streetscape design guide

PREPARED FOR THE ENERGY CORRIDOR DISTRICT
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The Design Standards and Streetscape Guidelines (DSG) gives The Energy Corridor Management District (ECD) the framework for implementing streetscape improvements throughout the Energy Corridor including sidewalks, specialty paving, landscaping, lighting, site furnishings and more. The goal is to not only build long-term economic vitality and visual appeal that help define the brand of the District but also overcome the fragmentation associated with varying maintenance responsibilities amongst public and private entities.

The following are Critical Success Factors that must be accomplished in order for the project to be considered a successful process.

- **Create consistency in the public realm.**
- **Enhance the qualities of a neighborhood character.**
- **Protect community from incompatible development or improvements.**
- **Increase property values by improving quality of the public realm.**
This document is a summarized guide to the *District Design Standards and Streetscape Guidelines*. As opportunities for streetscape improvement projects arise, this document is intended to be used as a roadmap for agencies, real estate stakeholders, and urban designers to understand how the District’s Design Standards and Streetscape Guidelines can lead to a walkable environment, consistent public realm, and mix of uses.

The content of the Standards and Guidelines has been assembled through an extensive analytical investigation of the physical environment, review and analysis of previous planning documents, collaboration with a Stakeholder Advisory Committee (SAC), coordination with the District’s Property Ownership Associations (POAs), and through the leadership and guidance of the ECD staff and Board of Directors. This participatory process is critical in ensuring the recommendations herein are fully supported by the District, the Board, the SAC and the community at large. The year-long process entailed a series of steps to reach the final set of Standard and Guidelines that included several meetings with the SAC, key meetings with the public and an engagement with numerous POAs across the District. A detailed schedule and process is as shown here.

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**Month 1-2 Project Kick-off and Site Tour:** The team conducts a strategic kickoff to confirm the vision and goals for the project.

**Month 2-4 Research + Existing Conditions:** The team establishes an effective and extensive process for analyzing previous plans and existing baseline conditions along streetscapes. An initial public meeting (Values Workshop) is held virtually to engage in a dialogue about goals, opportunities and challenges for the project.

**Month 4-6 Design Concepts:** The team derives a framework strategy to identify streets that are vital improvement projects in the near future and applies a method of improvements.

**Month 6-9 Draft Standards and Guidelines Document:** The team creates an initial structure to outline key toolkit elements that impact the public (and private) realm and which require standardization. A second workshop (Vision Workshop) is held as an open house to gather input on framework strategy, draft DSG structure and furnishings.

**Month 9-12 Final Standards and Guidelines Document:** The team develops a final set of recommendations for review and adoption.
The accompanying map below depicts the administered boundaries for the Design Standards and Streetscape Guidelines, assigned in part to The Energy Corridor District. The scope of the document is primarily focused on public right-of-way improvements, but when physical space limitations are encountered, recommendations for utilizing Public Access Easements have been developed. These easements encourage the coordination and use of private property to realize the full potential of the existing streetscape corridors throughout the ECD. With mutual compliance, this arrangement provides maximum flexibility that can accommodate the varying street and land use conditions seen throughout the District. It is critical in this process that context sensitive design solutions are choreographed for the various streetscape conditions on each of the ECD corridors in order to activate and promote multimodal transportation throughout the District and create a safe, comfortable environment for pedestrians.
The Design Standards and Streetscape Guidelines articulate and illustrate how public realm improvements may be implemented. Note that the Design Standards and Streetscape Guidelines report document should be referred to for details on spacing, location, frequency, specifications and supporting guidelines prior to project implementation.

With each key connector street receiving varying levels of improvements, the Index provides comprehensive, itemized chart for toolkit element treatments. Refer to full report document for detail.
PUBLIC VERSUS PRIVATE REALM

Aesthetic upgrades, multimodal access, and safety create a clear relationship between the public street and private development parcels. Below is a description distinguishing parameters in the public and private realm.

**public realm**

1. Publicly owned spaces that belong to and are accessible by everyone
2. Investments typically use municipal resources to provide services such as utilities, sidewalks, roads, plazas, bus stops, etc.
3. Municipality-driven
4. Both standards AND guidelines can be applied

**private realm**

1. Visible areas of buildings and sites that may be behind at least one level of security like parking lots
2. Areas owned by private entities, typically not accessible to public
3. Examples include residential, commercial, private roadways, parking lots/structures.
4. Developer, private owner-driven
5. **Guidelines** can be applied only
The public realm toolkit defines elements in the right-of-way and adjacent to the right-of-way that are subject to improvements and standardization. The goal is to design and position these elements within the public realm to build consistency, create that sense of place for the District and establish a safe environment for all streetscape users.
A number of arterial roads have been identified as “key connector streets” that are vital to creating an integral multimodal system around the District. Each key connector street vary in right-of-way width, traffic capacity and proximity to destinations. Levels of Improvements (Level 1-3) have been applied to key connector streets based on these conditions.

*Note: This framework is subject to change depending on prioritization, future development, funding and partnerships.*
Understanding that one-size does NOT fit all for every streetscape, the levels of improvements approach considers changing conditions in the right-of-way and tools needed for improvements.

- **Level one (L1) improvements** = most basic set of upgrades needed to have a functioning public realm in the back of curb.
- **Level two (L2) improvements** = considers a set of recommended or moderate upgrades, involving public access easements in agreement with developers or POAs to create a well-balanced, well-connected pedestrian-friendly environment in the back of curb.
- **Level three (L3) improvements** = includes Complete Streets best practices to achieve a high-functioning, multimodal environment using the reconfiguration of the entire right-of-way to gain full access to services and amenities.
LEVEL ONE/ TWO EXAMPLE: NORTH ELDRIDGE SCENARIO

North Eldridge Parkway before

**INCONSISTENT TREE CANOPY**

**NO BUFFER FROM VEHICULAR TRAFFIC**

**CONSISTENT VEHICULAR LIGHTING**

North Eldridge Parkway

I-10

8' SIDEWALK
12' TRAVEL LANE
12' TRAVEL LANE
12' TRAVEL LANE
12' PLANTED MEDIAN/TURNING LANE
12' TRAVEL LANE
12' TRAVEL LANE
100' ROW
2’ 4’ PLANTING SIDEWALK

INCONSISTENT TREE CANOPY

NO BUFFER FROM VEHICULAR TRAFFIC

CONSISTENT VEHICULAR LIGHTING
North Eldridge Parkway after Level One/Two Improvements

North Eldridge Parkway is a major arterial linking the District to the I-10 Freeway. The limited back of curb space affects the extent of improvements that can be adopted.

With a considerable building setback, the west side of N. Eldridge Parkway is proposed as a Level two improvement allowing for a public access easement. This would enable the District to implement a planting buffer protecting the pedestrians along the sidewalk.

The east side of N. Eldridge Parkway, however, has limited opportunities both in the back of curb and for public access easements in adjacent multi-owned properties. Therefore, this side of the roadway is better suited for a Level one improvement where at the very least, City standards for adequate sidewalk widths would need to be met. Additional lighting and signage enhancements may also be achieved.
LEVEL TWO EXAMPLE: PARK ROW SCENARIO

**Park Row** before

- **Inconsistent Shade Coverage**
- **Missing Sidewalks on Both Sides of Street**
- **Oversized Lane Widths**
- **Lack of Pedestrian Scale Lighting**

**Dimensions:**
- **Sidewalk:** 5' to 5'
- **Travel Lane:** 12' to 12'
- **Planted Median/ Turning Lane:** 32' to 100' Row
- **Travel Lane:** 12' to 12'
- **Planting:** 10' to 10'
Park Row after Level Two Improvements

Recently-completed Park Row had improvements implemented to create some consistency in basic streetscape amenities. Adjacent uses on Park Row have setbacks that allow for a potential public access easement.

A Level two improvement is recommended for Park Row to accommodate an active pedestrian realm via a shared use path, improved signage, lighting and green space and added street amenities (ie: trash receptacles, bike racks, benches, median bioswales, etc).
LEVEL THREE EXAMPLE: GRISBY ROAD SCENARIO

Grisby Road before

- INCONSISTENT SHADE COVERAGE
- LACKING PEDESTRIAN REALM
- UNDEFINED PARKING + EDGE OF TRAVEL LANCES
- ABOVE GROUND UTILITIES
- LACK OF AN ACTIVATED RETAIL/RESTAURANT FRONTAGE

LEVEL THREE EXAMPLE: GRISBY ROAD SCENARIO

Grisby Road before

- INCONSISTENT SHADE COVERAGE
- LACKING PEDESTRIAN REALM
- UNDEFINED PARKING + EDGE OF TRAVEL LANCES
- ABOVE GROUND UTILITIES
- LACK OF AN ACTIVATED RETAIL/RESTAURANT FRONTAGE
Grisby Road provides access to Grisby Square. As a prime community destination, enhancements in the public realm should be substantial (a Level three) to better accommodate pedestrian foot traffic, make clear demarcations for vehicular flow, limit vehicular access, promote a safe, well-lit environment and provide an active edge fronting restaurants already present.
Overview of Streetscape Elements

Note: The following section provides an overview of public (and private) realm elements and subsequent recommendations that can be applied to various streetscape conditions and land uses to allow for consistency, access, creativity and return on investment while still supporting the District’s character and brand as a major employment hub. Consult the full report document for detailed standards and guidelines prior to project implementation.
PUBLIC REALM ELEMENTS

**Sidewalk Zone:** Sidewalks are paved linear areas where pedestrians travel and gather. The sidewalk zone should be void of obstructions that impede the flow of pedestrian traffic. The minimum clearance of 6'-0" per City standards must be achieved. Sidewalks should be scaled appropriately to accommodate a multitude of pedestrians and potential cyclists. This includes the potential for shared use paths.

- Maximize sidewalk width
- Shared use path
- Two-way cycle track with buffer
- Vertical elements: tactile strips, rumble strips, or low concrete domes may be used

**Shared use paths and separated cycle tracks in back of curb:**

Bagby Street, Midtown, Houston, TX

Baton Rouge Greenway, Baton Rouge, LA
Roadway Zone: Roadway is the space between curbs. The roadway space includes travel lanes for transit, bicycles and motorists as well as crossings for pedestrians. It is vital that design of this segment safely accommodate relevant multimodal roadway users. For examples, roadway design should ensure roadway markings (crossings, etc) are clearly defined; reduced lane widths and reduced median widths to accommodate other multimodal functions such as a designated bike lane, dedicated on-street parking, bus lane, shared use path or more sidewalk space.

(Left to right) Transit islands for bus stops adjoining on-street bike lanes, on-street parking adjoining on-street bike lanes, mid-block crossings, traffic signalization and curb cuts.
PUBLIC REALM ELEMENTS

Street amenities: Street furnishings provide a level of comfort for pedestrians and cyclists that make circulation welcoming and experiential. Furnishings include benches, tables, chairs, waste receptacles, planters, etc. Below are specifications for furnishings to be used consistently across the District.

Specifications: Landscape Forms Santa & Cole “Neocombo bench”; Finish- Aluminum. Backless options may also be used in the zone.


Specifications: Form and Fiber Box Planter Series; Finish- Stock Powder Coat, Color Gray Matte.

A ‘light traditional’ family of furnishings provides a District aesthetic that is cost-effective and modern. Materiality is predominantly aluminum or powder coated finishes.

Standards should consider the use of smart technologies such as solar powered elements or interactive sensors when possible. Refer to the Design Standards and Streetscape Guidelines report document for details prior to project implementation.
**Transit amenities:** Transit facilities provide comfort for people using bus transit or bike routes for recreation or work. Furnishings could include bike racks, enhanced bus shelters that include digital maps and timetables, trash receptacles, charging stations, transit curbs, ticket vending machines, access to Wi-fi and comfortable seating. Below are specifications for furnishings to be used across the District along key transit routes.

- **Bike rack specifications:** Landscape Forms FGP Bike Rack; Finish - Metal Polyester Powder Coat Finish, Silver (single tone/color).
- **Bus shelter specifications:** Landscape Forms Connect 2.0; Finish - Metal Polyester Powder Coat Finish, Silver.
- **Stop bollards specifications:** Bega without lighting/Impact bollard installation options; Finish - Powder Coated Silver.

Transit amenities such as bike racks specified in the public realm could be applied in the private realm. Alternative furnishings must be part of the same family aesthetically and functionally to that of public realm amenities specified in herein. Refer to the Design Standards and Streetscape Guidelines report document for details prior to project implementation.
**Public Realm Elements**

**Street lighting:** Lighting for the purposes of the Standards and Guidelines includes street lights, accent lights, bollard lights, path lights, roadway lights, etc. Consistent lighting is integral to creating a safe nighttime environment for both pedestrians and vehicles. Below are specifications for lighting fixtures to be used consistently across the District. Fixtures specified herein could be applied in the private realm. Alternative fixtures must be part of the same family aesthetically and functionally.

- **Typ. pedestrian lighting:**

- **Typ. path/ accent lighting:**
  - Accent/Path/Bollard lighting specifications: *Bega;* Finish- Powder Coated, Silver.

- **Roadway lighting (per City standards):**

- **Catenary lighting:**

- **Typ. pedestrian lighting:**
**Signage:** Signage refers to wayfinding elements that provide an overall image of a district, mark entry/exit points and provide informational cues about directions and destinations. These are vital in orienting pedestrians, cyclists and motorists, and limiting potential clashes. Signage should have appropriate hierarchy of information and should be scaled to their intended audience. Consolidating information on signage will also help in limiting clutter in the public realm. Below is a signage system and their respective location in the public and private realm.

**Regulatory signage (public realm):** Signs that are used to indicate traffic laws or regulations.

**Directional/Informational signage (public realm):** Display location information about points of interests in an area and distances to reach them.

**Gateway markers (public + public realm):** Helps define a place and are often iconic, easily recognizable and representative of a place.

For private realm signage (subdistrict), a family of items may be derived to complement public realm signage elements. Additional study and design of signage elements is required.
GREENS Spaces: Green space zones refer to areas where plants are used in the pedestrian realm including tree wells, garden beds and planters. Green spaces serve a number of functions related to buffers, aesthetic and seasonal appeal, habitat creation, water quality and stormwater management. Tree and plant selection as well as where and how far apart they are located is critical to maintaining tree/plant health long-term and is essential to character-building for signature streets.

**Street Tree Typologies**

Street trees need to be functional while enhancing the character of the District and considering resiliency. The following diagram shows street tree typologies based on the level of activity that occurs along the street.

**High Profile Street:** Characterized by fast interactions with an emphasis on vehicular travel. Tree palette needs to be a strong, bold statement to create a district character.

**Medium Profile Street:** Characterized by fast interactions with an emphasis on vehicular travel. Tree palette needs to be a strong, bold statement to create a district character.

**Low Profile Street:** Neighborhood streets that are used daily and have the potential for more seasonal interest.

Refer to the Design Standards and Streetscape Guidelines report document for a suggested list of tree species.
Appropriate soil volume for long term tree health

Publicly-accessible pocket parks and plazas may be located within the private realm, along easement properties or adjacent to sidewalks on street corners. A combination of planting and hardscapes may be used in addition to amenities. For details, consult the Design Standards and Streetscape Guidelines report document.

A logical pattern and diversity of species should be placed along the streetscape to signify an obvious street character and support a resilient urban forest.
Street Tree and Planting Palette: See page 26 for Street Tree Typologies.

**High Profile Street Trees**

- **Function:** Provide shade, seasonal interest and screening for adjacent uses.
- **Form:** Large to medium shade trees with more variation and diversity than the high profile typology.
- **Suggested Tree Species:** Southern Magnolia, American Holly, Southern Red Cedar, Water Hickory, Japanese Blueberry.

**Note:** Trees listed in the high profile typology may be utilized here but can result in a smaller tree if minimal soil volume is not reached.

**Medium Profile Street Trees**

- **Function:** Provide a continuous canopy of shade. Create distinct moments at key destinations and intersections.
- **Form:** Large, shade trees.
- **Suggested Tree Species:** American Elm, Bald Cypress, American Sycamore, Nuttall Oak, Overcup Oak, Loblolly Pine.
**Low Profile Street Trees**

*Function:* Provide shade and seasonal interest. Emphasize the pedestrian scale and encourage vehicular traffic to slow down.

*Form:* Medium trees that have more seasonal characteristics.

*Suggested Tree Species:* Parsley Hawthorn, Dwarf Southern Magnolia, Sweetbay Magnolia, Two-Wing Silverbell, Crape Myrtle, Chinese Pistache, Chinese Fringe, Lacebark Elm.

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**Groundcover Plantings**

*Function:* Provide interest and a buffer between pedestrian and vehicular travel while enhancing identity and character.

*Maintenance:* Plantings should be resilient to increase longevity and decrease care.

*Suggested Species:* Boston Sword Fern, Muhly Grass, Cast Iron Plant, Liriope, Western Yarrow, Cardinal’s Feather, Lazy Daisy, Wild Indigo, Smooth Bur Marigold, Indian Paintbrush.
PRIVATE REALM ELEMENTS

**Fences, screening + walls:** Fences, screening and walls may be used as barriers that enclose or separate an area. Examples include greening elements such as tall shrubs or vegetative screens or fences and walls. Screening elements must be proportional to its context, be made from durable, aesthetic material, be cost-effective and their use should generally be limited along active retail edges.

Green screens  
Fences  
Landscape buffer with retaining seatwalls

**Off-street parking:** Off-street parking refers to on-site parking areas in the privately-held properties, namely, surface parking or garage parking. Design of lots and structured parking must consider convenience of access for pedestrians and interactions with the public realm.
Building frontage + transition zone: The building frontage and transition zone addresses the area directly adjacent to the building. This space is key to providing a buffer and refuge where retail shoppers and pedestrians can escape the flow of pedestrians traffic in the sidewalk zone. The transition zone establishes an active edge on vital commercial corridors that help promote continuity and a rich pedestrian experience through use of outdoor furnishings, lighting, planting or retail displays.

Setbacks based on land use

Residential land use: Multifamily townhomes and brownstones, apartment complexes, single-family and duplexes

Office commercial land use: office/ creative work spaces, community services; ground floor retail or lobbies are encouraged

Activated Frontage

Facade treatment to be human-scale transparent

Durable cafe furnishings

Planters to separate sidewalk from transition zone

Commercial land use: Vertically-mixed use buildings with office space, multifamily residential, retail, restaurants; ground floor commercial uses with residential or office above
streetscape design guide

To access The District Design Standards and Streetscape Guidelines document, please visit, https://energycorridor.org.