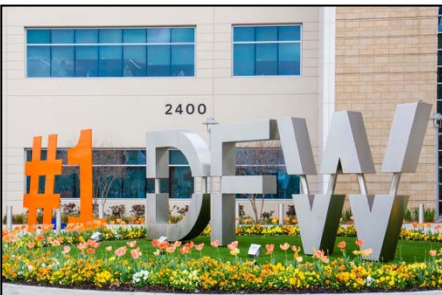




## DFW Development Design Guidelines



Revision	Date	Authorization
1	Nov. 2019	PLNG & CD
2	June 2020	PLNG & CD
3	Mar. 2021	PLNG & CD

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# 1. Introduction

Dallas Fort Worth International Airport (Airport) has land available and supports the development of its property for business complementing the air transportation activities of the Airport.

The major objective for developing this land is to grow the aviation business, increase non-airline revenue for the Airport, and attract a stronger economic base for the greater Dallas/Fort Worth area.

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## 1.1 Background

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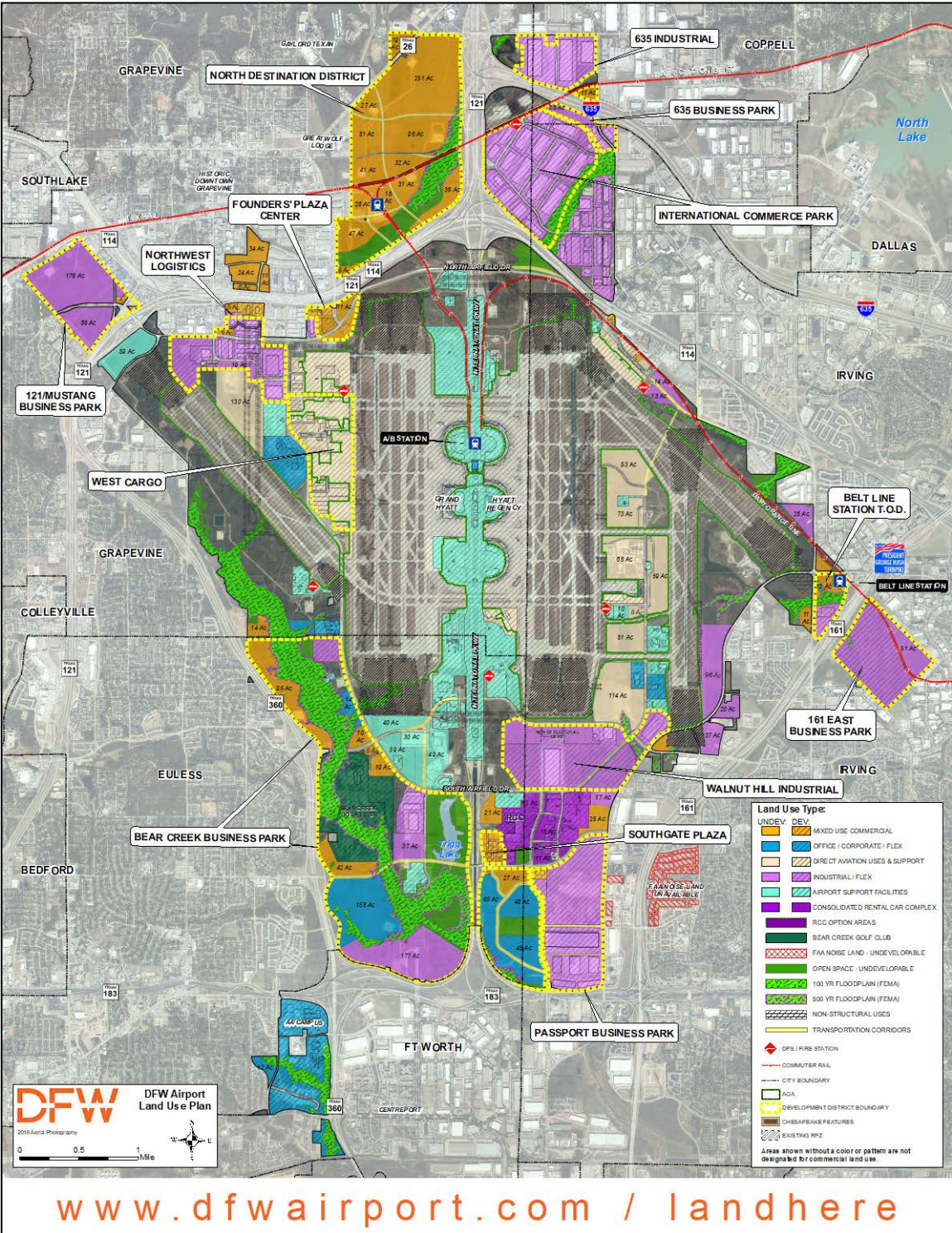
The [2019 Commercial Development Land Use Plan](#) (reference **Exhibit 1-1**) identifies possible land uses which the Airport intends to organize into separate and distinct development areas, or “districts”, defined by the use or geographic boundaries. As development in each district is pursued, entities shall adhere to the established criteria of the DFW Development Design Guidelines. For land use areas that fall into a district, additional criteria will be used to establish requirements for development, as outlined in the corresponding section of the DFW Development Design Guidelines. Compliance with all development criteria is verified by the airport’s Planning and Commercial Development Departments.

Departments referenced in this document include:

- Commercial Development Department (CD)
- Planning Department (PLNG)
- Design Code & Construction Department (DCC)
- Energy, Transportation and Asset Management Department (ETAM)
- Environmental Affairs Department (EAD)
- Department of Public Safety (DPS)



**Exhibit 1-1: 2019 Commercial Development Land Use Plan**





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## 1.2 Purpose of Criteria

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To promote the Airport's image and reputation through high quality development, the DFW Development Design Guidelines contained in this document have been established and shall convey the philosophy, principles, and core standards to be applied to all developments on the Airport's non-terminal areas (outside the Terminal Area, reference **Exhibit 1-1**) whether undertaken by a tenant or the Airport. These elements shall govern the master planning and design of the facilities and provide continuity throughout the Airport. These criteria shall also be used as the basis for more specific district development criteria and shall:

- Establish basic design elements to create a strong airport image
- Extend the identity of the Airport throughout the extent of its property
- Maintain aesthetic excellence and high standards of environmental protection
- Emphasize a sense of place and permanence for the Airport community
- Provide clear direction for developers and project designers without dictating absolute design styles
- Protect the interests and investments of all tenants

The criteria in this document are intended to supplement the Airport's Design Criteria Manual; therefore, requirements of the Design Criteria Manual and this document must be satisfied. Any public infrastructure permitted as a Board Funded Improvement shall comply with all applicable Division 1 Specifications as determined by PLNG and CD. When presented with conflicting development criteria, the more restrictive criteria shall apply. Any conflicts between the two documents shall be brought to the attention of the PLNG and CD for resolution. The interpretation of the design intent and use of these guidelines is at the sole discretion of PLNG and CD.

Additional planning documents to be consulted include:

- [2019 Commercial Development Land Use Plan](#)
- [Plan of Development Form \(POD Form\)](#)
- [Design Criteria Manual \(DCM\)](#)
- [Green Building Standards](#)
- [Stormwater Drainage Master Plan](#)
- [DFW Airport Sustainability Management Plan](#)
- [Passport Park Master Drainage Plan](#)

PLNG and CD is responsible for the interpretation and enforcement of these criteria. The DFW Airport Board requires a two (2) stage approval process designated as Stage 1 and Stage 2 Plan of Development (POD) submitted to PLNG and CD with the purpose of clearly documenting the critical components of the development proposal. Once a submittal has been received, a collaborative review by CD, PLNG, and DFW stakeholders

given their respective areas of interest will occur to determine compliance and acceptance of the POD. Each POD stage will include the following information:

### **Stage 1: Prior to DFW Airport Board Approval**

Information provided during this stage allows for CD, PLNG and DFW Airport Board to provide only conceptual approval of the proposed development. The Stage 1 POD shall consist of the POD form and drawings that clearly depict a conceptual site plan, building footprint, site coverage, number of parking spaces by type, labeled and dimensioned setbacks and buffers, preliminary grading, preliminary utilities, and denote locations of stormwater detention areas. Acceptance of the POD package during this stage allows for CD to proceed with lease recommendations to the DFW Airport Board.

### **Stage 2: Post-Board Approval**

Information provided during this stage includes modifications and refinement of information (if needed) from Stage 1, and additional planning and design documents including architectural elevations, roof plans, line of site exhibit, signage details, site lighting, and landscape plans. Refer to the POD Forms for a more detailed list of the requirements. If a variance to the DFW Development Design Guidelines is being requested, Tenants must mark the 'exception' box in the POD Stage 2 submission. A separate document explaining and justifying the variance request will be required. CD and PLNG will work in house with the appropriate internal stakeholders to determine approval. If approved, CD and PLNG will work with Tenants to supplement other areas of the criteria as needed in order to best meet the DFW Development Design Guidelines.

The approved document package in this stage becomes the basis for the Lease Agreement and Permit Documents. Following POD Stage 2 approval, the Airport's DCC performs a code review, as they are responsible for issuing all applicable construction permits and performing construction inspections.

For the purposes of these criteria, it is important to understand that the Airport leases its land for development in lieu of selling it. Therefore, the term "property line" and "lease line" may be used interchangeably in this document as they both refer to the boundary of a leased parcel.

Ground leases in existence on the effective date of the published district criteria shall be considered nonconforming as it pertains to these guidelines. New construction greater in size than 30% of the existing ground lease or greater than 5,000 square feet shall require compliance with these guidelines as it applies to the entire square footage of the existing ground lease and proposed addition. New construction intended to increase the square footage by less than 30% of the existing ground lease or less than 5,000 square feet shall be required to meet the requirements herein only as it pertains to the square footage of the new construction. Any substantial change to a POD submittal, at PLNG and CD discretion, will be subject to comply with these guidelines.

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## 1.3 Sustainability/LEED/Green Design

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The Airport is mindful of the financial, social, and environmental implications of its actions. A Sustainability Policy has been developed to guide the efforts of the Airport's activities in order to demonstrate commitment to economic growth, environmental stewardship, and social responsibility. All development at the Airport shall adhere to the most recent Green Building Standard and the associated DFW specification.

Given the substantial acreage of vacant and developable land within the Airport boundary, careful consideration must be given to the utilization and allocation of land for new development. Specific requirements consistent with the Sustainability Management Plan and pertaining to land development have been created, which emphasize the strategies for sustainable site development, water consumption, energy efficiency, material selection, and indoor environmental quality. Moreover, all developments and structures shall comply with the Airport's DCC standards and others in design, construction, and operations. The DFW Development Design Guidelines is consistent with these requirements and further encourage sustainability, innovation in design, construction, and maintenance of structures and developments.

### 1.3.1 MATERIALS

To limit the environmental impact of development, materials should be selected taking into account multiple factors such as: renewable resource, sustainable harvesting, regional products, recycled content, free of hazardous materials, carbon footprint, product efficiency, product lifetime, disposal requirements, etc.

### 1.3.2 WASTE MINIMIZATION

Waste produced during construction and operation can be minimized by adopting early in the design process a waste minimization strategy that sets out construction methodologies and construction waste minimization techniques. Diversion from landfills is encouraged as well as tracking of waste streams.

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## 1.4 Unifying Character

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A unifying character for each development shall be established to ensure a cohesive and coherent result for mixed-use and industrial developments. There are four general categories of criteria that support the creation of a development's brand and character. These categories are Circulation, Landscape, Architecture, and Signage. These categories each comprise a number of elements or details that form the foundation of the unifying character.

- Circulation
  - Street profiles
  - Accent paving
  - Lighting

- Denoted pedestrian areas and pathways
- Landscape
  - Selection, color, and quantity of planting material
  - Patterns (landscape buffer, entries, public areas, and internal streetscape)
  - Hardscape and public area decorative features
  - Site furnishings and fixtures
- Architecture
  - Feature materials and application
  - Special architectural features and vocabulary
  - Accent and secondary colors
  - Building massing, form, hierarchy, and scale
- Signage
  - Standards (size, design, placement)
  - Applications
  - Materials
  - Branding, monuments, and graphics features

## 2. Site Design

It is essential for site planning to receive primary attention and focus during the project design process. Site planning and design entails the organization of the external physical environment and pertains to the quality and location of structures, land, and activities. The Airport encourages site design to consider the full environmental context and when possible integrate existing environmental assets with the proposed development. Environmentally sensitive developments reduce maintenance costs, and conserve energy and water.

Furthermore, site design must be cognizant of how the physical elements of the site perform. Site performance includes traffic flow and safety, noise generation, air borne effluents, and visual aesthetics.

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### 2.1 Sense of Place

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In order to establish and maintain a sense of common, high-end quality, all existing and planned development districts will be planned to create an overall "sense of place". A "sense of place" is developed through perception and experiences of individuals from the unique or specific site features. This is further enhanced through creating connections between people and places, movement and urban form, and the built environment. The following features must be incorporated to constitute an acceptable site design:

#### 2.1.1 DENSITY / OPENNESS

The Airport is fortunate to have adequate space to grow and develop; therefore, recognition and preservation of this space and the character of the environment are major components in creating the Airport development image. The amount of building coverage on a site – whether a parcel or a large planned development – shall be controlled to preserve the sense of openness and space between structures. The building coverage (measured as the building drip line area) shall not exceed 40% of the total site area measured inside the lease lines. This shall also include all out-structures having a roof. To support this open, uncluttered aesthetic, all utilities shall be installed underground, unless screened per **Section 2.2.3**.

#### 2.1.2 CIRCULATION

Vehicular circulation within a development area and within a site shall be convenient, intuitive, logical, and conducive to efficient operations. Furthermore, good vehicular circulation is determined by successful management of congestion at ingress and egress points. The movement of vehicles between parcels and sites

must be considered; thus, multi-tenant developments shall be planned to provide for cross-access between parcels. The following describes additional criteria for vehicular circulation.

- If the land use requires the convenience of bulk materials by means of truck or tractor-trailer delivery, then the site shall be designed in such a way to separate employee and visitor vehicle movement from truck and tractor-trailer movements. Design vehicle is WB-67, unless waived by PLNG, in which case the design vehicle shall be single unit (S6) truck as an absolute minimum.
- All sites shall incorporate maneuvering areas for trucks and tractor-trailers to re-enter the public roadway in a forward direction.
- Two-way driveways shall be a minimum of 25 feet in width (back-of-curb to back-of-curb). The maximum width recommended is 40 feet. One-way driveways shall be a minimum of 15 feet in width (back-of-curb to back-of-curb) and a maximum width of 20 feet. Turning radii of drives shall be designed to recognize standards for the vehicle type anticipated.
- Fire lanes shall be 24 feet in width with a 35-foot turning radius unless otherwise noted in the [DCM](#).
- Long drives within the site shall incorporate curvilinear design in conjunction with landscape planting features to provide visual breaks along the drive.
- Receiving areas shall be provided for buildings that do not have loading docks in order to allow for drop-off deliveries of people, mail, or packages. The area shall have a 12-foot-wide receiving lane adjacent to all driveways or parking areas that serve the primary entrance to the building.
- Terminal access and traffic circulation for the core Airport business shall have priority; thus, future roadway modifications must be carefully studied to prevent negative impacts.

### 2.1.3 GENERAL ORGANIZATION OF ELEMENTS

The overall site layout shall promote a logical, organized, pleasant environment that incorporates nature and is mindful of context. The layout of individual parcels shall have an interrelationship to and complement the larger overall development. They shall also be designed to visually complement the adjacent property by providing street-oriented landscape design to provide district consistency.

### 2.1.4 CHARACTER—NATURAL AND MAN-MADE

To preserve the natural character of the Airport, the development shall emphasize natural features such as creeks, swales, groves of mature trees, significant geologic outcroppings, and natural variations in topography. At the POD review stages, please identify natural features present and seek DFW approval for impacting any of these features.

The layout and design of a district shall consider and utilize man-made features to create interest and focus. Artwork, hardscape elements, structures, lighting, heraldry, and other features shall be used to support the Airport image and identity.

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## 2.2 Relationship to the Street

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The perception and identity of the Airport is largely defined from the roadway. The Airport's roadway network will be master planned and integrated into regional and local transportation plans to ensure adequate capacity and access. The character of the street will be used as a unifying element by consistently incorporating expansive front yards, open space, controlled curb cuts, concrete paving, and standardized lighting. Divided boulevards with landscaped medians will be utilized as primary entries.

The Airport identifies the importance of the drive-up appeal or view from the approaching vehicle and puts great emphasis on creating the desirable streetscape. This will be achieved by established paving and building setbacks, the presentation of the structures, site features, controlled view of parking areas, and continuity of landscape design. Views of natural or man-made features are encouraged to create interest and support orientation (reference **Exhibit 2-1**).

In order to establish and maintain a sense of common quality, all land parcels shall be developed to relate to the street frontage in a manner that implies a "sense of arrival" or front door. The primary entrance or front of any building shall face the street upon which the site is located unless it is part of a "master planned development". If a site is located at the intersection of two streets, the building may face either, though the major street is preferred. Double frontage sites will be required to have two front yard setbacks.

**Exhibit 2-1: Relationship of Building and Landscape to Street**



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### 2.2.1 BUILD-TO LINES AND SETBACKS

Site and building setbacks provide regulation that is meant to create visual consistency between varying parcels and buildings. The minimum setbacks for all hard-surface parking, fencing, and building elements are measured from the lease line of the site. District specific criteria may differ as outlined in **Appendixes A-F**.

### 2.2.1.1 Front, Side, and Rear Yard Setbacks

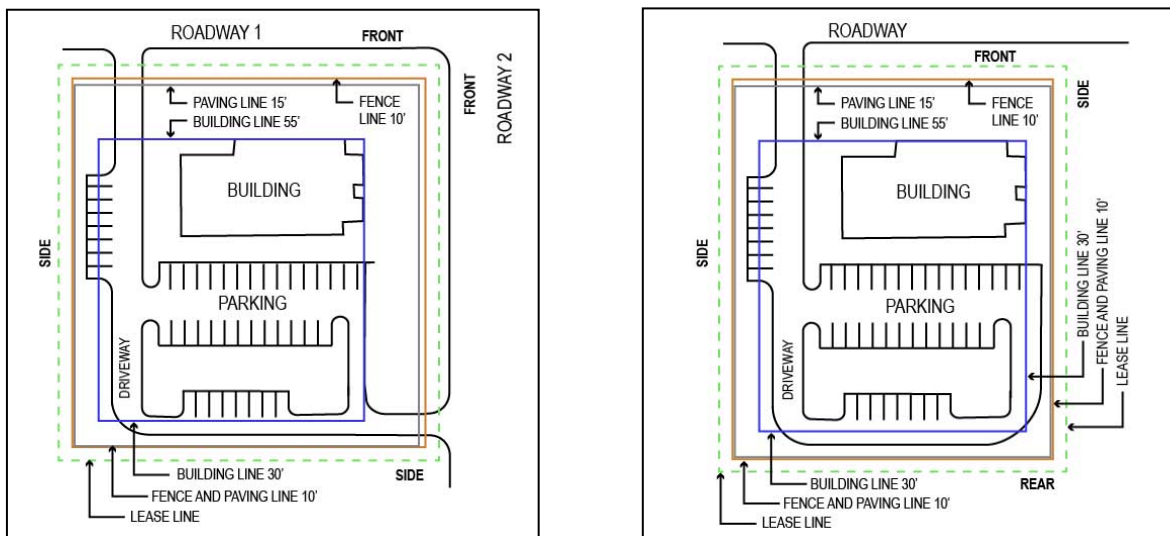
Setbacks establish dimensional criteria for the location of hard surface parking and building construction relative to the setback lease line. This set of criteria is a function of the roadway type on which the parcel fronts. Differing levels of activity characterize each roadway type. **Table 2-1** indicates the standard setbacks in relation to the roadway classifications. Project elements that front on the intersection of two roadway types shall incorporate the setbacks of each roadway type. Such project elements will typically not have a rear yard but will have two frontage setbacks and two side yard setbacks on a typical rectangular site.

A street-scaled approach will be pursued using a build-to line that will be, in most cases, synonymous with the setback line. Pending approval from PLNG, setback lines may be selectively reduced if determined necessary through a formal variance request.

The minimum setbacks for all hard-surface parking, fencing, and building elements are measured from the lease line of the site and are based on the classification of the adjacent roadway. The intersection of two roadways requires specific design elements, as shown on **Exhibit 2-2**. Setback conditions for the roadways' elements are defined in **Table 2-1**.

Some developments without street frontage will be encouraged to incorporate other, non-lease line features such as shared walking paths, rest stations or other points of refuge, or other landscape focal points. The setback requirements of these non-lease line features will require separate review and approval by PLNG.

**Exhibit 2-2: Typical Setback Conditions**





**Table 2-1: Setbacks**

ELEMENT MINIMUM SETBACK REQUIRED	FRONT YARD	SIDE YARD	REAR YARD
Paving (parking area)	15 feet	10 feet	10 feet
Building	55 feet	30 feet	30 feet
Landscape Buffer	15 feet	10 feet	10 feet
Fence	10 feet	10 feet	10 feet
Shared Lease Line Fence	N/A	0 feet	0 feet

Additional setbacks may be established for master planned developments to address internal circulation. District specific criteria may differ as outlined in **Appendixes A-F**. Reference **Section 3.1.4** for further information on landscape buffer requirements.

In the event a proposed development is adjacent to the Air Operations Area (AOA) fence line, the property line will be setback 1 foot off the fence line. No obstructions which could include trees, shrubs, ground covers, decorative boulders, gravel mulch etc. will be planted within 10 feet from the fence line. Only turf grass is permitted to be planted in the 10-foot strip between the AOA fence line and the development. The Tenant will be responsible for maintaining the strip of turf grass between the property and AOA fence line.

#### 2.2.1.2 Allowable Elements within Paving Setbacks

The setback is defined as a zone paralleling the property line where site development is restricted. The elements permitted in the Paving setbacks as defined in **Section 2.2.1** include driveways, sidewalks, pedestrian plazas, underground utilities, sub-surface structures. At the discretion of CD, retaining walls integral to landscape design or intended for site-contour engineering and signage may be allowed. Semi-trailer and truck overhang is not allowed in the paving setback or landscape buffer.

The landscape buffer is an area within the setback dedicated to planting and other landscape materials intended to improve aesthetic appeal, screen visual nuisances; or for environmental purposes such as stormwater collection, noise abatement, or increasing shade effects. Refer to **Section 3** for more information.

#### 2.2.1.3 Setback Encroachment

Any building feature, defined as architectural attachment to the primary building façade, may encroach up to 3 feet from the building face into the building setback area. These features may include:

- Bay Windows
- Awnings
- Balconies

- Canopies
- Eaves
- Screening Walls

### 2.2.2 VIEWS

The primary entrance or front of any building shall be oriented to the main public approach and sites with multiple public views, the architecture shall respond to all. If a building in the development is directly adjacent to a planned green space, an entry shall face that open space. Building entries shall have easily identifiable destination points as viewed from parking areas and the road. A building's primary entry point shall be recessed or sheltered; and project a sense of arrival through the architecture, landscaping, or hardscape. Additionally, the building entry shall be scaled in proportion to the facade in which they are placed. For the purposes of screening, public view is defined as any viewpoint from a public road or adjacent lease or property.

### 2.2.3 SCREENING

The following screening criteria is a minimum standard for development. The landscape buffer and/or paving setback areas shall be utilized for screening of the following. PLNG and CD shall review and approve all proposed screening and can request additional screening requirements as necessary.

Care shall be taken to locate features, such as utility components (transformers, meters, valves, etc.), trash collection areas, material storage, trailers, above ground tanks, mechanical equipment, and loading docks away from the public view in order to minimize presence. Any above ground utilities, above ground tanks, dumpsters and compactors, material storage, trailers, mechanical equipment, and loading docks must be screened (reference **Exhibit 2-3, Exhibit 2-4, Exhibit 2-5, and Exhibit 2-6**).

No loading docks or service areas may be placed on the front of buildings or facing primary entrances, secondary entrances, park-side streets, or open spaces, unless impractical due to site orientation. Under these circumstances, screening shall be provided to obstruct the view from the public road. For truck court areas, screen walls or structures with landscaping shall be provided at both ends of the docks. (reference **Exhibit 2-3**) For commercial loading/service areas either screen walls and/or berms shall be used in combination with landscaping (reference **Exhibit 2-5**). Corner lot loading docks shall face the secondary road if unable to be placed facing the adjoining property with additional screening and/or landscaping to obstruct the view from the road. Service areas and access drives shall be located so that they do not interfere with the normal activities of building occupants or visitors on driveways, walkways, parking or at entries.

Along public street frontage, berms and/or landscaping shall be used for screening. Along the side and rear yards, berms, landscaping, or screening walls shall be used for screening (reference **Exhibit 2-7**).

Screening walls shall be constructed of materials used in the construction of the building or with an approved material that is finished to match the finish of the building. (reference **Exhibit 2-3**).

**SCREEN WALL SIZE REQUIREMENTS**

LAND USE	MINIMUM HEIGHT	MAXIMUM HEIGHT
Industrial	10 ft	20 ft
Commercial / Mixed Use	8 ft	12 ft

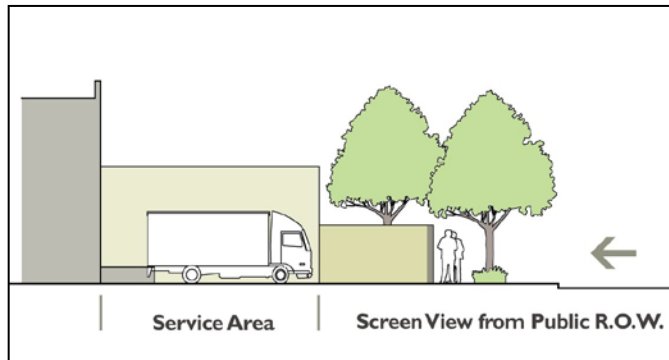
Screening walls shall not be placed outside of the paving setback line. All material and equipment stored in truck court areas shall be enclosed completely with a screen wall in compliance with this section. Vegetation is also required in addition to a screening wall in a landscaped area. Vegetation must cover the screen wall 50% of the liner feet and must be between three (3) to four (4) feet in height at maturity.

**Exhibit 2-3: Example Truck Court Screen Wall**

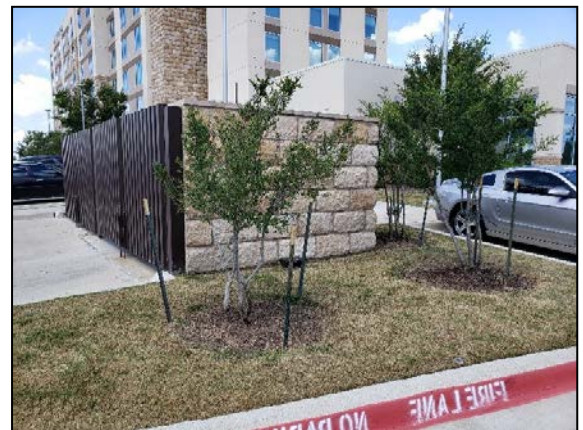
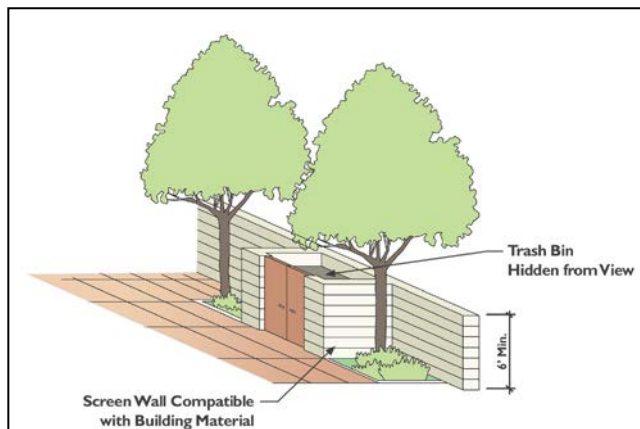
If utilities are in a landscaped area other than the landscaping corridor, they must be screened by shrubs or berms from all public roads, while maintaining access to the utilities.

**Exhibit 2-4: Example of Utility Screening**

### Exhibit 2-5: Appropriate Service Area Screening



### Exhibit 2-6: Appropriate Trash Collection Area Screening



Parking lots and truck courts are required to have a parking buffer surrounding the perimeter of the lot. The parking buffer is to have 100% evergreen shrub and tree screening when facing a public roadway. The parking buffer is to have 75% evergreen shrub and tree screening when facing an adjacent lease or property. All percent screening will be based on a linear foot measurement of the perimeter and based on mature plant size (reference **Exhibit 2-7**). Where applicable, landscape berms shall be utilized to screen parking areas from the street as well as from adjacent property. Berms shall combine shaped, earthen mounds with vegetation to provide an overall screening height of eight (8) to ten (10) feet for large truck court parking areas, and three (3) to four (4) feet for standard vehicular parking lots. The maximum slope of landscape berms should not exceed 4:1 in order to accommodate mowers, maintain stability, and avoid erosion. Berms should utilize a diverse palette of materials to achieve a varied aesthetic, which could include turf grasses, groundcovers, shrubs, trees, decorative boulders, or mulch (reference **Exhibit 2-8**).



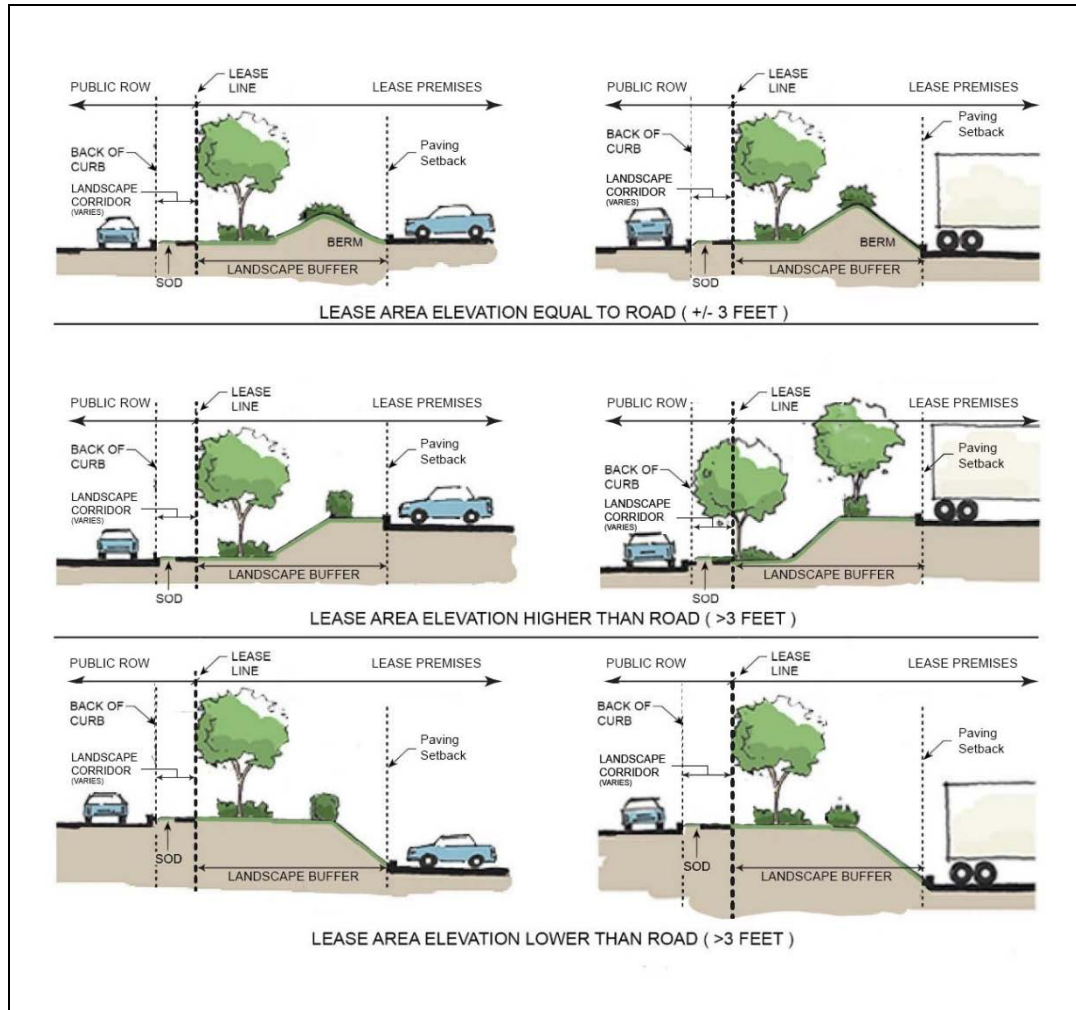
Fencing exposed to public view shall be painted architectural metal, masonry, precast or poured-in-place concrete, and shall relate to the corresponding structure. Chain-link, barbed wire, wood or plastic fencing is prohibited. All fencing located in open space shall have a continuous concrete mow strip extending 12 inches each side of fence (total width of 24 inches). All fencing and gate details shall be provided with the POD and shall comply with all DPS requirements. No manual gates shall be allowed across a fire lane. Reference Section 2.2.1.1 for fence setbacks.

Areas where guard rails are required for safety shall conform to all government regulations and be compatible to design of architectural and fencing concepts for adjacent buildings.

#### Exhibit 2-7: Examples of Parking Lot and Truck Court Screening



### Exhibit 2-8: Appropriate Screening for Car Parking and Truck Court Areas



## 2.3 Paved Surfaces

Careful consideration should be given on the design and material utilized for paving surfaces due to the impact on the environment and the aesthetic appearance of a site. Impervious surfaces increase stormwater runoff and ambient air temperatures. When impervious paving surface is employed, concrete shall be utilized that has proper thickness, strength, jointing, and drainage. The use of porous/pervious pavement materials is encouraged whenever possible in order to reduce stormwater runoff and to provide for cooler surfaces at the

site. DFW Airport encourages the use of Low Impact Design (LID) strategies when possible (reference **Section 3.5 Landscape Grading and Drainage**).

Hardscape elements, such as pedestrian sidewalks, crosswalks, traffic intersections, and driveway entries should work cohesively to provide a safe pedestrian and vehicular user experience. Continuous sidewalks may be required to provide safe circulation from parking areas to/from buildings and must be complete prior to building occupancy. The requirement for sidewalks along public right of ways will be at the discretion of PLNG and CD, and dependent on the land use type and district. The design of all sidewalks and ADA paths shall comply with the DCM.

### 2.3.1 PARKING

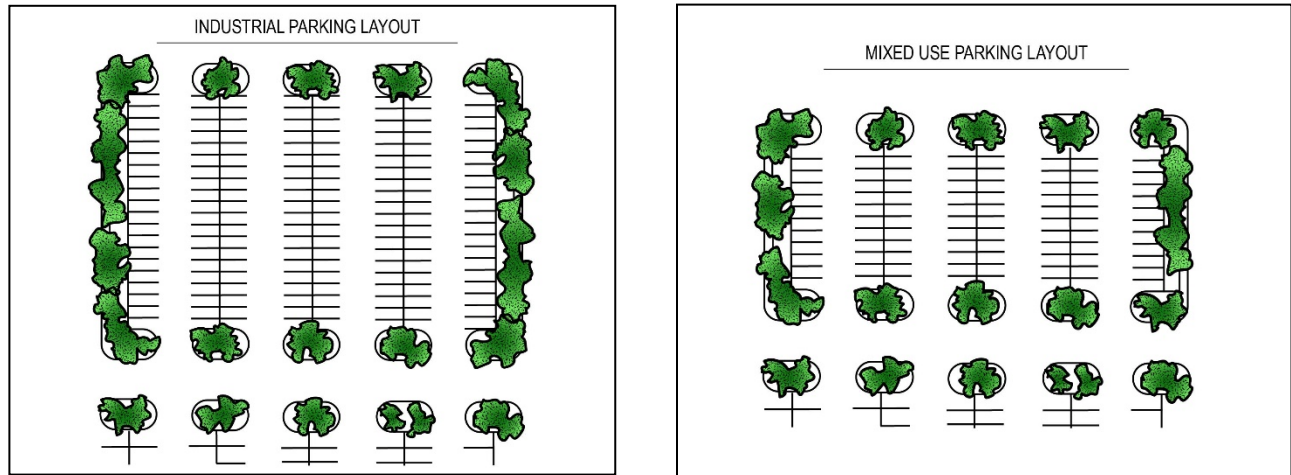
Pedestrian routes within the parking area shall consist of reinforced concrete, brick, or concrete pavers. The landscape margins and pedestrian routes shall be covered by elements of the site lighting system in order to enhance the nighttime effect of the landscape scheme and to provide safety and security for pedestrians.

#### 2.3.1.1 Parking Layout

Parking islands are used to enhance the aesthetic appeal of a building's parking area as well as to create space for landscaping opportunities that are encouraged to contain a variety of planting materials including at least one shade tree. The landscaping in parking islands located in the truck court areas of industrial facilities shall be designed to minimize any damage and constant repair to plantings. Landscaped parking islands can reduce the contribution to the heat island effect and provide shade protection for vehicles and pedestrians. Parking island requirements at DFW are dependent on the development's land use type. For industrial developments, a parking island in the passenger vehicle area is required for every 15-20 parking spaces. For commercial and mixed-use developments, a parking island in the passenger vehicle area is required for every 10-12 parking spaces. These parking islands shall be evenly distributed and compliment the proposed development's parking lot but may be adjusted to accommodate existing features. Further coordination with the PLNG and CD may be needed for space constricted developments and will be assessed on a case-by-case basis.

PARKING ISLAND SPACING		
LAND USE	PASSENGER VEHICLES	18-WHEELER TRAILERS
Industrial	15-20	20-25
Commercial / Mixed Use	10-12	NA

### Exhibit 2-9: Industrial and Mixed-Use Parking Layout



#### 2.3.1.2 Parking Capacity Requirements

The following shall be considered a minimum level of on-site parking spaces for each type of land use. The area utilized to determine the required number of parking spaces is the total interior area as defined by the Airport's measurement standards:

- Manufacturing or Industrial
  - Manufacturing: One space per 1,000 square feet
  - Warehouse: One space per 2,000 square feet
- Office and Professional
  - Professional and Administrative Office: One space per 300 square feet
  - Financial, Institutional, and Technical Research: One Space per 250 square feet
  - Medical and Health Services: One space per 175 square feet
  - Call Centers: One space per 200 square feet
- Hospitality and Retail
  - Hotel: One space per guest room
  - Food and Beverage Service: Twelve spaces plus one space per 50 square feet of seat area
  - General Retail: One space per 200 square feet

**Parking Area Dimensions:** The minimum parking space is 9 feet by 18 feet. Please consult federal and state regulations regarding the provision of parking for the physical disabled.



**Shared Parking:** In mixed used developments, parking calculations may consider shared parking arrangements with the approval of PLNG, provided that: (1) parking is shared between compatible uses (i.e., hotel and office uses); and (2) the total parking reduction does not exceed 20 percent.

The use of on-street parking to meet parking requirements is prohibited.

Emergency and regulatory parking zones shall be documented on any paving and parking plans.

The aforementioned criteria must be adjusted when the use of the site changes. Special uses or circumstances shall be addressed by CD and PLNG.

### 2.3.1.3 Accessible Parking

In addition to parking capacity and quantity, all developments must comply with the state and federal parking regulations for accessibility. Accessible parking spaces must be located on the shortest accessible route of travel to an accessible facility entrance. Where buildings have multiple accessible entrances with adjacent parking, the accessible parking spaces must be dispersed and located closest to the accessible entrance. Accessible parking spaces must be identified by signs that include the International Symbol of Accessibility. Signs at van-accessible spaces must include the additional phrase “van-accessible.” Accessible parking spaces, aisles, and routes must be maintained in good repair and kept clear of ice or fallen debris. Please refer to the Texas Accessibility Standards (TAS) and American Disabilities Act (ADA) standards for the most current minimum number of accessible parking spaces required for a building’s parking lot.

## 2.3.2 PAVED SURFACE MATERIALS

Paving shall be reinforced concrete, modular concrete pavers, or cut natural stone. All drives and roadways shall be provided with integrally formed concrete curb and gutter. All paving shall be placed on prepared subgrades adequately designed for the existing soil type and expected loads to be imposed. The use of natural materials (e.g. – granite) is encouraged. Stamped colored concrete patterns simulating pavers or stonework is encouraged (reference **Exhibit 2-10**). Asphalt paving is prohibited.

**Exhibit 2-10: Decorative Paving Materials and Design**



The Airport has established the requirement for an eight (8) foot wide band of stamped, colored concrete across all Tenant driveways that aligns with the lease line and projects outside of the lease area. In cases where sidewalks intersect with driveways, the band and sidewalk shall be centered in alignment. The color shall be “medium grey” with a slate texture in a two-foot by two-foot grid pattern complying with the Airport’s standard (reference **Exhibit 2-11**). Alternate paving patterns shall be approved on a case-by-case basis. District specific criteria may differ as outlined in **Appendixes A-F**.

**Exhibit 2-11: Eight-Foot Band Stripe**



### 2.3.3 PEDESTRIAN ENVIRONMENT

Circulation for pedestrians shall be clearly denoted with landscaped edges and protection from vehicular traffic. A continuous landscaped edge between sidewalks and vehicular drive lanes shall be used in order to provide a buffer while also creating additional areas for planting. This landscape edge shall be a minimum of four (4) feet wide (reference **Exhibit 2-13**). Pedestrian routes, paths or walks shall be of reinforced concrete, brick or concrete pavers. Pedestrian walkways shall be lit in order to enhance the nighttime effect of the landscape scheme and to provide a sense of security and safety of the user. Landscaping and lighting along landscape edge should be clear of obstructions that might block a driver’s view of potentially conflicting vehicles. Approach site triangles, intersection sight triangles, and departure sight triangles as referenced in the American Association of State Highway and Transportation Officials (AASHTO) Geometric Design of Highways and Streets should be followed.

Sidewalks and pedestrian paving at the main visitors' entry(s) shall be enhanced with sandblasted concrete, exposed aggregate, pavers, stamped concrete, stone, or other such materials, with a gridded joint pattern no larger than 30 inches.

Pedestrian guard rails will be required as per code and shall compliment the aesthetics of the building. To blend with the current or future fence material, all non-vehicle rated guard rails shall be black powder coated or wrought iron unless otherwise approved by CD. Galvanized steel shall not be allowed. (reference **Exhibit 2-12**)

**Exhibit 2-12: Pedestrian Guard Rail**

Plazas or public gathering areas shall be pedestrian friendly. In more-dense or in pedestrian-oriented developments, hardscape features shall be appropriately enhanced and compliment the human scale. Sidewalks are intended to lead to larger pedestrian systems and/or to other public pedestrian-oriented uses, including crossings and others points of refuge associated with streets. Dead-end sidewalks are prohibited. It is the responsibility of the Tenant to provide safe and visible pedestrian connectivity between the lease premise and the public sidewalk.

**Exhibit 2-13: Pedestrian Landscaped Edges**

### 2.3.4 PARKING GARAGE MASSING

It is encouraged for parking garages to incorporate vegetated screens on sides of the garage. These green screens are most desirable facing high pedestrian use areas, as well as open park space. In lieu of green screens, trees lining the perimeter of parking garages can be used as a screening method as well. Garage screening should be 50% of the linear foot calculation on the perimeter. If a parking garage cannot be adequately screened, care should be taken to reduce the visual impact of the garage on the street. In all cases, garages shall not be taller than the building they serve.

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## 2.4 Site Lighting

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It is mandatory that the exterior lighting design shall be approved LED fixtures engineered to provide zero-foot-candle "spill over" at the lease line. The site light pole height is restricted to 30 feet in open paved areas. Cut-off shielding for general site lighting will be required to reduce the effects of light pollution. Additionally, all parking lot lighting shall be cut-off lighting fixtures and on a house meter.

All exterior fixtures shall be DLC Premium listed LED and shall be compliant with the principles stated in the International Dark Sky Association publication labeled Outdoor Lighting Basics. All exterior lighting shall comply with the International Energy Conservation Code (IECC 2015 or latest edition) with regard to night-time operation. All paved surfaces shall have a minimum of 0.5fc. All exterior light fixtures shall be 3000K color.

The site lighting fixtures shall be low profile with energy-efficient LED fixtures (reference **Exhibit 2-14**) and factory painted gray or bronze finish to match poles. The pole shall be square or round steel or aluminum with light-gray finish (galvanized, anodized, and painted). All proposed site lighting must be reviewed and approved by ETAM.

**Exhibit 2-14: Typical Light Fixtures for Street, Parking, and Pedestrian**

## 2.4.1 PARKING AREAS AND DRIVEWAYS

It is mandatory that the parking area lighting shall be approved LED fixtures engineered to provide zero-foot-candle "spill over" at the property line. The light pole height should be a minimum of 20 feet and a maximum of 30 feet for open, paved areas. Cutover shielding for general parcel lighting will be required to reduce the effects of light pollution. All parking lighting shall comply with the Illuminating Engineering Society recommendations titled "Lighting for Parking Facilities". Additionally, all parking lot lighting shall be cut-off lighting fixtures and on a house meter.

## 2.4.2 PEDESTRIAN LIGHTING

In cases where pedestrian walkways cross the landscape outside of the coverage of parking lot lighting, it is recommended that short pole-mounted lighting (16 feet maximum height) or bollards (42 inches maximum height) be provided. Fixtures shall be approved LED.

## 2.4.3 LANDSCAPE LIGHTING

Landscape illumination is discouraged for majority of land uses, such as distribution and warehouse, freight forward, flex office, and showrooms. However, the Airport may consider landscape illumination for hospitality, retail, or mixed uses and shall adhere to the following:

- Lighting may include up-lighting in a tree lawn/grate or planting bed. Up-lighting of street trees, parking island trees, and important landscape areas at project entries is encouraged.
- Up-lighting shall be waterproof and directional.
- Up-lighting shall use fixtures that shield the light source from passing vehicles and pedestrians.

District specific criteria may differ as outlined in **Sections 6 – 10**.

## 2.4.4 EXTERIOR BUILDING LIGHTING

Buildings shall be lighted in a manner that emphasizes internal glow and transparency. Entire facades should NOT be floodlit, but lighted to accent architectural features or modules (reference **Exhibit 2-15**). Building lighting shall be oriented so that light is not directed towards streets or adjacent properties.

The light source shall be shielded from streets and adjacent properties. Building entries shall be illuminated and highlighted. Light sources shall be shielded from streets and adjacent properties. Exterior architectural accent lighting shall be LED with a 3000K or lower color. No lighting shall be installed that negatively impacts aircraft operations.



**Exhibit 2-15: Day and Night Views of Building Façade**

#### 2.4.5 SECURITY LIGHTING

Where security or safety lighting is deemed necessary, it should be localized as much as possible to avoid floodlighting large areas. The design of the light source should be directed on the immediate area of security concern and wherever possible should be automatically triggered by sensors or remote control. Fixtures shall be approved LED.

#### 2.4.6 LIGHTING CONTROLS

The design professional is urged to provide controls such as photocells that automatically limit the hours of operations according to seasonal changes in the length of daylight. In addition, it is desirable that these controls provide separation between the various types of site lighting so that lighting components not needed may be shut down at different times in order to conserve energy. See IECC 2015 for details.

#### 2.4.7 UNACCEPTABLE LIGHTING TECHNIQUES

For the purpose of providing an aesthetically coordinated system, the following techniques shall NOT be utilized:

- Wall pack light fixtures (mounted over 30 feet above grade)
- Colored flood lighting
- Open globe street lighting fixtures without cut-off
- Strobing or blinking light sources
- Incandescent lamps
- High pressure sodium lamps
- Metal halide lamps
- Up-lighting that may impact air traffic

### 2.4.8 STREET LIGHTING

Proper street lighting provides adequate illumination for both pedestrians and automobiles. Care should be taken to provide adequate lighting without negatively impacting adjacent land. Fixtures shall be approved LED. Streetlights shall be located 2.5 feet from face of curb on regular intervals.

Light fixtures shall be black or silver and designed to complement the architectural design of the development. Lighting should be contemporary in design, but simple enough as to not distract from the overall streetscape. Lighting shall serve a dual purpose of illuminating both streets and sidewalks.

- Streetlights shall be installed along all driveways by the tenant internal to their lease parcel.
- Lighting fixtures shall be placed a minimum of ten (10) feet from street trees.

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## 2.5 Utilities

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Utilities are to be designed to be as unobtrusive as possible while still adequately serving the site.

- All recorded easements and ROW corridors must be observed.
- All utilities shall be installed underground.
- The location of all off-site utilities necessary for a property must be approved by PLNG, CD and ETAM.
- All utilities must comply with the [DCM](#) unless a formal variance has been requested and approved.
- All gas meter shall always be installed outside of proposed or future secured areas to guarantee access.
- Additional electrical conduit shall be installed with the initial build to accommodate any future expansion without having to demo paved areas in the future.
- Frontier Communications is the approved provider for any telecommunication services.

## 3. Landscape

Landscaping will be used to create a sense of identity and continuity for Airport developments. Landscaping shall visually connect the entire development or site, define major entryways and circulation (both vehicular and pedestrian), and provide a buffer between the roadways and parking area. This shall be achieved through the consistent implementation of sustainable landscaping standards that govern landscape materials, forms and general design composition (reference [Water Conservation Standards](#)).

The airport landscaping standards are based on four landscaping fundamentals for “sustainable landscaping” (reference [DFW Airport Sustainability Management Plan](#)):

1. Use the right plants: select hardy plants that are compatible with North Texas soils, temperatures, and rainfall.
2. Install plants to minimize maintenance: use natural groupings and reduce turf areas.
3. Supplement plantings with appropriate hardscape: use mulch and pervious ground materials.
4. Incorporate smart irrigation: support water conservation.

The Airport encourages the use of landscape concepts designed to emulate the North Texas Cross Timbers or Blackland Prairies ecoregions using plants associated with the native regional environment. This type of landscaping integrates water-wise design to reduce water demand from sources other than natural rainfall.

Water Conservation and reduced operation and maintenance (O&M) costs are achieved by:

- Incorporating drought resistant plants and using mulch and ground covering.
- Incorporating practical turf areas that are a manageable and usable size, and include water saving grasses adapted to the regional environment. Turf areas must follow most current seeding and sodding specifications.
- Implementing efficient drip-irrigation systems.
- Using reclaimed water wherever available to the greatest extent possible. To this end, applicants will be required to show a water-use plan detailing any use of reclaimed water in a development.

Landscape elements should include simple, clean lines coupled with rich textures, natural color palettes and high-quality materials. The combination of natural elements and planting patterns along with more rigid design aspects in the streetscape and open spaces will create a varied experience suitable for automobile and pedestrian traffic.

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## 3.1 Design Requirements

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The landscape design for a parcel within a development district shall provide a smooth continuous transition into existing landscaping in the setbacks and adjacent properties. Existing natural character or features shall be preserved when possible. (At the POD review stages, please identify natural features present and seek DFW approval for impacting any of these features.) Groupings of plant materials in natural arrangements with rolling landscaped berms, gravel areas, rocks, and stone are encouraged. The natural shape of vegetation and groupings is required in lieu of manicured forms (reference Exhibit 3-1).

All features should be designed so they are not an attractant to birds and other wildlife and do not create habitats. The overall landscape design and its elements shall carefully consider wildlife management, so as to not create undesirable attractants, which may be a significant hazard to airfield operations.

As part of the landscape design, techniques should be considered and include the following:

- Identify the conditions that will influence water use, such as exposure to the elements (sun and wind) and drainage associated with the topography.
- Group plants with similar watering requirements together – plants that require more water are grouped together so that only limited portions of the landscape need extra water.
- Incorporate hardscape in appropriate locations in lieu of vegetation.

**Exhibit 3-1: Groupings of Plant Material in Natural Arrangements**



### 3.1.1 NATURAL GROUPINGS

To preserve a natural character, the landscape design shall emphasize natural features such as swales, groves of mature trees, significant geologic outcroppings, and the general natural flow of topography. The preservation of existing plant specimens or groupings is encouraged. New trees and shrubbery shall typically be installed in groupings in lieu of straight rows with uniform spacing.

### 3.1.2 PLANTING BEDS

Planting beds are planted areas located along the internal circulation of the development and shall be a minimum of ten (10) feet wide and planted with native grasses, shrubs, flowers and trees (reference **Appendix G** for plant list). Trees, shrubs, native grasses and rocks shall be grouped within large planting beds in an effort to facilitate maintenance. Planting beds shall be mulched and separated from turf areas with commercial grade steel edging. Mulches are applied to the soil surface to reduce evaporation, moderate soil temperature, and help to control weed growth and soil erosion. Dress all plant areas with wood mulch, gravel or other appropriate ground cover (reference **Exhibit 3-2**). Use local rocks and gravel when possible.

**Exhibit 3-2: Planting Bed**



### 3.1.3 TURF

In turf areas, plantings shall preserve a minimum spacing of 36 inches from obstacles to allow for the circulation of a mower. Do not use turf in areas that are impractical or difficult to maintain, such as narrow strips or steep slopes. Locate the mowed turf areas along the back of the curb. Obstructions within a mowed turf area shall be contained within a concrete mow strip (reference **Exhibit 3-3**), gravel area or planting area to facilitate maintenance. Use sod in lieu of seed which can attract birds and are subject to erosion.

**Exhibit 3-3: Mow Strip**

#### 3.1.4 LANDSCAPE BUFFER

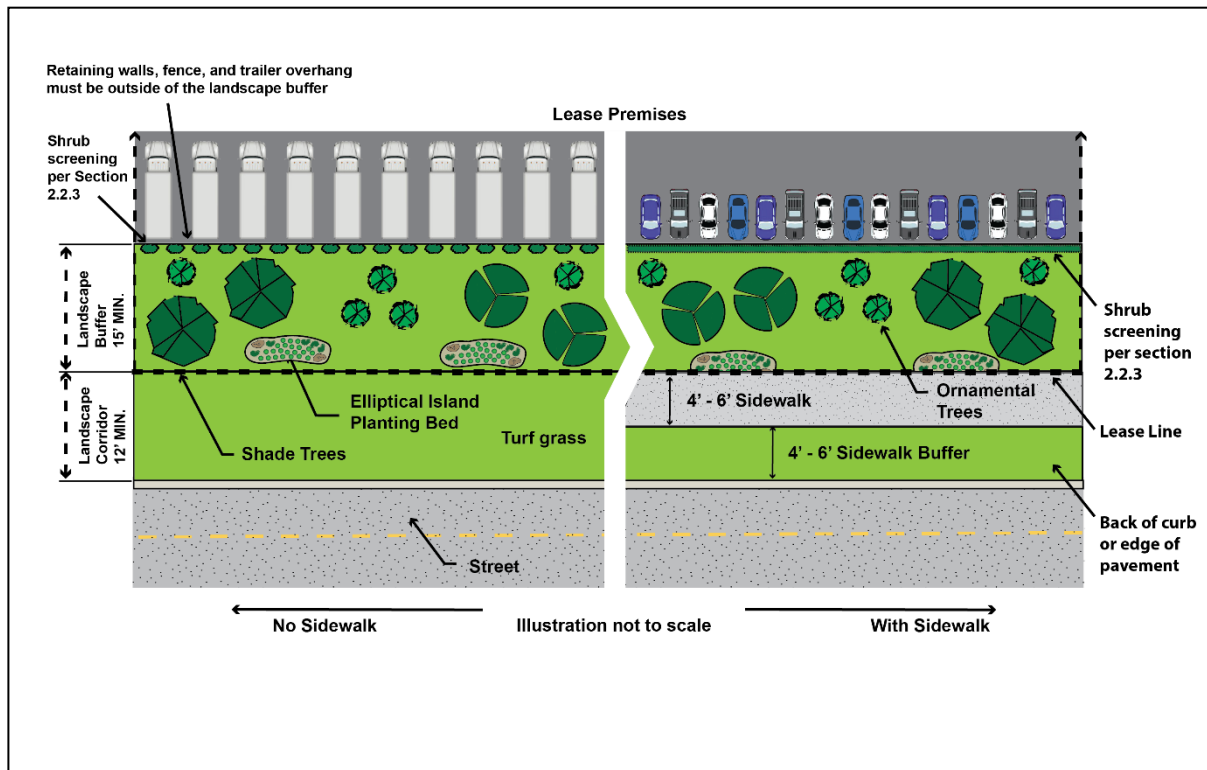
The landscape buffer is an area within the leased premises dedicated to planting and other landscape materials intended to improve aesthetic appeal, screen visual nuisances; or for environmental purposes such as stormwater collection, noise abatement, or increasing shade effects. This provides an area for natural North Texas Cross Timbers or Blackland Prairie ecoregion landscape features and is a component of the streetscape utilized to form the street's character. A landscaping corridor is defined as a natural buffer located between the back-of-curb of an adjacent street or DFW property line and the lease line.

The leaseholder shall provide and maintain landscaping and other tenant installed improvements located within the landscaping buffer. The Airport has developed a typical planting template for the landscape buffer. The airport will require a minimum of a 12-foot landscaping setback from back of curb or edge of pavement for existing and/or future utilities. Due to presence of underground utilities planting of trees will be restricted in those landscape corridors where these conditions exist. Shrubs may be used in the landscape buffer in lieu of trees when underground utilities are present. Depending on the location of the development site, this template may be required or used as a guide. Landscaping in this area may be enhanced and shall be diversified between a mix of shade and ornamental trees while also providing planting beds (reference **Exhibit 3-4**). Coordinate appropriate aesthetic applications with the PLNG and CD.

In order to promote a sense of variety and acknowledge the different seasons, the Airport prefers selected trees along the streetscape and in the front yards to provide seasonal color (reference **Exhibit 3-5**).



## Exhibit 3-4: Example Landscape Templates



## Exhibit 3-5: Seasonal Color Use in Buffers



Any existing irrigation works installed in this zone by the Airport and which are subsequently removed or modified by the Tenant during its own construction shall be sufficiently restored or reconfigured by the Tenant to match the original treatment intended for the area.

Landscape design shall be of appropriate density on all sides of the property. Tenants may enhance the landscape at visitor driveway(s), but they are required to transition back to the baseline planting within 100 feet each way. Critical areas such as high-profile entries and other “signature” areas will require a higher level of design treatment than less critical areas such as side yards or secondary points of entry. Tenant landscape design shall provide smooth transition and continuation of existing landscape in the setbacks and from existing adjacent properties. All landscape design shall be subject to review and approval by PLNG and CD.

Where driveways intersect public roadways or roadway intersections occur, a visibility triangle shall be provided that complies with AASHTO rules. Landscape elements including retaining walls and signage shall not infringe upon the ability of vehicle operators to see approaching vehicles from either roadway or driveway. At “T” intersections, an enhanced pocket park consisting of accent plants, limestone blocks, and black basalt gravel shall be provided (reference **Exhibit 3-6**). Contact PLNG and CD for details.

**Exhibit 3-6: Typical Enhanced Pocket Park Installation**



### 3.1.5 STREET TREES

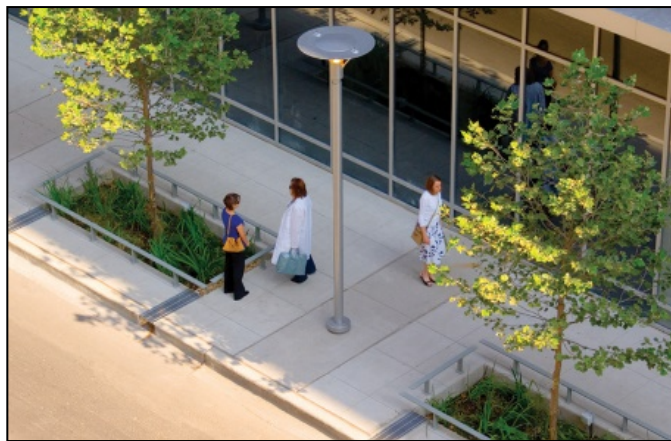
Street trees shall be located to provide unifying character to the streetscape within the development. In the frontage areas, street trees shall be placed within the landscaping corridor and or pavement setback. In retail areas street trees shall be located within tree wells. Repeated use of a tree species should be located in natural arrangements along individual streets.

All trees will not be located closer than ten (10) feet from obstacles (light poles, benches, signs, etc.)

### 3.1.5.1 Tree Wells

Tree wells in pedestrian right of way shall have a minimum dimension of six (6) feet by six (6) feet and a maximum dimension of six (6) feet by 12 feet. Tree wells may be closed with tree grates or open and landscaped with ground cover and shrubbery (reference **Exhibit 3-7**). Ground cover may be used as a substitute to grate only if the grade difference meets the Americans with Disabilities Act (ADA) requirements. Tree wells not in pedestrian right of way shall maintain a four (4) foot diameter mulch tree well. Mulch color shall match district criteria where applicable.

**Exhibit 3-7: Tree Well Planting in Pedestrian ROW**



## 3.2 Plants

Landscape concepts shall use plants that are drought-tolerant and suitable to the weather and soil conditions of North Texas to reduce both water consumption and maintenance. Plants that convey a Texas character such as Mesquite, Wax Myrtle, Yucca, Sage, and fountain grasses shall be used in all landscape designs as the unifying plant elements, in addition to plants from the Airport's established plant list. A single plant type should not dominate the landscaping in order to reduce the spread of plant disease or insects.

### 3.2.1 PLANT LIST

To promote a sense of variety and provide landscape solutions consistent with the North Texas Cross Timbers or Blackland Prairie ecoregion landform, the below lists are provided as approved plant selections. In no case shall a monoculture of a single plant selection be approved, nor shall any single selection dominate the site. Additional selections will be considered on a case-by-case basis by PLNG and CD. Some plants may not be suitable for urban environments or areas adjacent to the airfield; therefore, consideration should be taken for appropriate planting. All Landscape Plans should include the Latin Name and Common Name of the plant in an effort to avoid confusion.

For approved plant list please reference **Appendix G**.

### 3.2.2 PLANT SIZING AND QUANTITIES

To facilitate consistency in procurement, all plant materials shall be sourced in accordance with the ANSI Z60 American Standard for Nursery Stock for sizing, form, and quality. All proposed landscape plans shall incorporate the following plant sizing standards: At the time of planting, shade trees shall be a minimum 4-inch caliper; shrubs shall be a minimum 7-gallon container size, with a minimum 30" plant height where applicable.

The following minimum quantities shall be provided within the leased area in addition to the planting requirements of any landscaping buffer(s). All landscape materials shall be placed in accordance with standards that support the continued good health of the plant materials. PLNG and CD shall review and approve all proposed landscaping and can request additional landscaping as necessary.

- Trees: All development shall comply with the minimum canopy coverage requirement in **Table 3-1** and shall refer to the preferred distribution of tree sizes per acre. The canopy coverage will be calculated based on total project site minus any easements and detention area where trees are not allowed. All proposed trees shall be selected from the approved plant list in **Appendix G**.
- Trees of multiple different species and sizes shall be used to enhance the aesthetics of all street frontage and open spaces.
- All trees shall be spaced appropriately for their species and size at maturity. Trees along public street frontage shall be placed with a denser pattern than the rest of the site while maintaining the look of natural groupings.
  - In order to help mitigate wildlife attractants, oak trees shall be spaced no less than 200 feet apart. Quantities and placement of all wildlife attractant plants shall be reviewed and approved by the DFW Wildlife Administrator. Please see Appendix G for further restrictions related to projects in close proximity to the airfield.
- Shrubs: Shall be required in planting beds along street frontage to provide screening of parking lots, truck courts, etc. They should also be used to enhance entry ways into the site and pedestrian paths. There are many different types of shrubs available on the approved plant list from different sizes to color. The shrub selected needs to be used in a way that effectively addresses the use of screening or enhancement. No one species of shrub shall dominate the landscaped areas.
- Groundcover: Shall be used in parking islands and planting beds to reduce the amount of manicured lawn. Complimenting ground cover with hardscapes and shrubs is preferred over-using ground cover on large areas. Ornamental bunch grasses shall not be used as turf grass and shall only be used in planting beds with steel edging and mulch.
- Lawn: All other areas not paved, or planting beds, shall be turf grass.
- The total area of the detention basins as defined by the bottom of the basin to one foot above the 100-year water surface elevation shall be turf grass.

**Table 3-1: Canopy Coverage Requirements**

PREFERRED TREE DISTRIBUTION PER ACRE			
LAND USE (MINIMUM COVERAGE)	LARGE = 2000 FT <sup>2</sup>	MEDIUM = 700 FT <sup>2</sup>	SMALL = 100 FT <sup>2</sup>
Industrial (20%)	3.5 - 4	2.5 - 3	2 – 2.5
Commercial / Mixed Use (30%)	5 – 5.5	4 – 4.5	3 – 3.5

### 3.2.3 MAINTENANCE

The amount of maintenance required in a planted area is relative to the amount of water applied. Over-watering contributes to rapid, weak plant growth, fertilizer leaching, insect and disease problems and weed growth, all of which require increased maintenance. Any vegetation that was proposed to be non-fruit bearing and is discovered to bear fruit or that becomes diseased or damaged shall be replaced by the Tenant with plant material of a similar variety and size at either the time of loss, within (90) days or a future date approved by the CD. All landscaping must be professionally maintained in a healthy state and be replaced as needed. The natural shape of the plant should be used in lieu of unnecessary pruning. Tenants are allotted (45) days from first notification to make modifications requested by CD. After this duration, CD has the option to take necessary action as needed. Upon inspection, inappropriate plants or wrong use or implementation of landscaping may result in non-monetary default of lease. A Tenant may forfeit the lease and is subject to penalties as per the lease agreement if not compliant within (45) days.

## 3.3 Hardscape

Hardscapes can be provided to allow for access to the planted areas and reduce the amount of turf requiring irrigation. It can help define traffic patterns, separate areas in the landscape and add visual interest, especially in the winter months and early spring before herbaceous plants reach mature size. Hardscape elements typically are put in place in the early stages of a landscape installation and must be carefully considered. Stone or brick/concrete pavers are preferable in hardscape designs because they tend to be more pervious. Utilize pervious hardscape products as much as possible as opposed to impervious to reduce excessive stormwater runoff.

### 3.3.1 PERVIOUS PAVERS

Pervious pavers are typically made of pre-cast concrete, brick, stone or cobbles. Pavers usually form interlocking patterns and are placed within a rigid frame on top of a sand bed or over the drain system. Sand or gravel fills the gaps between pavers, allowing water to pass to the underlying subgrade then infiltrate into the ground. Some pavers also have small voids in the pavement surface to increase permeability. Furthermore, these pavers not only permit water infiltration, but allow airflow penetration, which these two actions in conjunction can produce a cooler surface than one with impervious materials.



Pervious pavers are available in many colors, shapes, sizes and textures, and can support heavy traffic loads and weights. They can replace conventional concrete paving in parking lots, roads and sidewalks. Brick or stone pavers are most appropriate for retail and plaza areas, while concrete pavers are allowed only in the roadway frontage areas.

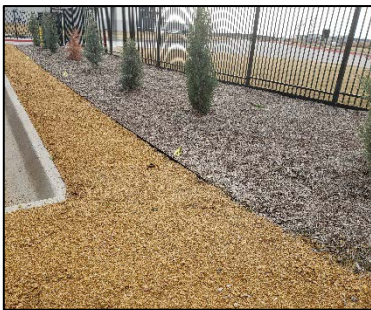
### 3.3.2 MULCH

Made of shredded bark from hardwood trees such as maples and oaks, this sturdy mulch compacts over time so it resists blowing or washing away. Mulch is not desirable on sloped surfaces. Additionally, many mulches float and are easily washed away. Mulch is a temporary erosion control because of this. Mulch controls weed growth, erosion, and enables the planted area to retain moisture.

### 3.3.3 DECOMPOSED GRANITE (DG)

Naturally occurring DG is solid granite rock that over millions of years has compressed and broken down resulting in natural gravel (reference **Exhibit 3-8**). Crushed stone screening is solid quarry rock that is crushed and screened to size creating the same material as naturally occurring DG. Most manufacturers offer both and both are completely organic and environmentally safe. DG shall be installed at a minimum of 2 inches compacted. This material packs well and creates a firmer surface than many other granite materials but allows water to permeate. DG can be used for areas with high pedestrian traffic such as outdoor seating areas, walking paths or trails. DG may be used in industrial truck courts instead of ground cover to help reduce maintenance and irrigation.

**Exhibit 3-8: Decomposed Granite Used in Landscaping**



### 3.3.4 GRAVEL

Gravel consists of small, smooth, colored pebbles and may be used to accent an area of the landscape. It allows water to freely seep into the ground below and is low maintenance when applied over a weed block. Gravel shall not be used on areas in lieu of turf grass or ground cover.



### 3.3.5 TURF PAVERS

Modular paving blocks or grass pavers consist of concrete or plastic interlocking units that provide structural stability while a series of gaps planted with turf grass allow for infiltration. Turf pavers may reduce or eliminate other stormwater management techniques by reducing runoff.

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## 3.4 Irrigation

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Landscaping shall be professionally maintained and equipped with a properly installed underground irrigation system. Whenever possible, the irrigation system shall use reclaimed or re-use water from on-site rainwater harvesting, a stormwater collection system or from the Airport's reclaimed water system (when available). All irrigation systems shall be designed by a State of Texas Professional Engineer, Landscape Architect, or a Licensed Irrigator and comply with the various Texas Administrative Codes. Low water (drip) systems are strongly encouraged to reduce water consumption. Watering shall comply with the [DFW Airport Sustainability Management Plan](#). If using reclaimed water, see additional requirements for filtration and usage.

The system shall be designed to apply only the amount of water a plant requires, with minimal waste. Frequency and duration of watering shall be adjusted with the changing seasons. Watering at the right time of day, when the sun is low, either dawn or dusk, when the winds are calm, and temperatures are cool will save water - as much as 30% - by reducing evaporative loss.

"Cycle and Soak" is a technique that can be utilized to help water infiltrate into heavy clay soils to ensure deep watering. The idea is to break up the overall runtime for a zone into several shorter runtimes that are separated by about an hour. This allows time for the soil to absorb the water applied in each cycle. Never water every day; this keeps the root zone shallow and makes the landscape much more vulnerable in the event of a drought or water restrictions.

A "smart" controller will help incorporate all of the aforementioned practices automatically. Smart controllers are technological devices that use sensors and weather information to manage watering times and frequency. As environmental conditions vary, the controller increases or decreases irrigation. Smart controllers have the ability to turn off sprinklers automatically during rain, high wind, or low temperature, and can reduce outdoor water use by an average of 15 to 30%.

### 3.4.1 DRIP/MICRO IRRIGATION

Drip irrigation (micro irrigation) is a method that saves water and fertilizer by allowing water to drip slowly to the roots of plants. The water flows under low pressure through emitters, bubblers or spray heads placed at each plant. Drip irrigation offers increased watering efficiency and plant performance when used under the correct conditions. Water applied by drip irrigation has little chance of waste through evaporation or runoff. Design the irrigation system to have multiple zones where plants that need more water can receive it without irrigating the entire area. All irrigation shall comply with the DCC standards.

Soaker tubing systems, such as Netafim, are prohibited.

### 3.4.2 MAINTENANCE

The irrigation system shall be maintained in an operative state. Leaks and broken heads shall be repaired immediately in order to perform as designed and to conserve our natural water resources. Heads shall be adjusted so they never overwater onto paved surfaces.

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## 3.5 Landscape Grading and Drainage

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### 3.5.1 GRADING AND DRAINAGE

The color of the retaining walls and other walls should be natural and neutral shades, complimentary to the character and architecture of the building. Leased properties that wish to construct retaining walls or other freestanding walls should comply with these standards.

All landscaped spaces shall be properly drained to avoid significant and unnecessary run-off and ponding. Where possible, landscape areas should double as stormwater management areas that allow rainwater to naturally seep into the ground rather than taxing the stormwater system.

- The maximum slope of lawn areas is 4:1 (25%).
- Elevation changes of 4:1 (25%) or greater shall be accomplished with retaining walls.
- Retaining walls shall be designed in a manner and with materials that harmonize with the design and materials of adjacent buildings.

Appropriate grading strategies will ensure proper drainage across the development and provide adequate systems to reduce impacts of rain events. The following standards shall apply:

- The slope used on a street shall conform to DFW Airport requirements for roadway corridors.
- A subsurface stormwater collection system must be used for drainage.
- First flush of stormwater to be treated for water quality shall conform to DFW Airport requirements.
- No lease parcel will be graded so that water sheet flows or has concentrated flow onto an adjacent parcel leased by others or into the roadway corridor unless approved by ETAM and CD.
- Design should take into consideration grading with the existing topography when applicable.

### 3.5.2 LOW IMPACT DESIGN (LID)

For the purpose of promoting sustainable development, the Airport encourages the option of Low Impact Design (LID) strategies to comply with stormwater management requirements. LID integrates stormwater into the urban environment to achieve multiple goals. It reduces stormwater pollution and promotes gradual creation of a greener airport. The following shall be considered when designing stormwater drainage that incorporates low impact development strategies:

- LID site planning and [DCM](#) criteria shall be implemented to control stormwater runoff at the source to more closely approximate predevelopment runoff conditions.
- The hydrologic analysis and computational procedures for LID stormwater management design plans shall comply with the storm design criteria stated in DFW's [DCM](#).
- LID stormwater management design plans shall not conflict with existing Federal or DFW regulations and/or policies. Applicable LID strategies being considered for stormwater drainage design shall also comply with the following:
  - Advisory Circular 150/5200-33 – Hazardous Wildlife Attractants on or Near Airports.
  - EPA 841-B-09-001: Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act.
  - National Environmental Policy Act (NEPA) requirements.
  - DFW [Stormwater Drainage Master Plan](#).

#### 3.5.2.1 Detention Ponds

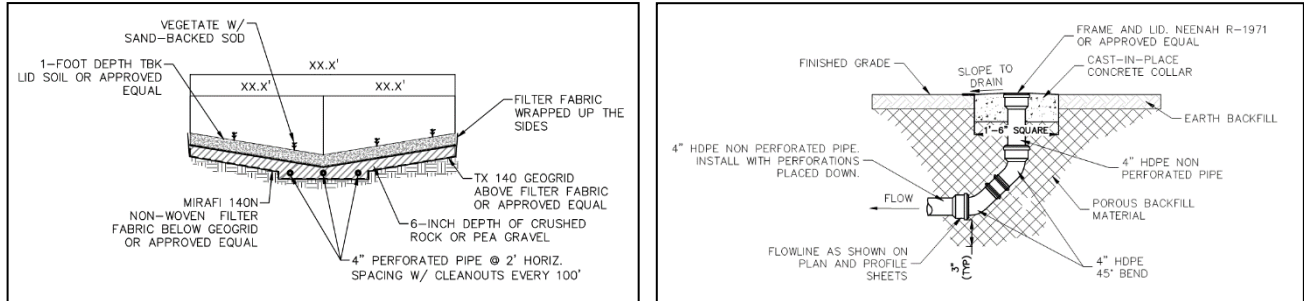
The design of the detention area shall be adjusted and reconfigured based upon detailed engineering design, but in general the following principals shall apply:

- The detention area shall be designed as a “natural edge” in order to complement the landscape characteristics of the development. Natural stone and natural groupings shall comprise the edge (reference **Exhibit 3-10**).

The Tenant will reference the published in DFW's [DCM](#), Section 334 – Storm Drainage Utilities design standards to minimize wildlife attractants and ensure detention areas are drained within the required 24-hour period.

- All site drainage to the detention area shall not interfere with the function of the streets, sidewalks and parking lots on site.
- In order to minimize detention requirements, areas such as parking landscape islands and bioswales in landscape corridors shall be utilized as areas of secondary water detention.
- If detention area has retaining walls a ramp shall be provided at a 12:1 slope to allow for truck access.
- Detention pond features shall include first flush of stormwater to be treated for water quality – shall conform to DFW Airport requirements. (reference **Exhibit 3-9**)

### Exhibit 3-9: Detention Pond Vegetative Filter Strip



### Exhibit 3-10: Detention Pond with Natural Edge



## 3.6 Street Furniture

The street furniture shall be complimentary to the buildings and shall support overall character of the development. The leaseholder shall be responsible for providing and maintaining street furniture.

### 3.6.1 BENCHES

Street benches shall be located at 150-foot intervals, near streetlamps or building entry locations.

Bench design shall be contemporary, functional and adaptable for a variety of locations throughout the districts. Benches shall be heavy-duty, durable and vandal resistant (reference **Exhibit 3-11** for example). No precast or total wood benches will be permitted. Multiple bench types may be provided, but they shall all be similar in color, style and size.

**Exhibit 3-11: Bench Example**

### 3.6.2 BOLLARDS

Bollards are required on driveways that are without curbs. Bollards shall be located on 6-foot average minimum intervals.

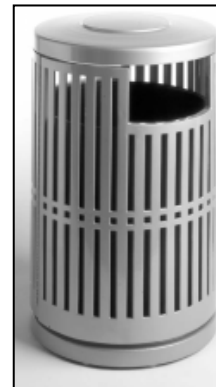
The bollards shall be a contemporary style that is consistent with the district vision and other street furniture in the development (reference **Exhibit 3-12** for example). Painted pipe bollards are prohibited except for service areas which are not visible to the public.

**Exhibit 3-12: Bollard Example**

### 3.6.3 LITTER CONTAINERS

Litter containers shall be located at 150-foot intervals, near streetlamps or building entry locations.

Litter containers shall complement other street furniture and be of a contemporary style while being as unobtrusive as possible (reference **Exhibit 3-13** for example). Litter containers shall always be covered to prevent debris from blowing out and prevent access to wildlife.

**Exhibit 3-13: Litter Container Examples**

### 3.6.4 PLANTING POTS

Planting pots, if used, (for retail areas only) shall complement the buildings they serve and may be multiple styles, sizes and configurations to create variety in the development. Pots must be scaled appropriately to provide for proper pedestrian movements and to meet all T.A.S. and A.D.A. requirements. All planting pots shall complement each other and regardless of style shall be of neutral colors (reference **Exhibit 3-14** for examples).

**Exhibit 3-14: Planting Pot Examples**



## 4. Architectural Design

The buildings constructed within Airport developments shall support the creation of a consistent airport campus by incorporating a design which reflects both the advanced technological image associated with aviation and the North Texas Cross Timbers or Blackland Prairie ecoregion environment in which they are sited.

It is intended that this framework provide flexibility to allow for the development of a wide range of building types, sizes, and uses, while maintaining a consistently high level of quality, sustainability, and design. Given the millions of passengers using the Airport, care should be taken to make the sites and building attractive when viewed from the air.

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### 4.1 Contemporary Style

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The character of the architecture is to be progressive, functional, and enduring. In recognition of the history of the Airport, innovation in design, structure, and materials is encouraged. The level of architectural detailing shall be reasonably consistent on all sides of a building. Buildings must have an overall horizontal expression. Furthermore, building massing forms and articulation shall have horizontal emphasis. Simple volumes that blend with the landscape are preferred.

Facades of larger buildings shall be articulated in order to reduce the scale of the façade and provide visual interest that is more consistent with the development's character and scale (reference **Exhibit 4-1**).

- Industrial structures shall incorporate material changes, projections, and significant offsets to break-up the massing into segments no longer than 300 feet. Repeating patterns of similar material and color shall not exceed 300 feet. Commercial and mixed-use structures shall be segments no longer than 100 feet.
- Commercial and mixed-use developments with ground floor facades that face streets shall have storefronts, arcades, display windows, entry areas, awnings or other features along no less than 50% of their horizontal length.
- All buildings over 25 feet tall (including towers) shall express a base, midsection, and top section by the use of varying material and color.

Entries should be easily identifiable destination points and scaled in proportion to the façade. For details on enhancing facades through architectural lighting please refer to **Section 2.4.4** on Exterior Building Lighting.

Unless allowed by district specific criteria, the following features are NOT allowed:

- Residential architectural character or features such as dormers, shutters, gables, hip roofs, and divided-light windows.
- Non-functional ornamentation, structure, or decoration inconsistent with the architecture character.
- Historical or regional styles and elements such as arches, domes, moldings, cornices, pediments, and ordered columns (ionic et al).
- Simulated structure, windows, or materials.
- Arbitrary, whimsical, or fad-oriented architecture.
- Over-scaled or ostentatious entries or features.
- Fabric Awning
- Wood siding, shingles, or trim, composition shingles, clay or concrete tile roofing.

**Exhibit 4-1: Building Articulation****4.1.1 VISUAL CONTINUITY BETWEEN BUILDINGS**

Districts shall be designed as a collection of buildings that relate to each other in material, color and to a lesser extent, form. Utilizing a variety of architectural features to create visual interest between buildings will unite individual buildings without repeating forms. All architectural features shall be made up of materials that complement the dominant building materials.

- All buildings within a development shall incorporate similar design features and material expressions.

All buildings shall include at least 3 of the following architectural features in order to create continuity within the overall development (NOTE: this applies to only the entry areas of limited warehouse) Reference **Exhibit 4-2**:

- Overhangs

- Canopies or Porticos
- Recesses/Projections
- Arcades
- Raised corniced parapets over the entrance
- Arches
- Tower Elements (at strategic locations)

**Exhibit 4-2: Brand Elements for Continuity within Strip Center Developments**



#### 4.1.2 CANOPIES, ARCADES AND OVERHANGS

Structural awnings are encouraged to enhance articulation of the building volumes (reference **Exhibit 4-3**).

- The material of awnings and canopies shall be architectural materials that complement the building.
- Awnings shall not be internally illuminated.
- Canopies shall not exceed 70 feet without a break.
- Awnings shall not extend more than 3 feet over the sidewalk unless otherwise approved by PLNG and CD and is in keeping with the architectural style of the building.
- Canopies shall respect the placement of street trees and lighting.

- All large canopies that require structural columns for support shall utilize materials that are complementary to the building they serve.
- Tenants are encouraged to use structural design which would minimize bird perching opportunities.  
Note: Bird mitigation apparatuses will not be installed by Tenants.

#### Exhibit 4-3: Overhang Example



#### 4.1.3 FENESTRATION

Clear glass is required in all retail storefronts; smoked, reflective, or black glass is prohibited. Use of reflective glazing shall be limited to second level uses and above and are subject to review.

## 4.2 Color Palette

Building exteriors shall use a neutral earth-tone color palette and materials with texture and character. General colors are: Warm gray, cool gray, tan, buff, white, black, brown, and metallic colors such as silver, silver gray, pewter, champagne gold, copper, light bronze, medium bronze, dark bronze, and grays. Black shall not be used as primary building color but may be used as accent color.

Accent colors shall be selected to complement the dominant building color and may be applied to window mullions, cornices and other architectural elements. Unique branding colors may be used in limited areas (i.e. at an entry or on a particular architectural feature). These colors shall NOT be distributed over entire facades as stripes or trim and shall be scaled so that they are proportional to the facade in which they are located. They are NOT to act as advertisements or billboards.

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## 4.3 Materials

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Facade materials shall be clearly articulated and consistently applied. A minimum of three (3) materials shall be used in a significant manner for the building exterior. Changes in materials shall be reflected in massing and/or offsets. Construction shall incorporate materials defined by the Airport as “natural finish materials”. A minimum of 50% of the front yard elevation shall consist of those materials defined by the Airport as “natural finish” materials, and a minimum of 25% of the other elevations. District specific criteria may differ as outlined in **Sections 6 – 10**. The Airport considers the following “natural finish materials”:

- Sand-blasted concrete
- Textured concrete (form liner)
- Exposed aggregate concrete
- Stone
- Glass
- Unpainted CMU (split-face, scored, ground-face)
- Anodized aluminum
- Stainless steel
- Exposed steel
- Weathered steel
- Unpainted brick
- Factory finished metal panels
- Aggregate finish coatings such as, but not limited to, Duraspec by Multicolor Specialties or Granitex

### MATERIALS

#### 4.3.1 BRICK

- Brick shall be modular, clay-fired units meeting or exceeding industry standards for quality including but not limited to: ASTM-C216-87 and ASTM C90.
- Texture/style: uniform-face texture such as wire-cut or smooth. “Antique” style brick is prohibited.
- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as sand, cream, and buff. Examples include but are not limited to: Acme #105, #107 and #114. Brick shall be relatively uniform in color rather than varied “blends”.
- Mortar color shall complement the brick color.



#### 4.3.2 CONCRETE MASONRY UNITS (CMU)

- CMU shall be modular units meeting or exceeding industry standards for quality including, but not limited to: ASTM-C129 and/or ASTM C90.
- Texture/style: uniform face texture such as smooth, burnished, split, scored, ribbed, or ground-face.
- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as warm gray and buff. Examples include but are not limited to: Featherlite “Limestone” and “Saddle Tan”.

#### 4.3.3 STONE VENEER

- Size: cut stone veneer shall be sized as appropriate for the type of stone and the method of installation. Stone exceeding 2-inch thickness may be set using mortar and anchored to structure when the system is designed to conform to recognized industry standards for installation and height. Thinner stone or taller applications shall be supported by a building structure engineered in accordance with the highest standards. Stone may be set on facades using adhesive methods.
- Lueders, Shellstone, Cedar Hill Cream or Hadrian. Other warm-toned natural stones such as sandstone and granite.
- Finishes: may consist of polished, flamed, honed, filled or unfilled.
- Stone pieces shall be cut modules and installed in a regular grid pattern.
- Color range: light, warm tones such as sand, cream, and buff.

#### 4.3.4 STUCCO

- Cement based 3-coat system on metal lath over appropriate substrate. Control joints and reveals shall be extruded aluminum.
- The top color coat may be colored cement or an acrylic product such as STO finish.
- EIFS is only permitted 9 feet above the first-floor elevation.

#### 4.3.5 CONCRETE (VERTICAL SURFACES)

- Exterior concrete wall surfaces shall be textured (i.e., form liner), sandblast, water blast or exposed aggregate, painted or stained.
- Fluted/ribbed form liner that has a similar appearance as corrugated metal is not acceptable.

#### 4.3.6 GLASS AND FRAMES

- Vision glass shall be warm toned, gray or black; colored tints or coatings (i.e., blue, green) are prohibited.
- Highly reflective glass is prohibited.
- At the discretion of DFW approval, Tenants may use dynamic glass which is recommended for improved energy efficiency and a promotes a comfortable user experience. Use of dynamic glass will be determined on a case-by-case basis.

- Spandrel glass color shall match vision glass color.
- Examples of acceptable types include but are not limited to, PPG Solarbronze and Viracon Bronze.

#### 4.3.7 HARDSCAPE

- Sidewalks and pedestrian paving at the main visitors' entry(s) shall be sandblasted concrete, exposed aggregate, pavers, stamped concrete, stone or other such materials, with a gridded joint pattern no larger than 30 inches.

#### 4.3.8 WOOD

- Wood is not an acceptable exterior building material or finish unless allowed by site specific development criteria issued or approved by the Airport.

#### 4.3.9 FENCING

- All fencing shall be painted architectural metal, masonry, precast or poured in place concrete, and shall comply with the other criteria of the section.
- Chain-link, barbed wire, wood or plastic fencing is prohibited.
- Any fence proposed outside of a paved area shall be mounted on a continuous mow strip of concrete extending 12 inches each side of the fence.

#### 4.3.10 RETAINING WALLS

- Retaining walls may be constructed of sand-blasted and rusticated joint concrete, concrete masonry unit systems or mosaic stone.
- Finish/Style: Retaining walls in view of the public or adjacent properties shall have a mosaic stone finish to compliment the aesthetic of the building.
- Color: warm tones such as sandstone or grey tones to compliment the aesthetic of the building.

#### 4.3.11 METAL PANEL SYSTEMS

- All metal panels shall be fully engineered architectural quality systems. Fasteners shall be either fully concealed or integrated into the panel design on any panels exposed to view. Panel systems shall be designed for uniformity and flatness. Corrugated or metal siding is not acceptable.
- Material standards:
  - Steel: G-90 (1.25 oz.) hot-dipped galvanized, ASTM A924 and ASTM A653.
  - Stainless steel: Type 304 AISI architectural grade alloy
  - Aluminum: Alloy 3003
- Finishes shall be a factory applied and warrantied system, paint coating shall consist of a minimum of 70% Kynar or Hylar resin no less than 0.8 mil thickness over a compatible primer. Anodized finishes may range from clear to dark bronze.
- "Galvalume" steel shall be hot-dip coated with aluminum-zinc alloy.

- Profiles/textures: smooth, embossed or ribbed. Examples include but are not limited to: Centria “Formawall”, “Versapanel” or “Super Rib”.
- Colors: Galvalume, stainless steel or colors as listed in **Section 4.2**.
- Minimum panel articulation dimension shall be 18-inches.

#### 4.3.12 ARCHITECTURAL METAL ROOFING

- Acceptable architectural roofing materials are aluminum, steel or copper. Roofing shall be installed over continuous substrate. Acceptable finishes:
  - Steel or aluminum: galvalume, zincalume or a factory applied baked on paint system such as silicone modified polyester (SMP) or polyvinylidene fluoride (PVF2) in approved color as listed in **Section 4.2**.
  - Copper or aluminum: natural

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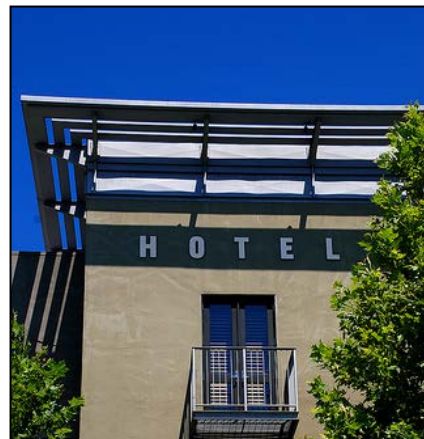
## 4.4 Roof

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Variations in roof lines shall be used to add interest and reduce the scale of large buildings. Roof features shall complement the character of the overall development (reference **Exhibit 4-4**).

The variety of roof forms is limited in order to maintain a sense of unity within the Airport. These forms are low-slope, shed, hip, or curved. Mansard, gable, and barrel vaults are prohibited.

**Exhibit 4-4: Roof Elements Provide Shadow and Architectural Relief**



#### 4.4.1 LOW SLOPE ROOFS

Low-slope roofing is defined as roofing that is typically installed at slopes of less than 2:12. This includes built-up, single-ply, modified bitumen and other similar systems. Low slope roofing must be concealed behind parapets. While low slope roofing may be any neutral color, lighter shades are encouraged to minimize and reduce heat gain, energy usage, and cost of cooling the building.

Since the roof will be frequently viewed from the air, care should be taken in the placement of roof elements, such as traffic pads and equipment. Finally, low-slope roof drainage should be by means of internal drains and downspouts and should avoid exposed gutters. Overflow scuppers may be visible provided they are located and detailed to harmonize with the building façade. Only under special circumstances will CD and PLNG approve visible gutters and downspouts to be permitted so long that they are recessed and blend into the overall building design.

#### 4.4.2 PITCHED ROOFS

Pitched roofs are defined as exposed, straight-run roofs with a slope greater than 2:12. Slopes shall not exceed 4:12. Exposed pitched roofs must be clad in architectural grade metal with no exposed fasteners. In addition, exposed architectural roofing may have visible gutters and downspouts that are clearly detailed and articulated as part of the overall building design. All metalwork should meet Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) standards.

#### 4.4.3 CURVED ROOFS

Curved roof forms should be graceful, low arcs; barrel vaults (180-degree radius or semi-circular) are prohibited. Other than slope, all standards listed for shed roofs apply to curved roofs as well.

#### 4.4.4 ROOF SCREENING

All roof mounted mechanical systems and communications equipment that can be seen from public roadways should be screened from the public roadways in a manner architecturally consistent with the building as a whole. Screening shall be walls or louvers in material and finish matching or complimenting the roof (if shed or curved) or the façade material or color. Stacks, vents, or tanks that cannot be screened should be finished in approved materials and colors and be designed integrally with the architecture of the entire structure. Such items should be placed in an organized manner when visible.

## 5. Signage

The Airport's approach to signage is that it be used to support way finding, **not advertising**. At no time should a developer's design consultant or subcontractor display signage (free-standing signs, trailers, etc.) for advertising purposes. All signage found to be in violation shall be removed in 48 hours of notification. Signage is controlled and all installations within the Airport must be reviewed and approved by PLNG. Basic standards and guidelines have been established and additional standards or signage programs shall be established (and/or amended from time to time) for specific development districts (reference **Sections 6 – 10**).

### 5.1 Building Mounted Signage

Signage attached on the face of the buildings must be architecturally compatible with character of the building and surrounding development. These signs are allowed to support way finding; therefore, signs must be oriented to achieve maximum visibility from the public roadway and should be placed in a manner that compliments the architectural elements.

In general, signage shall be designed to complement the building it serves, as well as support the unifying character of the development. All sign types shall utilize an established material and color palette. Tenants of similar functions within the development shall sign consistently. All signs shall be designed as an integral part of the store front design, with letter size and location appropriately scaled and proportioned to the overall store front design. No LED or digital display signs will be allowed.

All signs, unless otherwise approved by PLNG, must provide a minimum of nine (9) feet above ground of clearance if located above a sidewalk, park or other pedestrian area.

#### 5.1.1 OCCUPANT IDENTIFICATION SIGNS

Occupant identification signage is meant to locate and identify the primary building tenant or a storefront tenant (reference **Exhibit 5-1**).

- All signage that includes trademarks or other branded logos shall be allowed, but they are still required to conform to regulations outlined below.
- One building identifier shall be permitted for each tenant having an exterior public entrance. Buildings with over 1M square feet may be permitted two signs per the discretion of PLNG and CD.
- The maximum span of the tenant's sign shall not exceed 75% of the store frontage width or 150 square feet, whichever is more restrictive.
- For multitenant industrial buildings, the maximum size of the sign shall not be more than 100 square feet. If multiple signs are proposed on a single store front their combined square footage shall not

exceed 150 square feet. Sign square footage shall be measured as a rectangle placed around the extreme edges of the sign or letters.

- For retail and mixed-use spaces, the copy height of each tenant's sign shall not exceed 24 inches in height.
- The information on the sign shall consist of the name and/or logo of the tenant in a font style of their choice.
- Mounting hardware shall be non-corrosive and concealed from public view.
- Exposed lamp tubing will be not permitted.
- Installation hardware and mountings should limit potential for nesting of birds.

#### Exhibit 5-1: Building Attached Occupant Signage



#### 5.1.2 BUILDING ADDRESS SIGNS

The building's address numbers shall be located at the main entry of the building where they are visible from the road in 24-inch high numbers (reference **Exhibit 5-2**). Additional address numbers may be installed on the building facing the roadway. Road names can be included in 18-inch high letters and may be required if frontage is not on the main road. It is at the discretion of DFW DPS to require additional signs be installed on the building for wayfinding purposes. Color of address numbers and letters must be in high contrast with building color.

LAND USE	FONT	NUMBER HEIGHT	LETTER HEIGHT
Industrial	Arial	24"	18"
Commercial / Mixed Use	Arial	18"	12"

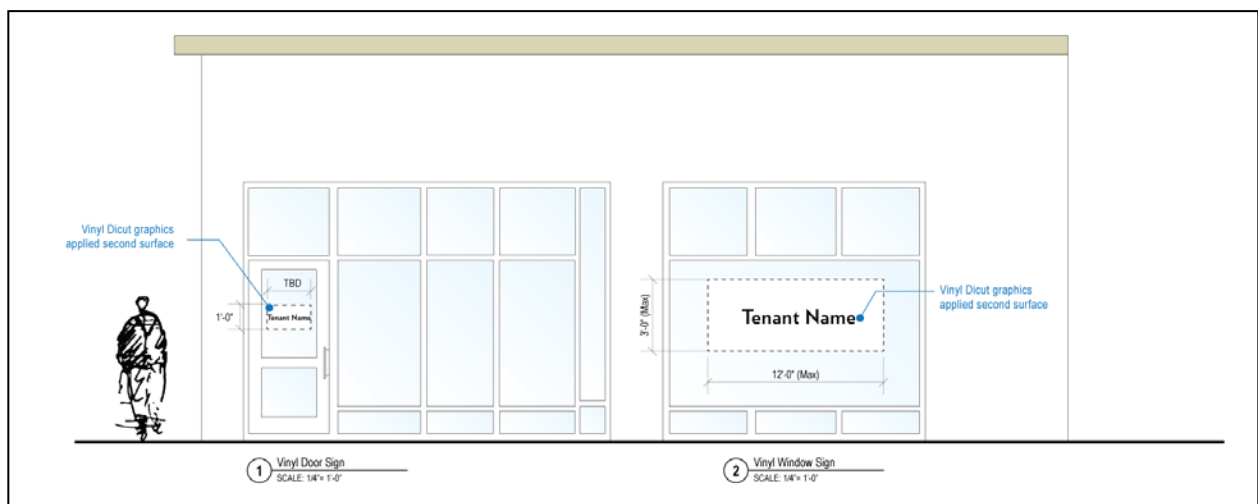


**Exhibit 5-2: Building Address Sign**

### 5.1.3 WINDOW SIGNS

Window signs are meant to allow for additional tenant signage but shall preserve a level of transparency (reference **Exhibit 5-3**).

- Decal application graphics shall be allowed on glass areas of store fronts, offices, and leasing areas.
- Applications shall be vinyl die-cuts applied directly to the glass with a copy height not to exceed three (3) feet.
- Total display area shall not exceed 144 inches wide.
- No temporary advertising placards, banners, pennants, trademarks or other descriptive material may be placed on the inside of the glass. The only exception is posted menus at restaurants.

**Exhibit 5-3: Window Signs**

#### 5.1.4 CANOPY SIGNS

Canopy signs allow for tenant signage that is treated as an architectural detail of a building. Generally, canopy signs shall be limited to major building entrances or major tenants only.

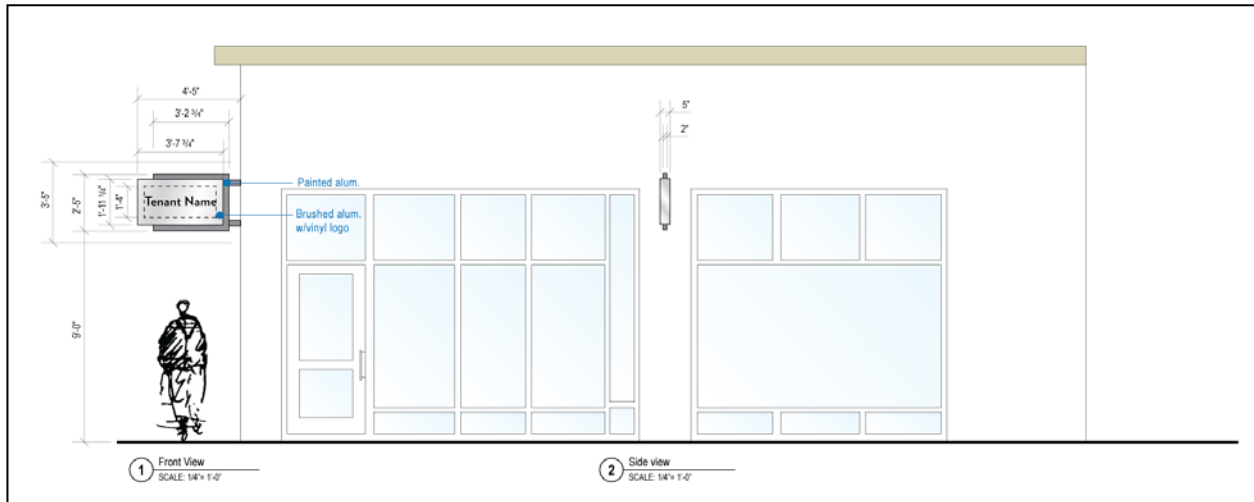
These signs are applied to, or attached to, an architectural canopy intended for weather protection or used as an architectural embellishment and projects from a wall over a door(s) and/or window(s). An engineer's seal is required at time of submittal.

- Canopies shall have lettering and graphics on or above the front panel of canopies over main entrances only.
- Canopies may be lighted from above with lighting affixed to the building. All lighting shall be shielded to prevent the light from shining directly into traffic, upper floor windows or pedestrians' eyes.
- Individual letters or graphics may be internally illuminated and glow either with a halo-illumination effect or glow through their front faces. No flashing lights, exposed raceways, conduits, or transformers are permitted.

#### 5.1.5 PROJECTING BLADE SIGNS

Projecting blade signs are meant to provide signage on a pedestrian scale. They shall be limited to uses only in areas of highest foot traffic in the Plaza Zone. Projecting blade signs are attached to and project out from a building face or wall more than 12 inches and generally project out at a right angle (reference **Exhibit 5-4**).

- Signs may project over sidewalks but shall have a clearance of at least nine (9) feet from grade.
- Support structures shall be made of metal and shall be engineered to support local wind loads.
- Individual letters, graphics or sign panels may be internally illuminated and glow with a halo-illumination effect or glow through their front face.
- Exposed conduits, raceways and transformers are prohibited.
- Indirect lighting shall be attached to the building or sign and must be shielded to prevent light from shining directly into traffic, upper floor windows or pedestrians' eyes.
- Blade signs cannot exceed nine (9) square feet in area, must be double sided and shall not exceed eight (8) inches in depth. Only one face of a sign shall be used to calculate size.

**Exhibit 5-4: Blade Signs**

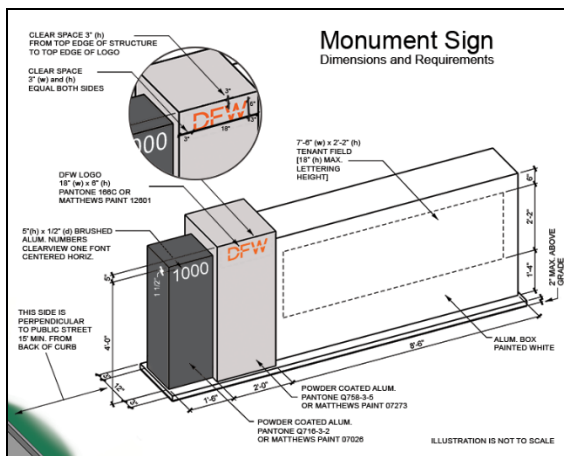
## 5.2 Free-Standing Signage

All tenant identification, directional, or informational signage not attached to the building shall comply with standards established.

### 5.2.1 FACILITY SIGNS – CORPORATE, OFFICE, INDUSTRIAL & WAREHOUSE

The Airport has established a standard building marker required for use throughout the Airport at appropriate facilities such as, but not necessarily limited to: corporate offices, flex-offices, and warehouses to identify the tenant(s) of the facility. The sign is two-sided, externally illuminated with ground mounted light fixtures (minimum two on each side), to achieve consistent illumination of the entire structure. The sign shall be installed in the landscaping buffer perpendicular to the public roadway (15 feet minimum from back-of-curb/edge of pavement measured from the public roadway). The design, size, shape and materials are standardized. The occupant(s) name and/or logo should be centered within the allowable tenant field. The building address numbers and Airport logo shall be located on the monument sign (reference **Exhibit 5-5**) and be the side nearest to the roadway. The monument signs shall be surrounded by an 36-inch minimum width planting bed of short native grass or ground cover that shall not obstruct the sign or illumination and is consistent with landscape requirements as found in **Section 3**.

**Exhibit 5-5: Template for Monument Sign and Example**



## 5.2.2 FACILITY SIGNS – RETAIL, HOSPITALITY & MIXED-USE

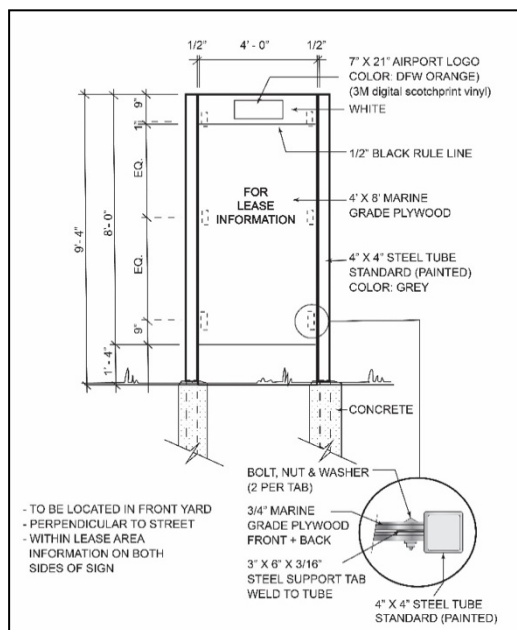
Signs for these land uses have special branding and public awareness needs but are expected to establish aesthetic controls. A signage system will be required that illustrates a consistency among the proposed individual sign structures (entry features, building markers, tenant storefront signs) and the architectural character of the development. District specific criteria may differ as outlined in **Sections 6 – 10**.

## 5.2.3 LEASE SIGNS

A standard sign design has been developed as a "For Lease" sign to be used to advertise available lease space (reference **Exhibit 5-6**). Layout of sign copy shall be submitted to PLNG and CD for review and approval. **Use of this sign is not for advertising the property management company, developers, or design consultants and contractors, and must be removed within 45 days of achieving 100% occupancy.** The surrounding land and sign should be properly kept and maintained in a neat and orderly presence until time of sign removal. The sign must not obstruct or block the view from any driveway. All structural support must be removed in addition to the sign, and any disturbed landscaping must be restored.

As space becomes available during the term of the lease agreement, the Tenant may install a new "For Lease" sign no more than 180 days prior to the end of the sublease term. The new sign must meet then applicable design criteria as may be in place at that time and submitted to both PLNG and CD for approval.

**Exhibit 5-6: Lease Sign Specifications**



## 5.2.4 SITE INFORMATION AND DIRECTIONAL SIGNAGE

On-site information or directional type signs provide wayfinding to pedestrians and drivers. They shall be consistent with the architectural character and color palette of the building and monument signage. The face shall extend to the ground in lieu of being mounted on posts. Secondary site directional signs shall be no taller than 48 inches and no wider than 38 inches. There shall be no more than one sign per driveway including the monument sign. Regulatory signs (stop, yield, accessible parking, etc.) are exceptions and shall comply with all applicable regulations. Typically, informational signs are located in the setback area between the sidewalk and building face and shall be located so as to not hinder pedestrian movement or block access to ground floor tenants. Final location of signage shall be approved by PLNG or CD. (reference **Exhibit 5-7**).

**Exhibit 5-7: Directional Signs**



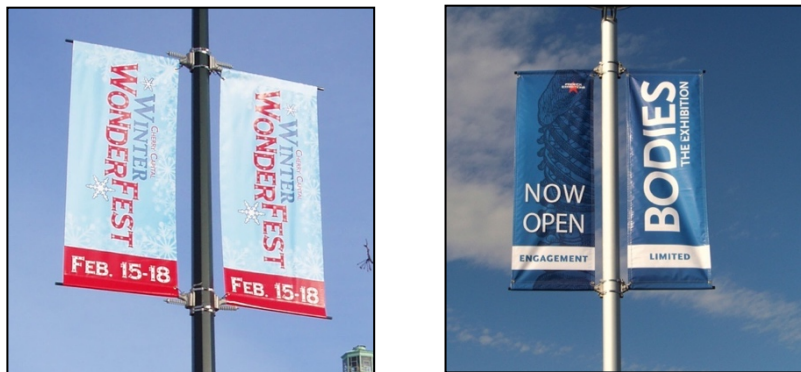


## 5.3 Temporary Signs

Temporary Advertising Signs are solely for relaying specific information regarding events at the development during a retail opening (reference **Exhibit 5-8**).

- Banners may be mounted to a vertical support, attached to a building or across a street.
- Banners which are mounted to a vertical support may be integrated onto internal street and pedestrian light poles.
- Banners may display artwork or a message that pertains to the zone regarding special events.
- Grand opening flags (plastic, multi-colored, triangular strands, etc.) are prohibited.
- Temporary signs should only be displayed for an approved duration of time no longer than one (1) year. Duration must be approved by PLNG prior to sign erection.

**Exhibit 5-8: Temporary Advertising Sign Example**



Temporary Construction signs used for wayfinding or relaying information during construction must be approved by PLNG or CD prior to being installed. The layout and language of the sign shall be submitted to PLNG or CD for review and approval. The maximum size of this type of sign shall be 48 inches wide by 96 inches tall and shall be mounted no more than 16 inches above the ground. The sign must not obstruct or block the view from any driveway. **Use of this sign is not for advertising the property management company, developers, or design consultants and contractors, and must be removed within 45 days of achieving substantial completion.** These signs should be properly kept and maintained in a neat and orderly presence until time of removal. All structural supports must be removed in addition to the sign, and any disturbed landscaping must be restored. Only one sign shall be allowed adjacent to the public roadway unless otherwise approved by PLNG or CD.

## 6. Appendix A: Founders' Plaza

### District Specific Criteria

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#### 6.1 Founders' Plaza Additional Site Criteria

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##### 6.1.1 SENSE OF PLACE

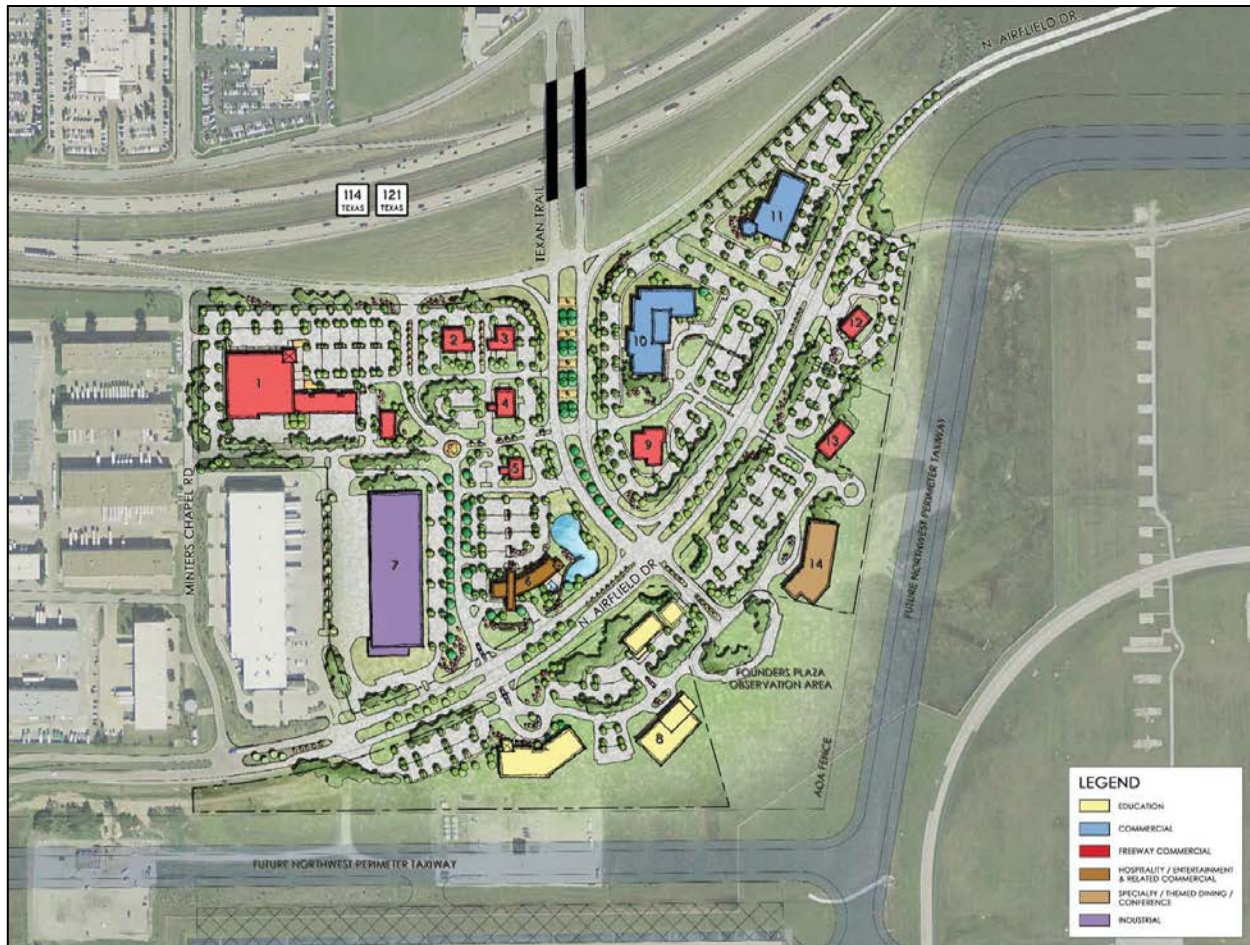
##### 6.1.1.1 Character – Natural and Man-Made

The site design strategy is three-fold, incorporating the site, buildings, and transportation. The strategy includes:

- Creation of destination, identity and urban environment.
- Creation of buildings that meet the mix of uses as laid out in the Founders' Plaza Master Plan.
- Flexibility and adaptability to absorb changes of use and technology.
- Creation of an inclusive environment that caters to convenience and long-term users.
- Creation of buildings and environments that enable the tenants, traveling public and citizens to achieve a positive experience at the development.
- Careful orientation of buildings, considering the relationship of each with the external environment and maximizing the views, use of natural daylight and ventilation.
- Strategically locating parking to allow for convenient access, but also limiting its impact upon open spaces.
- Integration with technology to achieve efficiency.

Founders' Plaza shall be laid out in a structured manner that will not only provide automobile access but provide safe pedestrian connectivity as well. **Exhibit 6-1** Founders' Plaza Conceptual Master Plan illustrates how the different parcels could be populated with buildings, parking, and green spaces.

### Exhibit 6-1: Founders' Plaza Conceptual Master Plan



## 6.1.2 RELATIONSHIP TO THE STREET

### 6.1.2.1 Special Landscape Corridor

A dedicated space for a DFW Sign / Monument will be provided at the southwest & southeast corners of Texan Trail and the S.H. 114 service road to accommodate Entry Elements such as signage, monuments, etc. (to be provided by DFW Airport). These special landscape corridors will be approximately 20 feet from the TxDOT ROW to the tenant leaseline (specific layout to be established by DFW PLNG) creating an extra-large landscaping corridor. These special corridors will be non-leased land area but will be maintained by the tenant occupying each corner site.

### 6.1.2.2 Site and Paving Minimum Setbacks

All buildings and paving within the Founders' Plaza development shall be constructed within the existing setback designations off the S.H. 114 service road, Texan Trail and North Airfield Drive. No encroachments are allowed

within these setbacks. Building setbacks will be measured at 55 feet from the lease line and paving setbacks are set at 15 feet from the lease line (reference **Exhibit 2-2**).

### 6.1.2.3 Building Setbacks

The minimum setbacks for all buildings are measured from the back of the curb. Each street type has a corresponding setback (reference **Section 6.1.4** for Street and Open Space Standards details and **Exhibit 2-2** for Typical setback Conditions).

### 6.1.2.4 Space Between Buildings

Areas between buildings are set to ensure visual continuity and access. **Tables 6-1** and **6-2** outlines the allowable dimensions.

**Table 6-1: Setbacks**

ELEMENT MINIMUM SETBACK REQUIRED	FRONT YARD	SIDE YARD	REAR YARD
Paving (parking area)	15 feet	10 feet	10 feet
Building	55 feet	30 feet	30 feet
Fence	10 feet	10 feet	10 feet
Special Landscape Corridor (Texan Trail and SH 114)	20 feet	20 feet	N/A

Additional setbacks may be established for master planned developments to address internal circulation or special needs.

**Table 6-2: Plaza Setbacks**

PLAZA SETBACK	BUILDING SEPARATION	THRESHOLD
Frontage	40 feet	minimum

## 6.1.3 PAVED SURFACES

### 6.1.3.1 Parking

Refer to **Section 2.3.1**.

#### 6.1.4 STREET AND OPEN SPACE STANDARDS

The Founders' Plaza parcels are intended to create simple perimeter blocks with buildings organized prominently along important streets and the observation plaza area. The objective is to create a balanced street framework that supports a range of mixed land uses and encourages pedestrian activity internally while providing straight forward circulation options at the periphery. The key design features for all areas of the site include:

- Continuity of sidewalks along Texan Trail from Grapevine into Founders' Plaza Observation Area.
- Crosswalk demarcation at street intersections.
- Utilities placed in setback areas between the roadway corridor and the building face.

##### 6.1.4.1 Street Type Specifications

The establishment of a street framework that provides ease of access and circulation will be established by the Airport. The key transport objectives are to:

- Ensure compliance with national and local planning and transport policies.
- Facilitate internal movement within the development.
- Provide high-quality access and circulation for DFW customers, automobiles and pedestrians to and within the site.
- Minimize the traffic impacts on the surrounding road network and in particular, ensure that public transport is not delayed.

##### 6.1.4.2 Street Type General Requirements

The general requirements for all street types provide consistency in design and application while providing appropriate access and circulation. The following requirements focus specifically on the pedestrian environment.

- **Openings and Curb Cuts:** All new curb cuts providing off-site access must first be approved by PLNG and CD and shall be constructed at the cost of the Tenants requesting the cut. In order to provide visual continuity, pavement to be cut shall match the existing pavement as closely as possible.
- **Sidewalks:** Continuous sidewalks are required along Texan Trail and required to provide safe circulation from parking areas to/from buildings and must be complete prior to building occupancy. Texas Accessibility Standards (TAS) and American Disabilities Act (ADA) standards must be met.
- **Required Paving Bands:** Dual, parallel 8-foot wide bands of stamped, colored concrete, separated by two feet, which aligns with the leaseline and projects out, shall be provided across circulation roads as directed by PLNG to create an entry feature into the development from the public roadway. The color shall be charcoal gray with a slate texture in a 2-foot by 2-foot grid pattern (reference **Exhibit 2-7**).

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## 6.2 Founders' Plaza Additional Landscape Criteria

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The landscape design of Founders' Plaza should align with the goals of this individual development. The roadway frontage areas should focus upon a softer palette of landscape materials, utilizing natural groupings, landscape berms and other design elements that relate to auto-focused development. Important to these areas is reducing the size and scale of parking lots through the use of trees, shrubs and seasonal flowers.

The Retail and Plaza areas should be designed to create a balance between automobile and pedestrian uses. A focus on creating an active street front that utilizes an order landscape is appropriate. Additionally, the retail and plaza areas central features will be to optimize views to the airfield and observation plaza areas. These open spaces will make up the heart of the Founders' Plaza development and should be designed to accommodate a variety of activities.

### 6.2.1 DESIGN REQUIREMENTS

#### 6.2.1.1 Landscaping Buffer

Refer to **Section 3.1.4**.

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## 6.3 Founders' Plaza Additional Architectural Criteria

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### 6.3.1 MATERIALS

**NOTE:** In Founders' Plaza, native limestone is used as a unifying element for the development. It should be used as an accent material in either the building architecture or as a part of the landscaping and should be applied in the visual plane of either application between a height of no more than four (4) feet (reference **Exhibit 6-3**).

**Exhibit 6-3: Native Limestone Accent**





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## 6.4 Founders' Plaza Additional Signage Criteria

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### 6.4.1 FREE-STANDING SIGNAGE

#### 6.4.1.1 Facility Signs – Retail, Hospitality and Mixed-Use

Individual signs for free-standing (parcel) buildings are required to utilize a standard sign structure, 30' maximum height, which uses materials and design features that relate to the directory structures for the development and shall support the unifying character of the development. All sign types shall contain similar design features so that they create a sign family.

Gas Station Pole signs may be conditionally approved by PLNG and Code Compliance on a case by case basis and are subject to height restrictions enforced by FAA Part 77 and the Joint Airport Zoning Board Ordinance 71-100 (JAZBO).

## 7. Appendix B: International Commerce Park

### District Specific Criteria

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#### 7.1 International Commerce Park Additional Site Criteria

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##### 7.1.1 PAVED SURFACES

##### 7.1.1.1 Loading, Maneuvering and Trailer Storage Areas

The expected on-site presence of transport trucks and trailers, bulk deliveries, waste handling, fuel trucks and other large service vehicles which require large maneuvering and parking areas shall mandate the adequate design of paved areas to enable the on-site handling of these functions without the use of public streets. Such areas shall be located and screened to conform to the following guidelines.

- Sites adjacent to any median-divided streets or highways in the public ROW:
  - No loading or maneuvering area shall be allowed in front-facing ROWs and all such areas shall be located at the side or rear of the facility. In those cases where the area is placed to the side, such areas shall be screened with a landscape screen or permanent wall.
  - No loading door shall be closer than 100 feet to the nearest ROW line.
- Sites adjacent to non-divided streets in the public ROW – loading and maneuvering (reference **Exhibit 7-1**) areas shall be allowed on all sides of a building with the following provisions:
  - All such areas fronting on any roadway shall be screened per **Section 2.2.3**.
  - No loading door shall be closer than 100 feet from the building setbacks of the site.

**Exhibit 7-1: Maneuvering Areas**

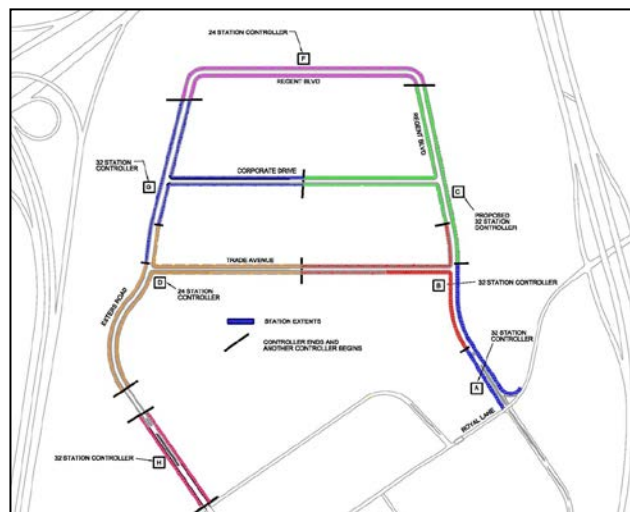
## 7.2 International Commerce Park Additional Landscape Criteria

### 7.2.1 DESIGN REQUIREMENTS

#### 7.2.1.1 Landscaping Corridor

At “T” intersections an enhanced pocket park consisting of accent plants, limestone blocks and black basalt gravel shall be provided.

### 7.2.2 IRRIGATION

**Exhibit 7-2: ICP Irrigation Zone Master Plan**

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## 7.3 International Commerce Park Additional Architectural Criteria

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### 7.3.1 MATERIALS

#### 7.3.1.1 Brick

- Brick shall be modular, clay-fired units meeting or exceeding industry standards for quality including but not limited to: ASTM-C216-87 and ASTM C90.
- Texture/style: uniform-face texture such as wire-cut or smooth. "Antique" style brick is prohibited.
- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as sand, cream, and buff. Examples include: Acme #105, #107 and #114. Brick shall be relatively uniform in color rather than varied "blends".
- Mortar color shall complement the brick color.

#### 7.3.1.2 Concrete Masonry Units (CMU)

- CMU shall be modular units meeting or exceeding industry standards for quality including, but not limited to: ASTM-C129 and/or ASTM C90.
- Texture/style: uniform face texture such as smooth, burnished, split, scored, ribbed, or ground-face.
- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as warm gray and buff. Examples include: Featherlite "Limestone" and "Saddle Tan".

#### 7.3.1.3 Stone Veneer

- Size: cut stone veneer shall be sized as appropriate for the type of stone and the method of installation. Stone exceeding 2-inch thickness may be set using mortar and anchored to structure when the system is designed to conform to recognized industry standards for installation and height. Thinner stone or taller applications shall be supported by a building structure engineered in accordance with the highest standards. Stone may be set on facades using adhesive methods.
- Lueders, Shellstone, Cedar Hill Cream or Hadrian. Other warm-toned natural stones such as sandstone and granite.
- Finishes: may consist of polished, flamed, honed, filled or unfilled.
- Stone pieces shall be cut modules and installed in a regular grid pattern.

#### 7.3.1.4 Stucco

- Cement based 3-coat system on metal lath over appropriate substrate. Control joints and reveals shall be extruded aluminum.
- The top color coat may be colored cement or an acrylic product such as STO finish.

#### 7.3.1.5 Concrete (vertical surfaces)

- Exterior concrete wall surfaces shall be textured (i.e., form liner), sandblast, water blast or exposed aggregate, painted or stained.

#### 7.3.1.6 Glass and Frames

- Vision glass shall be warm toned, gray or black; colored tints or coatings (i.e., blue, green) are prohibited.
- Highly reflective glass is prohibited.
- Examples of acceptable types include PPG Solarbronze and Viracon Bronze.

#### 7.3.1.7 Hardscape

- Sidewalks and pedestrian paving at the main visitors' entry(s) shall be sandblasted concrete, exposed aggregate, pavers, stamped concrete, stone or other such materials, with a gridded joint pattern no larger than 30 inches.

#### 7.3.1.8 Wood

- Wood is not an acceptable exterior building material or finish unless allowed by site specific development criteria issued or approved by the Airport.

#### 7.3.1.9 Fencing

- All fencing shall be painted architectural metal, masonry, precast or poured in place concrete, and shall comply with the other criteria of the section.
- Wood or plastic fencing is prohibited.
- Any fence type construction shall be mounted on a continuous mow strip of concrete extending 12 inches each side of the fence.
- If fencing is proposed to screen material or equipment the fence must be 100% screened by landscaping or fabric mesh. If fabric mesh is used then it shall be black, no logos, and installed on the inside of the fence and secured every 12 inches unless otherwise approved by CD.

#### 7.3.1.10 Retaining Walls

- Retaining walls may be constructed of sand-blasted and rusticated joint concrete, concrete masonry unit systems or stone.

#### 7.3.1.11 Metal Panel Systems

- All metal panels shall be fully engineered architectural quality systems. Fasteners shall be either fully concealed or integrated into the panel design on any panels exposed to view. Panel systems shall be designed for uniformity and flatness. Corrugated or metal siding is not acceptable.
- Material standards:
  - Steel: G-90 (1.25 oz.) hot-dipped galvanized, ASTM A924 and ASTM A653.
  - Stainless steel: Type 304 AISI architectural grade alloy

- Aluminum: Alloy 3003
- Finishes shall be a factory applied and warrantied system, paint coating shall consist of a minimum of 70% Kynar or Hylar resin no less than 0.8 mil thickness over a compatible primer. Anodized finishes may range from clear to dark bronze.
- “Galvalume” steel shall be hot-dip coated with aluminum-zinc alloy.
- Profiles/textures: smooth, embossed or ribbed. Examples include: Centria “Formawall”, “Versapanel” or “Super Rib”.
- Colors: Galvalume, stainless steel or colors as listed in **Section 4.2**.
- Minimum panel articulation dimension shall be 18-inches.

#### 7.3.1.12 Architectural Metal Roofing

- Acceptable architectural roofing materials are aluminum, steel or copper. Roofing shall be installed over continuous substrate. Acceptable finishes:
  - Steel or aluminum: galvalume, zincalume or a factory applied baked on paint system such as silicone modified polyester (SMP) or polyvinylidene fluoride (PVF2) in approved color as listed in **Section 4.2**.
  - Copper or aluminum: natural

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## 7.4 International Commerce Park Additional Signage Criteria

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### 7.4.1 BUILDING MOUNTED SIGNAGE

#### 7.4.1.1 Attached Occupant Identification Signs

The primary building occupant shall be allowed to install one of their identification signs on the face of the building (reference **Exhibit 7-3**) following these guidelines and with the approval of PLNG:

- Secondary or multi-occupant building mounted signage may not exceed 1-foot 6-inches in height.
- The sign area may not exceed 20 square feet, measured as a rectangle placed around the extreme edges of the sign or letters.
- Building tenants shall be consistently signed.

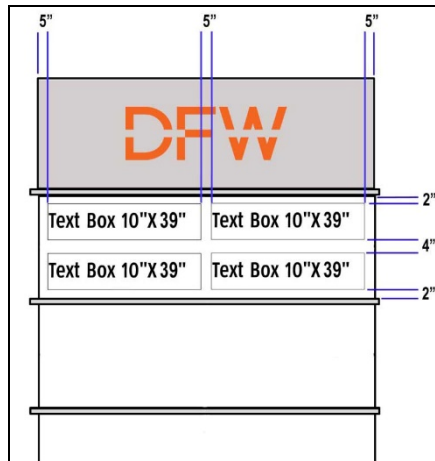


**Exhibit 7-3: Attached Occupant Sign Example****7.4.2 FREE-STANDING SIGNAGE**

All tenant identification, directional, or informational signage not attached to the building shall comply with established standards.

**7.4.2.1 Tenant Monument Signs**

- An entrance sign is located at the intersection of Royal Ln and Regent Blvd. Business names can be installed on the outside face. One business name listing is allowed for each separate ground leaseholder in ICP. Name Placement shall be on a first come first serve basis (reference **Exhibit 7-4**).
- It shall be the responsibility of the business representative to contact PLNG for approval. Shop drawings shall be required for review and approval by PLNG staff prior to name installation.
- Business names shall start on top panel row with others to follow underneath with no empty rows between names. A maximum of 4 names per panel.
- Text size shall be accommodated to fit within the provided 10-inch by 39-inch text panel, centered with 5-inch right & left margins with a 5-inch spacing between tenant names on same row and 2-inch top & bottom margins with a 4-inch spacing between tenant names on subsequent rows (reference **Exhibit 7-4**). Letters shall be black 3M vinyl and font shall be ClearviewHwy-2B, upper and lower case. Logos may be used but must fit within the same 10-inch by 39-inch panel and may only be black and white 3M vinyl.

**Exhibit 7-4: Tenant Monument Signage****7.4.2.2 Lease Signs**

Use of lease signs shall only be permitted when a minimum of 10 percent of the leasable building area is currently available for lease or 20 percent will be available within 6 months.

## 8. Appendix C: Passport Business Park East

### District Specific Criteria

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#### 8.1 Background

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Passport Business Park (PBP) is a development district located at the south end of the Airport (reference **Exhibit 1-1**) and has been identified as a 598-acre master-planned, mixed-use development with a combination of office, research, industrial, hospitality, restaurant, and specialized retail uses. The portion of PBP east of the proposed north-south spine road will be developed for industrial uses and referred to as Passport Business Park East. The wide variety of proposed uses will service a wide range of Airport patrons, rental car customers, and the surrounding business communities.

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#### 8.2 Passport Business Park East Additional Site Criteria

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##### 8.2.1 SENSE OF PLACE

##### 8.2.1.1 Character – Natural and man-made

A dominant aspect of maintaining this natural character shall be the proactive preservation and enhancement of the existing forested buffer along the freeway frontage of Passport Business Park. To this end, the preservation of existing plant specimens or groupings is encouraged for each development and, where removal is necessary, mitigation shall occur in the form of replacement tree plantings in the forested buffer area. Refer to **Section 3** and PLNG for more information.

To minimize mass grading to the greatest extent practicable, site development design shall utilize accepted sustainable site planning practices to fit development into existing topography wherever possible, and to limit the area of disturbance to the smallest area needed to meet design goals while maximizing the extent of site preservation of canopy cover and natural topography.

The maintenance of natural site drainage implies that the runoff from a site will continue to flow onto an adjoining site, though the quantities may be increased by the placement of hard, impervious surfaces and decreased by obstacles such as buildings and curbs. The alteration of natural drainage, either in direction, quantity, or velocity, shall be considered by qualified licensed professional engineers. Accommodations to control the effect of drainage onto adjacent sites shall be an inherent activity in the site planning process and shall be evidenced by the inclusion of such consideration in the construction documents, specifications, and site details. In addition, the effluent from such natural drainage shall not be directed through garbage and trash areas, storage areas of any kind, or in a manner that focuses an erosive flow onto an adjacent property.

## 8.2.2 RELATIONSHIP TO STREET

PLNG and CD have identified the importance of the drive-up appeal and view of PBP East, and place great emphasis on creating a desirable streetscape (reference **Exhibit 8-1**).

### 8.2.2.1 Build-To Lines; Setbacks; Rights-Of-Way; and Landscape Areas

The intersection of two roadways requires specific design elements. Reference **Exhibit 8-2** for typical roadway sections of major spine roads, indicating utility corridors, landscape zones, and vehicular zones.

The Lease Line along Valley View Lane aligns with the Airport's Property line at this location. The setback is established from the road by an approximate 20-foot section of the City of Irving's right-of-way, extending from the Airport property line to back-of-curb along Valley View Lane. The pavement setback inside the Lease Line shall accommodate the Airport's public utilities and the existing Atmos gas line. Pavement setback requirements will vary based upon finished grade elevation above the gas line.

The Lease Line along Rental Car Drive is established by the following setback: an approximately 40-foot section of the Airport/ Rental Car Drive right-of-way between Rental Car Drive's curb and the Tenant's Lease Line (Landscape Corridor).

The Lease Line along Highway 183 is established by the following setback: an approximately 60-foot, variable-width right-of-way between Highway 183 and the Tenant Lease Line/Airport Property Line. Since the Tenant Lease Line and the Airport Property Line overlap at this location, there will be no applicable Landscape Corridor responsibilities.

## Exhibit 8-1: PBP East Site Road Layout

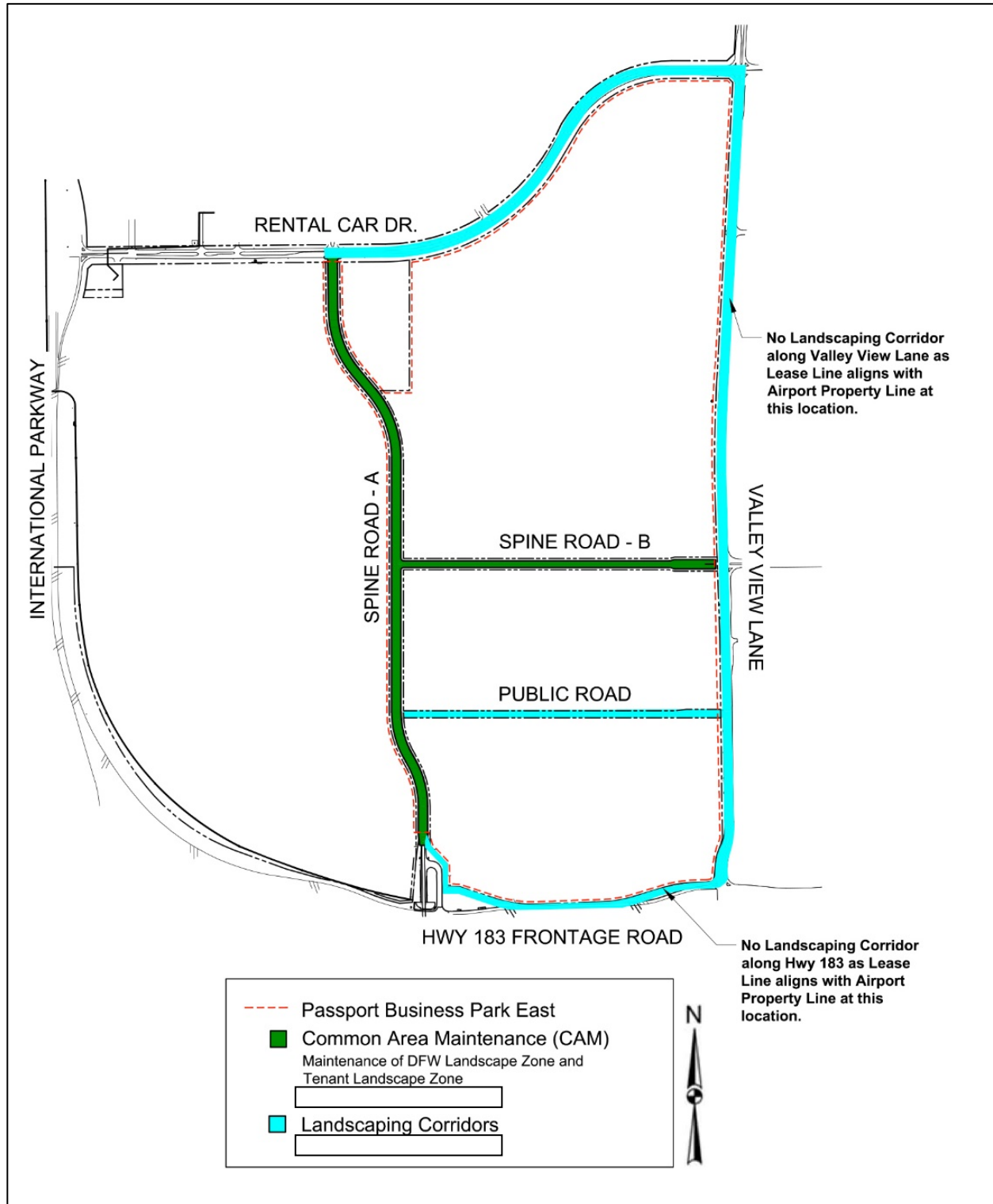
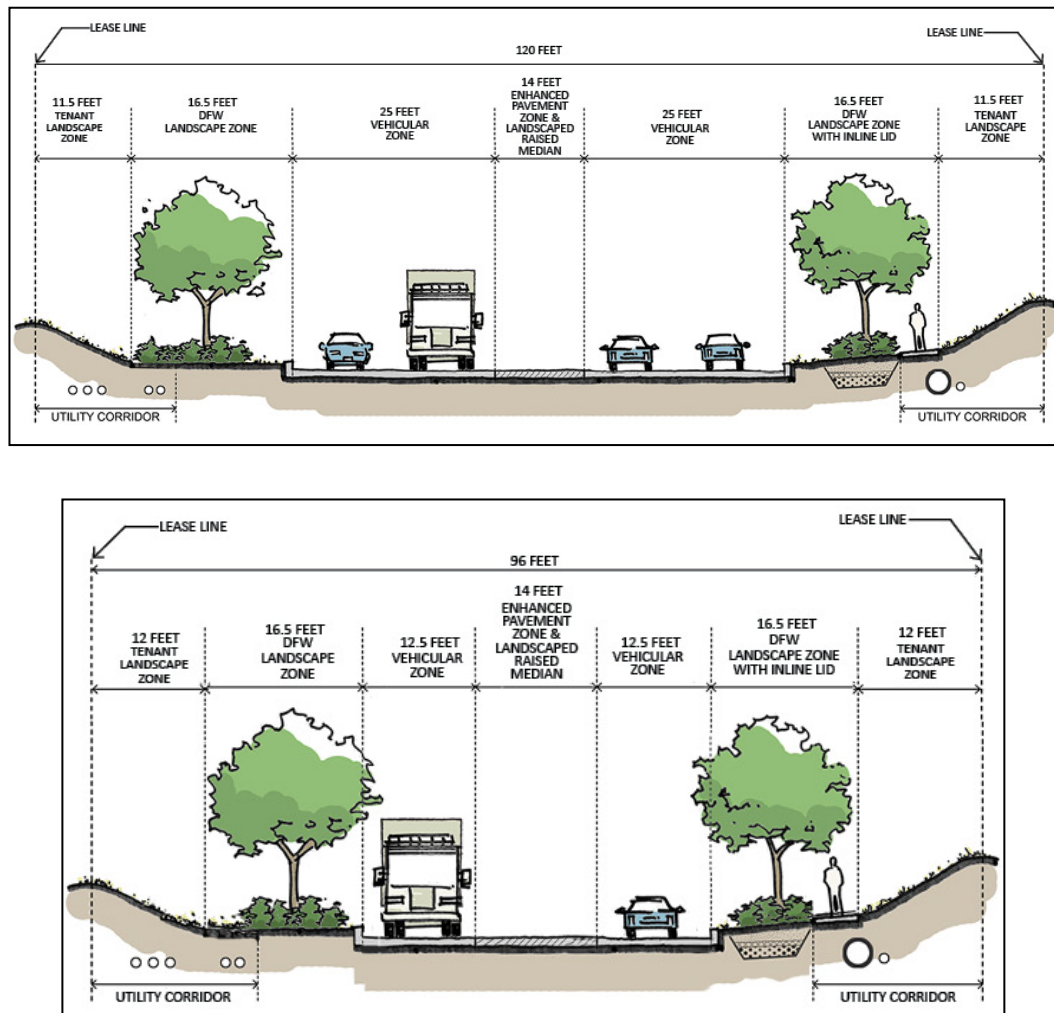


Exhibit 8-2: Typical Spine Road Sections A and B



### 8.2.2.2 Setbacks in Relation to Internal Roads

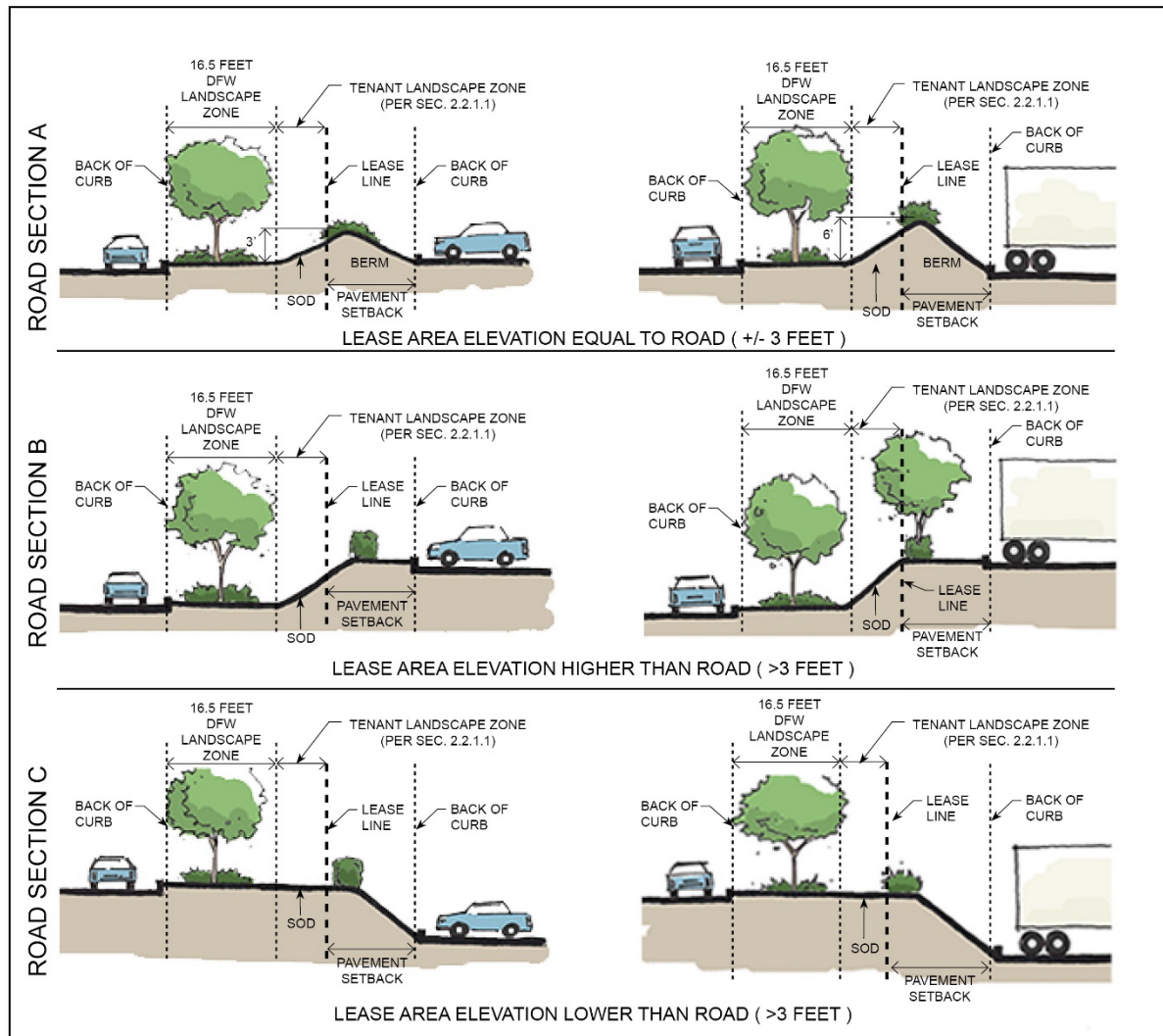
Development elements permitted in the setbacks include driveways, sidewalks, pedestrian plazas, underground utilities, screening walls, fencing, sub-surface structures, and retaining walls integral to landscape design or intended for site-contour engineering and signage.

The landscape zone is an area within the setback dedicated to plantings and other landscape materials intended to improve aesthetic appeal, screen visual nuisances; or for environmental purposes such as stormwater collection, noise abatement, or increasing shade effects. The landscape zone is further divided into a Tenant Landscape Zone and DFW Landscape Zone:



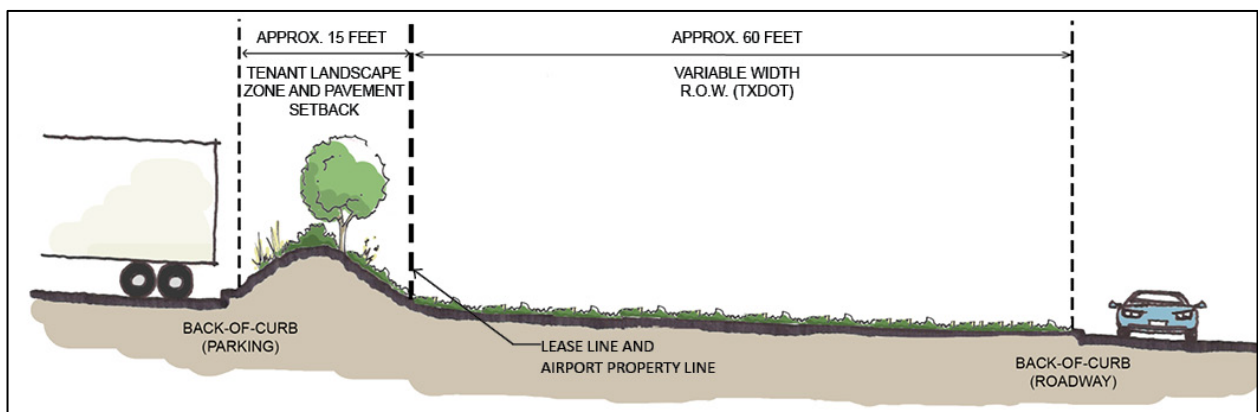
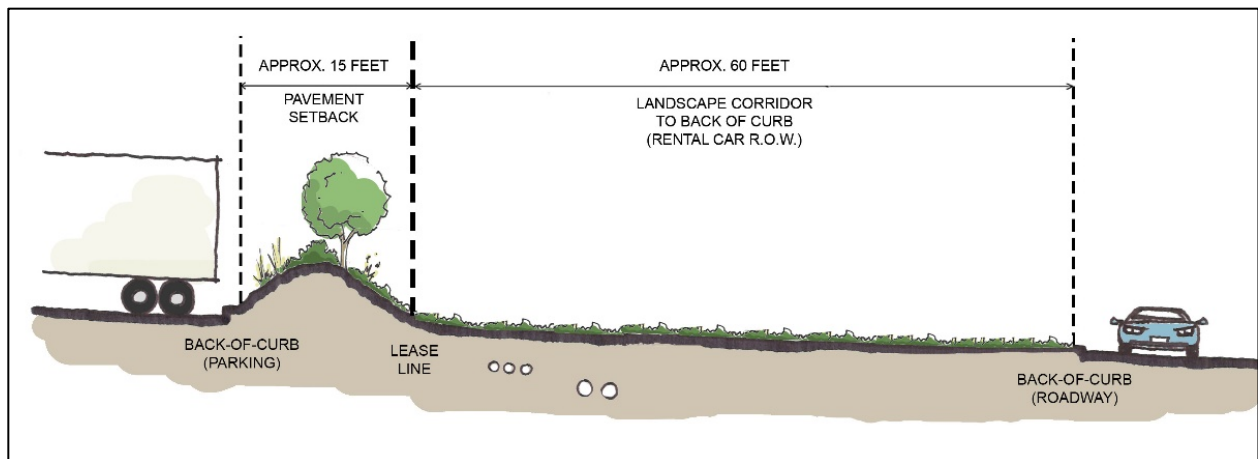
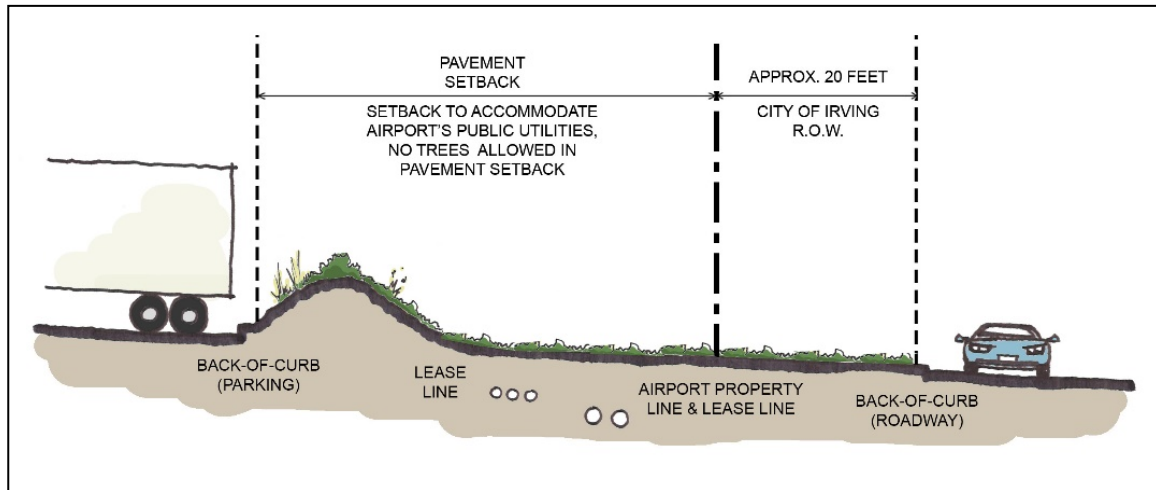
- **DFW Landscape Zone:** This area represents the area immediately adjacent to the spine road pavements as shown in **Exhibit 8-2**, on any medians along these roads, and at designated landscape and signage areas at entrances to Passport Business Park East. It is situated outside the Tenant's lease premise. Landscape, hardscape, and irrigation for this zone will be installed and maintained by the Airport at its expense. Costs associated with such maintenance of the Airport Landscape Zone will be recovered by the Airport from Passport Business Park East tenants through the Common Area Maintenance (CAM) charges established in the tenant Lease Agreement with the Airport.
- **Tenant Landscape Zone:** This area adjoins the DFW Landscape Zone along Spine roads A and B, as shown in **Exhibit 8-2**. It is situated outside the Tenant's lease line. Treatments proposed for this area could vary depending on the final grade elevation of the lease premise (reference **Exhibit 8-3**); consequently, grading and landscape treatments in this area will be installed by the Tenant at its expense. However, landscape, hardscape, and irrigation for this zone will be maintained by the Airport at its expense. Costs associated with such maintenance of the Tenant Landscape Zone will be recovered by the Airport from Passport Business Park East tenants through the Common Area Maintenance (CAM) charges established in the tenant Lease Agreement with the Airport. Any pre-existing irrigation works installed in this zone by the Airport which are subsequently removed or modified by the Tenant during its own construction shall be restored or reconfigured by the Tenant to match the original treatment intended for the area, per **Exhibit 8-3**.
- **Landscaping Corridor:** The Landscaping Corridor represents either (1) the area between the Lease Line and the back of curb or edge of pavement of any adjacent road or street, excluding Spine Roads A and B, or (2) the area between the Lease Line and the Airport's Property Line (whichever is located closest to the Lease Line). By this definition, the Tenant may be required to include a Landscaping Corridor if its lease premise has frontage along Rental Car Drive and any other public road internal to Passport Business Park East, excluding Spine Roads A and B. There will be no Landscaping Corridor along Valley View Lane and SH 183, as the Lease Line coincides with the Airport Property Line at these locations. Landscape, hardscape, and irrigation for this area will be installed and maintained by the Tenant at its expense.

### Exhibit 8-3: Appropriate Screening for Car Parking and Truck Court Areas Facing Spine Roads



#### 8.2.2.3 Screening

Required screening heights shall be met upon issuance of a certificate of occupancy. No allowance will be made for a vegetated berm that does not meet required screening height due to immature plant growth. For developments located along Valley View Lane, Rental Car Drive, and the Highway 183 frontage road, screening elements shall be aligned with anticipated utility rights-of-way and Landscape Corridors, with the goal of providing consistent visual buffering along the entire development site (reference **Exhibit 8-4**).

**Exhibit 8-4: Screening and Setbacks for Exterior Public Roads**

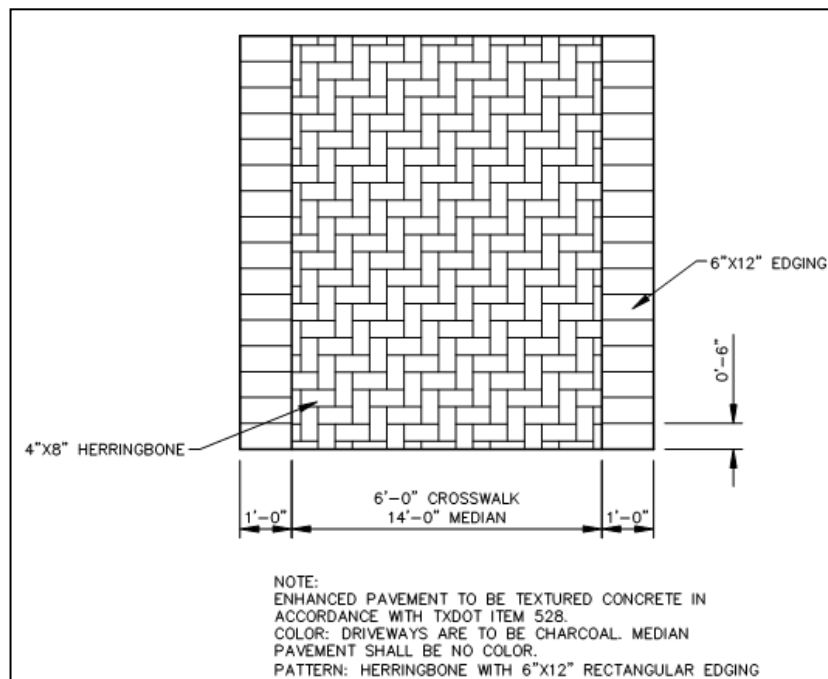
Landscape berms shall be utilized to screen parking areas from the street, as well as from adjacent property. Berms shall combine shaped, earthen mounds with vegetation to provide an overall screening height of 8 to 10 feet for large truck court parking areas, and 3 to 4 feet for standard vehicular parking lots. The maximum slope of landscape berms should not exceed 4:1 in order to accommodate mowers, maintain stability, and avoid erosion. Berms should utilize a diverse palette of materials to achieve a varied aesthetic, which could include turf grasses, groundcovers, shrubs, trees, decorative boulders, or gravel mulch.

## 8.2.3 PAVED SURFACES

### 8.2.3.1 Materials

PLNG has established the requirement for an 8-foot-wide band of stamped, colored concrete across all tenant driveways, located inside the lease line and aligned with the streetscape. The color shall be “charcoal grey” with a slate texture in a 4-inch by 8-inch herringbone pattern, and a 6-inch by 12-inch rectangular edging (reference **Exhibit 8-5**).

**Exhibit 8-5: Tenant Driveway Enhanced Pavement**



### 8.2.3.2 Loading, Maneuvering and Trailer Storage Areas

The expected on-site presence of transport trucks and trailers, bulk deliveries, waste handling, fuel trucks and other large service vehicles which require large maneuvering and parking areas shall mandate the adequate design of paved areas to enable the on-site handling of these functions without the use of public

streets (reference **Exhibit 8-6**). Such areas shall be located and screened to conform to the following guidelines.

- Sites adjacent to any median-divided streets or highways in the public ROW:
  - No loading or maneuvering area shall be allowed in front-facing ROWs and all such areas shall be located at the side or rear of the facility. In those cases where the area is placed to the side, such areas shall be screened with a landscape screen or permanent wall.
  - No loading door shall be closer than 100 feet to the nearest ROW line.
- Sites adjacent to non-divided streets in the public ROW: Loading and maneuvering areas shall be allowed on all sides of a building with the following provisions:
  - All such areas fronting on any roadway shall be screened per **Section 2.2.3**.
  - No loading door shall be closer than 100 feet from the building setbacks of the site.

#### Exhibit 8-6: Maneuvering Areas



## 8.2.4 SITE LIGHTING

### 8.2.4.1 Landscape Lighting

Landscape illumination is encouraged in large setbacks and open spaces where street and pedestrian lighting is inadequate. Proper lighting is intended to provide clarity of vehicular and pedestrian movement and articulate building design without needlessly lighting adjacent sites.

- Lighting may include string lighting in trees or up-lighting in a tree lawn/grate or planting bed. Up-lighting of street trees, parking island trees, and important landscape areas at project entries is encouraged.
- Up-lighting shall be waterproof and directional.

- Up-lighting shall use 45-degree cut-off fixtures that shield the light source from passing vehicles and pedestrians.

#### 8.2.4.2 Street Lighting

All proposed lighting fixtures and lighting plans shall be subject to PLNG approval for suitability and consistency with the broader design context of a particular development site.

A lighting photometric drawing shall be submitted depicting the design layout and the foot candle lighting levels on the site. All lighting shall achieve a minimum average level of 3-foot candles.

#### Exhibit 8-7: Streetscape and Pedestrian Complementary Lighting



## 8.3 Passport Business Park East Additional Landscape Criteria

### 8.3.1 DESIGN REQUIREMENTS

#### 8.3.1.1 Landscaping Corridor

Spine Roads A and B shall act as a template for design of all Landscaping Corridors internal to Passport Business Park East. This template provides a design framework based on 20 canopy trees per 400 feet of road frontage located inside the lease line (reference **Section 8.2.2.2** for setbacks for street-side landscape areas). In addition to canopy trees, each 400-foot segment shall devote 10 percent of its setback area to flowering ornamental trees planted on 12-foot centers, 10 percent to shrubs planted on 3-foot centers, and 20 percent to wildflowers and turf grass (reference **Table 8-1** for example plant calculations).

Depending on the location of the development site, the template may be applicable. The Tenant may also be required to include a Landscaping Corridor if its Lease Premise has frontage along Rental Car Drive. There will

be no Landscaping Corridor along Valley View Lane and SH 183, as the Lease Line coincides with the Airport Property Line at these locations. Due to the presence of a high-pressure Atmos gas line, planting of trees is prohibited in the pavement setback for Valley View Lane. For Landscaping Corridors required along exterior roads, the Tenant requirements for plantings outside the 15-foot pavement setback are limited to installation and maintenance of turf grass.

**Table 8-1: Landscaping Within Front, Back, and Side Pavement Setbacks (for Exterior Public Roads)**

ELEMENT	AREA	SPACING (FT)	PLANT QTY. <sup>1</sup>
Shade Canopy Trees	N/A	20	20
Flowering Ornamental Trees	600 SF (10%)	12	10 ±
Evergreen Shrubs & Ornamental Grasses	600 SF (10%)	3	70 ±
Wildflowers & Turf Grasses	1,200 SF (20%)	Full Cover	N/A

NOTES:

1. The quantities shown above are based on a 15-foot wide landscaping template for every 400-foot segment of exterior, public road frontage located inside the lease line.

## 8.3.2 LANDSCAPE GRADING AND DRAINAGE

### 8.3.2.1 Passport Business Park Drainage Plan

A site development drainage master plan associated with Passport Business Park has been developed. This master plan defines detention requirements for the proposed development area. The detention requirements were developed by comparing pre-and post-project conditions for the 1-year, 25-year, and 100-year storm events as outlined in the ISWM Criteria Manual, 2015. Existing 100-year floodplain inundation limits for three minor tributaries within the PBP development were defined.

Please reference the [Passport Park Master Drainage Plan](#) for more information prior to submitting a Plan of Development (POD).

## 8.4 Passport Business Park East Additional Architectural Criteria

### 8.4.1 MATERIALS

#### 8.4.1.1 Brick

- Brick shall be modular, clay-fired units meeting or exceeding industry standards for quality including but not limited to: ASTM-C216-87 and ASTM C90.
- Texture/style: uniform-face texture such as wire-cut or smooth. "Antique" style brick is prohibited.



- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as sand, cream, and buff. Examples include: Acme #105, #107 and #114. Brick shall be relatively uniform in color rather than varied “blends”.
- Mortar color shall complement the brick color.

#### 8.4.1.2 Concrete Masonry Units (CMU)

- CMU shall be modular units meeting or exceeding industry standards for quality including, but not limited to: ASTM-C129 and/or ASTM C90.
- Texture/style: uniform face texture such as smooth, burnished, split, scored, ribbed, or ground-face.
- Bond: any uniform pattern such as running or stack.
- Color range: light, warm tones such as warm gray and buff. Examples include: Featherlite “Limestone” and “Saddle Tan”.

#### 8.4.1.3 Stone Veneer

- Size: cut stone veneer shall be sized as appropriate for the type of stone and the method of installation. Stone exceeding 2-inch thickness may be set using mortar and anchored to structure when the system is designed to conform to recognized industry standards for installation and height. Thinner stone or taller applications shall be supported by a building structure engineered in accordance with the highest standards. Stone may be set on facades using adhesive methods.
- Lueders, Shellstone, Cedar Hill Cream or Hadrian. Other warm-toned natural stones such as sandstone and granite.
- Finishes: may consist of polished, flamed, honed, filled or unfilled.
- Stone pieces shall be cut modules and installed in a regular grid pattern.

#### 8.4.1.4 Stucco

- Cement based 3-coat system on metal lath over appropriate substrate. Control joints and reveals shall be extruded aluminum.
- The top color coat may be colored cement or an acrylic product such as STO finish.
- EIFS is only permitted 9 feet above the first-floor elevation.

#### 8.4.1.5 Concrete (vertical surfaces)

- Exterior concrete wall surfaces shall be textured (i.e., form liner), sandblast, water blast or exposed aggregate, painted or stained.

#### 8.4.1.6 Glass and Frames

- Vision glass shall be warm toned, gray or black; colored tints or coatings (i.e., blue, green) are prohibited.
- Highly reflective glass is prohibited.

- Examples of acceptable types include PPG Solarbronze and Viracon Bronze.

#### 8.4.1.7 Hardscape

- Sidewalks and pedestrian paving at the main visitors' entry(s) shall be sandblasted concrete, exposed aggregate, pavers, stamped concrete, stone or other such materials, with a gridded joint pattern no larger than 30 inches.

#### 8.4.1.8 Wood

- Wood is not an acceptable exterior building material or finish unless allowed by site specific development criteria issued or approved by the Airport.

#### 8.4.1.9 Fencing

- All fencing shall be painted architectural metal, masonry, precast or poured in place concrete, and shall comply with the other criteria of the section.
- Chain-link, barbed wire, wood or plastic fencing is prohibited.
- Any fence proposed outside of a paved area shall be mounted on a continuous mow strip of concrete extending 12 inches each side of the fence.

#### 8.4.1.10 Retaining Walls

- Retaining walls may be constructed of sand-blasted and rusticated joint concrete, concrete masonry unit systems or stone.

#### 8.4.1.11 Metal Panel Systems

- All metal panels shall be fully engineered architectural quality systems. Fasteners shall be either fully concealed or integrated into the panel design on any panels exposed to view. Panel systems shall be designed for uniformity and flatness. Corrugated or metal siding is not acceptable.
- Material standards:
  - Steel: G-90 (1.25 oz.) hot-dipped galvanized, ASTM A924 and ASTM A653.
  - Stainless steel: Type 304 AISI architectural grade alloy
  - Aluminum: Alloy 3003
- Finishes shall be a factory applied and warranted system, paint coating shall consist of a minimum of 70% Kynar or Hylar resin no less than 0.8 mil thickness over a compatible primer. Anodized finishes may range from clear to dark bronze.
- "Galvalume" steel shall be hot-dip coated with aluminum-zinc alloy.
- Profiles/textures: smooth, embossed or ribbed. Examples include: Centria "Formawall", "Versapanel" or "Super Rib".
- Colors: Galvalume, stainless steel or colors as listed in **Section 4.2**.
- Minimum panel articulation dimension shall be 18-inches.

#### 8.4.1.12 Architectural Metal Roofing

- Acceptable architectural roofing materials are aluminum, steel or copper. Roofing shall be installed over continuous substrate. Acceptable finishes:
  - Steel or aluminum: galvalume, zincalume or a factory applied baked on paint system such as silicone modified polyester (SMP) or polyvinylidene fluoride (PVF2) in approved color as listed in **Section 4.2.**
  - Copper or aluminum: natural

## 8.5 Passport Business Park East Additional Signage Criteria

### 8.5.1 FREE-STANDING OCCUPANT SIGNS

All tenant identification, directional or informational signage not attached to the building shall comply with standards established.

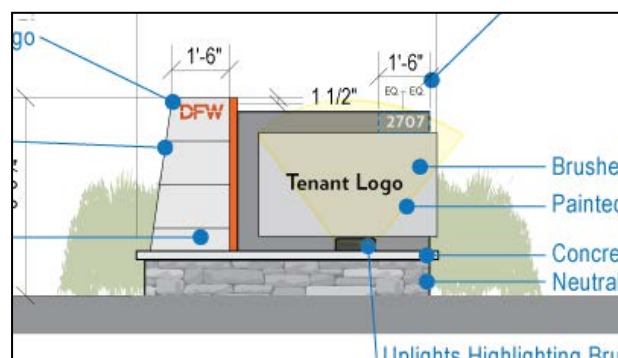
#### 8.5.1.1 Tenant Signs

Individual signs for free-standing (parcel) buildings are required to utilize a standard sign structure. This structure uses materials and design features that relate to the directory structures for the development and shall support the unifying character of the development (reference **Exhibit 8-8**). It is the responsibility of the tenant to maintain landscaping around the signage to ensure tenant signs are visible always.

A signage system illustrating different types of signs, their specific uses and display rules shall be produced. All sign types shall contain similar design features so that they create a sign family.

- Standard 1 – For application within the development.
- Standard 2 – Application facing Rental Car Drive & NB Service Road.

**Exhibit 8-8: Tenant Sign – Standard 1**

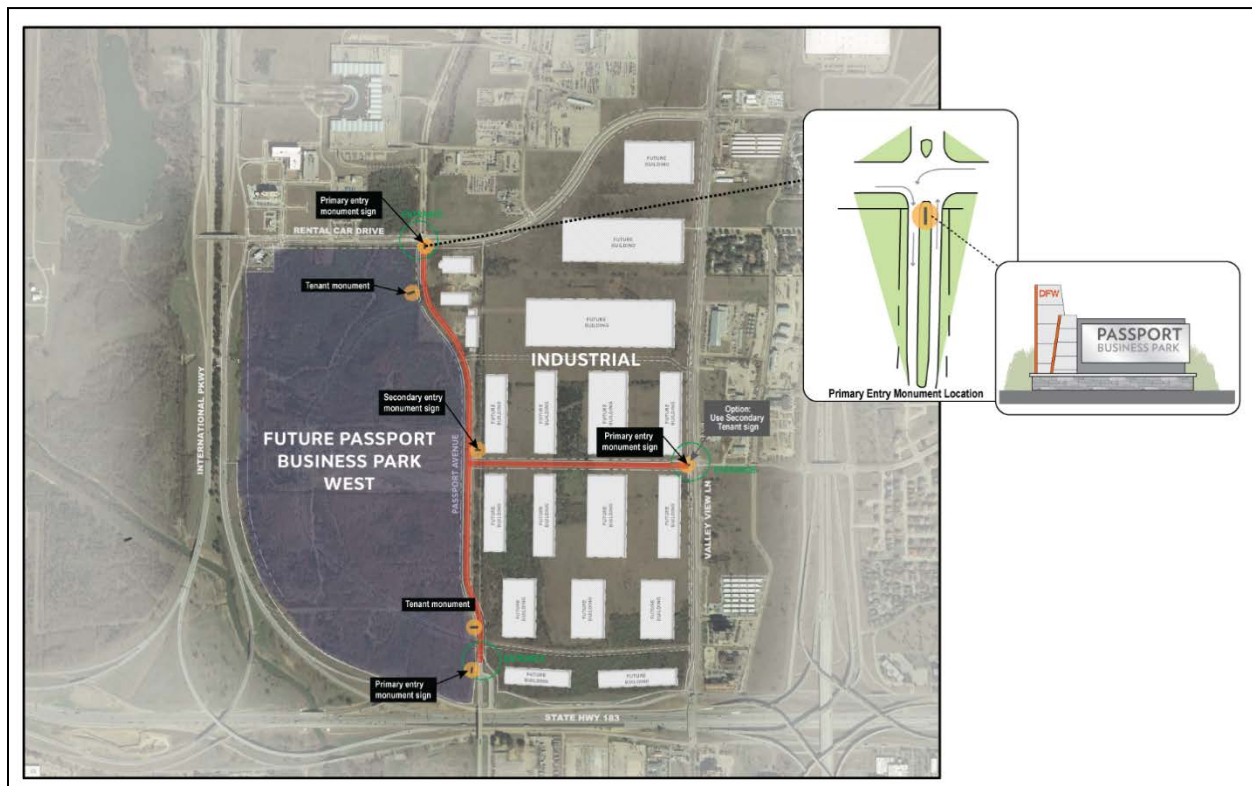


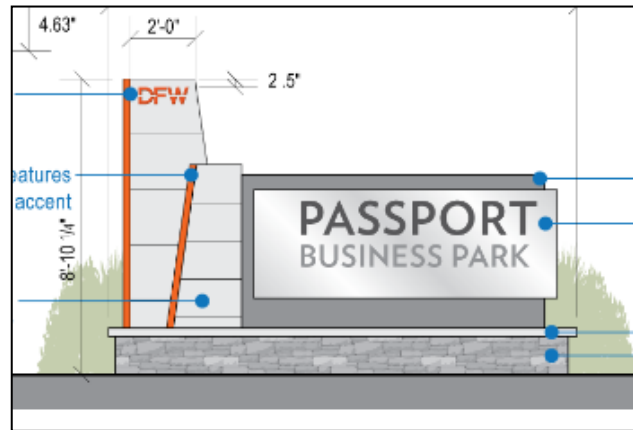
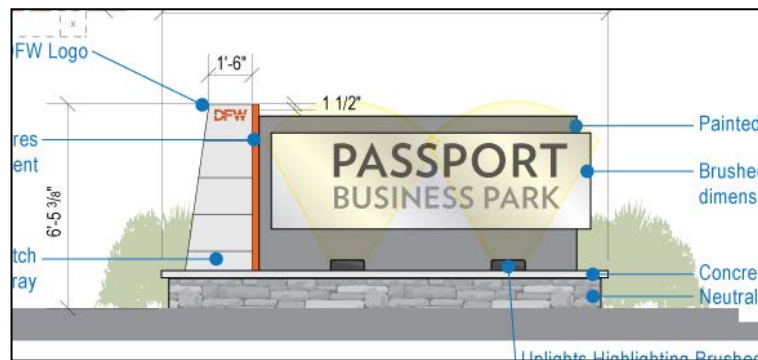
### 8.5.1.2 District Monument Signs

The front entry walls at Passport Business Park should announce a sense of arrival and give a sense of place through landscape design, hardscape materials, and signage.

Through consistent design, materials, font, and logo use, a family of signs unifies Passport Business Park's wayfinding. Through different sizes and scale, each sign serves a particular purpose. The gateway is a pedestrian scale sign and set at one of the main entries to create a branded environment. The District Monument sign serves as a general wayfinding sign of major tenants on site. The materiality of the signs reflects the rest of the character of Passport Business Park. The stone used is the same veneer as the retaining walls. The aluminum plated signs and internally lit acrylic signs compliment the contemporary style of Passport Business Park.

**Exhibit 8-9: District Monument Sign Locations**



**Exhibit 8-10: Primary District Monument Sign****Exhibit 8-11: Secondary District Monument Sign**

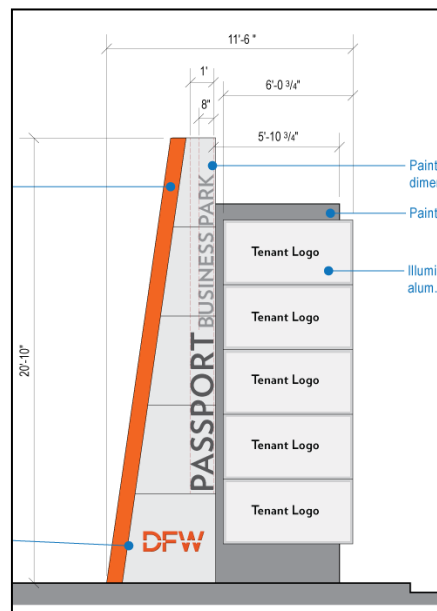
### 8.5.1.3 Tenant Monument

An important aspect of relaying the Passport Business Park brand is the installation of a tenant monument. This sign is the dominant feature of the plaza; therefore, it is required for it to convey the quality and unique characteristics of the environment through the design and function of the sign.

The monument is intended to employ the Passport Business Park logo, as well as fixed and digital signage, and shall be designed to complement the architecture of the built environment. All displays shall be approved by the Airport.

- The maximum height of the monument is 100 feet.

- Signage associated with the monument may project over sidewalks, plazas and other pedestrian areas, but shall have a clearance of at least nine (9) feet from grade.
- No single sign may exceed 200 square feet.
- Support structure of the monument shall be made of metal and shall be engineered to support local wind loads.
- The sign panel shall be made of metal. Background panel shall be made of acrylic, Plexiglas or similar plastic sheeting.
- Individual letters, graphics or sign panels may be internally illuminated and glow with a halo-illumination effect or glow through their front face. Exposed conduits, raceways and transformers are prohibited.
- Indirect lighting shall be attached to the monument or sign and shall be shielded to prevent light from shining directly into traffic, upper floor windows or pedestrians' eyes.

**Exhibit 8-12: Tenant Monument Sign**

### 8.5.2 SIGNAGE PLAN

A signage plan provides a strategy for all on-site signage within the lease premises at Passport Business Park. Final signage plans are subject to approval by PLNG.

**Refer to the following pages for signage specifications for the sign types below.**

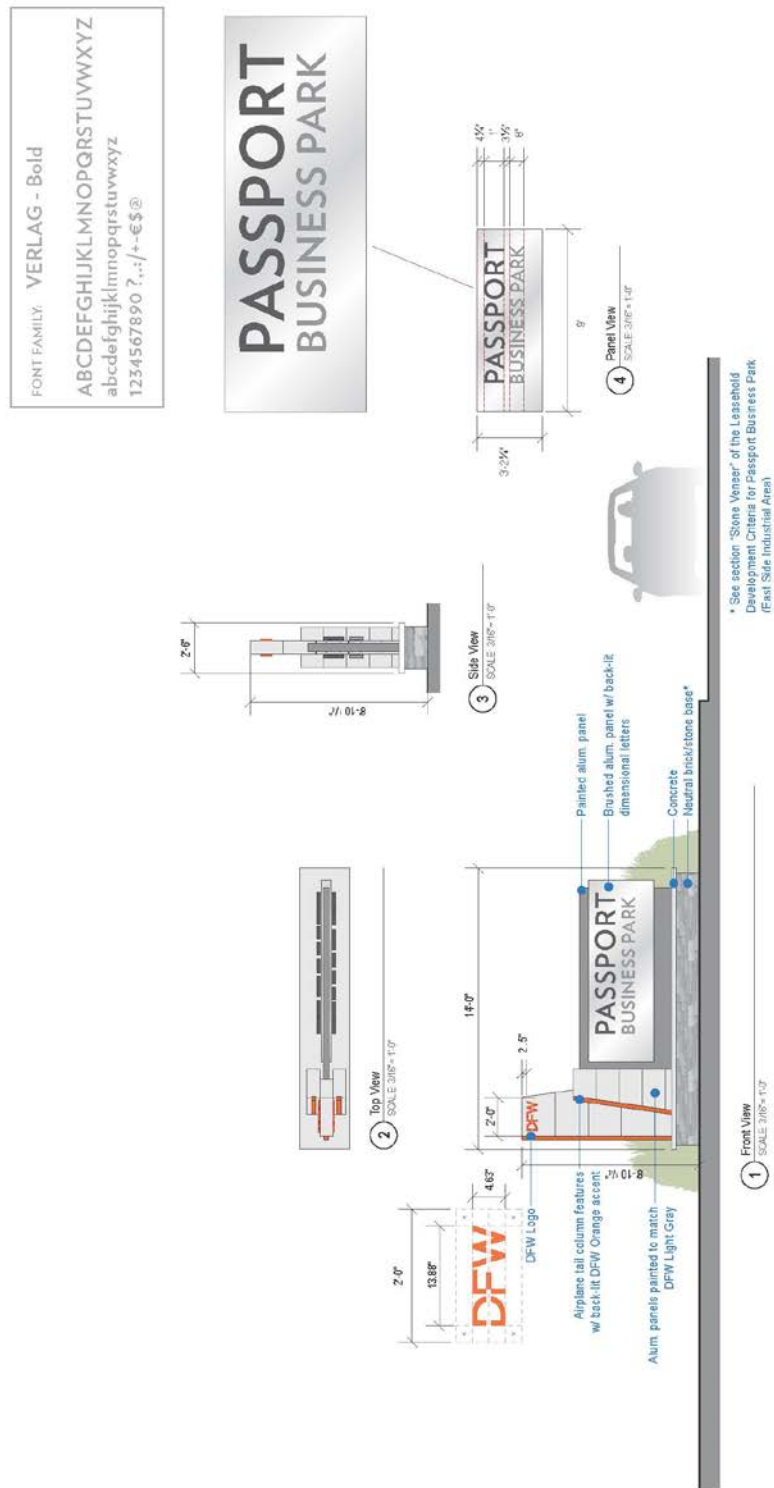
- Free-standing Tenant Sign
- Primary District Monument Sign
- Secondary District Monument Sign
- Tenant Monument Sign



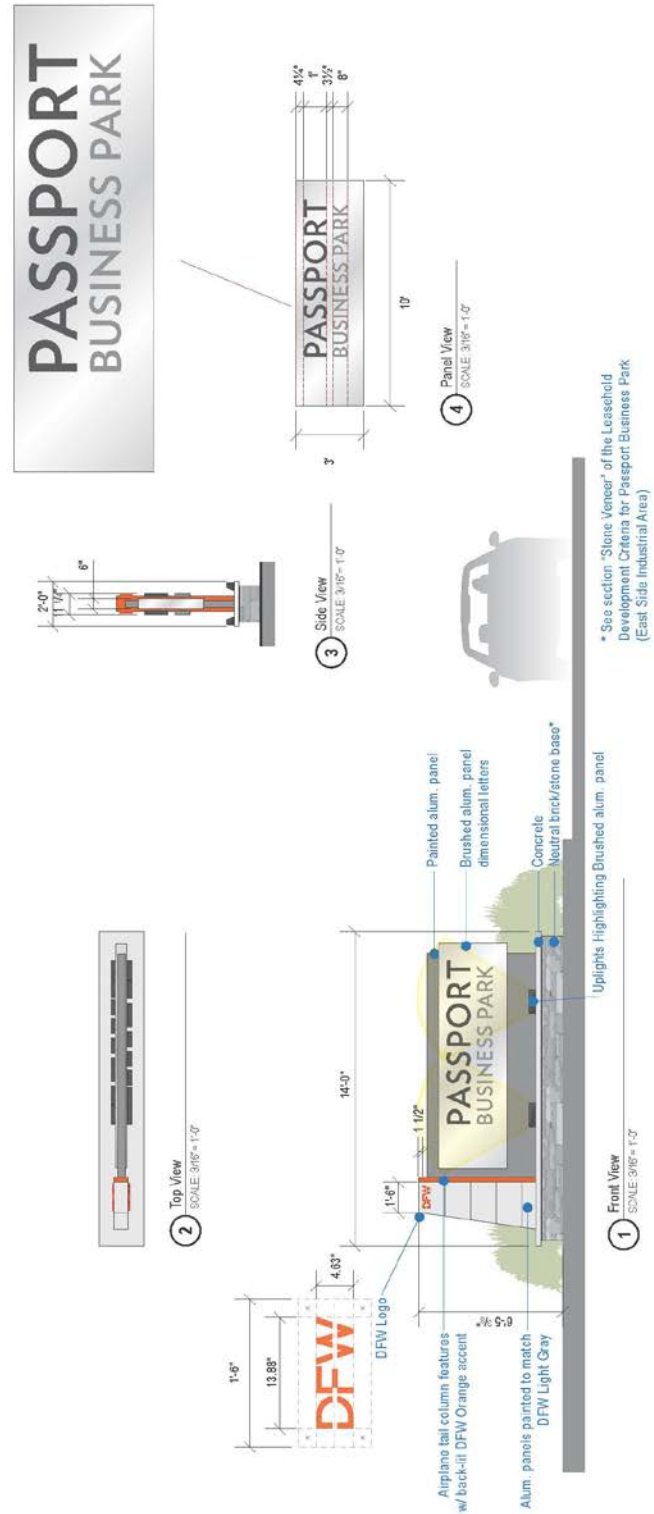
**Exhibit 8-13: Free-Standing Tenant Sign**



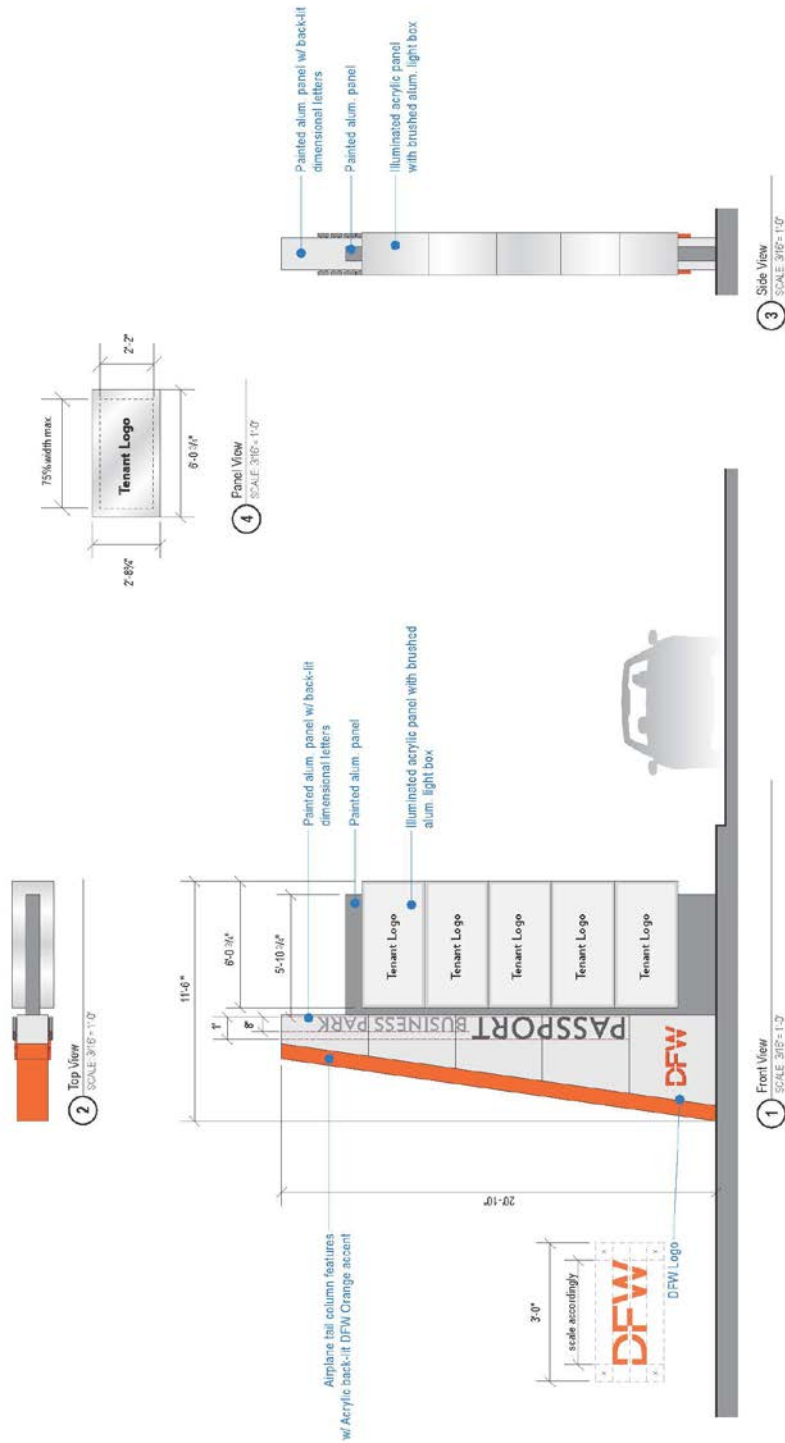
Exhibit 8-14: Primary District Monument Sign



## Exhibit 8-15: Secondary District Monument Sign



## Exhibit 8-16: Tenant Monument Sign



## 9. Appendix D: Passport Business Park West

### District Specific Criteria

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#### 9.1 Background

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Passport Business Park (PBP) is a development district located at the south end of the Airport (reference **Exhibit 1-1**) and has been identified as a 598-acre master-planned, mixed-use development with a combination of office, research, industrial, hospitality, restaurant, and specialized retail uses. The portion of PBP west of the spine road will comprise the mixed-use components and will be referred to as Passport Business Park West. The wide variety of proposed uses will service a wide range of Airport patrons, rental car customers, and the surrounding business communities.

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#### 9.2 Passport Business Park West Additional Site Criteria

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##### 9.2.1 SENSE OF PLACE

##### 9.2.1.1 Circulation

Driveways are not intended to dominate the streetscape. These requirements are intended to organize and consolidate driveways in order to accommodate both pedestrian and vehicular traffic. Driveways shall have a minimum width of 12 feet and a maximum width of 30 feet and have a minimum connection radius of 15 feet.

##### 9.2.1.2 General Organization of Elements

The overall site layout shall promote a logical, organized, pleasant environment that incorporates nature and is mindful of context. The layout of individual parcels shall have an interrelationship to and complement the larger overall development (reference **Exhibit 9-1**). They shall also be designed to visually complement the adjacent property by providing street-oriented landscape design to provide district consistency.

Over time, mixed-use developments have typically incorporated differing transects or zones of building type/density/diversity that share compatible scales. Areas of PBP West with mixed-use or multi-use design intent shall incorporate a framework of these zones to help organize the creation of a quality environment based on a mix of land-use, building density and intensity, a diversity of architectural styles, and concepts.

Classification of these zones is determined by a hierarchy based on density and diversity of uses: the Mixed-Use “Core” (highest density and diversity), the Commercial “Center” (moderate density with high diversity), the Multi-use “General” (low density with moderate diversity), the Single-use “Edge” (lowest density and diversity), with civic elements reserved for public areas of green space, parks, squares, or plazas within or adjacent to the other zones (reference **Exhibit 9-2**).

The intent of these development zones is to provide a diverse range of building types and uses in configurations that strive to avoid a disparate or “choppy” pattern of development. To this end, zones within a development should ideally remain in succession in terms of adjacency, wherever possible. For example, a Core zone should be adjacent to a Center zone, but an Edge zone should *not* be adjacent to a Core zone. Civic elements are exempt from succession and may abut any other zone. In addition, to optimize development flexibility while still maintaining overall coherency for PBP West, no development should skip or jump more than one zone type out of succession. For example, and pending approval by PLNG staff, a Core zone may align with a General zone but not with an Edge zone. Similarly, a Center zone may align with both a Core zone and an Edge zone, with civic elements abutting any of these zones.

The Core zone represents the highest and most diverse mixed-use district approach, and the Edge zone represents a more conventional, single-use district approach. PBP West mixed-use development will emphasize the Core, Center, and General zones. Edge zones shall be largely reserved for single-use industrial park developments subject to PLNG approval.

“Frontage” area is defined as circulation on tenant property that fronts State Highway 183 and/or International Parkway.

Development areas of up to 10 acres in size should provide direct pedestrian access or adjacency to at least one civic element. Development areas of 10 to 20 acres in size should provide at least one civic element as part of the development project, in the form of a walkable public green, a park, or other gathering space, such as a square or plaza. To aid in the creation of, or connectivity to, civic elements and public spaces, each development should have at least one discernable center as a focal point. All sidewalks should have connection to the public sidewalk network along major roads. Dead-end sidewalks are prohibited.

As all projects will be subject to approval by PLNG, Tenants should take into consideration the overall fabric of mixed-use character desired for PBP West in order to most effectively determine the ideal location, size, and zone type for a particular project.



## Exhibit 9-1: Passport Business Park District Conceptual Master Plan

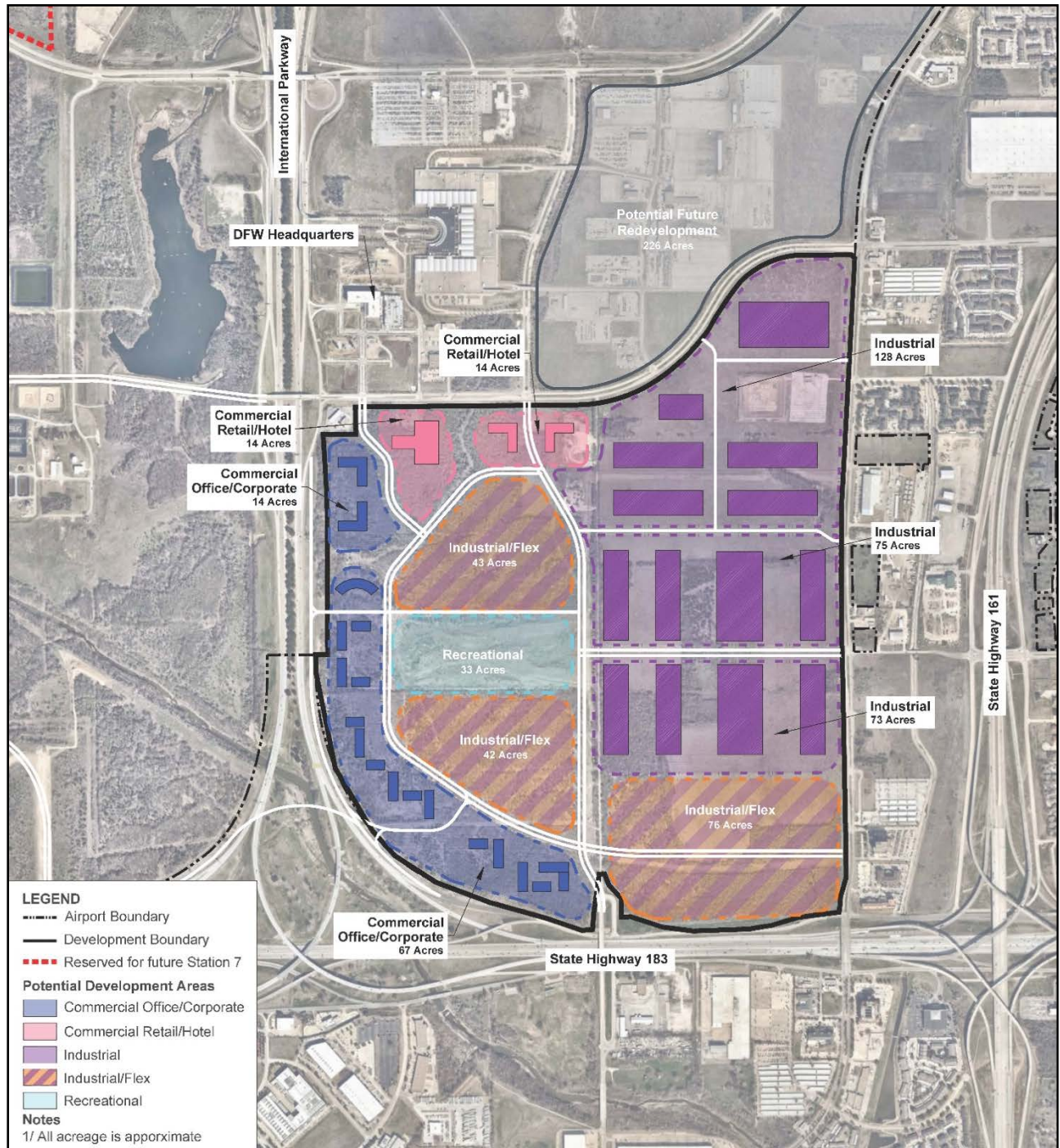
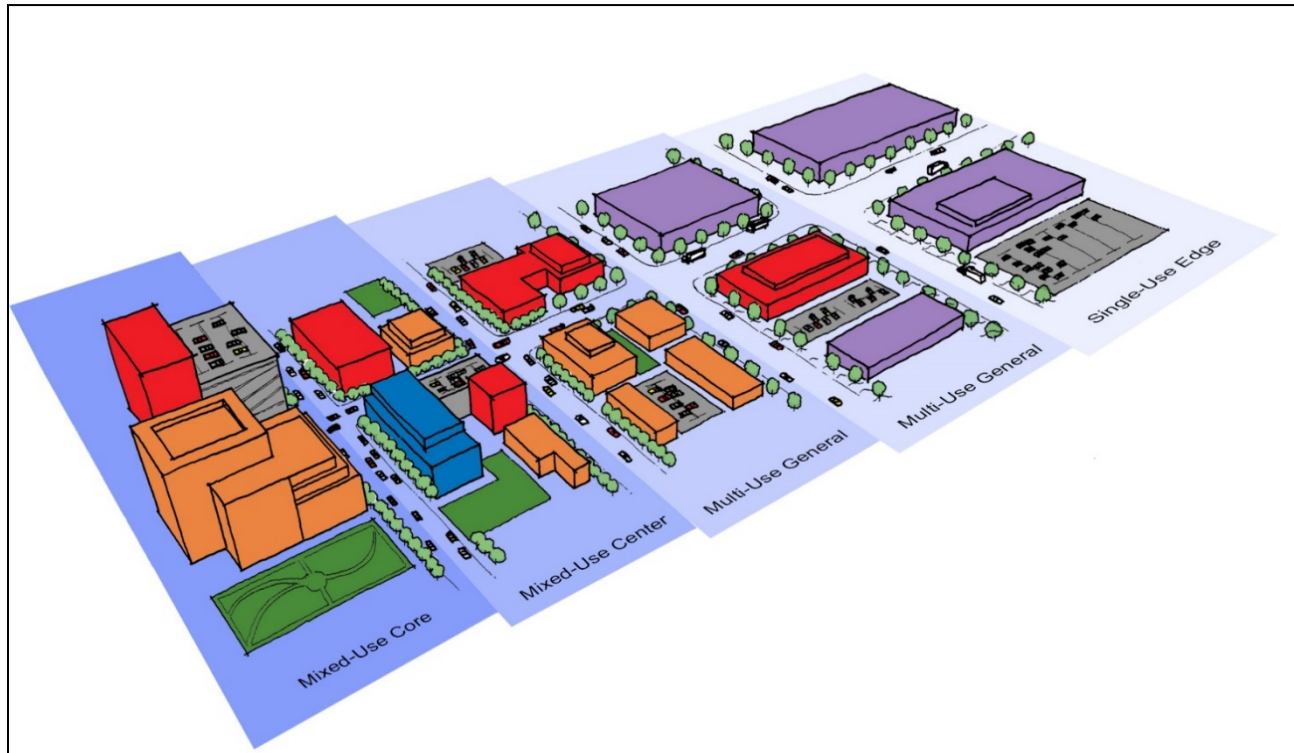




Exhibit 9-2: Mixed-Use Development Zone Hierarchy



#### 9.2.1.3 Character – Natural and man-made

A dominant aspect of maintaining this natural character shall be the proactive preservation and enhancement of the existing forested buffer along the freeway frontage of PBP. To this end, the preservation of existing plant specimens or groupings is encouraged for each development and, where removal is necessary, mitigation shall occur in the form of replacement tree plantings in the forested buffer area. Refer to **Section 3** and PLNG for more information.

To minimize mass grading to the greatest extent practicable, site development design shall utilize accepted sustainable site planning practices to fit development into existing topography wherever possible, and to limit the area of disturbance to the smallest area needed to meet design goals while maximizing the extent of site preservation of canopy cover and natural topography.

The maintenance of natural site drainage implies that the runoff from a site will continue to flow onto an adjoining site, though the quantities may be increased by the placement of hard, impervious surfaces and decreased by obstacles such as buildings and curbs. The alteration of natural drainage, either in direction, quantity, or velocity, shall be considered by qualified licensed professional engineers. Accommodations to control the effect of drainage onto adjacent sites shall be an inherent activity in the site planning process and shall be evidenced by the inclusion of such consideration in the construction documents, specifications, and site details. In addition,

the effluent from such natural drainage shall not be directed through garbage and trash areas, storage areas of any kind, or in a manner that focuses an erosive flow onto an adjacent property.

## 9.2.2 RELATIONSHIP TO STREET

### 9.2.2.1 Front, Side, and Rear Yard Setbacks

In addition to criteria established in **Section 2.2.1**, for minor circulation routes, narrow vehicular circulation drives, such as might be used to access buildings without standard roadway frontage, a setback of 20 feet is required.

**Table 9-1: Setbacks**

ELEMENT SETBACK	FRONT YARD	SIDE YARD	REAR YARD
Paving (parking area)	15 feet	10 feet	10 feet
Building	55 feet	30 feet	30 feet
Fence	10 feet	10 feet	10 feet
Minor Circulation Route	20 feet	20 feet	20 feet

## 9.2.3 PAVED SURFACES

### 9.2.3.1 Parking

Similar to many other mixed-use developments, such as hospitals, hotels, and even higher-density residential developments, PBP West is anticipated to accommodate parking demand 24 hours a day, 365 days a year.

The intent of the parking design criteria for PBP West is to balance accepted standards and code requirements with the needs of developers and tenants. For example, while local ordinances might require minimum sizing of parking spaces or drive aisles, the most practical and user-friendly parking design for higher-turnover facilities, such as small professional offices, might incorporate larger-than-minimum parking spaces and drive aisles.

All parking area designs are subject to approval by the PLNG staff. Therefore, Tenants should address a range of practical and technical concerns before committing to a final design, including the following:

- Building type and parking facility type
- Length of stay and user types
- Opportunities for coordinated multimodal design
- Conflicts between pedestrian and vehicular circulation
- Street traffic flows and peak volumes

- Entrances and exits
- Dimensions and angles of parking spaces and drive aisles
- Striping and other wayfinding

Further, it is essential that all parking areas adhere strictly to the requirements of the Americans with Disabilities Act (ADA), maintaining full accessibility standards.

For the highest density mixed-use developments in PBP West, parallel or angled on-street parking should be utilized to the extent possible, with overflow accommodated either in a parking garage or rear-located parking lot.

For more general or single-use developments, parking areas should be located at the rear of buildings in order to preserve the front-yard character of pedestrian-oriented landscape features along the street frontage. Entrance drives to parking areas should be located on streets where traffic flow is inbound, toward the destination area. Exits should be located where traffic flow is outbound, away from the destination area. To further minimize conflicts between street traffic and exiting vehicles, it is best to locate exits on low-volume side streets, wherever feasible.

Generally, efficient design of parking entrances and exits should favor entering traffic over exiting traffic. Such an approach expedites the movement of traffic from the street into the parking area, preventing traffic from lining up in the public roadway. Additionally, this arrangement takes advantage of the fact that exiting traffic tends to move more slowly than entering traffic.

Driveways should be designed and located to maximize traffic flow within the parking area itself.

To prevent conflicts between parking area traffic and intersection traffic, entrances should be located at least 75 feet from any intersection. Accepted traffic-engineering principles should be applied to determine appropriate vehicle queuing levels in traffic entrance lanes.

On streets with deceleration lanes at parking area entrances, the entry-control devices should be set sufficiently back from the street so that an incoming vehicle can clear a sidewalk that crosses the driveway. Where deceleration lanes are not feasible, entry-control devices should be located so that at least three or four van-length vehicles may queue easily.

Single entrance lanes should be approximately 13 to 16 feet wide, tapering to 10 feet at control devices. Double-entrance lanes should be at least 24 feet wide.

Wherever feasible, exits should be located on a lower-volume street in order to reduce delays caused by street traffic. Drive aisles may incorporate turns that lead to an exit lane or plaza, which in turn slow exit speeds and control the rate of exiting vehicles into the street. Exit-control devices should be set sufficiently back from the street so that at least one exiting vehicle may queue after passing the control device.

Angled, one-way parking is encouraged over right-angle, two-way parking, due to its greater inherent efficiency of traffic flow.

Parking spaces should be a minimum of 9-feet wide by 18-feet long, excluding wheel stops, if applicable.

Parking areas should be striped with 4-inch lines using yellow paint, unless otherwise approved by the PLNG staff.

Plantings in parking areas can help to mitigate solar heat effects, as well as soften the visual impact by screening circulating and parked vehicles. Typically, landscape features should be located in areas unsuitable for both parking and circulation and at adequate distance from parked vehicles. For interior landscape islands, a corner radius of 5 feet or greater can help ensure adequate space for turning vehicles. Islands should be sized and located so as not to interfere with access to parking spaces or with the exiting of drivers from their vehicles.

Vehicle sight lines should be maintained at all entrances, exits, and pedestrian routes; a “clear zone” should be established between 3 feet and 8 feet above ground-level.

In keeping with established engineering standards, parking areas shall be sloped a minimum of 1 percent for drainage toward inlets, catch basins, or curb inlets. Slope shall not exceed 2 percent at or along ADA-compliant routes.

Parking area designs are subject to approval for compliance with local ordinances and stormwater control standards.

#### 9.2.3.2 Treatment of Parking Facilities

Structured parking garages, if necessary, should be designed as an integral part of the architectural vernacular and, where practical, incorporated within a building complex. Parking access should be organized in a way that minimizes conflicts or disruption of the pedestrian travel way.

#### 9.2.3.3 Pedestrian Environment

- Encourage multiple public sidewalk entrances to buildings (i.e., limit single-entrance lobbies or retail courts, wherever appropriate and possible).
- Sidewalks should encourage open circulation in every direction. Wherever possible, avoid controlled access onto sidewalks, except for primary building entrance lobbies or courtyards (reference **Exhibit 9-3**).
- Design access to visitor-oriented uses (e.g., hotels and “destination” restaurants/retailers) to minimize pedestrian/vehicle conflicts.

**Exhibit 9-3: Sidewalk Exhibiting High Degree of Open Circulation****9.2.4 SITE LIGHTING****9.2.4.1 Landscape Lighting**

Landscape illumination is encouraged in large setbacks and open spaces where street and pedestrian lighting is inadequate. Proper lighting is intended to provide clarity of vehicular and pedestrian movement and articulate building design without needlessly lighting adjacent sites (reference **Exhibit 9-4**).

- Lighting may include string lighting in trees or up-lighting in a tree lawn/grate or planting bed. Up-lighting of street trees, parking island trees, and important landscape areas at project entries is encouraged.
- Up-lighting shall be waterproof and directional.
- Up-lighting shall use fixtures that shield the light source from passing vehicles and pedestrians.

**Exhibit 9-4: Accent Lighting in Landscaped Areas**

## 9.2.5 STREET AND OPEN SPACE STANDARDS

The PBP West parcels are intended to create simple perimeter blocks with buildings organized prominently along important streets and open spaces within a plaza area (reference **Section 9.2.2**), while simultaneously allowing for automobile-focused uses and parking to occur primarily within the Frontage area. The objective is to create a balanced street framework that supports a range of mixed-land uses and encourages pedestrian activity internally, while providing straight-forward circulation options at the periphery. The key design features for all areas of the site include:

- Continuity of sidewalks along each street.
- Crosswalk demarcation at street intersections.
- Wide sidewalks with shade trees.
- Parallel or angled head-in parking to protect pedestrians from traffic movement.
- Narrow street cross-sections and neck downs at crosswalk locations.
- Utilities placed in setback areas between the roadway corridor and the building face.

### 9.2.5.1 Street-Type Specifications

A general outline of access and service options to PBP West focuses on the access and parking options available for each parcel within the concept plan.

The key transport objectives are to:

- Ensure compliance with national and local planning and transport policies.
- Facilitate internal movement within the development.
- Provide high-quality access and circulation for Airport customers, automobiles, and pedestrians to and within the site.
- Minimize the traffic impacts on the surrounding road network and, in particular, ensure that public transport is not delayed.

The street framework established for PBP West creates a clear hierarchy of streets that provides ease of access and circulation, divides the site into simple development parcels, and distinguishes between automobile-oriented access and more developed integration between automobile and pedestrian traffic. In general, streets within the Frontage area focus on vehicular entry and access to parking, while internal streets integrate automobile and pedestrian traffic.

### 9.2.5.2 Block Guideline

The key element in the physical and functional integration of mixed-use development is pedestrian orientation. The overall layout of a mixed-use development is built around a viable pedestrian environment that successfully integrates pedestrian friendly program elements.

A framework for a pedestrian-oriented layout has three main components: 1) a block structure with a safe and feasible walkable arrangement, 2) a building orientation and architecture with pedestrian scale, and 3) a street network to define the block edges, create continuous pedestrian connections, and integrate pedestrian travel with other modes of transportation (reference **Exhibit 9-5**).

- Block standards may apply to all development that contains 4 acres or more of gross land area.
- All development may be arranged in a pattern of interconnecting streets and blocks, while maintaining respect for the natural landscape and floodplain.
- Each block face may range between a minimum of 200 feet and a maximum of 600 feet.
- For block faces that exceed 400 feet, a mid-block pedestrian pass-through is encouraged to connect opposite sides of block faces.
- An applicant may submit alternative block standards, provided that such alternative achieves the intent of the above standards and the procedures and criteria.

#### Exhibit 9-5: Limited Curb Cuts Providing Unobstructed Pedestrian Access at Sidewalks

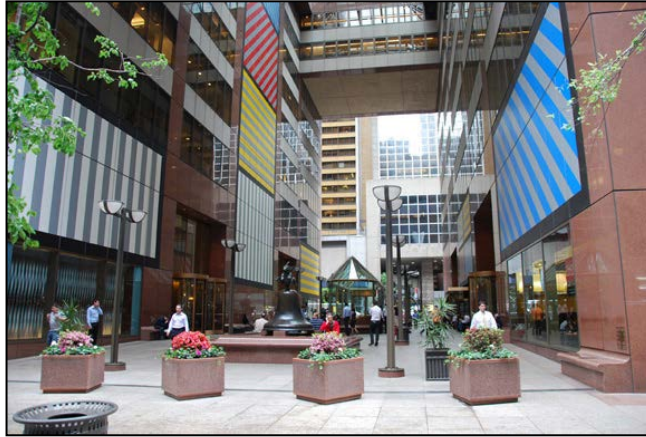


#### 9.2.5.3 Mid-Block Pedestrian Pass-Through

A mid-block pedestrian pass-through or galleria, for blocks larger than 400 feet, could be lighted and designed to be safe and visually interesting for pedestrians, incorporating such features as display windows or artwork.

The pedestrian pass-through could be used to connect separate buildings or link customer parking to the front of buildings (reference **Exhibit 9-6**).



**Exhibit 9-6: Mid-Block Pedestrian Pass-Through****9.2.5.4 On-site Amenity**

An attractive public realm is a fundamental ingredient in the success of a mixed-use development. Open-air and semi-enclosed public gathering spaces can serve as central organizing elements in a mixed-use center. They can also help to shape the relationship between different uses and provide focal points and anchors for pedestrian activity. On-site amenities can create a strong image and unique character for a mixed-use development, making it a special place for the community, instead of just a project.

This part is intended to create outdoor, on-site amenities and gathering places. Such amenities and places provide desirable open space; create an inviting image for customers, visitors, and employees; enhance the pedestrian environment and streetscape; offer attractive spaces for people to gather, interact, rest, shop, and eat; and contribute to the character of the development.

**9.2.5.5 Provision of On-site Amenities**

All development shall incorporate at least two of the following on-site amenities or features as highly visible, easily accessible, outdoor focal points or gathering places for residents, employees, and visitors to the development site:

- Patio or plaza with seating areas.
  - While asphalt is prohibited for pavement; use of decorative pavers and textured or colored concrete are encouraged.
  - Patios and plazas may include pedestrian amenities intended to support these places as gathering areas.
- Landscaped mini-parks, squares, or greens, provided such park or green has a minimum length and width of 10 feet and a minimum total area of 650 square feet, and shall include pedestrian amenities intended to support these places as gathering areas (**Exhibit 9-7**).

- Protected customer walkways, arcades, or easily identifiable building pass-through containing window displays and intended for general public access.
- Outdoor public art in an area that is:
  - Visible from an adjacent public sidewalk or street.
  - Easily accessed for viewing by pedestrians.
- Any other well-designed area and/or focal feature that PLNG finds is consistent with the intent of this subsection, substantially enhances the development, and serves as a safe and natural gathering place.

#### Exhibit 9-7: Gathering Space Amenity Example



#### 9.2.5.6 Guidelines

- Patios, plazas, mini-parks, squares, and greens should be proportionate in size to the development. Small-scale amenities are appropriate for small developments, and large-scale amenities are appropriate for large developments.
- FAA requirements prohibit PBP West development from including decorative, ponding water features, in order to avoid attracting birds.
- In order to serve as a focal point, a feature should be visible and easily recognizable as an area that encourages outdoor assembly. It may be framed by a view corridor, be placed on a high point, or be visually related to a multiuse trail or other walkway.
- Pedestrian amenities for patios and plazas, and for landscaped mini-parks, squares, or greens, may include seating, lighting, enhanced paving, planting, and sculpture.

### 9.2.5.7 Buildings Adjacent to Outdoor Amenities Standard

Providing good public visibility of on-site outdoor amenities shall enhance the security of pedestrians (reference **Exhibit 9-8**). Accordingly, when a building will be adjacent to a pedestrian plaza, patio, mini-park, square, or green, as provided under this part, the building wall facing such outdoor amenity shall contain at least one of the following elements:

- A building entry
- Windows facing onto the outdoor amenity
- Arcades along the edges of the outdoor amenity
- Outdoor seating areas
- Other features that will help bolster security and encourage pedestrian use of the outdoor amenity.

**Exhibit 9-8: Building Adjacency to Public Outdoor Amenities**



## 9.3 Passport Business Park West Additional Landscape Criteria

The landscape design of PBP West should align with the goals of the individual area. The Frontage area should focus on a softer palette of landscape materials, utilizing natural groupings, landscape berms, and other design elements that relate to auto-focused development. Important to the Frontage area is reducing the size and scale of parking lots through the use of trees, shrubs, and seasonal flowers.

The Core and Center zones should be designed to create a balance between automobile and pedestrian uses. A focus on creating an active street front that utilizes an ordered landscape is appropriate. Additionally, a plaza

area's central feature will consist of a series of squares or civic greens. These open spaces will make up the heart of the PBP West development and should be designed to accommodate a variety of activities (reference **Exhibit 9-9**).

#### Exhibit 9-9: Squares and Civic Greens Directly Relating to Buildings and Adjacent Uses



### 9.3.1 DESIGN REQUIREMENTS

#### 9.3.1.1 Landscape Corridor

A landscape corridor is defined as a natural buffer located between the back-of-curb of a street and the leaseline. This provides an area for natural North Texas Cross Timbers or Blackland Prairie ecoregion landscape features, and it is a component of the streetscape used to form the street's character. PLNG has developed a typical planting template for the landscape corridor. Depending on the location of the development site, this template may be required or used as a guide. This template provides for every 400 linear feet of the leaseline along the streets, the planting areas of which shall have 50% shade canopy trees, 30% flowering ornamental trees, and 20% shrub and groundcover plantings. Shade and ornamental trees should provide a mix of evergreen and deciduous species wherever possible. Small, naturalistic groupings of trees are encouraged over linear patterns wherever possible. Shrubs and perennials may be arranged in either linear patterns or naturalistic groupings. Coordinate appropriate applications with PLNG.

Landscape design shall be of consistent density on all sides of the property. Tenants may enhance the landscape at visitor driveway(s), but they are required to transition back to the baseline planting within 100 feet each way. Critical areas such as high-profile entries and other "signature" areas will require a higher level of design treatment than less critical areas such as side yards or secondary points of entry. Tenant landscape design shall provide smooth transition and continuation of existing landscape in the setbacks and from existing adjacent properties. All landscape design shall be subject to review and approval by PLNG.

#### 9.3.1.2 Street Trees

- **Tree Wells** - Tree wells are required in the Core and Center zones (reference **Section 3.1.5**).

- **Tree Lawns** - Tree lawns are planted areas located along the internal circulation of the development and shall be a minimum of 10-feet wide and planted with turf and/or native grasses, shrubs, flowers, and trees. Tree lawns may also be used as a bioswale to create secondary rainwater storage.

### 9.3.2 FORESTED BUFFER MITIGATION AREAS

The Airport has designated the frontage along International Parkway and Airport Freeway to be maintained as forested buffer mitigation areas. The purpose of a forested buffer mitigation area is to provide a visual and acoustic buffer between conflicting land uses, to aid in retarding and filtering runoff, and to prevent erosion. A mixed naturalistic community of canopy trees, understory trees, shrubs and groundcover can most easily achieve these goals, with the added benefit of enhancing the natural aesthetic of the Airport.

These mitigation areas will function as a focal point for overall tree protection efforts at the Airport. Each development proposal must document avoidance and minimization of disturbance of both natural vegetation and topography. These efforts to minimize tree removal and site grading can best be accomplished by incorporating accepted practices of sustainable site design, ample tree protection, and establishing enforceable limits of disturbance.

Development proposals for which tree removal is necessary, assuming good-faith efforts at disturbance avoidance and minimization have been documented, shall incorporate a tree mitigation plan that details the total caliper inches of tree removal by species. Removed trees over six inches in diameter when measured at breast-height (DBH), and which appear on the Airport approved tree list shall require a replacement ratio of 1:1 with a 3-inch caliper minimum, and a 5-inch caliper maximum planting size. For example, removal of a 10-inch Bur Oak will require a 1:1 replacement of 10 total caliper inches, which could be replanted as either two (2) 3-inch trees plus one (1) 4-inch tree; or as two (2) 5-inch trees. All tree mitigation plantings shall take place within the designated forested buffer preservation areas, the actual location and species mix to be approved by PLNG.

### 9.3.3 HARDSCAPE

#### 9.3.3.1 Pervious Pavers

Brick or stone pavers are most appropriate for the Core and Center zones, while concrete pavers are allowed only in the Frontage area.

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## 9.4 Passport Business Park West Additional Architecture Criteria

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### 9.4.1 CONTEMPORARY STYLE

The character of the architecture is to be progressive, functional, and enduring (reference **Exhibit 9-10** examples). Innovation in design, structure, and materials is encouraged. The level of architectural detailing shall be reasonably consistent on all sides of a building. Buildings must have a horizontal expression. Simple volumes that blend with the landscape are preferred. Professional/office and other large commercial structures shall



incorporate material changes, projections, and significant offsets to break up the massing into segments no longer than 100 feet. Entries shall be easily identifiable destination points and scaled in proportion to the façade. Residential character features and/or materials are NOT allowed, such as fabric awnings, wood siding, window shutters, non-functional ornamentation, and period (historical) applications. For details on enhancing façades through architectural lighting, refer to **Section 2.4.4**.

#### Exhibit 9-10: Passport Business Park West Brand Façade Example



##### 9.4.1.1 Building Height

The maximum building height shall be eight stories or 120 feet in all areas, except for the area within 225 feet of the property line along International Parkway. Here the maximum building height is two stories or 30 feet.

##### 9.4.1.2 Maximum Building Length

No building length, as measured along the street frontage, shall be more than 400 feet in length.

##### 9.4.1.3 Building Corner Treatments

Buildings shall reinforce a strong corner condition at street intersections in order to emphasize the intersection (reference **Exhibit 9-11**). Building shall be designed to accommodate required visibility triangles without compromising the corner design.

**Exhibit 9-11: Strong Corner Condition****9.4.1.4 Fencing**

To keep consistent with the street-oriented, pedestrian friendly atmosphere of the development, fencing will be controlled so as not to create barriers that interfere with the desired pedestrian street experience. The maximum total length for a fence will be 100 feet without a break (reference **Exhibit 9-12**).

All fencing must be wrought iron or steel, with a design compatible with the adjacent architecture. Chain link and barbed wire is not allowed. No wood or plastic fencing shall be allowed. Any fence with perforations shall be installed with a continuous mow strip of concrete extending a minimum of 12 inches on each side of the fence.

Areas where guard rails are required for safety shall conform to all government regulations and shall be compatible to the design of architectural and fencing concepts for adjacent buildings.

**Exhibit 9-12: Fencing Separating Public and Private Uses without Screening the Building or Development**



## 10. Appendix E: Southgate Plaza

### District Specific Criteria

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#### 10.1 Southgate Plaza Additional Site Criteria

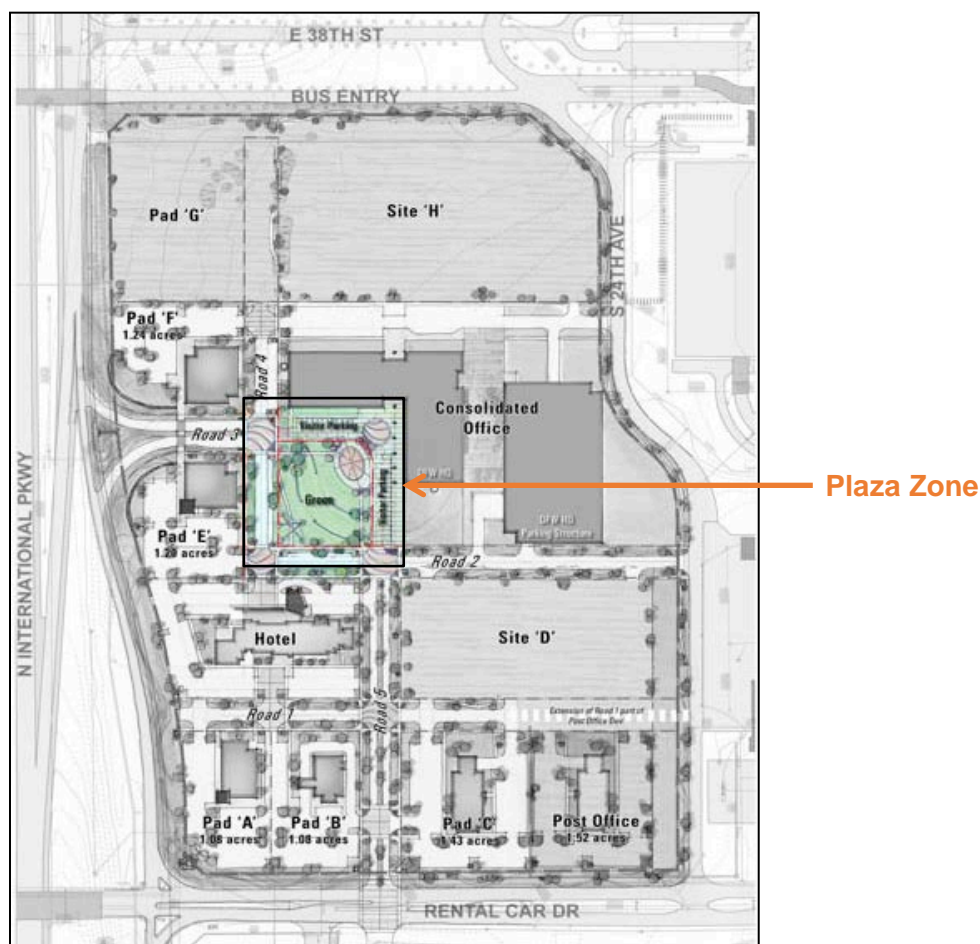
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Southgate Plaza is to be a development that is designed to cater towards convenience, dining and the gathering of people. This section provides criteria for building placement on the site, as well as information pertaining to the design of all streets, parking lots and driveways. In order to maintain a consistent Southgate Plaza brand, the site is organized by zones as described in **Section 10.1.1** and as illustrated in **Exhibit 10-1**.

Landscape design serves the two-fold purpose of balancing automobiles and pedestrian users. Generous landscape corridors on the periphery of the site form a green edge to the property and is a key element of the Southgate Plaza brand. Coupled with parking lot planting that breaks down the scale of lots and provides shade, the corridor areas and parking lots envelop the core of the site with a rich landscape texture. Regular street trees, along with planting in tree lawns and at the base of buildings, create a landscape framework suitable for the pedestrian realm.

##### 10.1.1 PLAZA ZONE

To better define and implement complementary uses envisioned for Southgate Plaza, the site has been divided into two halves (north and south) and a Plaza Zone identified as illustrated on the Plaza Zone Diagram (reference **Exhibit 10-1**). The north half shall have a strong pedestrian link to the Rental Car Center to encourage foot traffic. The south half shall have a strong vehicular access for terminal traffic on International Parkway and local commuter traffic on Rental Car Drive. The Plaza Zone serves as the focal point of the development which allows for pedestrian movement, outdoor space, and seating. The extent of the Plaza Zone boundary may be adjusted due to site design considerations.

**Exhibit 10-1: Southgate Plaza Zone Diagram**

#### 10.1.1.1 Plaza Zone Intent

The Plaza Zone is the most restrictive zone as it is the central focus of the Southgate Plaza district. The Plaza Zone is primarily made up of parks, plazas, or open spaces that buildings in the development face and define. These parks create the central organizing features of the site and are designed to accommodate automobile and pedestrian circulation in a high-quality urban environment. Outdoor dining, gathering places, and a strong landscape identity are the defining themes of the Plaza Zone. The Plaza Zone is the “heart” of Southgate Plaza. Providing both the ease of automobile circulation and a lively pedestrian environment is key to this development.

## 10.1.2 SENSE OF PLACE

### 10.1.2.1 Character – Natural and Man-Made

To promote a natural character, the Southgate Plaza Development shall emphasize natural features such as Low Impact Design (LID) development elements, groves of trees, geologic outcroppings and the general flow of topography.

The site design strategy is three-fold, incorporating the site, buildings and transportation. The strategy includes:

- Creation of active frontages and an animated streetscape in the Plaza Zone.
- Creation of destination, identity and urban environment.
- Creation of buildings that can accommodate a mix of uses.
- Flexibility and adaptability to absorb changes of use and technology.
- Creation of an inclusive environment that caters to convenience and long-term users.
- Creation of buildings and environments that enable the traveling public to achieve a positive experience at the development.
- Careful orientation of buildings, considering the relationship of each with the external environment and maximizing the views, use of natural daylight and ventilation.
- Strategically locating parking to allow for convenient access, but also limiting its impact upon open spaces.
- Integration with technology to achieve efficiency.

Southgate Plaza shall be laid out around a framework of internal streets that will not only provide automobile access but provide pedestrian connectivity as well. **Exhibits 10-2** and **10-3** include the Southgate Plaza District Conceptual Master Plan and illustrations of how the different pad sites could be populated with buildings, parking, and green space.

## Exhibit 10-2: Southgate Plaza District Conceptual Master Plan



**Exhibit 10-3: Southgate Plaza District Conceptual Renderings****10.1.3 RELATIONSHIP TO THE STREET****10.1.3.1 Building and Paving Setbacks in Relation to Periphery Roads**

All buildings and paving within the Southgate Plaza development shall be constructed within the existing setback designations off the International Parkway service road, East 38th Street, South 24th Avenue, and South Rental Car Drive. No encroachments are allowed within these setbacks.

- Building setbacks will be measured at 70 feet from the leaseline.
- Paving setbacks are set at 15 feet from the leaseline (reference **Exhibit 10-4**).



**Exhibit 10-4: Site and Paving Setback Diagram****Table 10-1: Setbacks**

ELEMENT SETBACK	FRONT YARD (INTL. PKWY, 38 <sup>TH</sup> ST, S. 24 <sup>TH</sup> AVE, S. RENTAL CAR DR FRONTAGE ONLY)	FRONT YARD (INTERIOR SOUTHGATE PLAZA ROADS)	SIDE YARD	REAR YARD
Paving (parking area)	15 feet	15 feet	10 feet	10 feet
Building	70 feet	55 feet	30 feet	30 feet
Fence	10 feet	10 feet	10 feet	10 feet
Shared Leaseline Fence	N/A	N/A	0 feet	0 feet

## 10.1.4 PAVED SURFACES

### 10.1.4.1 Materials

Entry driveways are to incorporate an eight (8)-foot wide band of stamped, colored concrete, which aligns with the leaseline and projects out, & shall be provided across all tenant driveways. Each tenant will be responsible for the construction of their driveway. The tenant will field verify to match colors for the concrete pattern (Exhibit 10-5A).

**Exhibit 10-5: South Gate Plaza Required 8' Paving Band****10.1.5 SITE LIGHTING****10.1.5.1 Landscape Lighting**

Refer to **Section 2.4**.

**10.1.6 STREET AND OPEN SPACE STANDARDS**

The Southgate Plaza parcels are intended to create simple perimeter blocks with buildings organized prominently along important streets and open spaces within the Plaza Zone, while simultaneously allowing for automobile-focused uses and parking. The objective is to create a balanced street framework that supports a range of mixed land uses and encourages pedestrian activity internally while providing straight forward circulation options at the periphery. The key design features for all areas of the site include:

- Continuity of sidewalks along each street.
- Crosswalk demarcation at street intersections.
- Wide sidewalks with shade trees.
- Parallel or angled head-in parking to protect pedestrians from traffic movement.
- Narrow street cross-sections and neck downs at crosswalk locations.
- Utilities placed in setback areas between the roadway corridor and the building face.



#### 10.1.6.1 Street Type Specifications

A general outline of access and service options for the Southgate Plaza follows and focuses on the access and parking options available for each parcel within the concept plan.

The key transport objectives are to:

- Ensure compliance with national and local planning and transport policies.
- Facilitate internal movement within the development.
- Provide high-quality access and circulation for DFW customers, automobiles and pedestrians to and within the site.
- Minimize the traffic impacts on the surrounding road network and in particular, ensure that public transport is not delayed.

The street framework established for Southgate Plaza (reference **Exhibit 10-5**) creates a clear hierarchy of streets that provides ease of access and circulation, divides the site into simple development parcels, and distinguishes between automobile-oriented access and more developed integration between automobile and pedestrian traffic.

#### 10.1.6.2 Street Type General Requirements

The general requirements for all street types provide consistency in design and application while providing appropriate access and circulation. The following requirements focus specifically on the pedestrian environment.

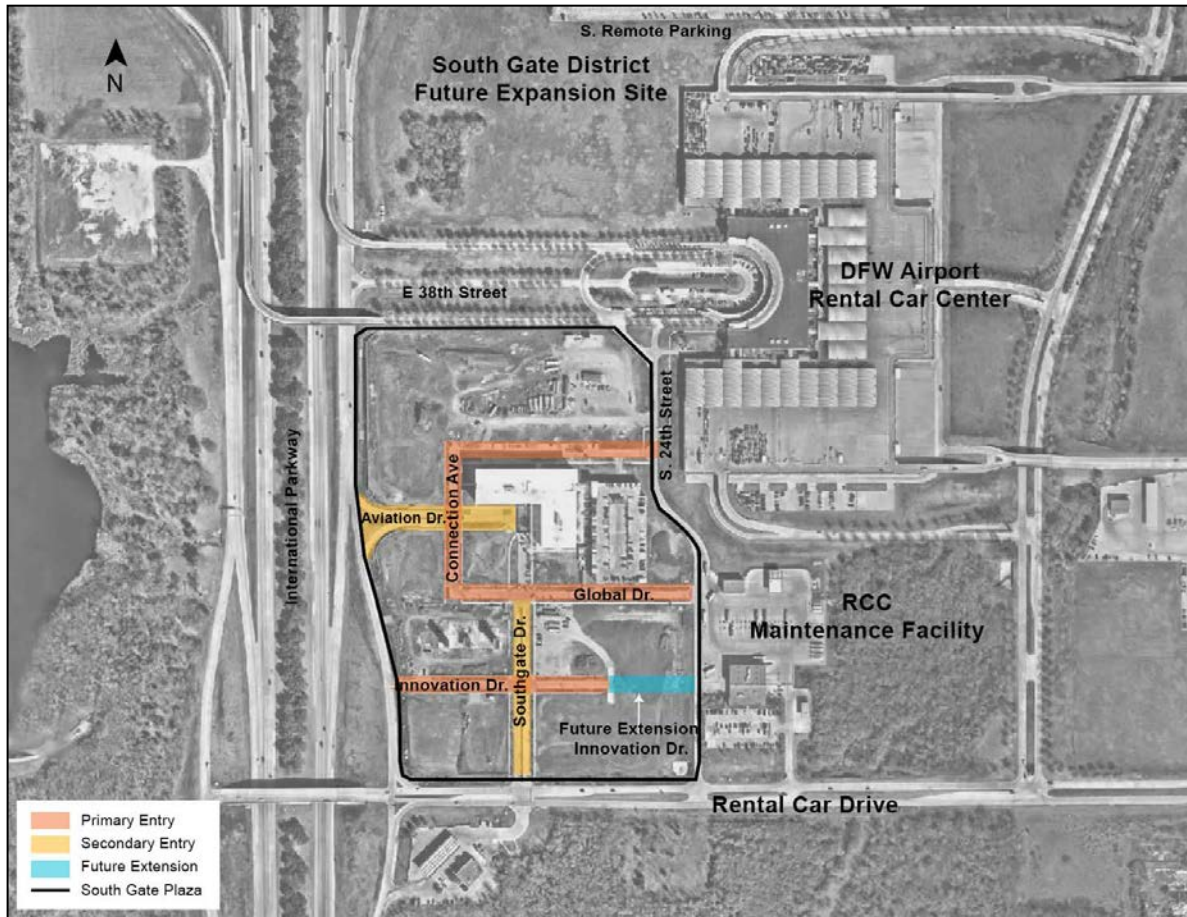
#### 10.1.6.3 Openings and Curb Cuts

All new curb cuts providing off-site access must first be approved by PLNG and CD and shall be constructed at the cost of the Tenants requesting the cut. In order to provide visual continuity, pavement to be cut shall match the existing pavement as closely as possible.

#### 10.1.6.4 Sidewalks

Continuous sidewalks are required along all Plaza and circulation streets and must be complete prior to building occupancy. American Disabilities Act (ADA) standards must be met.

Exhibit 10-6: Street Types Framework Diagram



## 10.2 Southgate Plaza Additional Landscape Criteria

### 10.2.1 DESIGN REQUIREMENTS

#### 10.2.1.1 Landscaping Corridor

The landscaping corridor is the area outside the leaseline up to the back of curb for the Airport roadway. It shall:

- 1) Provide a visual buffer between Southgate Plaza and International Parkway and
- 2) Provide continuity with adjacent airport property.

The leaseholder shall provide and maintain landscaping and other improvements located within the landscaping corridor. The Airport has developed a typical planting template for this area (reference **Exhibit 3-4**). Landscaping in this area may be enhanced but shall satisfy the following minimums: 1) a minimum of 20 trees for every 400 linear feet, 2) of these 20 trees, four (4) shall be Crepe Myrtle trees (watermelon red), six (6) shall

be Mesquite trees, four (4) shall be Red Oak trees, three (3) Wax Myrtle and three (3) Red Bud trees. Coordinate appropriate applications with PLNG.

Landscaping should be consistent in design and density on all sides of the property. Landscape design shall provide smooth transition and continuation of existing landscaping in the setbacks and from existing adjacent parcels.

#### 10.2.1.2 Street Trees

- **Tree Lawns** - Tree lawns are planted areas located along the internal circulation of the development and shall be a minimum of ten (10) feet wide and planted with turf and/or native grasses, shrubs, flowers and trees (reference **Section 10.1.5.1** Street Type Specifications for more details and **Appendix G** for plant list). Tree lawns may also be used as a bioswale to create secondary rainwater storage.

### 10.2.2 LANDSCAPING GRADING AND DRAINAGE

#### 10.2.2.1 Detention Ponds

All site detention areas shall be centralized at the lowest point of the site at the southern edge. The design of the detention area shall be adjusted and reconfigured based upon detailed engineering design, but in general the following principals shall apply:

- Due to the location of the detention area, it shall also act as a gateway feature to the site. The detention area shall be designed as a permanent active water feature on the site.
- The freeboard area shall be designed as a “natural edge” in order to complement the landscape characteristics of Southgate Plaza. Natural stone and natural groupings shall comprise the edge.
- The Tenants will reference AC-150-5200-32B during design to minimize wildlife attractants and ensure detention areas are drained within the required 48-hour period.
- All site drainage to the detention area shall not interfere with streets, sidewalks and parking lots on site.
- In order to minimize detention requirements, areas such as parking landscape islands and bioswales in landscape corridors shall be utilized as areas of secondary water storage.

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## 10.3 Southgate Plaza Additional Architecture Criteria

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### 10.3.1 CONTEMPORARY STYLE

The character of the architecture is to be progressive, functional and enduring (reference **Exhibit 10-6**). Innovation in design, structure and materials is encouraged. The level of architectural detailing shall be reasonably consistent on all sides of a building. Buildings must have a horizontal expression. Simple volumes that blend with the landscape are preferred. “Big Box” structures shall incorporate material changes, projections and significant offsets to break up the massing into segments no longer than 100 feet. Entries shall be easily identifiable destination points and scaled in proportion to the façade. Residential character features and/or

materials are NOT allowed, such as: fabric awnings; wood siding; window shutters; non-functional ornamentation; and period (historical) applications. For details on enhancing facades through architectural lighting refer to **Section 2.4.4**.

#### Exhibit 10-7: Southgate Plaza Brand Façade Example



##### 10.3.1.1 Building Height

The maximum building height shall be eight (8) stories or 120 feet in all zones except for the area within 225 feet of the property line along International Parkway. Here the maximum building height is two (2) stories or 30 feet.

##### 10.3.1.2 Maximum Building Length

No building length, as measured along the street frontage, shall be more than 400 feet in length.

##### 10.3.1.3 Building Corner Treatments

Buildings shall reinforce a strong corner condition at street intersections in order to emphasize the intersection (reference **Exhibit 10-7**). Buildings shall be designed to accommodate required visibility triangles without compromising the corner design.

**Exhibit 10-8: Strong Corner Condition****10.3.1.4 Fencing**

To keep consistent with the street-oriented, pedestrian friendly atmosphere of the development, fencing will be controlled so as not to create barriers that interfere with the desired pedestrian street experience. The maximum total length for a fence will be 100 feet without a break (reference **Exhibit 10-8**).

All fencing must be wrought iron or steel, with a design compatible with the adjacent architecture. Chain link and barbed wire is prohibited. Wood or plastic fencing is prohibited. Any fence with perforations shall be installed with a continuous mow strip of concrete extending a minimum of 12 inches on each side of the fence.

Areas where guard rails are required for safety shall conform to all government regulations and shall be compatible to the design of architectural and fencing concepts for adjacent buildings.

**Exhibit 10-9: Fencing Separating Public and Private Uses without Screening the Building or Development**

## 10.4 Southgate Plaza Additional Signage Criteria

#### 10.4.1 FREE-STANDING OCCUPANT SIGNS

#### 10.4.1.1 Tenant Signs

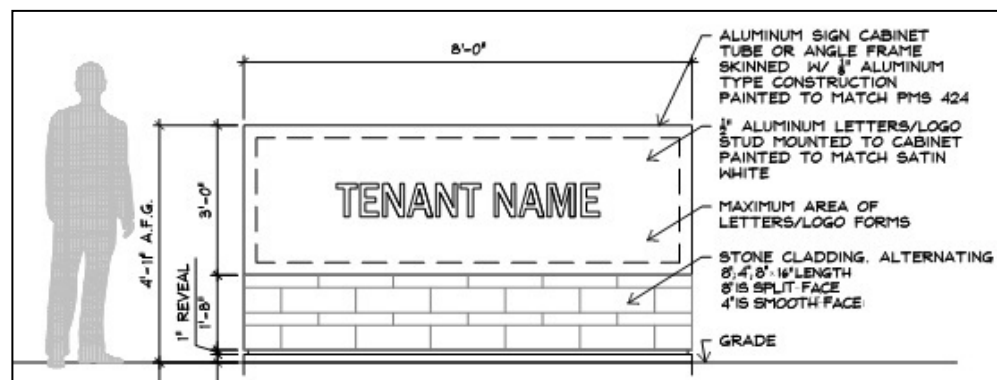
Individual signs for free-standing (parcel) buildings are required to utilize a standard sign structure which uses materials and design features that relate to the directory structures for the development and shall support the unifying character of the development.

A signage system illustrating the different types of signs and their specific uses and display rules shall be produced.

All sign types shall contain similar design features so that they create a sign family.

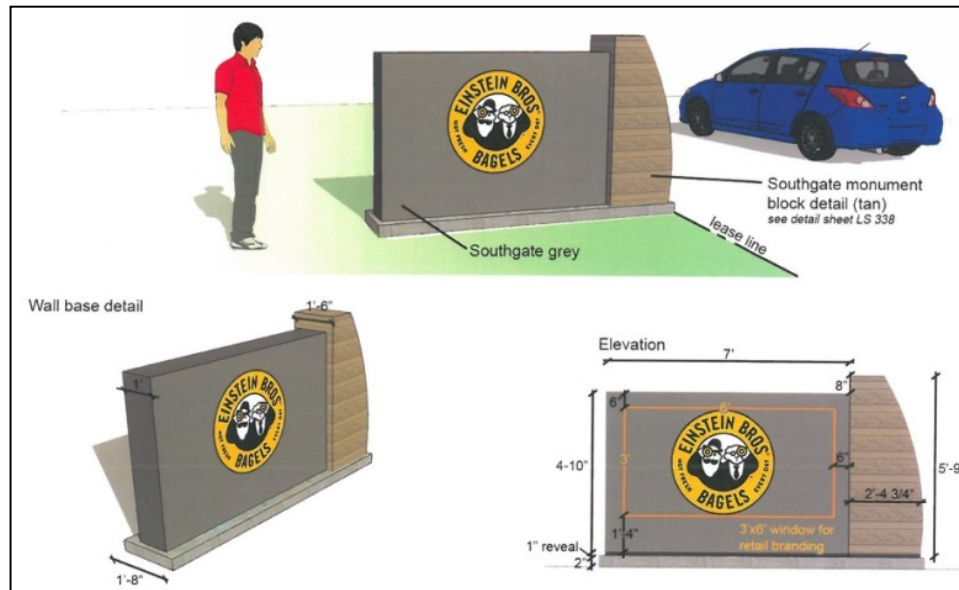
- Standard 1 – For application within the development (reference **Exhibit 10-9**).
- Standard 2 – Application facing Rental Car Drive & NB Service Road (reference **Exhibit 10-10**).

### Exhibit 10-10: Tenant Sign – Standard 1





### Exhibit 10-11: Tenant Sign – Standard 2



#### 10.4.1.2 District Monument Signs

Through consistent design, materials, font, and logo use, a family of signs unifies Southgate Plaza's wayfinding. Through different sizes and scale each sign serves a particular purpose. The Gateway sign is a pedestrian scale sign and set at one of the main entries to create a branded environment. The Monument sign serves as a general wayfinding sign of major tenants on site. The materiality of the signs reflects the rest of the character of Southgate Plaza. The stone used is the same veneer as the retaining walls. The aluminum plated signs and internally lit acrylic signs compliment the contemporary style of Southgate Plaza.

#### 10.4.1.3 Tenant Monument Sign

An important aspect of relaying the Southgate Plaza brand is the installation of a tenant monument. This monument is the dominant feature of the plaza; therefore, it is required for it to convey the quality and unique characteristics of the environment through the design and function of the monument.

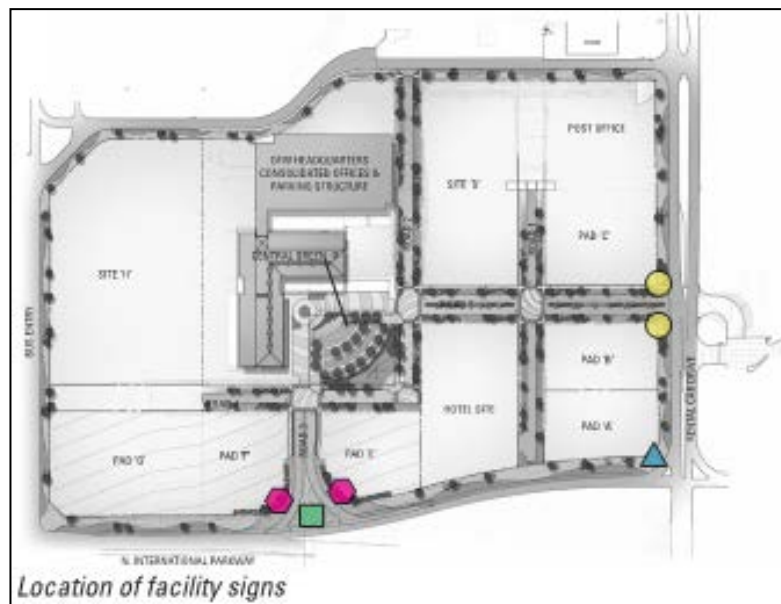
The monument is intended to employ the Southgate Plaza logo, as well as fixed and digital signage, and shall be designed to complement the architecture of the built environment. All displays shall be approved by the Airport.

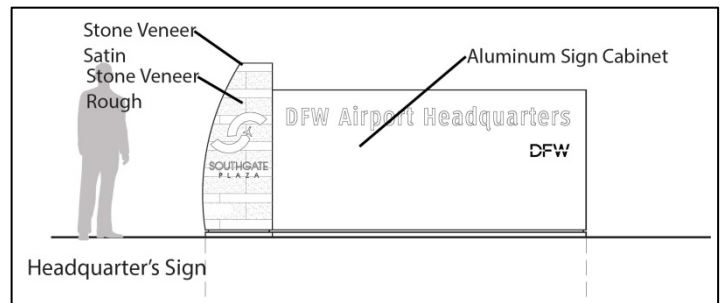
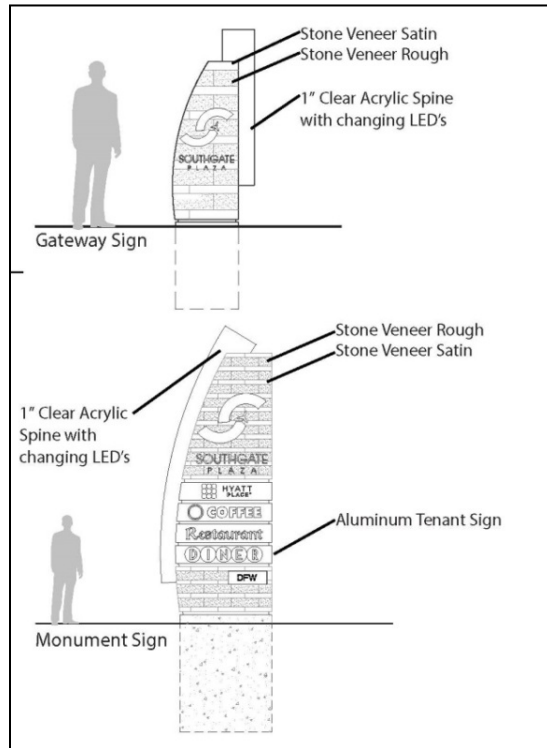
- The maximum height of the monument is 100 feet.
- Signage associated with the monument may project over sidewalks, plazas and other pedestrian areas, but shall have at least 9 feet of clearance from grade.
- No single sign may exceed 200 square feet.



- Support structure of the monument shall be made of metal and shall be engineered to support local wind loads.
- The sign panel shall be made of metal. Background panel shall be made of acrylic, Plexiglas or similar plastic sheeting.
- Individual letters, graphics or sign panels may be internally illuminated and glow with a halo-illumination effect or glow through their front face. Exposed conduits, raceways or transformers are prohibited.
- Indirect lighting shall be attached to the monument or sign and shall be shielded to prevent light from shining directly into traffic, upper floor windows or pedestrians' eyes.

**Exhibit 10-12: District Identification Sign Locations**



**Exhibit 10-13: Southgate Plaza Gateway and Monument Signs**

# 11. Appendix F: SH114 Corridor

## District Specific Criteria

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### 11.1 SH 114 Frontage and Texan Trail Additional Site Criteria

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The following specific treatments, design elements or application standards shall apply to developments with frontage along the SH114 highway right of way (ROW). These requirements are intended to provide consistency and continuity between the developments on Airport property and those along the north side of SH114 in Grapevine. They shall supplement the other development criteria that apply to the specific leasehold and if indicated below the new criteria shall supersede Sections 1-5 of this document and the Founder's Plaza Appendix. Potential conflicts or questions should be discussed with and resolved by the Commercial Development and Planning Departments. This information may be updated from time to time.

#### 11.1.1 SITE LIGHTING

The site lighting fixture shall be a Gardco Gullwing (G18 Area Luminaires), Natural Aluminum Paint factory finish on a matching round pole. Exterior lighting shall be approved LED fixtures and lamps shall produce a white light.

#### 11.1.2 LANDSCAPING

When a lease abuts the SH114 ROW, the Landscaping Corridor shall be defined as the landscaping in the front yard setback (between the TxDOT ROW and the parking). For these sites the suggested landscape template shall NOT apply and be replaced with the following and shall apply to all front yards of the applicable lease.

-Provide a continuous planting bed in the setback area with a steel edging at the TxDOT ROW. The area from the steel edging to the street shall be mowed turf. Within the planting bed provide a "stepped" landscape design (refer to **Exhibit 11-1**) composed of:

- o Low area closest to the ROW: use gravel, ground cover planting, native grasses (not mowed turf)
- o Middle area: incorporate boulders, short accent plants
- o Hedge area closest to parking: provide a continuous 36"h hedge along the back of the planting bed. (Use plants such as dwarf yaupon holly, burford holly, indian hawthorne, boxwood) Plant size shall produce a hedge that measures a minimum of 30" high at time of planting.
- o Any fencing or security railing shall be located behind the hedge row.

- In addition to the planting bed, a planting mass containing taller plants (groupings of trees, shrubs, ground covering, and hardscape) shall be provided at a maximum spacing of 100' or every 12 parking spaces along the frontage. This area shall connect to the front planting bed and extend perpendicular into the site 18' minimum and be a minimum of 10' wide. Refer to **Exhibit 11-2**. When possible this requirement for planting mass shall be embedded in the "stepped" landscaping bed described above.
- Enhanced planting shall be provided at the ends of parking rows, at terminus areas and on both sides of entry driveways. This planting shall contain groupings of trees, taller plants and low plants. Refer to **Exhibit 11-3**.
- Trees shall be varieties indicated on the "Shaded Trees" except for Mesquites shall not be used. They shall be 4" caliper or larger at time of planting.
- Trees on the "Ornamental Trees" list may be used in the required planting mass areas and elsewhere in the landscaping.
- Where driveways intersect public roadways or roadway intersections, a visibility triangle complying with the American Association of State Highway and Transportation Officials (AASHTO) shall be provided so that landscaping, retaining walls, lighting and signage shall not infringe upon the ability of vehicle operators to see approaching vehicles from either roadway or driveway.

**Exhibit 11-1: "Stepped" Landscaping**



**Exhibit 11-2: Perpendicular Planting Mass**



**Exhibit 11-3: Landscaping at End of Row**



### 11.1.2.1 Landscape at Base of Building

Landscaping beds, structured planters, and/or irrigated planter containers (refer to **Exhibits 11-4,5,6** respectively) shall be provided at the base of the building to enhance entries, front elevations and architectural features.

**Exhibit 11-4: Landscaping Bed**



**Exhibit 11-5: Structured Planter**





**Exhibit 11-6: Irrigated Containers****11.1.3 FENCING AND SECURE RAILING**

Fence designs in front yards shall be enhanced by incorporating appropriate features, change in material, and/or change in alignment to create visual breaks for long continuous runs. This enhancement requirement shall apply to fences installed within the “front yard area” defined as the area between the roadway lease line and the face of the building and shall extend from side lease line to side lease line. Boundaries of the “front yard area” may be adjusted by the Airport based on specific development conditions. Public entry gates shall be featured, and the side posts shall be articulated to create a sense of arrival.

**11.1.4 PLAN OF DEVELOPMENT (POD) PACKAGE**

Computer generated 3D color renderings shall be provided with the POD as exhibits to illustrate the anticipated appearance of the proposed development components in context. Renderings shall include as a minimum; the four sides of the building(s), public entries, the drive-up approach, specifically features in public view.



## 12. Appendix G

### Approved Plant List

These landscape plants were chosen for inclusion in the DFW Airport Approved Plant List for their availability and popularity in horticulture, overall drought tolerance (exceptions noted), nativity to Texas or suitability to the DFW area, and minimal attractiveness to undesirable wildlife (restrictions noted). Use of plants that fit these parameters is required in future landscape plans on DFW Airport property. Plants that produce wildlife attractants such as seeds, berries, nuts, roosting cover, nesting cover, or that otherwise attract or harbor prey animals such as rodents are not approved for use in future landscape design and are omitted from the Approved Plant List. Hazardous wildlife attractants are addressed by the Federal Aviation Administration in Advisory Circular (AC) 150/5200-33B, and FAR Part 139.337 instructs airports to address and mitigate wildlife attractants.

Certain approved species have **wildlife-specific restriction** statements, in **bold**, in the "Notes" column (and **WSR** in the "Symbols" column). These species are only approved for restricted use, meaning they must be used sparingly (no mass plantings), and then only in areas buffered from flight paths and away from the Airport Operations Area. **Any plans including these restricted species must be submitted to Wildlife Administration for approval, with details on the site/location, and number of restricted plants proposed, per species or cultivar. Permanent physical visual barriers (buildings) must exist between any oaks and the airfield.**

Anticipating that certain locally-popular landscape plants may be suggested by external contractors unaware of wildlife-specific restrictions at DFW Airport, we have included some of these undesirable species in the "Not Approved" section, with explanation as to why they are inappropriate in every circumstance. In most cases, these plants prolifically produce fruits or seeds that attract nuisance birds or other undesirable animals. A few plants are also listed as inappropriate based on invasiveness, cold sensitivity, or high irrigation requirements.

Before selecting landscape plants for a project, the designer is encouraged to conduct their own research to determine suitability for their design. Certain considerations, such as maintenance requirements, ultimate plant size, and resistance to disease, were beyond the scope of this list, so certain species will not be desirable for all sites or plans.

*\* These lists are not all-inclusive. New plants are continually being brought into cultivation or hybridized in nurseries and research centers throughout the world. If a plant that is not listed as approved (but is also not specifically excluded) is desired for inclusion in a landscape plan, the designer shall provide Commercial Development with a request for approval. For each plant species or cultivar request, the scientific name, common name, number of plants proposed, details on the proposed site/location, and documenting literature or web sites from reputable sources describing the species/cultivar, habits, and growth requirements must be provided, and will be forwarded to the Wildlife Administrator. The Wildlife Administrator will review these requests, along with local experts, to determine suitability as a DFW Airport landscape plant.*

*The DFW Approved Plant List was created by DFW Airport Wildlife Administrator Cathy Boyles and Botanical Consultant Amanda K. Neill, with input from DFW Airport Commercial Development. The plant cultivars and species listed may be reviewed and updated periodically by the authors.*

### Plant Qualities Legend:

- N= Native to TX
- E= Evergreen (provided for groundcovers, vines, shrubs, and trees only)
- H= High-Water Use (may need additional irrigation). Plants without the H symbol are considered drought-tolerant
- WSR= Wildlife-Specific Restriction

### SHADE TREES

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	CANOPY SIZE L=2000 FT <sup>2</sup> M=700 FT <sup>2</sup> S=100 FT <sup>2</sup>	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN BOLD.
Acer grandidentatum	Bigtooth Maple	N	M	Tolerates a range of soils and moisture levels. Tolerates shade. Reliable fall color. Texas native.
Cedrus deodara	Deodar Cedar	E	L	Graceful and sculptural evergreen. Can become a very large tree.
Fraxinus texensis	Texas Ash	N	L	Provides fall color. Male trees are seedless. Texas native.
Pinus eldarica	Afghan Pine, Eldarica Pine	E	M	Fast-growing evergreen; tolerates poor, dry soils. Should not be planted in moist sites or areas receiving irrigation.
Pistacia chinensis	Chinese Pistache	WSR	M	<b>* Only male (fruitless) trees are acceptable.</b> Withstands harsh conditions and poor soils. Provides fall color.
Quercus buckleyi	Texas Red Oak	N, WSR	L	<b>* Acorns can be a wildlife attractant. Red, Lacey, and chinkapin oaks shall be used sparingly (no mass plantings).</b> Provides fall color. Texas native. Previously known as Quercus texana.
Quercus laceyi	Lacey Oak	N, WSR	M	<b>* Acorns can be a wildlife attractant. Red, Lacey, and chinkapin oaks shall be used sparingly (no mass plantings).</b> Unusual bluish foliage. Texas native. Previously known as Quercus glaucoides.
Quercus macrocarpa	Bur Oak	N	L	<b>* Acorns can be a wildlife attractant. Use sparingly. The acorns are too large for most birds to eat, which makes this the best oak for DFW Airport, however, can be an attractant. Bold foliage, fast-growing, long-lived. Can become a very large tree. Texas native.</b>
Quercus muehlenbergii	Chinkapin Oak	N, WSR	L	<b>* Acorns can be a wildlife attractant. Red, Lacey, and chinkapin oaks shall be used sparingly (no mass plantings).</b> Provides fall color. Texas native.

Quercus shumardii	Shumard Red Oak	N, WSR	L	* <b>Acorns can be a wildlife attractant. Red, Lacey, and chinkapin oaks shall be used sparingly (no mass plantings).</b> Provides fall color. Texas native.
Taxodium distichum	Bald Cypress	N	L	Soft, needle-like leaves turn copper in the fall. Adapted to both dry and moist sites. Will produce pavement-disrupting "knees" in wet sites. Texas native.
Ulmus crassifolia	Cedar Elm	N	L	Upright habit; good street tree. Texas native.
Ulmus parvifolia	Lacebark Elm		L	Spreading habit; textured bark.

### ORNAMENTAL TREES

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	CANOPY SIZE L=2000 FT <sup>2</sup> M=700 FT <sup>2</sup> S=100 FT <sup>2</sup>	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Cercis canadensis var. texensis	Texas Redbud	N	M	Pink-purple early spring flowers. Good cultivars include 'Oklahoma' and 'Forest Pansy'. Texas native.
Chilopsis linearis	Desert Willow	N	S	Fast-growing; requires well-drained soil. Pink-purple orchid-like flowers from spring through summer. Airy foliage. Texas native.
Chitalpa tashkentensis	Chitalpa		S	Requires well-drained soil. White or pink snapdragon-like flowers from spring through summer. Airy foliage.
Cotinus obovatus	American Smoketree	N	S	Pink to purple flowers in spring. Blue-green leaves turn bright colors in fall. Texas native.
Cupressus arizonica	Arizona Cypress	N, E	M	Fast-growing evergreen; tolerates poor, dry soils. Should not be planted in moist sites or areas receiving irrigation. Suitable for a windbreak or privacy screen. Texas native.
Ilex vomitoria	Yaupon Holly	N, E, WSR	S	* <b>Only male (fruitless) trees are acceptable.</b> Sculptural, evergreen large shrub or small tree; upright and weeping forms available. Takes pruning well. Texas native.
Juniperus virginiana	Eastern Red Cedar	N, E, WSR	M	* <b>"Fruits" (actually cones) can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Large evergreen with fine foliage. Texas native.
Lagerstroemia indica	Crepe Myrtle		M	Many cultivars are available in several sizes. Summer-blooming in numerous colors of white, pink, purple, and red.
Magnolia grandiflora smaller cultivars	Southern Magnolia, 'Little Gem' and 'Teddy Bear'	N, E, WSR	S	* <b>Fruits can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Conical, evergreen tree. Large white flowers in summer.

Prosopis glandulosa	Honey Mesquite	N, WSR	M	<b>* Beans can be a wildlife attractant. Shall be used sparingly (no mass plantings). Thornless cultivars preferred, as they tend to produce fewer beans.</b> Tolerates poor, dry soils. Airy foliage and graceful habit. Summer-blooming with yellow catkins. Texas native.
Prunus mexicana	Mexican Plum	N, WSR	S	<b>* Fruits can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> White spring flowers are followed by small red plums that fall when ripe; should not be planted near pavement. Good fall color. Texas native.
Sophora affinis	Eve's Necklace	N	S	Requires well-drained soil. Pink flowers in spring are followed by black beans that are avoided by wildlife. Texas native.
Sophora secundiflora	Texas Mountain Laurel	N, E	S	Evergreen; requires well-drained soil. Purple, fragrant flowers in spring are followed by tan beans that are avoided by wildlife. Texas native.
Ugnadia speciosa	Mexican Buckeye	N	S	Requires well-drained soil. Pink orchid-like flowers in spring are followed by brown pods that are avoided by wildlife. Texas native.
Vitex agnus-castus	Vitex, Chaste Tree		S	Fast-growing shrub or small tree. Lavender or white flowers in spring.

## SHRUBS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Abelia x grandiflora	Glossy Abelia	E (sometimes semi-evergreen)	Numerous cultivars of Abelia are available, ranging from tall groundcovers to large shrubs, some with colorful variegated foliage. Most have white or pink flowers from summer through fall.
Buxus microphylla and Buxus sempervirens	Boxwood	E, H	Evergreen shrub. Takes pruning well. A good hedge for irrigated areas.
Chaenomeles x superba	Flowering Quince		Earliest-blooming shrub; spreading and thorny. Scarlet flowers in late winter. Fruit bitter and rarely produced.
Cotoneaster glaucophyllus	Grayleaf Cotoneaster	E (sometimes semi-evergreen), WSR	<b>* Berries can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Dusty gray-green foliage. Heat tolerant.
Hesperaloe parviflora	Red Yucca	N, E	Low-growing, evergreen; heat-tolerant. Spikes of red or yellow flowers in summer. Texas native.
Hibiscus syriacus	Rose of Sharon, Althea		Takes pruning well. Large white, pink, or purple flowers in summer.
Ilex cornuta 'Carissa'	Carissa Holly	E	Glossy, evergreen shrub. Takes pruning well; a good hedge. More desirable than other hollies because the 'Carissa' cultivar rarely produces berries.
Ilex vomitoria (dwarf cultivars)	Dwarf Yaupon Holly	N, E	Evergreen shrub. Takes pruning well; a good hedge. Numerous cultivars exist. More desirable than other hollies because dwarf yaupon cultivars do not produce berries. Texas native.

Jasminum fruticans	Wild Jasmine	E (sometimes semi-evergreen)	A mounding, spreading, cascading shrub that can spread to cover a large area; useful to cover retaining walls. Takes pruning well. Yellow flowers from winter to spring.
Lagerstroemia indica (dwarf cultivars)	Dwarf Crepe Myrtle		Many cultivars are available in several sizes. Summer-blooming in numerous colors of white, pink, purple, and red.
Leucophyllum candidum and Leucophyllum frutescens	Texas Sage, Violet Silverleaf, Cenizo	N, E	Green-gray or silver evergreen foliage; takes pruning well; suitable for hedges. Requires well-drained soil; heat-tolerant. Lavender flowers from summer to fall. Several compact cultivars are available, including 'Green Cloud' and 'Thunder Cloud.'
Loropetalum chinense	Chinese Fringe Flower	E	Pink to purple flowers in early spring. Numerous cultivars are available with purple leaves year-round.
Myrica cerifera	Southern Wax-Myrtle	N, E	<b>* Berries can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Fragrant, olive-green foliage is evergreen; takes pruning well. Can become a very large shrub. Texas native.
Nandina domestica 'Gulf Stream'	Gulf Stream Nandina	E	Colorful, evergreen low shrub or tall groundcover. Suitable for hedges. A preferred cultivar because it produces no fruit.
Opuntia ellisiana	Spineless Prickly-Pear	N, E, WSR	<b>* Fruits can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Hardy, evergreen, spineless cactus; heat-tolerant; can form a large mound. Yellow flowers in summer. Sometimes called Opuntia cacanapa.
Pittosporum tobira 'Wheeler's Dwarf/ Wheeler'	Dwarf Japanese Mock Orange, Wheeler's Mock Orange	E	Evergreen shrub. Takes pruning well; a good hedge. Only the solid green "Wheeler's Dwarf" is recommended, as the variegated cultivars are less winter-hardy in DFW.
Rhapidophyllum hystrix	Needle Palm	E, H	Evergreen, tropical-looking, clumping and spreading palm; perfectly winter hardy in DFW. Spiny trunk base. Prefers part-shade and some irrigation.
Rosa hybrids (Earth-Kind selections)	Earth-Kind Rose Cultivars, including 'Knock-Out' Rose		Shrub roses selected for heat, drought, and disease-tolerance. Several cultivars are available. Most have pink to red flowers from spring to fall.
Rosmarinus officinalis	Rosemary	E	Fragrant, fine-leaved evergreen shrub; takes pruning well; heat-tolerant. Lavender flowers in spring. Numerous upright cultivars are available, and these are generally the most winter-hardy.
Spiraea x vanhouttei	Bridalwreath Spiraea		Showy white flowers in late spring.
Yucca sp.	Yucca	N (some), E	Numerous Yucca species are available, ranging from small stemless plants to multi-trunked shrub-like plants; all hardy species are acceptable; all require well-drained soil and are heat-tolerant. White spikes of flowers in summer. Some species have sharp leaves. Many species are Texas natives.
P. Tenuifolium	Pittosporum		Small evergreen; bright pale wavy green leaves on black twigs; Honey scented purplish flowers in spring

## VINES

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Bignonia capreolata	Crossvine	N, E	Evergreen; climbs by twining; shade tolerant. Orange and pink flowers in spring. Texas native.
Campsis x tagliabuana	Trumpet Creeper	N	Select from improved, non-aggressive hybrid cultivars only. Climbs with sucker-roots. Red-orange flowers from summer to fall.
Gelsemium sempervirens	Carolina Jessamine	N, E	Evergreen; climbs by twining. Fragrant yellow flowers in early spring. Texas native.
Hedera helix	English Ivy	E	Can be an aggressive climber-- do not plant near trees. Evergreen; climbs with sucker-roots; prefers shade.
Lonicera sempervirens	Coral Honeysuckle	N, E	Evergreen; climbs by twining. Red flowers from spring to summer. Texas native.
Parthenocissus quinquefolia	Virginia Creeper	N	Climbs with sucker-roots; shade tolerant. Provides fall color. Texas native.
Parthenocissus tricuspidata	Boston Ivy		Climbs with sucker-roots; prefers afternoon shade. Provides fall color.
Rosa banksiae 'Lutea'	Lady Banks rose	E (semi-evergreen)	Usually holds some leaves through winter; climbs by twining; accepts pruning well. Yellow flowers in spring. Can become a very large plant.
Wisteria frutescens	American Wisteria	N	Climbs by twining; less aggressive than Chinese wisteria. Lilac flowers in summer.
Wisteria sinensis	Chinese Wisteria		Can be an aggressive climber-- do not plant near trees. Climbs by twining. Fragrant lavender flowers in spring.
Antigonon leptopus	Coralvine		Pink flowers in late summer and fall.
Campsis radicans	Improved Trumpet Vine		Orange flowers in summer and fall.

## GROUND COVERS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Ajuga reptans	Ajuga, carpet bugle	E	Prefers some shade. Purple flowers spring through summer. Many cultivars exist; some have colorful foliage.
Carex sp.	Sedges	N (some), E	Prefers some shade; tolerates wet soils. Evergreen and grass-like. Numerous species and cultivars are available. Some are Texas natives.
Calyptocarpus vialis	Horseherb	N	Tolerates shade and dry, poor soils. Goes dormant in winter. Small yellow flowers from spring through fall. Texas native.

Cyrtomium falcatum	Japanese holly fern	E, H	Part to full shade; requires some irrigation.
Euonymus fortunei	Purple Wintercreeper	E	Sun to shade. Evergreen foliage that turns plum-colored in winter; semi-prostrate growth requires some shearing.
Juniperus horizontalis	Creeping Juniper	E	Sun. Evergreen; heat-tolerant. Numerous cultivars are available.
Liriope muscari	Liriope, Lilyturf	E	Sun to shade. Evergreen and grass-like; spikes of lilac flowers from spring to summer.
Ophiopogon japonicus	Monkeygrass, Mondo Grass	E	Prefers shade. Evergreen and grass-like.
Santolina chamaecyparissus	Gray Santolina, Lavender Cotton	E	Sun; requires well-drained soil. Silver or greenish foliage is fragrant; heat-tolerant.
Trachelospermum asiaticum	Asiatic Jasmine	E	Sun to shade. Evergreen.
Vinca major	Vinca, Periwinkle	E (sometimes semi-evergreen)	Prefers part shade. Purple flowers from spring to summer.

## ORNAMENTAL GRASSES

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Andropogon gerardii	Big Blue Stem	N	Tall height; spreads by rhizomes. Stem base turns blue-purple as it matures. Texas native.
Chasmanthium latifolium	Inland Sea-Oats	N	Medium-height bunchgrass; gradually spreading by seed; prefers some shade. Graceful green seedheads turn tan in winter. Texas native.
Eragrostis curvula	Weeping Love Grass		Medium-height bunchgrass. Graceful, long, "weeping" leaves. Can spread aggressively by seed.
Eragrostis spectabilis	Purple Lovegrass	N	Medium-height bunchgrass. Showy purple seedheads. Texas native.
Miscanthus sinensis	Maiden Grass		Tall bunchgrass; can tolerate some shade. Feathery seedheads persist from fall to winter.
Muhlenbergia capillaris	Gulf Muhly	N	Medium-height bunchgrass. Showy pink-purple seedheads. Texas native.
Nasella tenuissima	Mexican Hairgrass, Needlegrass	N	Medium-height bunchgrass. Graceful, hairlike leaves. Texas native.
Pennisetum alopecuroides	Dwarf Fountain Grass		Low to medium-height bunchgrass. Buff or purple seedheads. 'Hameln' and 'Little Bunny' are both recommended cultivars



Schizachyrium scoparium	Little Bluestem	N	Medium-height bunchgrass. Blue-green foliage becomes mahogany-orange in fall; seedheads are white and feathery. Texas native.
Sorghastrum nutans	Indian Grass	N	Tall bunchgrass. Blue-green foliage; gold and purple seedheads in fall. Texas native.

## TURF GRASSES

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Cynodon dactylon	Bermuda Grass		Dense turf; poor shade tolerance.
Buchloe dactyloides	Buffalo Grass	N	Thin turf; poor shade tolerance. Requires no or infrequent mowing. Good cultivars include Stampede, 609, and Top Gun. Texas native.
Zoysia japonica (and hybrids)	Zoysia Grass		Dense turf; good shade tolerance.

## PERENNIALS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Achillea millefolium	Yarrow, Milfoil	N	Low-growing; heat-tolerant. Various colors, summer. Texas native.
Anisicanthus wrightii	Flame Acanthus	N	Sprouts from ground or lower branches mid-spring; heat-tolerant. Red flowers summer to fall. Texas native.
Artemisia sp.	Wormwood	N (some)	Low-growing herbaceous species/cultivars do well on well-drained sites; heat-tolerant.
Asclepias sp.	Milkweed	N (some)	Several species/cultivars available; various colors, spring to summer. Important for monarch butterflies.
Conoclinium greggii	Gregg's Mistflower	N	Spreading, low-growing. Lavender flowers in fall. Can spread aggressively. Texas native.
Coreopsis sp.	Tickseed	N (some)	Many species/cultivars available; usually have yellow flowers, spring to summer.
Delosperma cooperi	Hardy Ice Plant		Low-growing succulent; heat-tolerant.
Echinacea sp.	Purple Coneflower	N (some)	Many species/cultivars available; usually have pink-purple flowers, spring to summer.
Gaillardia sp.	firewheel, Indian blanket	N (some)	Many species/cultivars available; usually have red/orange or yellow flowers, spring to summer.

Gaura sp.	Gaura, Wild Honeysuckle	N (some)	Many species/cultivars available; usually have white or pink flowers, summer to fall.
Hemerocallis fulva	Daylily		Many cultivars available; various flower colors, summer.
Hesperaloe parviflora	Red Yucca	N	Low-growing, evergreen; heat-tolerant. Spikes of red or yellow flowers in summer. Texas native.
Hibiscus coccineus	Texas Star Hibiscus	N	Sprouts from ground in late spring; large red flowers in summer. Texas native.
Iris sp.	Iris		Bearded irises and Dutch irises do well in the DFW area; various flower colors.
Lantana sp.	Lantana	N (some), WSR	<b>* Berries on some cultivars can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Trailing and upright species/cultivars available; heat-tolerant. Various flower colors.
Liatis sp.	Gayfeather, Blazing Star	N (some)	Spikes of pink-purple flowers from summer-fall.
Malvaviscus drummondii	Turks'-Cap	N, WSR	<b>* Fruits can be a wildlife attractant. Shall be used sparingly (no mass plantings).</b> Red flowers from summer to fall. Texas native.
Melampodium leucanthum	Black-Foot Daisy	N	White flowers from spring to fall. Texas native.
Oxalis sp.	Shamrock		Low-growing; prefer some shade. Colorful foliage; pink flowers from spring to fall.
Pavonia lasiopetala	Texas Rock Rose	N	Shrubby; heat-tolerant. Pink flowers from spring to fall. Texas native.
Penstemon sp.	Beardtongue	N (some)	Many species/cultivars available; white, pink., and red flowers, spring to fall.
Petrovskia atriplicifolia	Russian Sage		Shrubby; heat-tolerant. Purple flowers in summer.
Phlomis fruitcosa	Jerusalem Sage		Heat-tolerant. Yellow flowers in summer.
Rosa hybrids (Earth-Kind selections)	Earth-Kind Rose Cultivars, including 'Knock-Out' rose		Roses selected for heat, drought, and disease-tolerance. Several cultivars are available. Most have pink to red flowers from spring to fall.
Rosmarinus officinalis	Rosemary		Fragrant, fine-leaved evergreen shrub; takes pruning well; heat-tolerant. Lavender flowers in spring.
Rudbeckia sp.	Coneflower	N (some)	Many species/cultivars available; usually have yellow flowers, spring to summer.
Ruellia brittoniana 'Katie'	Katie Ruellia, Dwarf Mexican Petunia		Low-growing. Several cultivars available; white, pink, or purple flowers, spring to fall.
Salvia sp.	Salvia, Sage	N (some)	Many species/cultivars available; various flower colors, spring to fall.
Santolina chamaecyparissus	Gray Santolina, Lavender Cotton		Sun; requires well-drained soil. Silver or greenish foliage is fragrant; heat-tolerant.
Scutellaria suffrutescens	Pink Texas Scullcap	N	Low-growing; heat-tolerant. Pink flowers summer to fall. Texas native.
Sedum sp.	Stonecrop		Low-growing succulent; many species/cultivars available.

Solidago sp.	Goldenrod	N (some)	Many species/cultivars available; usually have yellow flowers, summer to fall. Can spread aggressively.
Symphyotrichum oblongifolium	Texas Fall Aster	N	Tolerates partial shade; spreading. Purple flowers in fall. Texas native.
Tagetes lucida	Mexican Mint Marigold		Fragrant foliage; heat tolerant. Yellow flowers in fall.
Tecoma stans 'Gold Star'	Gold Star Esperanza, Yellowbells		Sprouts from ground in late spring; yellow flowers summer to fall.
Tetaneuris scaposa	Four-Nerve Daisy	N	Low-growing; heat-tolerant. Yellow flowers summer to fall. Texas native.
Tulbagia violacea	Society Garlic		Grasslike clump. Purple flowers from spring to summer.
Verbena sp.	Verbena	N (some)	Many species/cultivars available; usually have pink-purple flowers, spring to summer.
Wedelia hispida	Zexmenia, Orange Wedelia	N	Tolerates poor soil and heat; requires good drainage. Orange-yellow flowers from summer to fall. Texas native.
Yucca sp.	Yucca	N (some)	Numerous Yucca species are available, ranging from small stemless plants to multi-trunked shrub-like plants; all hardy species are acceptable; all require well-drained soil and are heat-tolerant. White spikes of flowers in summer. Some species have sharp leaves.
Salvia greggii	Autumn Sage		White, Pink, Red, Salmon flowers; blooms spring to fall.
Plumbago auriculata	Blue Plumbago		Evergreen perennial shrub; Flower colors vary, ranging from pale blue to white or darker blue.
Portulaca pilosa	Kiss-Me-Quick, Purslane		Bright purple/pink blooms; green, succulent leaves

## WILDFLOWERS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
(various)	native Texas wildflower seed mixes	N, WSR	* Seed mixes may not contain any species of sunflower ( <i>Helianthus</i> sp.), which are bird attractants. Mixes of truly <b>NATIVE</b> Texas wildflower seed from reputable sources will not contain undesirable wildlife attractants, generally speaking. Have DFW Wildlife Administration approve any seed mix species list before planting. Luckily, Texas bluebonnets are not a wildlife attractant and their planting is encouraged.

## BULBS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
(various)	spring and summer flowering bulbs		Typically-available commercial flowering bulbs (Crinum, Crocus, daffodills, Dutch irises, Gladiolus, grape-hyacinths, hyacinths, Liatriis, Muscari, Narcissus, oxblood lilies, paper-whites, snowdrops, spider lilies, tulips, etc...) present no undesirable wildlife attractants, as far as we know.

## ANNUALS

SCIENTIFIC NAME	COMMON NAME	PLANT QUALITIES	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
(various)	annual bedding plants		Typically-available commercial annual bedding plants suited to DFW (begonias, Celosia, Coleus, daisies, Gazania, impatiens, Ipomoea, marigolds, moss-rose, ornamental kale, pansies, pentas, periwinkles, petunias, pinks, Portulaca, snapdragons, sweet alyssum, Zinnia, etc...) present no undesirable wildlife attractants, as far as we know. Any plants sold as annuals belonging to genera included in recommended perennials are also acceptable.

## NON APPROVED PLANT LIST

CATEGORY	SCIENTIFIC NAME	COMMON NAME	NOTES: SPECIES WITH * WILDLIFE-SPECIFIC RESTRICTION STATEMENTS ARE IN <b>BOLD</b> .
Shade Trees	Quercus Virginiana	Live Oak	Evergreen habitat irresistibly attracts hazardous flocks of roosting birds; also, birds eat acorns, therefore, a wildlife attractant
Ornamental Trees	Ilex cultivars not on recommended list	Various evergreen holly cultivars incl. 'Nellie Stevens,' 'Palatka,' 'Savannah,' 'Mary Nell,' etc.	Bred for showy red berries, therefore a wildlife attractant. Unlikely to find male (fruitless) hollies of these cultivars available.
Ornamental Trees	Ilex Decidua	Possumhaw Holly	Bred for showy red berries, therefore a wildlife attractant. Unlikely to find male (fruitless) hollies of these cultivars available.
Ornamental Trees	Prunus Caroliniana	Carolina Cherry Laurel	Produce purple berries in abundance, therefore a wildlife attractant.

Ornamental Trees	Pyrus Calleryana	Bradford Pear, Callery Pear	Small brown fruit attract wildlife; also, birds spread the seeds, causing this species to be invasive.
Shrubs	Callicarpa Americana	American Beautyberry	Produce purple berries in abundance, therefore a wildlife attractant.
Shrubs	Ilex cultivars not on recommended list	Various evergreen holly cultivars incl. 'Burford,' 'Chinese,' 'Needlepoint,' etc.	Bred for showy red berries, therefore a wildlife attractant. Unlikely to find male (fruitless) hollies of these cultivars available.
Shrubs	Berberis sp.	Barberries	Many cultivars produce red berries in abundance, therefore a wildlife attractant. Also, these generally just don't grow very well in the DFW area.
Shrubs	Elaeagnus sp.	Silverberry, Silverthorn	Produce silvery-orange berries in abundance (under the leaves), therefore a wildlife attractant.
Shrubs	Ligustrum sp.	Privets	Produce purple berries, in abundance, therefore a wildlife attractant. Also, many species are invasive.
Shrubs	Mahonia Trifoliata	Agarita	Produce red berries in abundance, therefore a wildlife attractant.
Shrubs	Photinia sp. and cultivars	Red-tip Photinia, Chinese Photinia	Produce red berries in abundance, therefore a wildlife attractant.
Shrubs	Raphiolepis Indica	Indian Hawthorn	Produce purple berries in abundance, therefore a wildlife attractant.
Shrubs	Rhamnus Caroliniana	Carolina Buckthorn	Produce blue-black berries in abundance, therefore a wildlife attractant.
Shrubs	Rhus sp.	Sumac	Produce red berries in abundance, therefore a wildlife attractant.
Shrubs	Viburnum sp.	Viburnum, Blackhaw	Produce red or blue berries in abundance, therefore a wildlife attractant.
Vines	Trachelospermum	Confederate Jasmine	Will be damaged in cold winters
Ornamental Grasses	Eragrostis Lehmanniana	Leham Lovegrass	Invasive.
Ornamental Grasses	Panicum Virgatum	Switchgrass	Grains are eaten by birds; a known wildlife attractant at DFW.
Turf Grasses	Stenotaphrum Secundatum	St. Augustine Grass	Requires more water than other turf grasses.