
- 5. No company logos or product signs are attached to unit.
- 6. Unit must be finished or clad in the same materials as the overall concept.
- 7. Standalone units placed against a solid full height wall need DFW Concessions approval.

3.8.4 Display

Following are specific requirements for display of food and beverages:

- 1. Front counter The use of built-in glass display cases is allowed. They should be a maximum of 5'-0" high above finish floor and must be constructed of a clear glass front, with stainless steel, brass, or other bright metal, and must sit on a standard 6-inch base. The width of display cases cannot exceed 25% of the counter frontage. Pre-fabricated display cases on countertops are not allowed.
- 2. All display cases must be lighted and vented. Light sources must not be visible. The sides and back of the case may be mirrored.
- No displays or signs are permitted in the public concourse beyond the SCZ.
- 4. Back counter storage units or pre-fabricated display cases may be installed at the tenant's option at the back of the serving area. Any such unit shall adhere to the counter or display case specifications mentioned for materials above, except that storage counter doors must be polished stainless steel.
- 5. Sneeze guards must be set back a minimum of 6" from the counter edge and be a maximum height of 4'-6" above the finished floor. All horizontal joints are to be butt glazed for maximum visibility. Glazing must be of tempered glass or safety glass. No acrylic glazing is permitted.

3.8.5 Menu Boards

Tenants are to provide one or more menu boards designed as an integral part of the design concept. Menu Boards should be digital unless specific written variance is given.

Menu boards must have changeable price and menu graphics. Additional signage on menu boards is limited to a designated logo, point-of-sale graphics, and trade name only. Text on the menu boards must be legible from the front counter.

Menu boards are not permitted within the SCZ. The Airport must approve the use of menu board photographs. The graphic design of the menu board is to match the storefront identity in type style and colors.

"Daily Special" signs or signs for seasonal or temporary promotions may be integrated into the overall design of the menu board and of the back wall.

Refer to the design conditions for the minimum and maximum height allowed for the menu board zone. The board must be a minimum of 1'-6" from the adjacent demising wall.

3.8.6 Equipment

Tenant equipment on counters is to be set back a minimum of 6" from the front counter edge and recessed into the countertop so that no portion exceeds 4'-6" high above finish floor. Self-serve soda machines may exceed this height upon review and approval of the Airport. Beverage machines and other miscellaneous equipment on the counter are subject to design review. No used equipment, simulated wood finishes, nor trademark or supplier logos will be permitted on equipment within public view.

When necessary, screening of equipment cords and unfinished equipment backs will be required if visible from the public side. All paper goods and supplies are to be stored in areas not visible to the public.

3.8.7 Storage

The tenant's supplies must be stored on appropriate racks or in cabinets within the tenant's lease space. Such storage must be concealed from public view with doors or sliding panels.

Tenant to provide for interim used cooking oil storage within lease space.

In addition to storage within the lease space, tenant has an option to lease storage space on the Service Level of Terminal D. Modification of or creation of new remote storage locations will require building permits. (Reference Section 2.1.3, "Tenant Storage", Section 6.1, "Provisions Summary", Section 6.19, "Service Level Concessions Storage Plan", and DFW Design Criteria Manual.)

3.8.8 Kitchen Ventilation

For in-line and village concession lease spaces that have a kitchen hood, the tenant shall provide a kitchen cooking exhaust air fan and hood. Hood is to be a "compensating" hood with makeup air being taken from the terminal return air. A qualified contractor must install it and the submitted design must include sizing and roof penetrations by tenant.

- a. Roof exhaust fans must be of the belt drive, upblast, vertical discharge type, and must bear the AMCA certified ratings seals for air and sound performance. There must be a built-in grease drain. Grease protection to be provided which meets roof warranty requirements. (Reference Section 3.1.3.5 "Terminal Roof")
- b. Ductwork shall be routed in common mechanical ductwork shafts. It shall be the tenant contractor's responsibility to install exhaust air

- ductwork from the tenant's hood to the tenant's exhaust fan on the roof in roof equipment wells.
- c. The lease space design shall include all data required by the TPM to determine what capacities are being added.

3.8.8.1 Vent Hood Requirements

Every cooking appliance in a commercial cooking operation is required to be located under a kitchen exhaust hood to capture and remove cooking effluents such as smoke, grease-laden air, moisture, excess heat and odors. Cooking appliances are used for commercial purposes when such appliances are primarily intended for the preparation of food for compensation, trade or services rendered. The term "grease" refers to animal and vegetable fats and oils that are used to cook foods or that are a byproduct of the cooking process, such as the grease rendered during the cooking of bacon and other meats. Type 1 Commercial Kitchen Hoods are required over light duty commercial cooking appliances that produce grease or smoke; over medium duty commercial cooking appliances; over heavy duty commercial cooking appliances.

Furthermore, Looking at the 2009 Code there has been a change for the Type II hood requirements from the language in the 2006, to include a definition of "Light duty cooking appliance". These 2009 code changes will allow for much more flexibility.

In general, it appears that all of the light duty cooking appliances, as defined in the IMC, that do not produce grease vapors or smoke will be allowed to be installed within the Terminal buildings without Type II hoods with the following conditions:

- 1. Provide the menu items that will be cooked to show very little, or no smoke or grease vapor being released.
- A mechanical engineer, familiar with the HVAC systems within the terminal, shall provide a stamped and signed letter with supporting documentation to show the HVAC system is fully capable of removing ALL heat and moisture released by all light duty cooking appliances installed.
- 3. Or, a separate HVAC system shall be installed to accommodate this heat and moisture vapor.
- 4. Mechanical fresh air shall be provided in accordance with 403.3, with each appliance installed being provided not less than the fresh air required for 100 sq. ft. of floor space. This will be part of the documentation provided by items #2 or #3 above.

5. A Type II hood shall be installed over light duty cooking appliances that have products of combustion (Gas fueled appliances).

As the newer remodeled areas of the Terminals come on line, meeting item #2 should be relatively easy, the terminal sections not yet remodeled may require extensive work on the HVAC systems to meet the above criteria.

It appears that the appliance cut sheet provided for standard "Turbo-Chef type warming ovens" will meet the definition of a "light duty cooking appliance" when operated and maintained in accordance with the manufacturers guidelines and safety standards. The building official, as the authority having jurisdiction, has interpreted these provisions to be in compliance with the intent and purpose of the adopted codes. Also, having final jurisdiction, the building official may enforce stricter requirements; whereas it is determined that the aforementioned appliances are-not or havenot been properly utilized and/or maintained. Any fire and life safety issues that arise or violations of the International Fire Code will be enforced by the Fire Marshal's Office. The extent of additional enforcement will be at the discretion of the Fire Marshal and are the sole resultant consequence of the tenants' procedures. Maintenance of the units is the sole responsibility of the concessionaire/operator and an annual inspection by the Fire Inspectors will take place at every location. These annual inspections may give cause for the Fire Marshal to make a determination that a hazard exists if maintenance and/or use of the unit is not acceptable.

Any further determinations and/or enforcements and required upgrades to the location or its equipment will be solely at the expense of the tenant as discovered by the Building Code Official. The location may temporarily be barred from operations until any and all deficiencies are corrected and cleared for operations by the Fire Marshal's Office. (Refer to Section 6.7 DFW International Airport ETAM Department Vent/Hood Data Form.)

4.1 Organization

The Tenant Project Planner (TPM) administers the submittal and approval process for tenants. The TPM assists in the various steps of the application/review/construction process and reviews the application for compliance with this Manual. Tenants will select architects and general contractors who will submit applications to the TPM for coordination with DFW International Airport's Code Enforcement Department, the governing health agency (if food and beverage are involved), and the DFW Airport Concessions Department.

4.1.1 Professional Responsibility Statement

All facilities located within the boundaries of the Airport must be designed by a practicing professional architect and/or engineer licensed in the State of Texas. The professional must sign and seal the work, which must be confined to the profession in which he/she is licensed.

4.1.2 Sustainability

In keeping with the Airport's sustainability commitment, concession tenants shall employ green design strategies wherever possible, and follow criteria outlined in the DFW International Airport Green Building Standards (GBS). This document may be obtained at www.dfwairport.com.

Specific sustainable strategies include but are not limited to:

- Use of recycled and locally sourced materials
- Maximizing the use of daylight to limit energy consumption.
- Water use reduction through more efficient appliances, fixtures and fittings.
- Reduce, reuse, recycle and salvave of construction waste.
- Use of energy efficient appliances, lighting, and HVAC systems
- All appliances and equipment must be Energy Efficient as qualified by the EPA's ENERGY STAR Program.
- Connect refrigeration units to the airports sustainable chilled water system
- Submit enegry efficient lighting calculation forms to the code dept.
- Required Use of zero VOC(Volitile Organic Compound) emitting materials in furniture, adhesives, sealants, paints, coatings and composite products.
- Required use of materials using no urea formaldehyde
- Wood products should be wood certified in accordance with the Forest Stewardship Council's principles and criteria.
- Grease recycling program
- Enzyme treatment program reduces grease waste disposal of interceptors

Compliance with LEED certification through the U.S. Green Building Council (USGBC) is optional. If seeking LEED for Commercial Interiors certification, please note that design features of the existing terminal renovation may provide credits toward certification, including:

- 1. Development Density and Community Connectivity.
- 2. Alternative Transportation: Public Transportation Access.

Please reference www.usgbc.org for additional information regarding the <u>LEED for Retail: Commercial Interiors rating system.</u>

4.1.3 Accessibility Standards

All facilities shall be designed and constructed in compliance with current Americans with Disabilities Act Accessibility Guidelines (ADAAG) and with Texas Accessibility Standards (TAS) guidelines. Tenant is responsible for making required submittals to the appropriate agencies. (Reference DFW Design Criteria Manual, www.license.state.tx.us/AB/tas/abtas.htm, and www.ada.gov)

4.1.4 DFW Design Criteria Manual

All tenants, architects, engineers, and contractors must be familiar with the DFW Concession Tenant Manual as well as with the applicable sections of the current edition of the DFW Design Criteria Manual and adopted Airport codes as modified by the Terminal D Fire Strategy Report. (Reference www.dfwairport.com)

The Code Enforcement Section of the Airport Development Department publishes the DFW Design Criteria Manual. The purpose is to inform architects and engineers of acceptable design parameters for the design of construction improvements within the boundaries of the Airport. The TPM can assist tenants, architects, and contractors in securing this document.

While the DFW Design Criteria Manual refers to legally binding codes and standards that have been adopted by the Airport, it is not in itself a code, standard, or specification, but rather a guide for the tenant's design consultants. The Design Criteria Manual must **NOT** be referred to in construction documents. Such notations as, for example, "Construct in accordance with DFW Design Criteria Manual" are not permitted. Conflicts between the DFW Design Criteria Manual and this Manual should be addressed with the TPM.

4.2 Codes

Tenant design and construction must comply with applicable federal, state, and local laws, statutes, orders, codes, ordinances, and regulations that are legally applicable to the work to be performed. The DFW Airport Board and the cities of Dallas and Fort Worth have adopted the DFW Construction and Fire Prevention Standards Resolution and Amendments to the Codes for all construction within the boundaries of the Airport.

Because of many unique architectural conditions, the 'Fire Strategy Report' has superceded some of the requirements within the current edition of the DFW Construction and Fire Prevention Standards Resolution and Amendments to the Codes. Where conflicts arise due to future additions of any DFW adopted code, the TPM will handle the conflicts on a case-by-case basis.

4.3 Submittal Process

The tenant is responsible to schedule a pre-design meeting with the TPM within (15) days of the commencement date.

The tenant is responsible to attend a pre-design meeting with the TPM within (15) days of Board approval/ or being notified by the Concessions Department.

At the pre-design meeting the TPM will review the tenant's lease exhibit applicable to his/her particular space, and any interim design modifications regarding this Manual. Working from this information, the tenant develops the plans and specifications required for the design review and the tenant construction application, and ultimately for construction. (Reference Section 5. "Construction".)

All tenant improvements are subject to the approval of the TPM and the DFW Code Enforcement Department. Tenants must submit construction applications for each project. Plans must be submitted in three phases: schematic design, contract documents, and permit documents. The construction application form must be completed and included with the schematic design submittal. The tenant and the tenant's architect and/or engineer must refer to the DFW Design Criteria Manual to determine when signed and sealed documents are required. The tenant and the tenant's design team must also comply with the DFW/CDP CADD standards for electronic drawing set up and to determine when electronic drawings are

required. (Reference DFW Design Criteria Manual, DFW CADD Standards Manual.)

Variances, if any, to the criteria may be approved on a case-by-case basis. Such approval must not be construed to apply to any other case; hence variances must be identified and requested in each submittal.

Deviations between the criteria drawings in this Manual and the Airport's lease exhibit should be addressed with the TPM.

Prior to plan development, before the construction bidding process, and before commencement of construction, the tenant or the tenant's architect must make on-site inspections of the leased premises. The purpose is to verify the as-built location, conditions, and physical dimensions of the leased premises, and to assure that the final contract documents conform to them. Failure to do so shall be at the sole risk and expense of the tenant.

All submittals to the TPM must include the lease space Program Reference Number. Once the Tenant Construction Application number has been assigned, this number will also be required on subsequent submittals.

4.3.1 Schematic Design Submittal

Schematic design drawings must be submitted and, as a minimum, must include the following:

- 1. A key plan showing the location of the lease space within Terminal D including a construction access plan.
- 2. Preliminary floor plans, reflected ceiling plans, and demolition plan (minimum ½" = 1'-0") indicating interior design concept.
- 3. Typical interior elevations (minimum $\frac{1}{4}$ " = 1'-0").
- 4. Storefront elevation and section, including any graphics and signage and indicating all materials and finishes (minimum $\frac{1}{2}$ " = 1'-0").
- 5. Preliminary sign details, menu boards and graphics, (minimum 1½" = 1'-0").
- 6. A preliminary finish schedule.
- 7. Utility connection drawings, including riser diagrams and load summary schedules (Reference Figures 6.4, "Heat Loss Schedule", 6.5, "Heat Gain Schedule", and 6.6, "Electrical Review Schedule".)
- 8. Preliminary single-line schematic drawings of mechanical/electrical/plumbing (MEP) connections and locations.
- 9. A preliminary project schedule.
- 10. Architects' statement of site visitation.

11. Health Department application forms (food and beverage tenants only).

When the initial review is completed, the TPM will issue written response of acknowledgement before work may proceed on the contract documents.

4.3.2 Contract Documents Submittal

This phase should include construction documents as follows:

- 1. A key plan showing the location of concessionaire within Terminal D, and include a construction access plan.
- 2. Floor plans (minimum ¼" = 1'-0") indicating storefront construction materials, colors, and finishes; security grille location (if required); location of partitions and type of construction; and locations of any tenant-provided toilet rooms, indicating placement of plumbing fixtures.
- 3. Reflected ceiling plans (minimum ¼" = 1'-0") indicating ceiling materials and conditions; ceiling heights; location of all light fixtures, manufacturer's name and catalog number, lamps to be used, and mounting (recessed, surface, etc.); location of sprinkler heads; location of HVAC grilles; and location of plenum access panels.
- 4. Storefront elevation and section (minimum $\frac{1}{2}$ " = 1'-0").
- 5. Typical interior elevations (minimum $\frac{1}{4}$ " = 1'-0").
- 6. Interior finishes schedule, and illustration boards (maximum 11" x 17") with clearly labeled and firmly attached samples and color chips.
- 7. Detailed signage drawings and details (minimum 1½" = 1'-0") indicating elevation and section views, letter style and size, all colors and materials, methods of illumination, color of illuminate, and voltage requirements. Food tenants must include menu board details as well as any proposed method of temporary signage (sales, daily or weekly specials) including location, size, materials, color, letter type, and framing method.
- 8. Mechanical drawings, including electrical, HVAC, plumbing and sprinkler, and load summaries. Drawings must indicate placement of all MEP equipment, connected electrical loads, and weights of heavy equipment, cases, etc.
- 9. Utility connections for water, sewer, electrical, telephone, and lighting; building mechanical, plumbing, electrical, lighting, fire protection, fire alarm plans to scale; detailed riser diagrams; and load schedules. *Include schedules found in Sections 6.4, 6.5, and 6.6 in the drawings.*
- 10. Project construction schedule.
- 11. Temporary construction barrier partition plan (minimum $\frac{1}{4}$ " = 1'-0"), and partition elevation (minimum $\frac{1}{4}$ -" = 1'-0").

12. A DFW Airport tenant Construction Application (CA) form fully executed by the tenant.

Specifications not on drawings should be submitted on 8½" X 11" paper.

The documents at this point should contain all of the revisions requested prior to this submittal. Upon completion of the review of this submittal, the TPM will issue written review comments for inclusion into the permit documents submittal.

4.3.3 Permit Documents Submittal

The permit documents submittal which is submitted to the TPM, consists of the following documents:

- 1. Documents sufficient to demonstrate compliance with the applicable Building Codes, Criteria Manuals, and this Manual. All documents to reference the construction application (CA) number and the lease space reference number.
- 2. Copy of the executed contract between the tenant and the general contractor.
- 3. Copy of the contractor's insurance policy (certificate of insurance).
- 4. Copy of the contractor's payment and performance bonds, in accordance with current DFW permit requirements and procedures.
- 5. Submittal of Funding Affidavit, with cover letter, for Airport approval; forms are available from the TPM.
- 6. Permit Fee check and Construction Application form (revised per current construction cost).
- 7. Copy of lease exhibit with any applicable variances that may have been negotiated.
- 8. Copies of project construction schedule, construction phasing and operation plan, and contractor/subcontractor directory.

Once the permit documents have been reviewed and approved, a permit for construction will be issued, and a pre-construction meeting scheduled.

4.3.4 Shop Drawing Submittal

Detailed signage shop drawings shall be submitted and approved by the TPM prior to fabrication.

4.3.5 Review Process

A minimum of two weeks should be allowed on each submittal for review and approval. Review time will vary, depending upon the project's size, complexity, whether the approval of an outside agency is necessary, and the number of projects being reviewed at one time. In the event changes or modifications to the submitted material are required, conditional approval may be given, contingent upon ultimate satisfaction of the changes noted.

- 1. Plans or submittals are submitted to the TPM.
- 2. The TPM distributes the plans to the various concession team members, who review the submittal for compliance with the DFW Design Criteria Manual and referenced codes.
- Simultaneously, the TPM reviews the plans for compliance with this Manual. The Tarrant County Health Department reviews all submittals from food and beverage tenants.
- 4. When the TPM has received all comments, copies of them are returned to the tenant for review and response.
- 5. Once this is completed to the satisfaction of all, an approval letter, along with the approved application, is sent to the tenant.
- 6. After verification by the TPM, one of these sets must be kept at the job site. The tenant is not permitted to commence any of the work before posting a fully executed and approved copy of the application in a visible location convenient to the site.
- 7. Construction must commence within a reasonable period of time as defined in the lease agreement and the Construction Application form.

DFW Airport concessions department does not inspect the drawings for coordination between MEP and architectural disciplines. The DFW Code Department will inspect the drawings based on their respective disciplines and the comments issued will be based on the information depicted only in the documents related to that discipline. It is the job of the project design team to ensure the completeness of the coordinated set of design documents. It is the sole responsibility of the concessionaire's team to ensure that all critical information, elements and dimensions are depicted accurately and that all information critical to applicable codes are submitted to the appropriate authority having jurisdiction.

Revisions made after the approval of documents and during construction must be coordinated and approved by the TPM before their installation.

Before the Certificate of Occupancy will be issued, the tenant must provide the TPM with a complete set of as-built record documents, as well as the completed environmental checklist that is attached to the construction permit and copies of air balance test reports.

4.4 Roles and Responsibilities

1. Owner – The owner must be certain that all members of the Design team (architectural and MEP) review the Tenant Design Manual and that the final documents produced and submitted to code also meet the requirements set forth therein. After the design is approved, the owner, assigned agent, designer, or contractor MAY NOT change any aspect of the design without prior approval from the Board's TPM representative. Adherence to the TDM is the responsibility of the owner and their design team. The owners design team is responsible for checking for DCN's and changes to the constructions documents. Failure to comply with TDM will result in added cost and may require re-do of work. Variances from TDM must be approved in writing from Concessions Dept. Unapproved variances will result in re-work which will be additional cost to the owner/contractor. The owners design team must be available for the 35% and 95% design reviews, either in person or by conference line. A material sample board must be submitted at the 35% design review and again at the 95% review if any items have changed. After submitting to code and construction starts, the owner, and owner's appointed representative or authorized agent must attend all weekly construction meetings. The owner must appoint an agent/representative to make decisions in their absence. The owner/agent will be required to make decisions in the field and must be authorized to do so. The owner/agent is responsible for making certain that any changes in the construction documents take place expeditiously with the design team, and is responsible for making certain the contractor is onboard with the changes. The owner/agent must remain engaged with project from Design Kick-off to Construction Final Certificate of Occupancy. Lease Insurance and surety bonds must be submitted before construction can begin. Owner must submit an organizational chart and/or decision hierarchy. Owner is required to have contractor perform a site visit to confirm site conditions and dimensions before construction begins. It is required that the Owner identify and procure any owner provided long lead items in advance to meet build-out/construction schedule of 90/120 days.

2. General Contractor -

Contractor Insurance and surety bonds must be submitted before construction can begin. The GC will be building-out this space from a code approved set of construction documents. There can be no changes, modifications, omissions or alterations made in the field without prior approval from the concessions department and the code department if necessary. If there is any discrepancy between the architectural plans and the MEP plans, those discrepancies need to be discussed with the architect and with the TPM prior to any modifications. The GC is also to make aware the team of any discrepancy between the base building and the depiction thereof in the contract documents. The contract documents include Construction Drawings and specifications, approved submittals, TDM and Concessions RFP. The Contractors BID documents are not part of the Contract documents. The Contractors failure to include in the bid, any items in the contract documents does not negate his/her responsibility to provide them as shown; unless otherwise specifically noted and agreed upon by the owner. The contractor is solely responsible for means and methods of construction but does not have the authority to modify the design in the field. The superintendent will be responsible for documenting discussions at the weekly construction meeting and making note of any changes or directions given. Any decisions made onsite will be documented in meeting minutes prepared by the GC and this will be emailed to all parties by the contractor within 36 hours of the meeting. (Noon the following day)

3. Tenant Project Planner

Keep open lines of communication and help ensure smooth project delivery. The role of the TPM is to help remove barriers between the Tenant contractor and the airport. We also endeavor to make certain that the work is carried out in accordance with the construction documents and the Tenant Design Manual. It is imperative that the TDM is complied with; TPM's are not code officials and cannot give or make rulings to code related questions. The TPM has no contract with the general contractor; our obligations lie solely with the airport and with the concessionaire. If any issues/problems with quality, safety, design adherence or behavior are observed, these will be communicated to the contractor and always copy the concessionaire's representative. TPM's are not responsible for changes to the white box build out. The TPM is not responsible for catching design errors and or omissions. The TPM does a general review of the documents for over-all design approval and is not responsible for ensuring adherence to the TDM.

4. DFW Airport Terminal Managers

Oversee Passenger Satisfaction and Comfort; Coordinate Terminal Activities between contractors, vendors, and tenants. Work with Airline Partners to ensure airline and aircraft operations are uninterrupted. Work with Maintenance and Janitorial contractors to keep the terminals functioning properly and ensure terminal cleanliness.

Construction 5

5.1 Procedures

These construction procedures are intended to allow flexibility and accessibility to the tenant's contractor for the timely execution of the tenant's work.

5.1.1 Temporary Provisions

- 1. The tenant is to provide and maintain temporary dust partitions to seal openings to all adjacent areas.
- 2. Temporary construction partitions must be located a maximum of 3'-0" beyond the tenant's furthest projection.
- 3. Partitions must extend the full height to the existing structure or ceiling to positively seal off the construction area. Partitions in view of the public are to include coming soon graphics. A combination of 25% paint and 75% vinyl graphics is a minimum. EXCEPTION: Partitions at high-bay ceilings may use a vinyl/canvas sheet drape to seal off the upper limits of the construction area, or as otherwise directed by the TPM. All temporary partitions must be self-supporting. Contractor is responsible for damage to base building finishes.
 - a. Barricade graphics may contain the brand name, art work, imagery and design renderings.
 - b. Advertisements, requests and petitions of any kind are prohibited.
 - c. Names of operators, contractors, or design firms are prohibited.
- 4. All existing and adjacent finishes and flooring are to be returned to their original condition when temporary partitions are removed.
- 5. Water from drilling or cutting operations must be controlled. Surfaces below such operations must be protected. Such operations must not be conducted without the written approval of the TPM. The tenant is responsible for the costs of any damages sustained in such procedures.
- Access doors into construction areas must be solid core or hollow metal doors with commercial grade hardware and must be mounted in metal frames. The tenant is to provide a cypher lock door handle and the TPM will be given the combination to the lease space during construction.
- 7. Building finishes shall not be disturbed or altered in the construction of this partition.
- 8. Plans and Elevations for the partition are to be submitted with the construction document submittal. (Reference Section 4.3.2, "Submittal Process Contract Documents Phase and Submittal".)
- 9. Sound Attenuation in the temp. wall is required for daytime work.
- 10. The construction partition is to remain up until the night before the new tenant is ready to open the space for normal business operations.

5.1.2 Safety and Security

The tenant is entirely responsible for the security of the leased premises during construction, and must take all necessary steps to maintain Airport security. The most current Airport security requirements are available through the TPM. The Airport shall have no liability for loss or theft of any property.

All contractors and subcontractors may be required to be badged by DFW Airport. Badge applications are to be secured and processed through the DFW Access Control Office.

Safety is of utmost importance, contractors shall practice best practices for all types and stages of demolition and construction and should be in compliance with all OSHA safety standards at all times. Contractors should review safety items on the job site as a weekly on-going risk mitigation practice. Job sites are subject to unannounced safety inspections by DFW DPS and safety personnel.

5.1.3 Construction and Coordination

The Tenant or their designated contractor is responsible for contacting those organizations responsible for maintaining the buildings life safety systems and employing that contractor to "MAKE SAFE" the system before any demolition can begin inside the tenant space. Any damage to the systems or construction activities which cause the system to not function as intended will be the responsibility of the tenant or their designee to correct. The tenant's contractor is to keep all terminal areas and access points outside of lease space free of construction materials, tools, dust and debris at all times. Foot prints leaving the construction space are not acceptable at any time. Walk off mats are required and must be regularly maintained.

The tenant must submit in writing a construction phasing and operations plan to be submitted to the TPM for review and approval. The plan is submitted with the Permit Documents submittal and is reviewed at the preconstruction conference preceding the commencement of construction. (Reference DFW Design Criteria Manual and Section 4.3.3, "Permit Documents Phase and Submittal".)

Contractors for the concession tenants must coordinate their construction activities with the Terminal Manager and the TPM.

Project construction coordination includes, but is not limited to, the following issues:

Construction 5

- 1. Site and Terminal D access and site safety.
- 2. Maintenance of the Federal Aviation Administration (FAA) security requirements.
- 3. Maintenance of both Terminal D and tenant leasehold construction site security.
- 4. Materials delivery and storage.
- 5. Employee parking.
- 6. Trash removal and construction site clean up.
- 7. Hours and days construction allowed, i.e., coordination of Terminal D and tenant lease space construction schedules.
- 8. Connections to and modifications of Terminal D Fire Protection and Life Safety Systems.
- 9. Modifications to Terminal structure.
- 10. Code Enforcement Inspections.
- 11. Systems testing; include air balance testing.
- 12. Project close out and Certificate of Occupancy inspections, etc.
- 13. Ventilation and exhaust ducting needs.
- 14. Code approved drawings must be onsite as well as a copy of the approved renderings, the ACM survey, construction schedule, a 2 week look ahead plan, safety/emergency contacts and a sprinkler shunt gun.
- 15. Approved tool safety plan.

5.1.4 Base Building Finishes

Tenants are required to restore all disturbed base building finishes resulting from their construction. The tenant is required to match adjacent building finish floor material if the existing finish has been damaged or discolored during construction. The tenant is responsible for restoring the terrazzo floor polish to its original luster "3m Diamond Polish," to 1 foot beyond the perimeter of the temporary partition and should meet the finishing specifications provided by DFW Airport. The tenant should schedule, with the TPM, a pre-construction inspection to document the state of adjacent finishes.

6.1 Provisions Summary

IN-LINE CONCESSIONS (DESIGN CONDITIONS A1, A2, A3, A4, A5)

| | Base Building | Tenant Improvements | | | | |
|---|--|---|--|--|--|--|
| STOREFRONT | Surrounding curtain wall construction. | Build-out by tenant in accordance with the DFW Concessions Tenant Manual. | | | | |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard, insulation and finishes. Tenant to provide one-hour, fire rated tenant separations. | | | | |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. | | | | |
| ACCOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. | | | | |
| FLOORS | Typical – concrete fill. | Floor finishes. | | | | |
| ELECTRICAL | Empty conduit with pull cord terminated at demising wall from common distribution panel. | Conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devices and distribution from tenant panel. | | | | |
| EXHAUST DUCTS FOR KITCHEN HOODS, DISHWASHER, SMOKING (IF APPLICABLE) | Common shaft right of way to roof mechanical wells. | Ductwork and rated enclosure from tenant equipment to roof mechanical wells. Roof mounted exhaust air fans. | | | | |
| HVAC | Main supply air duct tap to deliver 2.4 cfm per sq. ft. | VAV Box, grilles, registers, distribution ductwork and controls. | | | | |
| DOMESTIC WATER | Overhead domestic water main with valve and capped tap. | Connection to tap and all distribution piping and fixtures. | | | | |
| SANITARY WASZE WATER | Below floor sanitary waste water main with capped tap. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | | | |
| GREASE WASTE WATER | Below floor grease waste water main with capped tap. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | | | |
| PLUMBING VENTS | Master common vent line above ceiling to roof. | Tap to master vent system, loop to Studer vents are approved by Code. | | | | |
| FIRE PROTECTION SYSTEM | Upright sprinklers and one 75-candela strobe for every 1600 sq. ft. of unobstructed space. Wiring to water flow and tamper switches, located in tenant spaces, for base building sprinkler system. | In accordance with the DFW Concessions Tenant Manual. | | | | |

Exhibits

Provisions Summary (Continued)

<u>IN-LINE CONCESSIONS (Continued)</u> (DESIGN CONDITIONS A1, A2, A3, A4, A5)

| | Base Building | Tenant Improvements | | | | |
|--|--|--|--|--|--|--|
| FIRE ALARM AND DETECTION / VOICE COMMUNICAITON SYSTEM | In the event of a fire condition within the tenant spaces, or associated evacuation zones which is related to the tenant spaces, the strobe lights shall flash and the appropriate pre-recorded and/or live voice messages shall be distributed throughout the terminal. Smoke detectors within the tenant spaces in the concession triangles shall activate the smoke control system in the concession triangles. Activation of the tenant's Ansul system shall generate a supervisory signal at the main fire alarm control panel. | In accordance with the DFW Concessions Tenant Manual. | | | | |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box at demising wall or below floor from common IT/ Communications closet distribution panel. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. | | | | |

Provisions Summary (Continued)

<u>VILLAGE DEPARTURES LEVEL CONCESSIONS</u> (DESIGN CONDITIONS B1, B2, B3, B4, B5, B6)

| | Base Building | Tenant Improvements | | | |
|--|--|---|--|--|--|
| STOREFRONT/TENANT NEUTRAL FRAME AND ATTACHMENTS | Framework structure. | Build-out by tenant in accordance with the DFW Concessions Tenant Manual. | | | |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard, insulation and finishes. Tenants to provide 1 hour, fire rated tenant separation. | | | |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. | | | |
| ACOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. | | | |
| FLOORS | Typical – concrete fill. | Floor finishes. | | | |
| ELECTRICAL | Empty conduit with pull cord terminated at demising wall from common distribution panel. | Conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devices and distribution from tenant panel. | | | |
| EXHAUST DUCTS FOR KITCHEN HOODS, DISHWASHER, SMOKING (IF APPLICABLE) | Common shaft right of way to roof mechanical wells. | Ductwork and rated enclosure from tenant equipment roof mechanical wells. Roof mounted exhaust air fans | | | |
| FAN COIL UNIT | | Fan Coil Unit and connections – grilles, registers, distribution ductwork and controls. | | | |
| CHILLED AND HEATING WATER | Water distribution mains at ceiling with shut off valves and capped taps. | Chilled and heating water connections, control valves and piping to fan coil unit. | | | |
| DOMESTIC WATER | Domestic water main riser in demising wall with valve and capped tap. | Connection to tap and all distribution piping and fixtures. | | | |
| SANITARY WASTE WATER | Below floor sanitary waste water main with capped tap. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | | |
| GREASE WASTE WATER | Below floor grease waste water main with capped tap. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | | |
| PLUMBING VENTS | Master common vent line above ceiling to roof. | Tap to master vent system look or Studer vents as approved by Code. | | | |
| FIRE PROTECTION SYSTEM | Upright sprinklers and one 75-candela strobe for every 1600 sq. ft. of unobstructed space. Wiring to water flow and tamper switches, located in tenant spaces, for base building sprinkler system. | In accordance with the DFW Concessions Tenant Manual. | | | |

Provisions Summary (Continued)

VILLAGE DEPARTURES LEVEL CONCESSIONS (Continued) (DESIGN CONDITIONS B1, B2, B3, B4, B5, B6)

| | Base Building | Tenant Improvements |
|---|--|--|
| FIRE ALARM AND DETECTION / VOICE COMMUNICAITON SYSTEM | In the event of a fire condition within the tenant spaces, or associated evacuation zones which is related to the tenant spaces, the strobe lights shall flash and the appropriate pre-recorded and/or live voice messages shall be distributed throughout the terminal. Smoke detectors within the tenant spaces in the concession triangles shall activate the smoke control system in the concession triangles. Activation of the tenant's Ansul system shall generate a supervisory signal at the main fire alarm control panel. | In accordance with the DFW Concessions Tenant Manual. |
| FIRE PROOFING | Base building fireproofing. | Patching as required. |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box at demising wall from common IT/ Communications closet distribution panel. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. |

Provisions Summary (Continued)

VILLAGE MEZZANINE CONCESSIONS (DESIGN CONDITIONS B1, B2, B3)

| | Base Building | Tenant Improvements | | |
|---|--|---|--|--|
| STOREFRONT/TENANT NEUTRAL FRAME AND ATTACHMENTS | Framework structure. | Build-out by tenant in accordance with the DFW Concessions Tenant Manual. | | |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard, insulation and finishes. Tenants to provide one-hour, fire rated tenant separations. | | |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. | | |
| ACCOUSTIAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. | | |
| FLOORS | Typical – concrete fill. | Floor finishes. | | |
| ELECTRICAL | Empty conduit with pull cord terminated at demising wall from common distribution panel. | Conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devices and distribution from tenant panel. | | |
| EXHAUST DUCTS FOR KITCHEN HOODS, DISHWASHER, SMOKING (IF APPLICABLE) | Common shaft right of way to roof mechanical wells. | Ductwork and rated enclosure from tenant equipment to roof mechanical wells. Roof mounted exhaust air fans. | | |
| FAN COIL UNIT | | Fan Coil Unit and connections – grilles, registers, distribution ductwork controls. | | |
| CHILLED AND HEATING WATER | Water distribution mains at ceiling with shut off valves and capped taps. | Chilled and heating water connections, control valves and piping to fan coil unit. | | |
| DOMESTIC WATER | Domestic water main riser in demising wall with valve and capped tap. | Connection to tap and all distribution piping and fixtures. | | |
| SANITARY WASTE WATER | Sanitary waste water main riser in demising wall with capped tap below floor. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | |
| GREASE WASTE WATER | Grease waste water main riser in demising wall with capped tap below floor. | Connection to tap, core drill to lease space, upstream cleanouts, traps and fixtures. | | |
| PLUMBING VENTS | Master common vent line above ceiling to roof. | Tap to master vent system, loop or Studer vents as approved by Code. | | |
| FIRE PROTECTION SYSTEM Upright sprinklers and one 75-candela strobe for every 1600 sq. ft. of unobstruct space. Wiring to water flow and tamper switches, located in tenant spaces, for babuilding sprinkler system. | | In accordance with the DFW Concessions Tenant Manual. | | |
| FIRE PROOFING | Base building fireproofing. | Patching as required. | | |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box at demising wall from common IT/ Communications closet distribution panel. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. | | |

Exhibits 6

Provisions Summary (Continued)

VILLAGE MEZZANINE CONCESSIONS (Continued) (DESIGN CONDITIONS B1, B2, B3)

| | Base Building | Tenant Improvements |
|---|--|---|
| FIRE ALARM AND DETECTION / VOICE COMMUNICAITON SYSTEM | In the event of a fire condition within the tenant spaces, or associated evacuation zones which is related to the tenant spaces, the strobe lights shall flash and the appropriate pre-recorded and/or live voice messages shall be distributed throughout the terminal. Smoke detectors within the tenant spaces in the concession triangles shall activate the smoke control system in the concession triangles. Activation of the tenant's Ansul system shall generate a supervisory signal at the main fire alarm control panel. | In accordance with the DFW Concessions Tenant Manual. |

Provisions Summary (Continued)

DEPARTURES LEVEL KIOSKS (DESIGN CONDITIONS C2, C3)

| | Base Building | Tenant Improvements | | | | |
|----------------------|---|---|--|--|--|--|
| ELECTRICAL | Empty conduit with pull cord terminated below floor from common distribution panel. | Conduit from pull box core drilled through floor to kiosk panel. Conductors to kiosk panel from distribution panel. Kiosk panel, all devices and distribution from kiosk panel. | | | | |
| DOMESTIC WATER | Domestic water main below floor with valve and capped tap. | Connection to tap, core drill to kiosk, shut off valve and all distribution piping and fixtures. | | | | |
| SANITARY WASTE WATER | Below floor sanitary waste water main with capped tap. | Connection to tap, core drill to kiosk, and all distribution piping and fixtures. | | | | |
| GREASE WASTE WATER | No provisions. | No provisions. | | | | |
| PLUMBING VENTS | No provisions. | Loop or Studer vents as approved by Code | | | | |
| FIRE PROOFING | Base building fireproofing. | Patching as required. | | | | |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box from common IT/ Communications closet distribution panel. | Conduit from pull box core drilled through floor to kiosk panel. Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. | | | | |

Provisions Summary (Continued)

MEETER / GREETER CONCESSIONS (DESIGN CONDITION C1)

| | Base Building | Tenant Improvements |
|---|---|--|
| STOREFRONT | Surrounding base building with wall construction. | Build-out by tenant in accordance with the DFW Concessions Tenant Manual. |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard, insulation and finishes. |
| CEILINGS | Exposed structure or exposed base building finishes ceiling. | By tenant to approved design criteria. |
| ACCOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. |
| FLOORS | Typical – concrete fill. | Floor finishes. |
| ELECTRICAL | Empty conduit with pull cord terminated below floor from common distribution panel. | Conduit from pull box core drilled through floor to tenant panel. Conductors to kiosk panel from distribution panel. Kiosk panel, all devices and distribution from kiosk panel. |
| HVAC | Main supply air duct tap to deliver 2.4 cfm per sq. ft. | VAV Box, grilles, registers, distribution ductwork and controls. |
| DOMESTIC WATER | Domestic water main in demising wall with valve and capped tap. | Connection to tap, shut-off valve and all distribution piping and fixtures. |
| SANITARY WASTE WATER | Below floor sanitary waste water main with capped tap. | Connection to tap, core drill to lease area, upstream cleanouts, traps and fixtures. |
| GREASE WASTE WATER | No provisions. | No provisions. |
| PLUMBING VENTS | No provisions. | Loop or Studer vents as approved by Code. |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box below floor from telephone closet. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. |

Provisions Summary (Continued)

IN-TRANSIT LOUNGE CONCESSIONS (DESIGN CONDITION INS)

| | Base Building | Tenant Improvements |
|---|--|---|
| STOREFRONT | \$20.00 per square foot allowance. | Build-out by tenant in accordance with the DFW Concessions Tenant Manual. |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard insulation and finishes. |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. |
| ACCOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. |
| FLOORS | Typical – concrete fill. | Floor finishes. |
| ELECTRICAL | Empty conduit with pull cord terminated at demising wall from common distribution panel. | Conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devises and distribution from tenant panel. |
| EXHAUST DUCTS FOR KITCHEN HOODS, DISHWASHER, SMOKING (IF APPLICABLE) | Common shaft right of way to roof mechanical wells. | Ductwork and rated enclosure from tenant equipment to roof mechanical wells. Roof mounted exhaust air fans. |
| HVAC | Main supply air duct tap to deliver 2.4 cfm per sq. ft. | VAV Box, grilles, registers, distribution ductwork and controls. |
| DOMESTIC WATER | Overhead domestic water main with valve and capped tap. | Connection to tap and all distribution piping and fixtures. |
| SANITARY WASTE WATER | Below floor sanitary waste water main with capped tap. | Connection to tap, core drill to lease area, upstream cleanouts, traps and fixtures. |
| GREASE WASTE WATER | No provisions. | No provisions. |
| PLUMBING VENTS | No provisions. | Loop or Studer vents as approved by Code. |
| FIRE PROTECTION SYSTEM | Upright sprinklers and one 75-candela strobe for every 1600 sq. ft. of unobstructed space. | In accordance with the DFW Concessions Tenant Manual. |
| FIRE ALARM AND DETECTION / VOICE COMMUNICAITON SYSTEM | In the event of a fire condition within the tenant spaces, or associated evacuation zones which is related to the tenant spaces, the strobe lights shall flash and the appropriate pre-recorded and/or live voice messages shall be distributed throughout the terminal. Smoke detectors within the tenant spaces in the concession triangles shall activate the smoke control system in the concession triangles. Activation of the tenant's Ansul system shall generate a supervisory signal at the main fire alarm control panel. | In accordance with the DFW Concessions Tenant Manual. |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box at perimeter wall from common IT/ Communications closet distribution panel. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. |

Provisions Summary (Continued)

TENANT GUIDELINE SUMMARY SERVICE LEVEL STORAGE – SINGLE TENANT

| | Base Building | Tenant Improvements |
|---|--|---|
| PERIMETER WALLS | Full height, one-hour, fire rated CMU perimeter wall construction | Gypsum wallboard and furring, insulation and finishes. Tenant to provide one-hour, fire rated separation. |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. |
| ACCOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. |
| FLOORS | Typical – concrete fill. | Floor finishes. |
| ELECTRICAL | Panels are provided to serve these spaces at the Service Level, adjacent to spaces and are labeled as to which space they serve. | Conduit and conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devises and distribution from tenant panel to lease area. |
| HVAC | Main supply air duct tap to deliver 2.4 cfm per sq. ft. | VAV Box, grilles, registers, distribution ductwork and controls. |
| SANITARY WASTE WATER | Two floor drains. | Any additional floor drains, trenching to underslab waste line, patching and repair of floor slab and water proofing membrane. |
| PLUMBING VENTS | Master common vent line above ceiling to floor. | Tap to master vent system, loop or Studer vents as approved by Code. |
| DOMESTIC WATER | Overhead domestic water main with valve and capped tap. | Connection to tap and all distribution piping and fixtures. |
| FIRE PROTECTION SYSTEM | Upright sprinklers and one 75- candela strobe for every 1600 sq. ft. of unobstructed space. | In accordance with the DFW Concessions Tenant Manual. |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to pull box at perimeter wall from telephone closet. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. |

Provisions Summary (Continued)

TENANT GUIDELINE SUMMARY SERVICE LEVEL STORAGE – MULTI TENANT

| | Base Building | Tenant Improvements |
|---|--|---|
| PERIMETER WALLS | Full height, one-hour, fire rated CMU perimeter wall construction | Gypsum wallboard and furring, insulation and finishes. Tenant to provide one-hour, fire rated separation. |
| DEMISING WALLS | Refer to Lease Exhibits | Gypsum wallboard, insulation and finishes. |
| CEILINGS | Exposed structure. | By tenant to approved design criteria. |
| ACCOUSTICAL SOUND TRANSMISSION PROTECTION | | In accordance with the DFW Concessions Tenant Manual. |
| FLOORS | Typical – concrete fill. | Floor finishes. |
| ELECTRICAL | Panels are provided to serve these spaces at the Service Level, adjacent to spaces and are labeled as to which space they serve. | Conduit and conductors to tenant panel from distribution panel. Circuit breakers at distribution panel. Tenant panel, all devises and distribution from tenant panel. |
| HVAC | Main supply air duct tap to deliver 2.4 cfm per sq. ft. | VAV Box, grilles, registers, distribution ductwork and controls. |
| DOMESTIC WATER | Overhead domestic water main with valve and capped tap. | Connection to tap and all distribution piping and fixtures. |
| SANITARY WASTE WATER | Two floor drains | Any additional floor drains, trenching to underslab waste line, patching and repair of floor slab and waterproofing membrane. |
| PLUMBING VENTS | Master common vent line above ceiling to roof. | Tap to master vent system, loop or Studer vents as approved by Code. |
| FIRE PROTECTION SYSTEM | Upright sprinklers and one 75-candela strobe for every 1600 sq. ft. of unobstructed space. Gypsum wallboard, insulation, finishes. | In accordance with the DFW Concessions Tenant Manual. |
| ITS/COMMUNICATIONS | Empty conduit(s) with pull cord to shared pull box from telephone closet. | Media/wiring to tenant panel from distribution panel. Tenant panel, all devices, equipment and distribution from tenant panel. |

6.2 Responsibility Matrix

Following in this section are spread sheets that generally outline provisions by lease space number and tenant type. The specifics of these provisions will be outlined in the tenant lease agreement. (Reference Section 1 and 2 for Design Condition Descriptions)

| | Building Construction Provisions | | | | | | | | | | | | | | | | |
|-----------|----------------------------------|------------------|-------------------|------------|-------------------------|--------------------|---------------|----------------|----------------------|----------------------|--------------------------|----------------------|----------------|--------------------|----------------|-----------------|--------------------|
| | | | | | | | | | | | | | | | | | |
| SPACE NO. | TENANT MIX | Design Condition | ITS Communication | Electrical | HVAC VAV supply air tap | HVAC Fan Coil Unit | Chilled Water | Domestic Water | Sanitary Waste Water | Cooking Exhaust duct | Dishwashing Exhaust duct | Smoking Exhaust duct | Toilet Exhaust | Grease Waste Water | Plumbing vents | Fire Protection | Misc. Provisions |
| | | | N | ORT | H VIL | LAG | E CO | NCO | URS | E LE | VEL | | | | | | |
| D-NV101 | Cafe/Bar | B2 | Χ | Х | | Χ | Х | Х | Х | Х | Х | Χ | Χ | Χ | Χ | Х | |
| D-NV102 | Duty-free | B1 | Х | Х | | Х | Х | | | | | | | | | Х | Interior stairs |
| D-NV103 | Retail | B2 | Х | Х | | Χ | Х | | | | | | | | | Χ | |
| D-NV104 | Walk-away | B6 | Χ | Х | | Χ | Χ | Х | Х | | | | | | Х | Χ | |
| D-NV105 | Walk-away | B6 | Χ | Х | | Χ | Х | Х | Х | | | | | | Χ | Х | |
| D-NV106 | Quick-serve | B2 | Χ | Х | | Χ | Х | Х | Х | Х | Х | | | Χ | Χ | Х | |
| D-NV107 | Quick-serve | B2 | Χ | Х | | Χ | Х | Х | Х | Х | Х | | | Χ | Χ | Х | |
| D-NV108 | Walk-away | B6 | Χ | Х | | Χ | Х | Х | Х | | | | | | Χ | Χ | |
| D-NV109 | Quick-serve | B1 | Χ | Х | | Χ | Χ | Х | Х | Х | Х | | | Χ | Χ | Χ | |
| D-NV110 | Quick-serve | B6 | Χ | Х | | Χ | Χ | Х | Χ | Х | Х | | | Χ | Х | Х | |
| D-NV111 | Quick-serve | B2 | Χ | Х | | Χ | Х | Х | Х | Х | Х | | | Χ | Χ | Х | |
| D-NV112 | Retail | B5 | Χ | Х | | Х | Χ | Χ | Х | | | | | | Χ | Χ | |
| D-NV113 | Retail | B6 Similar | Х | Х | | Х | Х | | | | | | | | | Χ | |
| D-NV114 | Retail | B6 Similar | Χ | Х | | Χ | Χ | | | | | | | | | Χ | |
| | | | | IOR1 | H VII | LAG | E ME | ZZA | NINE | LEV | ΈL | | | | | | |
| D-NV201 | Duty-free | B1 | Χ | Х | | Χ | Χ | | | | | | | | | Χ | Interior stairs |
| D-NV202 | Quick Serve | B2 | Х | Х | | Х | Х | Х | Х | Х | Х | Х | | Х | Х | Х | |
| D-NV203 | Business Services | B2 | Х | Х | | Х | Х | Х | Х | | | | | | Х | Х | |
| D-NV204 | Family Amenities | В3 | Х | Х | | Х | Х | Х | Χ | | | | | | Х | Х | |
| D-NV205 | Quick-serve | B2 | Χ | Х | | Χ | Х | Χ | Х | Х | Х | | | Χ | Χ | Χ | |
| D-NV206 | Traveler Services | B2 | Х | Х | | | | | | | | | | | | Х | |

Responsibility Matrix (continued)

| Responsibility Matrix (continued) Building Construction Provisions | | | | | | | | | | | | | | | | | |
|---|---------------------------|------------------|----------------------|------------|----------------------------|-----------------------|---------------|----------------|-------------------------|----------------------|-----------------------------|----------------------|----------------|-----------------------|----------------|-----------------|------------------|
| | | | Bui | ldir | ng C | ons | stru | ctio | n P | rov | isio | ns | | | | | |
| SPACE NO. | TENANT MIX | Design Condition | ITS Communication | Electrical | HVAC VAV supply air tap | HVAC Fan Coil Unit | Chilled Water | Domestic Water | Sanitary Waste Water | Cooking Exhaust duct | Dishwashing Exhaust duct | Smoking Exhaust duct | Toilet Exhaust | Grease Waste Water | Plumbing vents | Fire Protection | Misc. Provisions |
| | | | S | OUT | H VII | LLAG | E CC | ONCO | URS | ELE | VEL | | | | | | |
| D-SV101 | Walk-away | B6 | Х | Χ | | Х | Χ | Х | Х | | | | | | Χ | Χ | |
| D-SV102 | Walk-away | B6 | Х | Χ | | Χ | Χ | Х | Х | | | | | | Х | Χ | |
| D-SV103 | Retail | B2 | Χ | Χ | | Х | Χ | | | | | | | | | Χ | |
| D-SV104 | Duty-free | B1 | Х | Х | | Х | Х | | | | | | | | | Х | Interior stairs |
| D-SV105 | Retail | B1 | X | Х | | X | Х | ., | ., | | | | | | | X | |
| D-SV106 | Walk-away | B6 | X | X | | X | X | Х | Х | | | | | - | Х | X | |
| D-SV107 D-SV108 | Retail Retail | B1 B4 | X | X | | X | ٨ | | | | | | | - | | X | |
| D-SV100 | Quick-serve | B3 | X | X | | X | Х | Х | Х | Х | Х | | | X | Х | X | |
| D-SV109 | Retail | B3 | X | X | | X | X | | | | ^ | | | | ^ | X | |
| D-SV111 | Cafe/Bar | B2 | X | X | | X | X | Х | Х | Х | Х | Х | Х | Х | Х | X | |
| | 04.0/24. | | | | TH V | ILLA | | | | | | , , | 7. | , , | , , | ,, | <u> </u> |
| D-SV201 | Duty-free | B1 | Х | Х | | Х | Х | | | | | | | | | Х | Interior stairs |
| D-SV202 | Not Used | | Х | Χ | | Χ | Х | Х | Х | | | | | | Х | Х | |
| D-SV203 | Traveler Ser. | B2 | Χ | Χ | | | | | | | | | | | | Χ | |
| D-SV204 | Sit-down restaurant | B2 | Х | Χ | | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | X | |
| D-SV205 | Walk-away | В3 | Х | Χ | | Χ | Χ | Х | Х | | | | | | Х | Χ | |
| D-SV206 | Family Amenities | В3 | Х | Х | | Х | Х | Х | Х | | | | | | Х | Х | |
| D-SV207 | Cafe/Bar | В3 | Χ | Χ | | Х | Х | Х | Χ | Х | Х | Х | Х | Х | Χ | Х | |
| | | | _ | | _ | IDITIO | <u> - NC</u> | | | RSE I | LEVE | L | 1 | | | 1 | |
| D-NC101 | Retail | A1 | Х | Χ | Х | | | Х | Х | | | | | Х | Χ | Х | |
| D-NC102 D-NC103A * | Business Ser. Cafe/Bar | A1 | Х | Χ | Х | | | Х | Х | | | | | | Х | Х | |
| D-NC 103B * | Currency Ser. | A1 | Х | X | Х | | | Х | Х | Х | Х | Х | Х | Х | Х | Х | |
| | * Demising | wall b | etween | tenar | its to b | | | | nant pe adjace | | | bits. [| Divisio | n of bui | ilding ι | ıtilities | to be |
| D-NC104 | News | A2 | Х | Х | Х | | · an iat | X | X | | J. 11. | | | | Х | Х | |
| D-NC105 | Retail | A2 | Х | Χ | Х | | | | | | | | | | | Х | |
| D-NC106 | Retail | A2 | Х | Χ | Х | | | | | | | | | | | Х | |
| D-NC107A * D-NC 107B * | Retail Retail | A2 | Х | Χ | Х | | | | | | | | | | | Х | |
| | * Demising | wall b | etween | tenar | its to b | | | | nant pe adjace | | | bits. [| Division | n of bui | lding u | ıtilities | to be |
| D-NC108 | Sit-down Restaurant | A2 | Х | Х | Х | | | X | Х | X | Х | Χ | Χ | Х | Х | Χ | |
| D-NC109 | News | A2 | Х | Х | Х | | | Х | Х | | | | | | Х | Х | |
| D-NC110 | Walk-away | А3 | Х | Χ | Х | | | Х | Х | | | | | Х | Х | Χ | |

Responsibility Matrix (continued)

| Responsibility Matrix (continued) | | | | | | | | | | | | | | | | | |
|---|-----------------------------------|------------------|-------------------|------------|-------------------------|--------------------|---------------|----------------|----------------------|----------------------|--------------------------|----------------------|----------------|--------------------|----------------|-----------------|----------------------------------|
| | | | В | uild | ing | Col | nstr | uct | ion | Pro | visi | ons | <u> </u> | | | | |
| SPACE NO. | TENANT MIX | Design Condition | ITS Communication | Electrical | HVAC VAV supply air tap | HVAC Fan Coil Unit | Chilled Water | Domestic Water | Sanitary Waste Water | Cooking Exhaust duct | Dishwashing Exhaust duct | Smoking Exhaust duct | Toilet Exhaust | Grease Waste Water | Plumbing vents | Fire Protection | Misc. Provisions |
| IN-LINE CONDITION - CONCOURSE LEVEL (CONTINUED) | | | | | | | | | | | | | | | | | |
| D-NC111 | Retail | A3 | Χ | Х | Х | | | | | | | | | | | Х | |
| D-NC113 | Retail | А3 | Х | Х | Х | | | | | | | | | | | Χ | |
| D-SC102 | Retail | А3 | Х | Х | Х | | | | | | | | | | | Х | |
| D-SC103 | Walk-away | A3 | Χ | Х | Х | | | Χ | Х | | | | | Х | Х | Χ | |
| D-SC104 | Cafe/bar | A2 | Χ | Χ | Х | | | Х | Х | Х | Χ | Χ | Χ | Χ | Х | Χ | |
| D-SC105 | News | A2 | Х | Х | Х | | | Х | Х | | | | | | Х | Х | |
| D-SC106A * D-SC106B * D-SC106C * | Retail Retail Currency Ser. | A2 | Х | Х | Х | | | | | | | | | | | Х | |
| | *Demising wall | betwe | en ten | ants to | be co | nstruc | | | per Le jacent | | | . Divis | ion of I | buildin | g utiliti | es to b | e coordinated |
| D-SC107A * D-SC107B * | Retail Retail | A2 | X | Х | Х | | | | | | | | | | | Χ | |
| | * Demisi | ng wal | l betwe | en ter | ants to | | | | | | ease E tenant | xhibits | . Divis | ion of | buildin | g utiliti | es to be |
| D-SC108 | News | A2 | Х | Х | Х | | | Χ | X | | | | | | Х | Χ | |
| D-SC109 | Quick-serve | A1 | Х | Х | Х | | | Х | Х | Х | Χ | | | Х | Х | Х | |
| D-SC110 | Sit-down Restaurant | A4 | Х | Х | Х | | | Х | Х | Х | Х | Х | Х | Х | Х | Х | |
| D-SC111 | News | A5 | Х | Х | Χ | | | Х | Х | | | | | | Х | Х | |
| D-SC112 | Retail | A1 | Х | Х | Х | | | Х | Х | | | | | | Х | Х | |
| D-SC113 | Retail | A3 | Χ | Χ | Χ | | | | | | | | | | | Χ | |
| | | | | | CONC | OUR | SE K | iosi | | NDIT | ION | | | | | | |
| D-SC101 | News | C2 | Х | Х | | | | Х | Х | | | | | | | Х | |
| D-NC112 | News | C2 | Х | Х | | | | Х | Х | | | | | | | Х | |
| D-SC114 | Retail | C3 | Χ | Х | | | | | | <u></u> | | | | | | Χ | |
| | | | | | , | IN-TI | RANS | | | ЭΕ | | | | | | | |
| D-NI201 | Cafe/bar | - | X | X | X | | | Х | Х | Х | Х | | | Х | Х | X | D |
| D-NI202 | Duty-free | - | X | X | X | | | | | | | | | | | Х | Duty-free tenant allowance |
| D-NI203 | Business Ser. | - | Χ | Х | Х | | | Χ | Х | | | | | | Χ | Χ | |
| D-SI201 | Business Center | - | Х | Х | Х | | | _ | | | | | | | | Х | |
| D-SI202 | Cafe/bar | - | Χ | Χ | Χ | | | Х | Х | Х | Х | Х | | Х | Χ | Х | |
| D-SI203 | Duty-free | - | Х | Х | Х | | | | | | | | | | | Х | Duty-free tenant allowance |
| D-SI204 | Business Center | - | Х | Х | Х | | | | | | | | | | | Х | |

Responsibility Matrix (continued)

| Building Construction Provisions | | | | | | | | | | | | | | | | | |
|--|--|------------------|----------------------|------------|----------------------------|--------------------|---------------|----------------|-------------------------|-------------------------|-----------------------------|-------------------------|----------------|-----------------------|----------------|-----------------|------------------|
| | | Bu | <u>ildi</u> i | ng | <u>Cons</u> | <u>truc</u> | tio | <u>n P</u> | rov | isio | ns | | | | | | |
| SPACE NO. | TENANT MIX | Design Condition | ITS Communication | Electrical | HVAC VAV supply air tap | HVAC Fan Coil Unit | Chilled Water | Domestic Water | Sanitary Waste Water | Cooking Exhaust duct | Dishwashing Exhaust duct | Smoking Exhaust duct | Toilet Exhaust | Grease Waste Water | Plumbing vents | Fire Protection | Misc. Provisions |
| | • | | MEE | TER | S/GREE | TER | S C | ONC | ESSI | ONS | <u> </u> | · · | | | | | |
| D-MG102 | Walk-away | C1 | Χ | Χ | | | | Χ | Χ | | | | | | | Χ | |
| D-MG103 | Quick-serve | B6 Similar | Х | Χ | Х | | | Х | Х | | | | | | Χ | Χ | |
| D-BZ101 | Currency Services | B4 | Х | Х | HVAC VAV Box | | | | | | | | | | | Х | |
| DUTY-FREE DISTRIBUTION ROOMS AT GATEHOUSES | | | | | | | | | | | | | | | | | |
| D-NG 101 D-NG 102 D-NG 103 D-NG 104 | Duty-free distribution rooms 2 at each gatehouse | - | Х | Х | Х | | | | | | | | | | | Х | |
| | SE | RVICE | LEVE | EL S | TORAG | E CC | NDI | TION | I - SII | VGLE | TEN | IANT | 1 | | | | |
| D-S103 | Tenant storage - single tenant | - | Χ | Х | Х | | | Х | Χ | | | | | | Х | Х | |
| D-S106 | Tenant storage - single tenant | = | Х | Х | Х | | | Х | Х | | | | | | Х | Х | |
| | SE | RVICE | LEV | EL S | TORAC | SE CO | OND | ITIO | N - M | ULTI | TEN | 4NT | 1 | | · | | |
| D-S104A D-S104B D-S104C D-S104D | Tenant storage Multi tenant | - | Х | Х | Х | | | Х | Х | | | | | | Х | Х | |
| D-S105A D-S105B D-S105C D-S105D | Tenant storage Multi tenant | · | Х | Х | Х | | | Х | X | | | | | | х | Х | |
| D-S107A D-S107B D-S107C D-S107D | Tenant storage Multi tenant | - | Х | Х | Х | | | Х | Х | | | | | | х | Х | |
| D-S108A D-S108B D-S108C D-S108D | Tenant storage Multi tenant | - | Х | Х | Х | | | Х | Х | | | | | | х | Х | |
| D-S109A D-S109B D-S109C D-S109D | Tenant storage - multi-tenant | - | Х | Х | Х | | | Х | X | | | | | | х | Х | |

6.3 Utility Assumption Matrix

The existing electrical loads (watts per square foot) used in this matrix were taken from previous electrical studies for the existing terminal concession programs. This matrix is intended to determine the empty conduit size to run to each space, not to size services for the concessions. The actual service size will be determined by each of the concession consultants utilizing actual electrical loads. This matrix assumes that spaces designated for retail or food will remain retail or food if another concession vendor takes over. The attached sheets for estimated space requirements are the assumed requirements for each space. The actual sizes for exhaust shall be determined by each of the concession consultants utilizing actual space exhaust requirements.

| Space No. | Space Type | Estimated Watts/SF | Estimated Service Size @ 480V, 3 Ph | Estimated Conduit Size | DFW Installed Conduit Size | Toilet Exhaust | Cooking Exhaust | Dishwashing Exhaust | Smoking Exhaust | Domestic Cold Water | Sanitary Sewer | Grease Waste | Vent | Chilled/Htg Water | Supply Air Tap |
|------------|------------------------|-----------------------|--|---------------------------|-------------------------------|----------------|-----------------|------------------------|-----------------|------------------------|----------------|--------------|------|-------------------|----------------|
| Service Le | evel | | | | | | | | | | | | | | |
| D-S101 | Truck Dock Storage | * | | | | | | | | 1" | 4" | | 4" | n/a | n/a |
| D-S103 | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 16" Dia. |
| D-S104A | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 16" Dia. |
| D-S104B | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S104C | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S104D | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S105A | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 16" Dia. |
| D-S105B | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S105C | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S105D | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S106 | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 16" Dia. |

^{*} In Base Bldg.

^{**}Panels are shown in Base Bldg for these rooms. Tenant Contractor shall route and size conduits as required.

| | | | | | | | | | | | | | 1 | | |
|--------------------------|---------------------------|-----------------------|--|---------------------------|-------------------------------|----------------|-----------------|------------------------|-----------------|------------------------|----------------|--------------|-----------|-------------------|----------------|
| Space No. | Space Type | Estimated Watts/SF | Estimated Service Size @ 480V, 3 Ph | Estimated Conduit Size | DFW Installed Conduit Size | Toilet Exhaust | Cooking Exhaust | Dishwashing Exhaust | Smoking Exhaust | Domestic Cold Water | Sanitary Sewer | Grease Waste | Vent | Chilled/Htg Water | Supply Air Tap |
| Service Leve | | | | | | | | | | | | | | | |
| D-S107A | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S107B | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S107C | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S107D | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S108A | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 16" Dia. |
| D-S108B | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S108C | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S108D | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S109A | Concessions Storage | 10 | | | ** | | | | | 1" | 4" | | 4" | 3/4" HS/HR | 8" Dia. |
| D-S109B | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S109C | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| D-S109D | Concessions Storage | 10 | | | ** | | | | | | | | | | |
| Arrivals Leve | el . | | | | | | | | | | | | T | T | |
| D-BZ101 | Currency Services | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 10" Dia. |
| D-MG102 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | | | |
| D-MG103 | Quick Serve | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 10" Dia. |
| Concourse L | | | | | | | | | | | | | T | T | T |
| D-NC100 | Traveler Services | | | | | | | | | | | | | | |
| D-NC101 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | 4" | 4" | | 16x10 |
| D-NC102 | Business Services | 20 | 225A | 2-1/2" | 3" | | | | | 2" | 4" | | | | 36x24 |
| D-NC103A * D-NC103B * | Café/Bar Currency Ser. | 75 | 350A | 4" | 4" | 12x12 | 16x16 | 10x10 | 12x1 2 | 2" | 4" | 4" | 4" | | 24x20 |
| | * Demisino | g wall | betwe | en tena | nts to b | | ructed by | | | | ibits. D | Division (| of buildi | ng utilities | to be |
| D-NC104 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 18x14 |
| D-NC105 | Retail | 10 | | 1-1/4" | 2" | | | | | | | | | | 20x16 |
| D-NC106 | Retail | 10 | | 1-1/4" | 2" | | | | | | | | | | 30x20 |
| * In Raca Rid | _ | _ | | | | | | | | | | | | | - |

^{*} In Base Bldg.

^{*}Panels are shown in Base Bldg for these rooms. Tenant Contractor shall route and size conduits as required.

| i | Utility A | 155 | սուբ | Juon | ivia | uix (| COIIL | mue | <u>u)</u> | | | | | | |
|--|-----------------------------------|-----------------------|--|---------------------------|-------------------------------|----------------|-----------------------|------------------------|-----------------|------------------------|----------------|--------------|----------|----------------------------|----------------|
| Space No. | Space Type | Estimated Watts/SF | Estimated Service Size @ 480V, 3 Ph | Estimated Conduit Size | DFW Installed Conduit Size | Toilet Exhaust | Cooking Exhaust | Dishwashing Exhaust | Smoking Exhaust | Domestic Cold Water | Sanitary Sewer | Grease Waste | Vent | Chilled/Htg Water | Supply Air Tap |
| | evel (Continue | ed) | | | | | | <u> </u> | | | | | | <u>'</u> | |
| D-NC107A * D-NC 107B * | Retail Retail | 10 | 100A | 1-1/4" | 2" | | | | | | | | | | 26x18 |
| | * Demisin | g wall | betwee | en tenan | ts to be | | ucted by dinated w | | | | bits. D | ivision | of buil | lding utilities t | o be |
| D-NC108 | Sit Down Restaurant | 100 | 800A | 2 - 4" | 2-4" | 16x16 | (2) 22x22 | (2) 18x16 | 16x16 | 2" | 4" | 4" | 4" | | 38x24 |
| D-NC109 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 18x12 |
| D-NC110 | Walk Away | 20 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | 4" | 4" | | 18x10 |
| D-NC111 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 12x10 |
| D-NC112 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | | | n/a |
| D-NC113 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 12x10 |
| D-SC101 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | | | n/a |
| D-SC102 | Retail | 50 | 150A | 2" | 3" | | | | | | | | | | 20x12 |
| D-SC103 | Walk Away | 20 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | 4" | 4" | | 16x12 |
| D-SC104 | Café/Bar | 75 | 250A | 2-1/2" | 3" | 12x12 | 16x16 | 10x10 | 12x12 | 2' | 4" | 4" | 4" | | 22x14 |
| D-SC105 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 20x12 |
| D-SC106A * D-SC106B * D-SC106C * | Retail Retail Currency Ser. | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 26x16 |
| | * Demisin | g wall | betwee | en tenan | ts to be | | | | | | bits. D | ivision | of bui | lding utilities t | o be |
| D-SC107A * D-SC107B * | Retail Retail | 10 | 80A | 1-1/4" | 2" | coor | dinated w | ith adja | cent ter | iant | | | | | 28x18 |
| | * Demisin | g wall | betwee | en tenan | ts to be | constr | ucted by dinated w | tenant p | er Leas | e Exhi | bits. D | ivision | of bui | lding utilities t | o be |
| D-SC108 | News | 10 | 80A | 1-1/4" | 2" | COOL | umateu v | niii auja | Cent ter | 1" | 4" | | 4" | | 24x12 |
| D-SC109 | Quick Serve | 50 | 125A | 2" | 3" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | | 20x12 |
| D-SC110 | Sit Down Restaurant | 100 | 600A | 2-3" | 2-3" | 16x16 | 22x22 | 18x16 | 16x16 | 2" | 4" | 4" | 4" | | 24x16 |
| D-SC111 | News | 10 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 10x8 |
| D-SC112 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | 2" | 4" | | 4" | | 16x10 |
| D-SC113 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 12x6 |
| D-SC114 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | n/a | n/a |
| D-NV101 | Café/Bar | 75 | 250A | 2-1/2" | 2" | 12x12 | 16x16 | 10x10 | 12x12 | 2" | 4" | 4" | 4" | 1-1/2" / 1- 1/4" | |
| D-NV102 | Duty Free Shopping | 10 | 100A | 1-1/4" | 2" | | | | | | | | | 1-1/2" / 1- 1/4" | |
| D-NV103 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1-1/4" / 1" | |
| D-NV104 | Walk Away | 50 50 | 80A 80A | 1-1/4" 1-1/4" | 2" | | | | | 1" 1" | 4" 4" | | 4" 4" | 3/4" / 3/4" 3/4" / 3/4" | |
| D-NV105 D-NV106 | Walk Away Quick Serve | 50 | 100A | 1-1/4" | 2" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | 1" / 3/4" | |
| * In Base Bld | | | | , . | | | . 5.4.10 | . 5.4.10 | | | • | <u> </u> | <u> </u> | . , 0, 1 | |

^{*} In Base Bldg.
**Panels are shown in Base Bldg for these rooms. Tenant Contractor shall route and size conduits as required.

| Space No. | Space Type | Estimated Watts/SF | Estimated Service Size @ 480V, 3 Ph | Estimated Conduit Size | DFW Installed Conduit Size | Toilet Exhaust | Cooking Exhaust | Dishwashing Exhaust | Smoking Exhaust | Domestic Cold Water | Sanitary Sewer | Grease Waste | Vent | Chilled/Htg Water | Supply Air Tap |
|-----------|-----------------------|-----------------------|--|---------------------------|-------------------------------|----------------|-----------------|------------------------|-----------------|------------------------|----------------|--------------|------|--------------------|----------------|
| Concourse | Level (Continu | ied) | | | | | | | | | | | | | |
| D-NV107 | Quick Serve | 50 | 100A | 1-1/4" | 2" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | 1-1/4" / 1" | |
| D-NV108 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 3/4" / 3/4" | |
| D-NV109 | Quick Serve | 50 | 150A | 2" | 3" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | 1-1/4" / 1" | |
| D-NV110 | Quick Serve | 50 | 80A | 1-1/4" | 2" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | 1" / 3/4" | |
| D-NV111 | Quick Serve | 50 | 150A | 2" | 3' | | 16x16 | 10x10 | | 2' | 4" | 4" | 4" | 1-1/4" / 1" | |
| D-NV112 | Retail | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 3/4" / 3/4" | |
| D-NV113 | Retail | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 3/4" / 3/4" | |
| D-NV114 | Retail | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 3/4" / 3/4" | |
| D-SV101 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 1" / 3/4" | |
| D-SV102 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 1" / 3/4" | |
| D-SV103 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1" / 3/4" | |
| D-SV104 | Duty Free Shopping | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1-1/2" / 1-1/4" | |
| D-SV105 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1-1/4" / 1" | |
| D-SV106 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 1" / 3/4" | |
| D-SV107 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1-1/4" / 1" | |
| D-SV108 | Retail | 20 | 80A | 1-1/4" | 2" | | | | | | | | | 1" / 3/4" | |
| D-SV109 | Quick Serve | 50 | 500A | 4" | 4" | | 16x16 | 10x10 | | 2' | 4' | 4" | 4" | 2" / 1- 1/2" | |
| D-SV110 | Retail | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1" / 3/4" | |
| D-SV111 | Café/Bar | 75 | 350A | 4" | 4" | 12x12 | 16x16 | 10x10 | 12x1 2 | 2" | 4" | 4" | 4" | 1-1/2" / 1-1/4" | |

In Base Bldg.

Panels are shown in Base Bldg for these rooms. Tenant Contractor shall route and size conduits as required.

| | | ated SF | Estimated Service Size @ 480V, 3 Ph | Estimated Conduit Size | DFW Installed Conduit Size | Toilet Exhaust | Cooking Exhaust | Dishwashing Exhaust | Smoking Exhaust | Domestic Cold Nater | Sanitary Sewer | Grease Waste | | Chilled/Htg Water | Supply Air Tap |
|-----------|--------------------------------|-----------------------|--|---------------------------|-------------------------------|----------------|-----------------|------------------------|-----------------|------------------------|----------------|--------------|------|--------------------|----------------|
| Space No. | Space Type | Estimated Watts/SF | Estim Size @ | Estimated Conduit Si: | DFW I | Toilet | Cooki | Dishwas Exhaust | Smok | Dome Water | Sanita | Greas | Vent | Chille | Suppl |
| INS Level | Duty Free | | | | | | | | | | | | | 2" / | |
| D-NV201 | Shopping | 10 | 80A | 1-1/4" | 2" | | | | | | | | | 1-1/2" | |
| D-NV202 | Quick Serve | 75 | 150A | 2-1/2" | 3" | | 16x16 | 10x10 | 12x12 | 2" | 4" | 4" | 4" | 1-1/4" / 1" | |
| D-NV203 | Business Services | 20 | 80A | 1-1/4" | 2" | | | | | 2" | 4" | | 4" | 1" / 3/4" | |
| D-NV204 | Family Amenities | 20 | 80A | 1-1/4" | 2" | | | | | 2" | 4" | | 4" | 1" / 3/4" | |
| D-NV205 | Quick Serve | 50 | 125A | 1-1/4" | 2" | | 16x16 | 10x10 | | 2" | 4" | 4" | 4" | 1-1/4" / 1" | |
| D-NV206 | Traveler Services | 20 | 80A | 1-1/4" | 2" | | | | | | | | | | |
| D-SV201 | Duty Free Shopping | 10 | 100A | 1-1/4" | 2" | | | | | | | | | 2" / 1-1/2" | |
| D-SV202 | Not Used | 20 | 80A | 1-1/4" | 2" | | | | | 2" | 4" | | 4" | 1" / 3/4" | |
| D-SV203 | Traveler Services | 20 | 80A | 1-1/4" | 2" | | | | | | | | | | |
| D-SV204 | Sit Down Restaurant | 100 | 350A | 4" | 4" | 16x16 | 22x22 | 18x16 | 16x16 | 2" | 4" | 4" | 4" | 1-1/2" / 1-1/4" | |
| D-SV205 | Walk Away | 50 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | 1" / 3/4" | |
| D-SV206 | Family Amenities | 20 | 80A | 1-1/4" | 2" | | | | | 2" | 4" | | 4" | 1-1/4" / 1" | |
| D-SV207 | Café/Bar | 75 | 80A | 1-1/4" | 2" | | 16x16 | 10x10 | 12x12 | 1" | 4" | 4" | 4" | 1" / 3/4" | |
| D-NI201 | Café/Bar | 75 | 125A | 2" | 3" | | 16x16 | 10x10 | 12x12 | 1" | 4" | 4" | 4" | | 16x10 |
| D-NI202 | Duty Free Shopping | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 12x10 |
| D-NI203 | Business Services | 20 | 80A | 1-1/4" | 2" | | | | | 1" | 4" | | 4" | | 12x8 |
| D-SI201 | Business Center- Laptops | 20 | 80A | 1-1/4" | 2" | | | | | | | | | | 6x6 |
| D-SI202 | Café/Bar | 75 | 100A | 1-1/4" | 2" | | 16x16 | 10x10 | 12x12 | 2" | 4" | 4" | 4" | | 14x10 |
| D-SI203 | Duty Free Shopping | 10 | 80A | 1-1/4" | 2" | | | | | | | | | | 12x8 |
| D-SI204 | Business Center | 20 | 80A | 1-1/4" | 2" | _ | | | | | | | | | 6x4 |

In Base Bldg.
*Panels are shown in Base Bldg for these rooms. Tenant Contractor shall route and size conduits as required.

6.4 Heat Loss Schedule

| Project: | | | | |
|----------------|-------|---|---|---------|
| Tenant: | | | | |
| Type of Store: | Area: | Х | = | sq. ft. |

| | | | De a rec. Novembran | | | | | | | |
|-----|--------|------|--|-------------|----------|------|----------|------|---------|------|
| | | П | Room: Number | | | | | | | |
| | | ltem | Name | | | | | | | |
| | | 1 | Area (sq. ft.) | | | | | | | |
| | | 2 | Ceiling height (ft.) | | | | | | | |
| | | 3 | Volume (cu. ft.) | | | | | | | |
| | Ē | EXTI | ERIOR LOSSES | Factor | Quantity | BTUH | Quantity | BTUH | Qantity | BTUH |
| |) | 4 | Roof | | | | | | | |
| | C Y | 5 | Wall | | | | | | | |
| | C | 6 | Glass | | | | | | | |
| | L | 7 | Infiltration | | | | | | | |
| | E | 8 | | | | | | | | |
| | | 9 | Sub Total (4 thru 8) | | | | | | | |
| N (| С | 10 | Roof | | | | | | | |
| 1 | Υ | 11 | Wall | | | | | | | |
| G | С | 12 | Glass | | | | | | | |
| Н | | 13 | | | | | | | | |
| T | E | 14 | Sub Total (10 thru 13) | - | | | | | | |
| | I | NTE | RIOR GAINS | | | | | | | |
| D (| | 15 | Lights (25% Credit) | 0.25 | | | | | | |
| Α | | 16 | Other | | | | | | | |
| Y | С | 17 | Sub Total (15 + 16) | | | | | | | |
| | 1 | NET | HEAT LOSS | • | | | | | | |
| | С | 18 | Room Load (9 less 17) | | | | | | | |
| | Y | | Average Room Load per | | | | | | | |
| | Ċ | | sq. ft. (lt. 18/lt. 1) | | | | | | | |
| | L | | Total Tenant Area (Sum of Iter | | | | | | | |
| | E | | Tenant Grand Total Load (Sun | |) | | | | | |
| | | | Avg. Tenant Load per sq. ft (It | | | | | | | |
| N (| | | Avg. Room Load per sq. ft. (It | • | | | | | | |
| _ | Y | | 24 Tenant Grand Total Load (Sum of It. 14) | | | | | | | |
| T | C | 25 | Avg. Tenant Load per sq. ft. (I | t. 24/lt. 2 | 0) | | | | | |

Notes:

- 1. Refer to Design Criteria for design conditions.
- 2. Overall Coefficient of Heat Transfer ("U" Value) of Tenant Wall is dependent on tenant's inside wall construction.
- 3. For Tenant's Load in Watt per sq. ft., divide appropriate "BTUH" column by 3.413.

6.5 Heat Gain Schedule

| Proje | ct: | | | | | | | | |
|----------|-------|---------------------------------|-------------|----------|------|----------|------|---------|---------|
| Tena | nt: | | | | | | | | |
| Туре | of S | tore: | | | | Area: | X | = | sq. ft. |
| | | | | | | • | | | |
| | | Room: Number | | | | | | | |
| | Item | Name | | | | | | | |
| | 1 | Area (sq. ft.) | | | | | | | |
| | 2 | Ceiling height (ft.) | | | | | | | |
| | 3 | Volume (cu. ft.) | | | | | | | |
| | EXT | ERIOR LOSSES | Factor | Quantity | BTUH | Quantity | BTUH | Qantity | BTUH |
| | 4 | Roof | | | | | | | |
| C D Y | 5 | Wall | | | | | | | |
| A C | 6 | Glass | | | | | | | |
| ΥL | 7 | Infiltration | | | | | | | |
| . E | 8 | | | | | | | | |
| | 9 | Sub Total (4 thru 8) | • | | | | | | |
| N C | 10 | Roof | | | | | | | |
| ΙΥ | 11 | Wall | | | | | | | |
| G C | 12 | | | | | | | | |
| H L | 13 | | | | | | | | |
| T E | _ ' ' | Sub Total (10 thru 13) | | | | | | | |
| | | ERIOR GAINS | | | | | | | |
| D C | | Lights (25% Credit) | 0.25 | | | | | | |
| A Y | _ | Other | | | | | | | |
| Y C | | , | | | | | | | |
| | | HEAT LOSS | | | | | | | |
| С | 18 | Room Load (9 less 17) | | | | | | | |
| DΥ | | Average Room Load per | | | | | | | |
| A C | | sq. ft. (lt. 18/lt. 1) | | | | | | | |
| ΥL | _ | Total Tenant Area (Sum of Ite | | | | | | | |
| Е | 21 | , | |) | | | | | |
| | | Avg. Tenant Load per sq. ft (It | | | | | | | |
| N C | | Avg. Room Load per sq. ft. (It | | | | | | | |
| G Y | | Tenant Grand Total Load (Sun | | | | | | | |
| T C | 25 | Avg. Tenant Load per sq. ft. (I | t. 24/lt. 2 | 0) | | | | | |

Notes:

- 1. Refer to Design Criteria for design conditions.
- 2. Overall Coefficient of Heat Transfer ("U" Value) of Tenant Wall is dependent on tenant's inside wall construction.
- 3. For Tenant's Load in Watt per sq. ft., divide appropriate "BTUH" column by 3.413.

6.6 Electrical Review Schedule

| Project: | | | | |
|----------------------|---------------------------------------|--------------------------------|---------------|--------------------|
| Tenant: | | | | |
| Type of Store: | | | Area: X | = sq. ft. |
| Circuit Breaker inst | alled in Owner's Distribution | Panel to Serve Tenant: | Size: | · |
| Frame: | | AIC Rating: | | e:277/480, Poles:3 |
| Traine. | | , no realing. | vollage | |
| Service Conductors | Conduit from Owner's Distr | ibution Panel to Tenant Distri | bution Panel: | |
| Conductor Sizes: | Phase: Neur | tral: Ground: | Conduit Siz | e: |
| | | | | |
| Loads | Connected KVA | Design Factor (%) | Design KVA | |
| Lighting | | 125 | | |
| Receptacles | | ** | | |
| Transformers | | 125 | | |
| Motors | | 125 (largest) + 100 | | |
| Heating | | * | | |
| Air Conditioning | | * | | |
| Miscellaneous | | 100 | | |
| Spares & Sp aces | | 100 | | |
| Kitchen | | (See NEC) | | |
| Hot Water Heater | | 125 | | |
| Totals: | KVA | | KVA | |
| | VA/SF | | VA/SF | |
| | | | | |
| * Largest Coincider | nt Load A/C, Heating | | | |
| | 00% (Remainder @ 50%) | | | |
| | , | | | |
| | | | | |
| Tenant Furnished E | quipment Sizes | | | |
| Main C/B in Tenant | Distribution Panel (TDP): | Size: | Frame: | |
| | | Trip: | | |
| Step Down Transfo | - rmer: KVA: Se | econdary Voltage: | Phase: | |
| - | | | | |
| 3 Phase Fault Curre | ent Data | | | |
| Panelboard: | | Max. Avail. 3 Phase Fault C | Current: | |
| Panelboard: | | Max. Avail. 3 Phase Fault C | | |
| Panelboard: | | Max. Avail. 3 Phase Fault C | | |
| | · · · · · · · · · · · · · · · · · · · | | | |
| Panel: | | Max. Avail. 3 Phase Fault C | Jurrent: | |
| | | | | |

6.7 DFW International Airport ETAM Department Vent/Hood Data Form

INSTRUCTIONS:

Concessionaire Contractor shall complete this form as part of the Concessions Department TCO final-phase requirements. Concessionaire Contractor shall complete the Location, Exhaust and Vent/Hood sections (blue sections) of this form, and attach any additional information (e.g., manuals) related to each vent/hood system included in this form. If the F&B Tenant location does not have a vent/hood system, the Concessionaire Contractor shall indicate such in the Location Exhaust Information comments section. Concessionaire Contractor must sign this form and provide license information. Failure to include this information will delay the F&B Tenant's TCO approval process. Once completed, Concessions Department staff shall forward this form to the ETAM Department's Senior Compliance Analyst at cjackson@dfwairport.com.

ETAM Facilities Services Coordinator shall complete the gold section of this form regarding cleaning frequency. After completion, forward form to the ETAM Systems Performance Group.

ETAM Systems Performance Group shall input all necessary information related to the vent/hood system into INFOR EAM, and complete the green section of this form.

All recorded data in the blue section should be typed to ensure legibility.

| F&B Tenan | t Name: | Termina Termina | | Conce | essions Unit ID Number: |
|------------|--------------------------------------|--------------------|---|--------|-------------------------------------|
| Column Lin | e: | Grid Lin | e: | Gate A | Area: |
| F&B Tenan | t Contact: | Telepho | ne: | Date F | Form Completed: |
| | | | | | |
| | number of exhaust duct assembly | | number of hoods connected to exhaust duct assembly | | exhaust duct linear footage |
| | number of make-up air fans | | number of make-up air fan ducts | | make-up air fan duct linear footage |
| commen | nts (E.g., Please note aLL optional/ | upgraded i | features added): | | |
| | | | | | |
| | island | | single island | | Double island |
| | wall or backshelf | | end-to-end | | fire suppresion |
| | vapor-proof lights | | back-splashes | | griddle |

| | fryer | | charbroiler | | Wok | |
|-----------|---|---------|-----------------------|-----------------|----------------------------|--|
| | Number of grease filters | | number of grease cups | | number of exhaust air fans | |
| Manufac | turer (e.g., captive aire): | n | nodel number: | seri | al number: | |
| commen | nts (E.g., Please note aLL optional/upg | raded f | eatures added): | | | |
| | | | | | | |
| | island | | single island | | Double island | |
| | wall or backshelf | | end-to-end | | fire suppresion | |
| | vapor-proof lights | | back-splashes | | griddle | |
| | fryer | | charbroiler | | Wok | |
| | Number of grease filters | | number of grease cups | | number of exhaust air fans | |
| Manufac | turer (e.g., captive aire): | n | nodel number: | seria | al number: | |
| commen | nts (E.g., Please note aLL optional/upg | raded f | eatures added): | | | |
| | | | | | | |
| | | | | | | |
| | island | | single island | | Double island | |
| | wall or backshelf | | end-to-end | | fire suppresion | |
| | vapor-proof lights | | back-splashes | | Oven | |
| | Number of ovens | | | | number of exhaust air fans | |
| Manufac | turer (e.g., captive aire): | n | nodel number: | seria | al number: | |
| commen | nts (E.g., Please note aLL optional/upg | raded f | eatures added): | | | |
| | | | | | | |
| Printed N | ame: | Sign | nature: | License Number: | | |

| | island | | | single island | | | Double | island | |
|--|---------------------|---------------|--|---------------|------------------------------|--------|------------|---------------------|--|
| | wall or ba | ckshelf | | end-to-end | | | fire supp | oresion | |
| | vapor-pro | of lights | | back-splashes | | | Oven | | |
| | Number o | f ovens | | | | | number | of exhaust air fans | |
| Manufac | eturer (e.g., capti | /e aire): | mode | el number: | | seria | al number: | | |
| comme | nts (E.g., Please | note aLL opti | ional/upgraded featu | res added): | | | | | |
| | | | | | | | | | |
| Printed N | lame: | | Signatu | ıre: | | Licens | e Numbe | r: | |
| | | | ' | | 1 | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Type I | se | rial numb | oer: | | | | | | |
| | aily | | Weekly | | Bi-weekl | У | | Monthly | |
| В | i-Monthly | | Quarterly | | Semi-An | nual | | Annually | |
| Due Date (Day, Date, Wo Month): | | | Start Date (I.e., Date first PM is due): | | Departme E.TERM D.TERM | .MEPS | , | | |
| | | | | | | | | | |
| Type I | | serial nu | ımber: | | | | | | |
| D | aily | | Weekly | | Bi-weekl | у | | Monthly | |
| В | i-Monthly | | Quarterly | | Semi-An | nual | | Annually | |
| Due Date (Day, Date, Wo Month): | | | Start Date (I.e., Date first PM is due): | | Departme E.TERM D.TERM | .MÈPS | , | | |
| | | | | | | | | | |

| Type II | seria | al number: | | | | |
|--|----------------|--|----------------------|---|---|----------|
| Daily | | Weekly | | Bi-weekly | | Monthly |
| ☐ Bi-Mor | nthly | Quarterly | | Semi-Annual | | Annually |
| Due Date (E.g., Day, Date, Week, Month): | | Start Date (I.e., Date first PM is due): | | Department (E.g., E.TERM.MEPS, D.TERM.CUST) | | |
| | | | | | | |
| Type II | serial number: | | | | | |
| Daily | | Weekly | | Bi-weekly | | Monthly |
| ☐ Bi-Mor | nthly | Quarterly | | Semi-Annual | | Annually |
| Due Date (E.g., Day, Date, Week, Month): | | Start Date (I.e., Date first PM is due): | | Department (E.g., E.TERM.MEPS, D.TERM.CUST) | | |
| | | | | | · | |
| | | | | | | |
| Date Received: | | | e Input in r EAM: | | | |
| Input by (printed | | Sigr | nature: | | | |
| OTHER INFO | RMATION 1 | TO NOTE (EXPLA | IN): | | | |
| | | | | | | |
| | | | | | | |

6.8 Specifications

SECTION 05 73 00 DECORATIVE METAL RAILINGS PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Stainless-steel decorative railings with glass- or metal-infill panels.

1.2 REFERENCES

- A. American Architectural Manufacturers Association
 - AAMA Aluminum Curtain Wall Series No. 12: Structural Properties of Glass
- B. American Welding Society
 - AWS D1.6: Structural Welding Code Stainless Steel
- C. ASTM International
 - ASTM A 240/A 240M: Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
 - 2. ASTM A 276: Specification for Stainless Steel Bars and Shapes
 - 3. ASTM A 312/A 312M: Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
 - 4. ASTM A 554: Specification for Welded Stainless Steel Mechanical Tubing
 - 5. ASTM A 666: Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
 - 6. ASTM A 743/A 743M: Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion-Resistant, for General Application
 - 7. ASTM B 633: Specification for Electrodeposited Coatings of Zinc on Iron and Steel
 - 8. ASTM C 1048: Specification for Heat-Treated Flat Glass Kind HS, Kind FT Coated and Uncoated Glass
 - 9. ASTM C 1107: Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
 - 10. ASTM E 488: Test Methods for Strength of Anchors in Concrete and Masonry Elements

- 11. ASTM E 894: Test Method for Anchorage of Permanent Metal Railing Systems and Rails for Buildings
- 12. ASTM E 935: Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings
- 13. ASTM F 1941: Specification for Electrodeposited Coatings on Threaded Fasteners (Unified Inch Screw Threads [UN/UNR])
- D. Code of Federal Regulations
 - 1. 16 CFR 1201: Safety Standard for Architectural Glazing Materials
- E. National Association of Architectural Metal Manufacturers
 - 1. Metal Finishes Manual for Architectural and Metal Products.

1.3 DEFINITIONS

A. Railings: Guards, handrails, and similar devices used for protection of occupants at open-sided floor areas, pedestrian guidance and support, visual separation, or wall protection.

1.4 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
 - 1. Stainless Steel: 60 percent of minimum yield strength.
 - 2. Glass: 25 percent of mean modulus of rupture (50 percent probability of breakage), as listed in "Mechanical Properties" in AAMA's Aluminum Curtain Wall Series No. 12, "Structural Properties of Glass."
- C. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ft. (0.73 kN/m) applied in any direction.
 - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.

| 6

Infill of Guards:

- a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
- b. Infill load and other loads need not be assumed to act concurrently.

1.5 SUBMITTALS

- A. Product Data: For the following:
 - 1. Manufacturer's product lines of railings assembled from standard components.
 - 2. Anchoring systems.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Samples for Verification: For each type of exposed finish required.
 - 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
 - 2. Each type of glass or metal infill required.
 - Fittings.
 - 4. Welded connections.
 - 5. Assembled Samples of railing systems, made from full-size components, including top rail, post, handrail, and infill. Show method of finishing members at intersections. Samples need not be full height.
- D. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Field Test Reports.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing from single source from single manufacturer.
 - 1. Modifications must be judged and approved by the Owner for this work.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for system's aesthetic effects and performance characteristics. Aesthetic effects are indicated by dimensions,

arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction. Performance characteristics are indicated by criteria subject to verification by one or more methods including structural analysis, preconstruction testing, field testing, and in-service performance.

- Do not modify intended aesthetic effects, as judged solely by DFW with DFW Concessions approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- C. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.6, "Structural Welding Code Stainless Steel."
- D. Safety Glazing Labeling: Permanently mark glass with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- E. Preinstallation Meeting: Conduct meeting on project site with Terminal Construction Team, DFW Concessions TPM Team and Tenant Contractor.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 COORDINATION AND SCHEDULING

A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages including anchor bolts and items with integral anchors that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails unless otherwise indicated.

- 1. Provide cast-metal brackets with flange tapped for concealed anchorage to threaded hanger bolt.
- 2. Provide either formed- or cast-metal brackets with predrilled hole for exposed bolt anchorage.

2.2 STAINLESS STEEL

- A. Tubing: ASTM A 554, Grade MT 304.
- B. Pipe: ASTM A 312/A 312M, Grade TP 304.
- C. Castings: ASTM A 743/A 743M, Grade CF 8 or CF 20.
- D. Sheet, Strip, Plate, and Flat Bar: ASTM A 666, Type 304.
- E. Bars and Shapes: ASTM A 276, Type 304.
- F. Perforated Metal: Stainless-steel sheet, ASTM A 240/A 240M or ASTM A 666, Type 304.
 - 1. Size and Spacing of Perforations: As selected by Tenant.
 - Thickness for Metal-Infill Panels: As approved by DFW
 Concessions. Tenant must provide adequate thickness and design to ensure structural integrity.

2.3 GLASS MATERIALS

- A. Tempered Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated), Type 1 (transparent flat glass), Quality-Q3. Provide products that have been tested for surface and edge compression according to ASTM C 1048 and for impact strength according to 16 CFR 1201 for Category II materials.
 - Glass Color: As approved by DFW Concessions. Applied film, etched, sandblasted or decal must be approved by DFW Concessions.
 - 2. Thickness for Glass Infill Panels: As required by structural loads, but not less than 10.0 mm.

2.4 OTHER MATERIAL

A. Infill Panels: As approved by DFW Concessions.

2.5 FASTENERS

- A. Fastener Materials: Unless otherwise indicated, provide the following:
 - 1. Stainless-Steel Components: Type 304 stainless-steel fasteners.

- Uncoated Steel Components: Plated-steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating where concealed; Type 304 stainless-steel fasteners where exposed.
- 3. Dissimilar Metals: Type 304 stainless-steel fasteners.
- B. Fasteners for Anchoring to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Provide concealed fasteners for interconnecting railing components and for attaching railings to other work unless exposed fasteners are the standard fastening method for railings indicated.
 - 1. Provide tamper-resistant flat-head machine screws for exposed fasteners unless otherwise indicated.
- D. Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
- E. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.
 - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.

2.6 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- C. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

2.7 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate. Locate weep holes in inconspicuous locations.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 1 welds: no evidence of a welded joint.
- I. Form changes in direction as follows:
 - 1. By flush bends or by inserting prefabricated flush-elbow fittings.
- J. Close exposed ends of hollow railing members with prefabricated end fittings.
- K. Flanges, Fittings, and Anchors: Provide flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
- L. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.8 GLAZING PANEL FABRICATION

A. General: Fabricate to sizes and shapes required; provide for proper edge clearance and bite on glazing panels.

1. Grind smooth exposed edges, including those at open joints, to produce square edges with slight chamfers at junctions of edges and faces.

2.9 REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.
- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.10 STAINLESS-STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Welding: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - 1. Run grain of directional finishes with long dimension of each piece.
- C. Brushed stainless steel, reflective, directional polish: No. 7.
- D. When finishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.

PART 3 - EXECUTION

- 3.1 INSTALLATION, GENERAL
 - A. Fit exposed connections together to form tight, hairline joints.
 - B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

- Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
- 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
- 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

RAILING CONNECTIONS

E. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

3.2 INSTALLING INFILL PANELS

- A. Install assembly to comply with railing manufacturer's written instructions.
 - 1. Adjust spacing panels so gaps between panels are equal before securing in position.
 - 2. Erect railings and infill panels under direct supervision of manufacturer's authorized technical personnel.
- B. Installation Tolerances:
 - 1. Maximum variation from level or from indicated slopes: 1/4 inch in 10 feet, noncumulative.
 - 2. Maximum offset from true alignment of abutting members: 1/16 inch.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports. Payment for these services will be made by Owner.

- B. Extent and Testing Methodology: Testing agency will randomly select completed railing assemblies for testing that are representative of different railing designs and conditions in the completed Work. Railings will be tested according to ASTM E 894 and ASTM E 935 for compliance with performance requirements.
- C. Remove and replace railings where test results indicate that they do not comply with specified requirements unless they can be repaired in a manner satisfactory to Architect and will comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.4 CLEANING

- A. Clean stainless steel by washing thoroughly with clean water and soap, rinsing with clean water, and wiping dry.
- B. Clean and polish glass as recommended in writing by manufacturer.
 Wash both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion.
- C. Other Materials: As recommended in writing by Manufacturer

3.5 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

6.9 Storefront Opening Guidelines for Smoke Management

This document intends to describe the opening requirements for tenant spaces that have unprotected openings. These requirements do not apply to protected openings or those with automatic closing glass doors protected with a water curtain.

When unprotected openings are part of the tenant design, the smoke management system for concourse is dependant upon the tenant spaces opening sizes. In this case, the smoke management system is designed to allow smoke from a fire occurring in the tenant space to 'spill' into the

concourse. Smoke spilling out of a tenant space is comparable to a bathtub overflowing with water; however, the tenant smoke spills upward, where the bathtub would spill downward.

In order to minimize the smoke spill from a tenant, openings in tenant spaces are limited. The Figures and Tables below represent the range of acceptable tenant opening configurations. Each figure represents four sides of a concession space. "SIDE 1" is the side out of which the smoke is intended to spill. The minimum height for the opening is on SIDE 1.

Note that the opening can be in the form of a grill (at least 70 percent open) or other feature that allows smoke to spill into the concourse. Also, Note that the opening height for the remaining three sides must be at least 18" lower than that of the spill side.

The opening requirements are based upon the smoke management concepts and calculations detailed in the latest versions of the DFW International Airport - Terminal D Expansion Fire Strategy. Refer to that document for additional details of the smoke management concepts.

6.9.1 Village Tenants

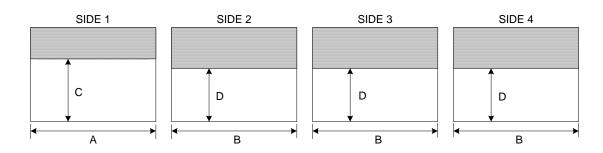
Legend:

= Open Space

= Ventilation Grid

= Glazing, wall, signage, other noncombustible feature

= Automatically closable door



| Dimension A | Requirements For Dimension B | Requirements For Dimension C | Requirements For Dimension D |
|--------------------------|------------------------------------|---------------------------------|------------------------------------|
| A = 27' - 6" to 30' | No Limitations | 12' – 0" minimum | 10' – 6" maximum See Note 1 |
| A = 25' - 0" to 27' - 6" | No Limitations | 10'- 0" minimum | 8' – 6" maximum See Note 1 |
| A = less than 25' - 0" | No Limitations | 8'– 2" minimum | 6' – 8" maximum See Note 1 |

Note 1: These sides can be full-height glazing protected with sprinklers

6.9.2 In-Line Tenants

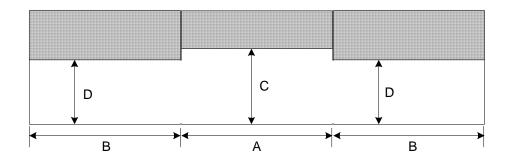
The drawing and table below represent possible layout options for the In-Line Tenant spaces. The minimum opening height of the central space in each case must be provided unless a ventilation grill is installed at this height. The opening heights of the adjacent spaces must be at least 18 inches lower than that of the center opening or grill elevation.

Legend:

= Open Space

= Ventilation Grid

= Window, wall, signage, other noncombustible feature

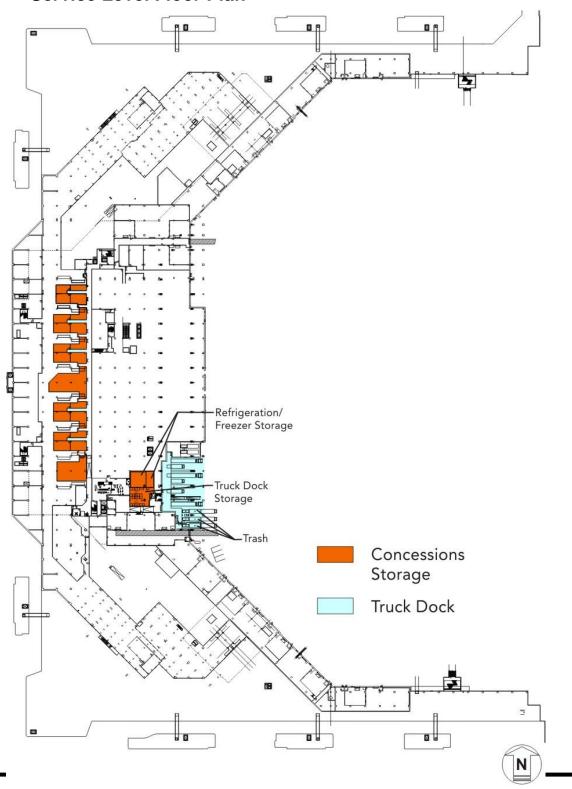


| Dimension A | Requirements For Dimension B | Requirements For Dimension C | Requirements For Dimension D |
|--------------------------|------------------------------------|---------------------------------|------------------------------------|
| A = 27' - 6" to 30' | No Limitations See Note 1 | 12' – 0" minimum | 10' – 6" maximum See Note 2 |
| A = 25' - 0" to 27' - 6" | No Limitations See Note 1 | 10'– 0" minimum | 8' - 6" maximum See Note 2 |
| A = less than 25' - 0" | No Limitations See Note 1 | 8'– 2" minimum | 6' – 8" maximum See Note 2 |

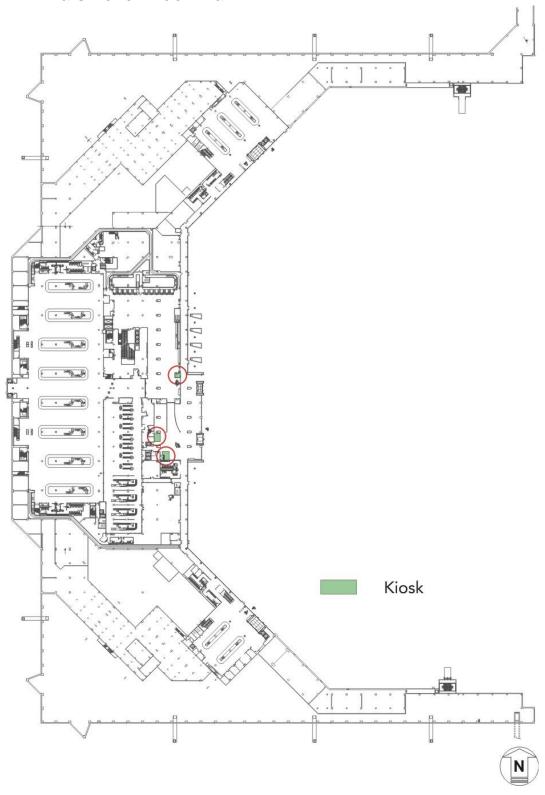
Note 1: Depending upon tenant size, this dimension may be zero or larger.

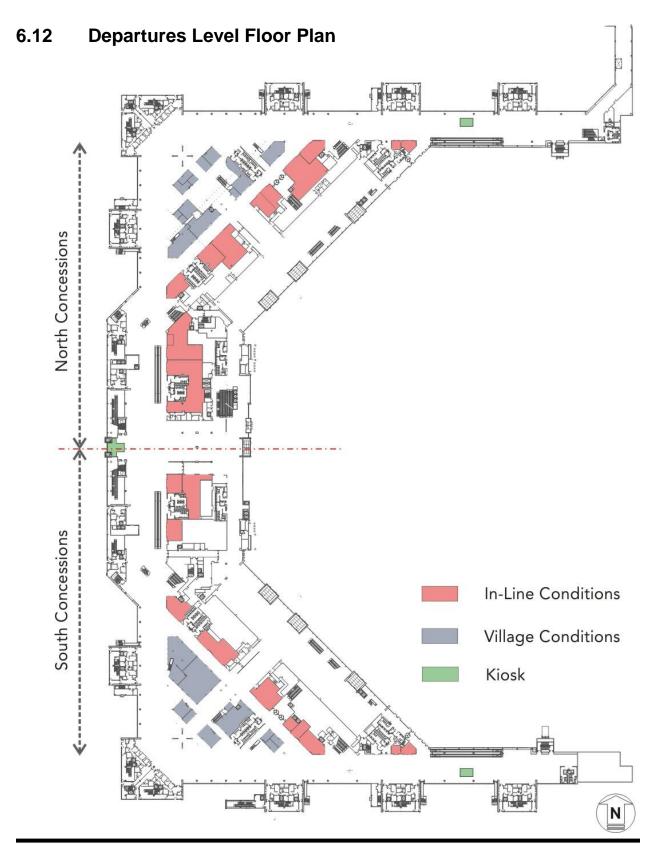
Note 2: These sides can be full-height glazing protected with sprinklers

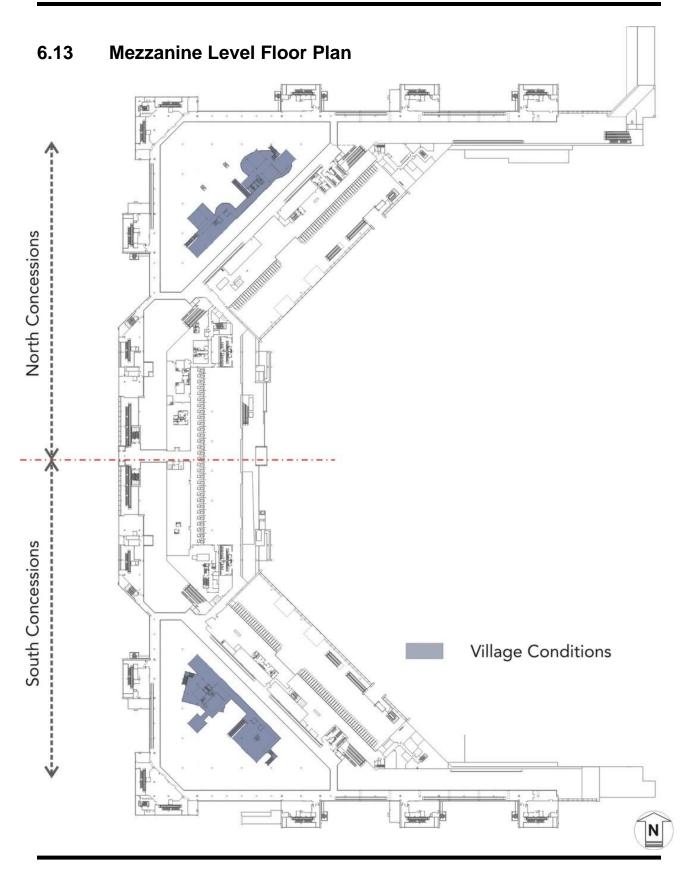
6.10 Service Level Floor Plan



6.11 Arrivals Level Floor Plan

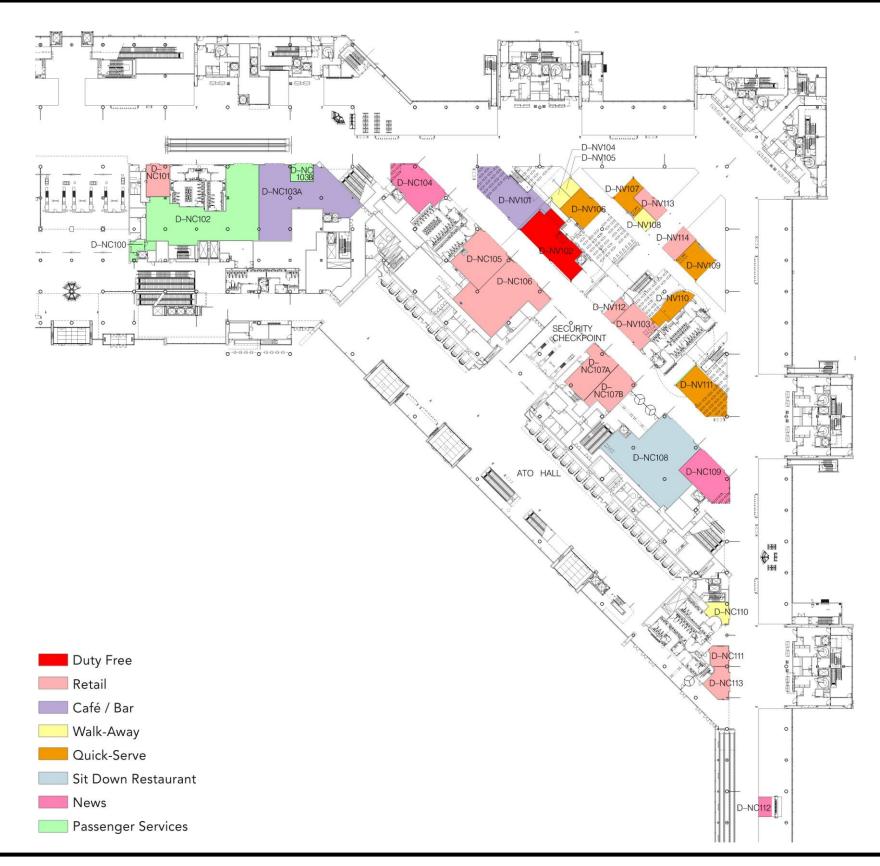






6.14 North Departures Level Tenant Location Plan



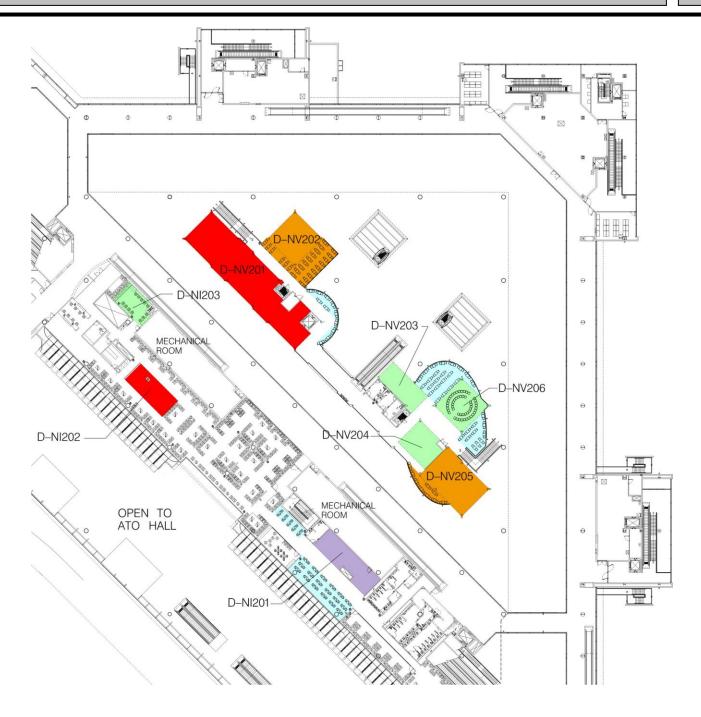


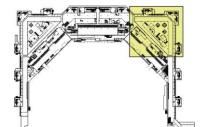
6.15 North Mezzanine Level Tenant Location Plan

| D-NV201 | Duty Free |
|---------|--------------------------|
| D-NV202 | Quick Serve |
| D-NV203 | Business Services |
| D-NV204 | Family Amenities |
| D-NV205 | Quick Serve |
| D-NV206 | Traveler Services |
| D-NI201 | Café/Bar |
| D-NI202 | Duty Free |
| D-NI203 | Business Services |

^{*}Some of the space identification numbers have changed

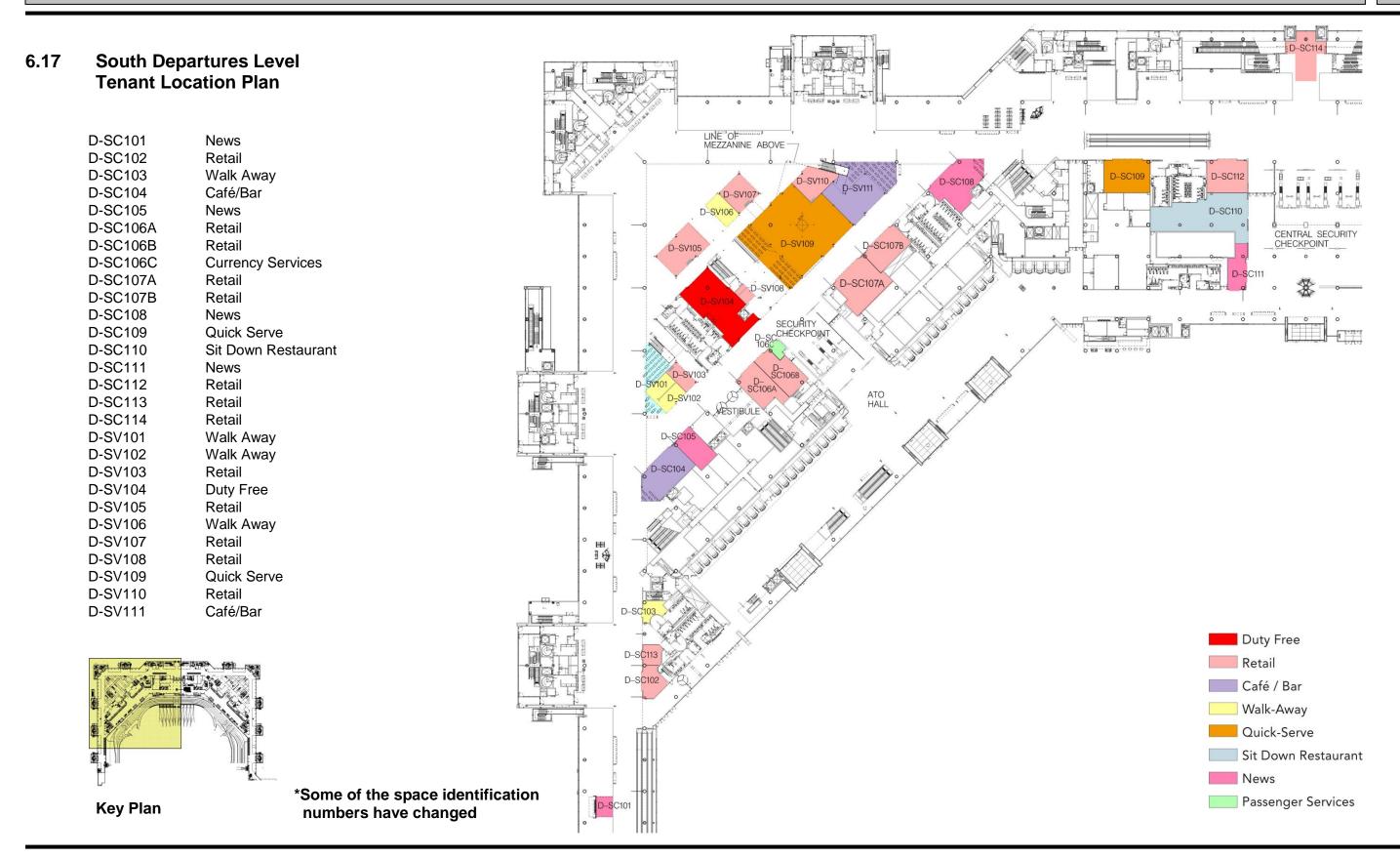






Key Plan

6.16 North Village Tenancy Diagrams
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Duty Free
Retail

Café / Bar
Walk-Away
Quick-Serve

News

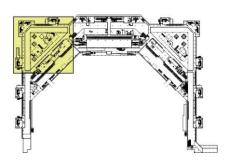
Sit Down Restaurant

Passenger Services

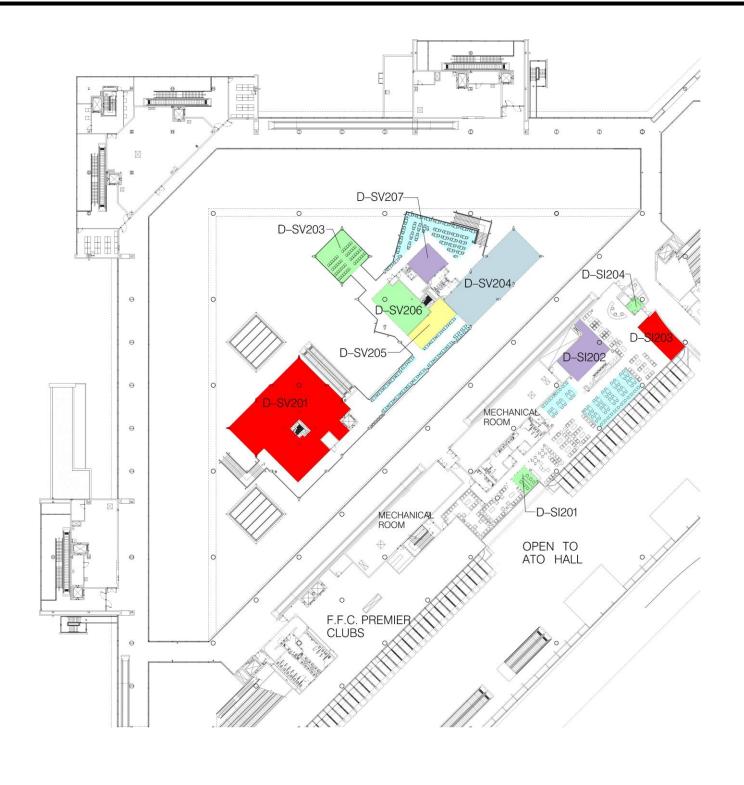
6.18 South Mezzanine Level Tenant Location Plan

| D-SV201 | Duty Free |
|---------|---------------------|
| D-SV202 | Not Used |
| D-SV203 | Traveler Services |
| D-SV204 | Sit Down Restaurant |
| D-SV205 | Walk Away |
| D-SV206 | Family Amenities |
| D-SV207 | Café/Bar |
| D-SV207 | Café/Bar |
| D-SI201 | Business Services |
| D-01201 | Dusiness Dervices |

D-SI202 Café/Bar
D-SI203 Duty Free
D-SI204 Business Services



Key Plan



^{*}Some of the space identification numbers have changed

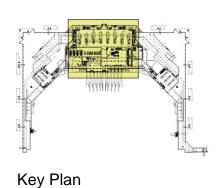
6.19 South Village Tenancy Diagram
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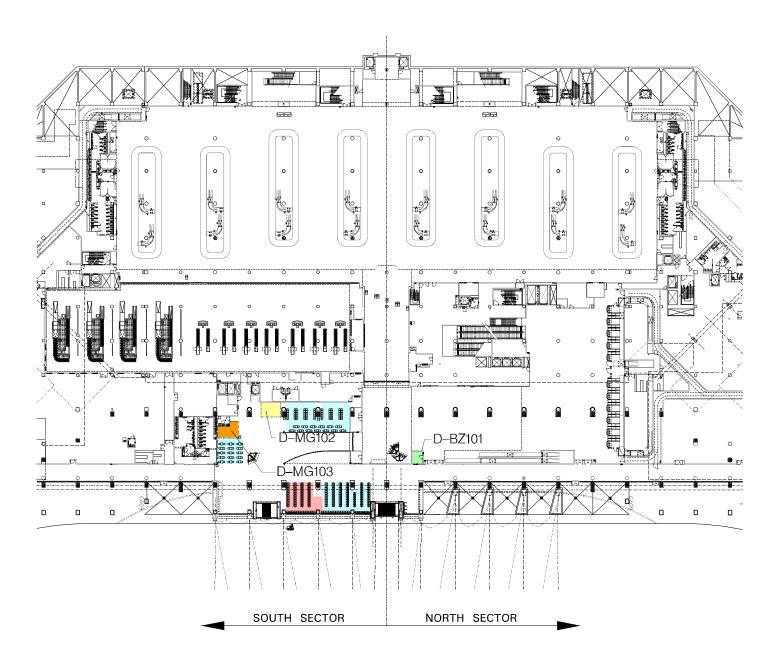
6.20 Arrivals Level Tenant Location Plan

D-BZ101 Currency Services

D-MG102 Walk Away
D-MG103 Quick Serve

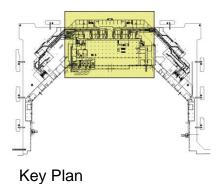
Walk-Away
Quick-Serve
Passenger Services





6.21 Service Level Concession Storage Plan

| Truck Dock Storage |
|---------------------|
| Concessions Storage |
| |





TENANT DESIGN MANUAL