

# Visioning Bellaire

Urban Design and Beautification Conceptual Master Plan

December 2016

# Introduction

The Urban Design and Beautification Conceptual Master Plan for the city of Bellaire is the result of an intensive planning effort. Recognizing that the quality of the physical environment has a tremendous influence on the image of the City, the Urban Design and Beautification Conceptual Master Plan serves as a foundation for shaping the City fabric in support of its vision to enhance the overall quality of life for its residents.

At its very essence, the Conceptual Master Plan is an assemblage of powerful ideas. This Master Plan provides guidelines to maintain the inherent beauty and unique characteristics of the city while, at the same time, identifying opportunities for improvement of the quality of the living environment.







## Citizens' Survey

### PARTICIPATION

In an effort to enhance the visual and environmental quality of the city of Bellaire, the Citizens for a Beautiful Bellaire organization invited residents to participate in a survey that received over 1,000 responses.

This survey, coupled with the grass-roots movement, launched the need to develop a long-term vision for the city of Bellaire. This plan aims to develop a consensus vision that acts as a guide to implementing design beautification initiatives over time.

### FOUR RESULTS CATEGORIES

Four categories were used to filter the numerous responses from the citizens' survey: landscaping, homes and neighborhoods, streetscape planning and Triangle/Downtown planning. The results of these categories are graphically represented as word clouds or tag clouds. The larger the word, the more the concept was repeatedly mentioned or emphasized in the survey.





## Design Process

The Urban Design and Beautification Conceptual Master Plan has been prepared as a collaborative and cooperative effort. Through a design process characterized by listening, fluid idea-generation, stakeholder involvement and on-site workshops, the general public was provided the opportunity to voice their concerns and make recommendations regarding issues to be considered in the Conceptual Master Plan. The design team has developed a long-range planning tool for the City of Bellaire addressing the physical, social, and sustainability challenges, which the City will face in the future. This Plan has been crafted to address both a near- and long-term strategy for implementing beautification interventions required to achieve the consensus vision.

### Step One: Conceptual Alternatives

#### Milestones

- » Listening to the City and Community Meetings
- » Conceptual Alternatives Workshop

#### Roles + Responsibilities

##### Terrain Studio

- » Listening to the city and community, perform site analysis
- » Conceptual Alternatives
- » Project management

##### The City

- » Data Gathering
- » Stakeholder Coordination
- » Design Input

##### Citizens for a Beautiful Bellaire

- » Citizen Survey
- » Design Advisory
- » Council, Boards and Commissions
- » Design Input During Community Meetings
- » Design Input During the Conceptual Alternatives Workshop

*Outcome:*  
Consensus Conceptual Direction  
September 2016

## Step Two: Draft Conceptual Master Plan

### Milestones

- » 75% Review of Draft Conceptual Master Plan
- » Draft Conceptual Master Plan Workshop

### Roles + Responsibilities

#### Terrain Studio

- » Draft Conceptual Master Plan Development
- » Project Management

#### Advisory Group

- » Representatives from Citizens for a Beautiful Bellaire, City, Key Boards and Commissions
- » Design Input at 75% Draft Conceptual Master Plan Point

#### The City

- » Stakeholder Coordination
- » Design Input

#### Council, Boards and Commissions

- » Design input during draft conceptual master plan workshop

*Outcome:*  
Draft Conceptual Master Plan  
October 2016

## Step Three: Final Conceptual Master Plan

### Milestones

- » 75% Review of Final Conceptual Master Plan
- » Draft Conceptual Master Plan Workshop

### Roles + Responsibilities

#### Terrain Studio

- » Final Conceptual Master Plan Development
- » Project Management

#### Advisory Group

- » Representatives from Citizens for a Beautiful Bellaire, City, Key Boards and Commissions
- » Design Input at 75% Final Conceptual Master Plan Point

#### The City

- » Stakeholder Coordination
- » Design Input

#### Council, Boards and Commissions

- » Design Input During Final Conceptual Master Plan Workshop
- » City Council Presentation

*Outcome:*  
Final Conceptual Master Plan  
November 2016

## Step Four: Program Plan

### Milestones

- » 90% Review of Program Plan

### Roles + Responsibilities

#### Terrain Studio

- » Program Plan
- » Final Conceptual Master Plan
- » Project Management

#### Advisory Group

- » Representatives from Citizens for a Beautiful Bellaire, City, Key Boards and Commissions
- » Design Input at 90% Program Plan Point

#### The City

- » Stakeholder Coordination
- » Program Plan Input

#### Council, Boards and Commissions

- » Program Plan and Final Conceptual Master Plan Approval

*Outcome:*  
Program Plan  
Final Conceptual Master Plan  
December 2016



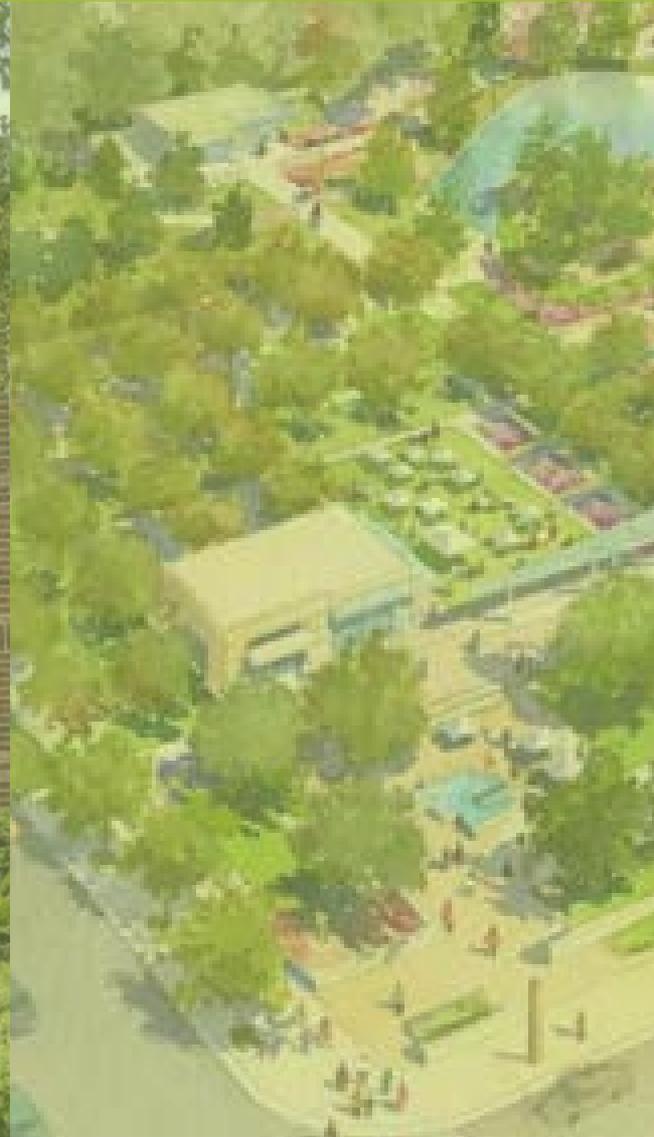
# Bellaire Wonderful



History and Culture



Neighborhoods and Schools

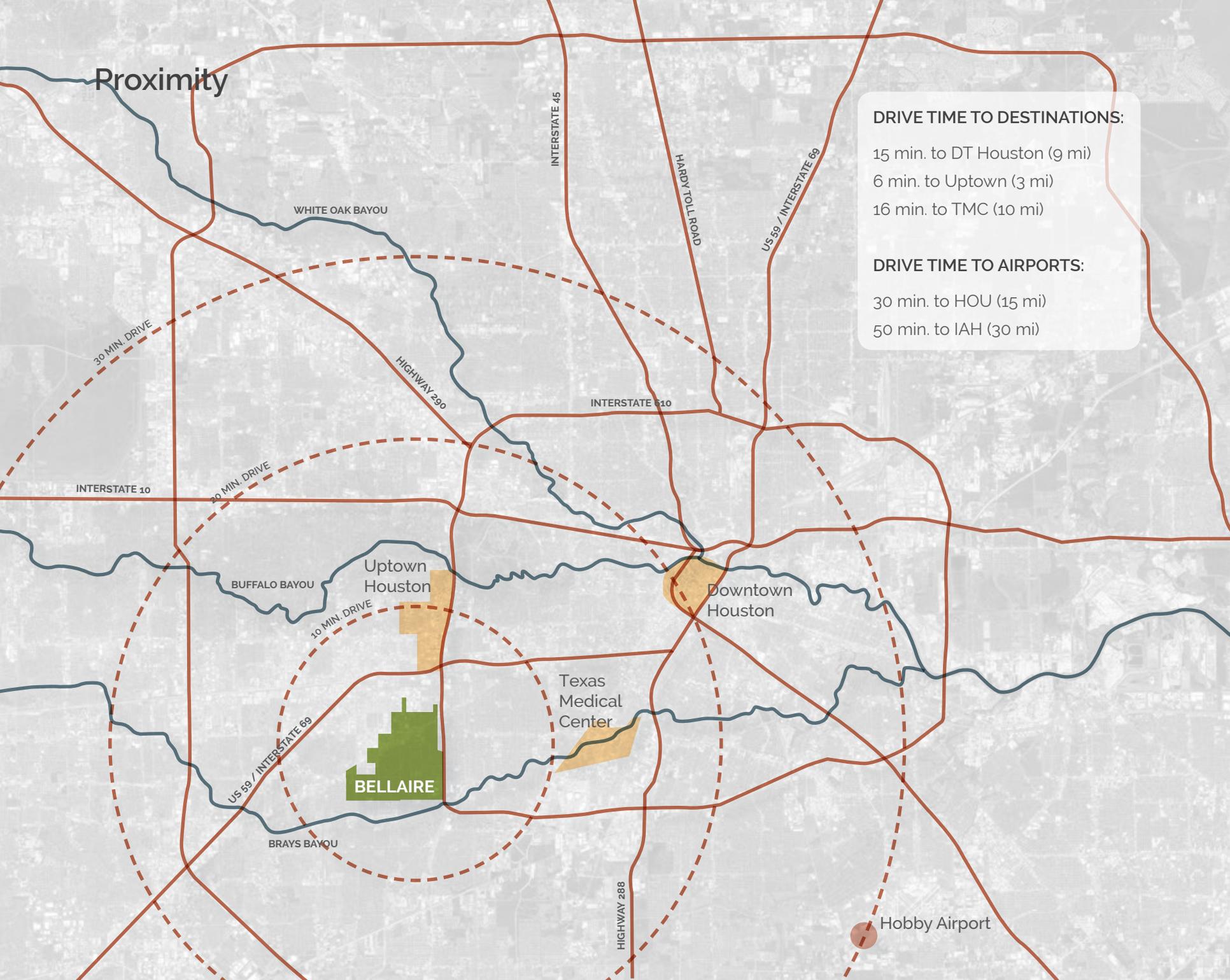


Parks and Trees





# Proximity



**DRIVE TIME TO DESTINATIONS:**

- 15 min. to DT Houston (9 mi)
- 6 min. to Uptown (3 mi)
- 16 min. to TMC (10 mi)

**DRIVE TIME TO AIRPORTS:**

- 30 min. to HOU (15 mi)
- 50 min. to IAH (30 mi)

# History

## Urban Planning

1908: City of Bellaire founded by William Baldwin as part of the 23,000-acre Rice Ranch. It was envisioned to be a "Garden City".

## Connectivity

1909: A four-mile street car line is built, along with Bellaire Boulevard, connecting Bellaire to Houston's Main Street.

## Signage

1952: "Welcome to Bellaire, Texas: A City of Homes" at City Entrance

## Strip Retail

1957: Pictured: Dugan Drugs Shopping Center on South Rice at Bellaire Boulevard. This is the current location of the Walgreens on South Rice Avenue.

## Automobile-Orientated

1958: Pictured: Shopping center on Bissonnet Street at 6th Street that Amegy Bank purchased the shopping center in 2006.

## Architectural Style

1960: Pictured: First State Bank of Bellaire located in the 5100 block of Bellaire Boulevard near South Rice. The First State Bank became the new location of Community National Bank.

## Outstanding Parks and Schools

1962: The Bellaire Parks + Recreation Department made Bellaire the best place for kids to grow up.



URBAN PLANNING



CONNECTIVITY



SIGNAGE



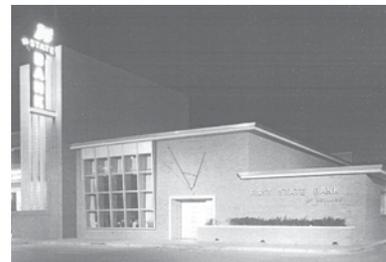
STRIP RETAIL



AUTOMOBILE ORIENTED



SCHOOLS AND PARKS



ARCHITECTURAL STYLE

## Key Components

Everything, including Bellaire's proximity to regional destinations, the city's urban forest, and auto-oriented development, has made the City what it is today.

### CAR-ORIENTED IDENTITY

- » Signage at city gateways
- » City seen as commuter's home

### GREAT NEIGHBORHOODS

- » Safe neighborhoods
- » Good schools
- » Good parks

### CONNECTED TO HOUSTON'S DESTINATIONS

- » Average commute time to employment: 20 minutes
- » Great location for bedroom community

### AUTO-ORIENTED COMMERCIAL DEVELOPMENT

- » Historically, development focused around the car
- » Inhibits sustainable forms of development



IMAGE FROM "LIFE AND TIMES AROUND BELLAIRE, TEXAS: 1909-2013" BY J. MICHAEL MCCORKLE

### AUTOMOBILE

- » City revolves around access via car
- » Historically important
- » Deters people from social interaction

### BELLAIRE ICONOGRAPHY

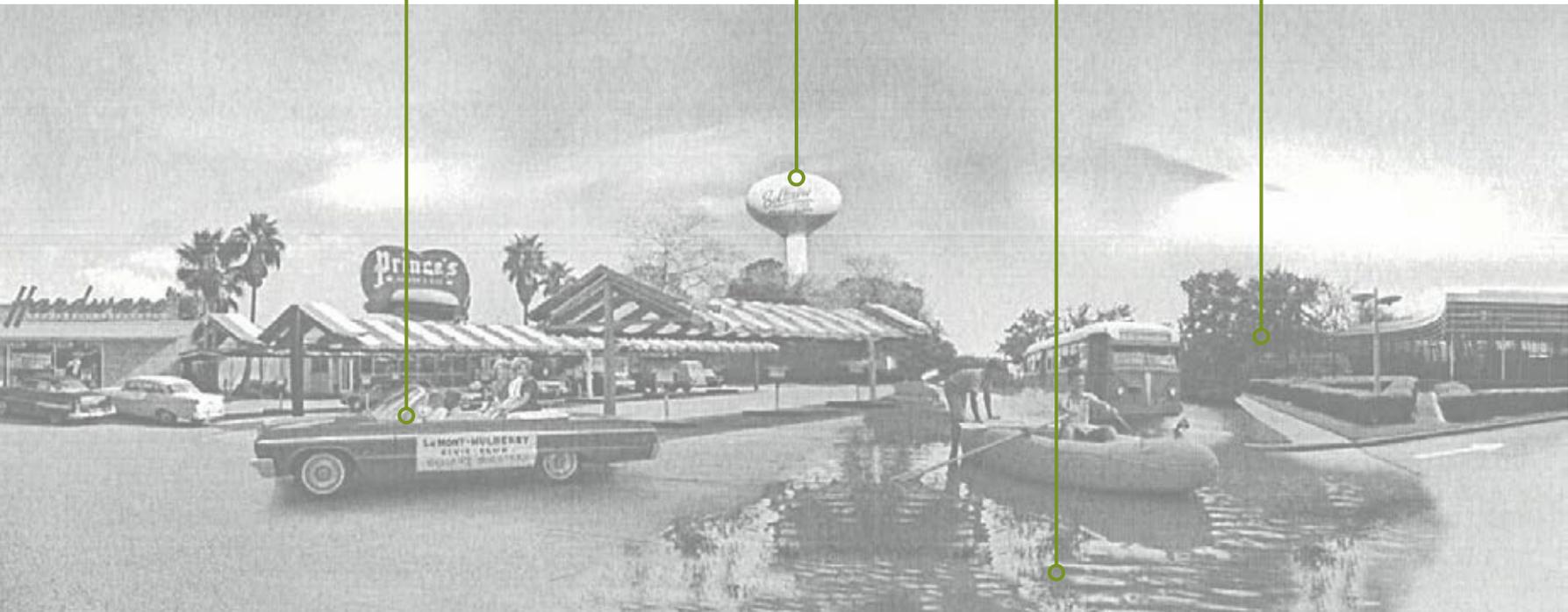
- » Signage as signature
- » Mostly auto-oriented iconography

### FLOODING

- » Frequent flooding due to location in region and existing infrastructure

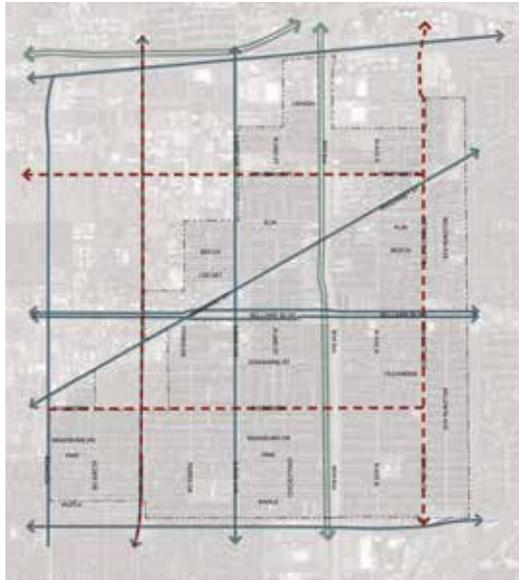
### TREES

- » Strong tree canopy
- » Major contributor to city's beauty
- » Appreciated by all in the community

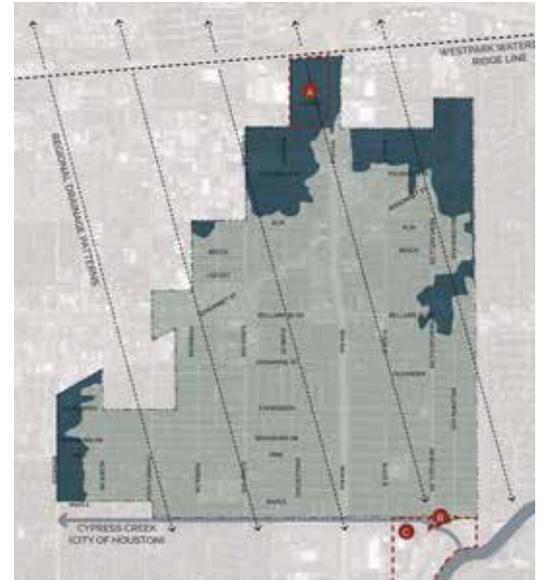




01. Land-Use



02. Urban Fabric



03. Natural Systems



#### 04. Cultural Systems

## Inventory + Analysis

Necessary efforts for an enhanced urban fabric, multi-modal connectivity, and beautification are made clear through a series of analyses. These four chosen analyses include layers of information that help establish the design principles and proposed design initiatives.

## Land-Use

### RATIO

A crucial component of the city's land-use includes public realm. This allows Bellaire to make a significant impact on its community. Examples of what is included in the public realm are streetscapes, publicly accessible open spaces, civic buildings and facilities, and right-of-ways.

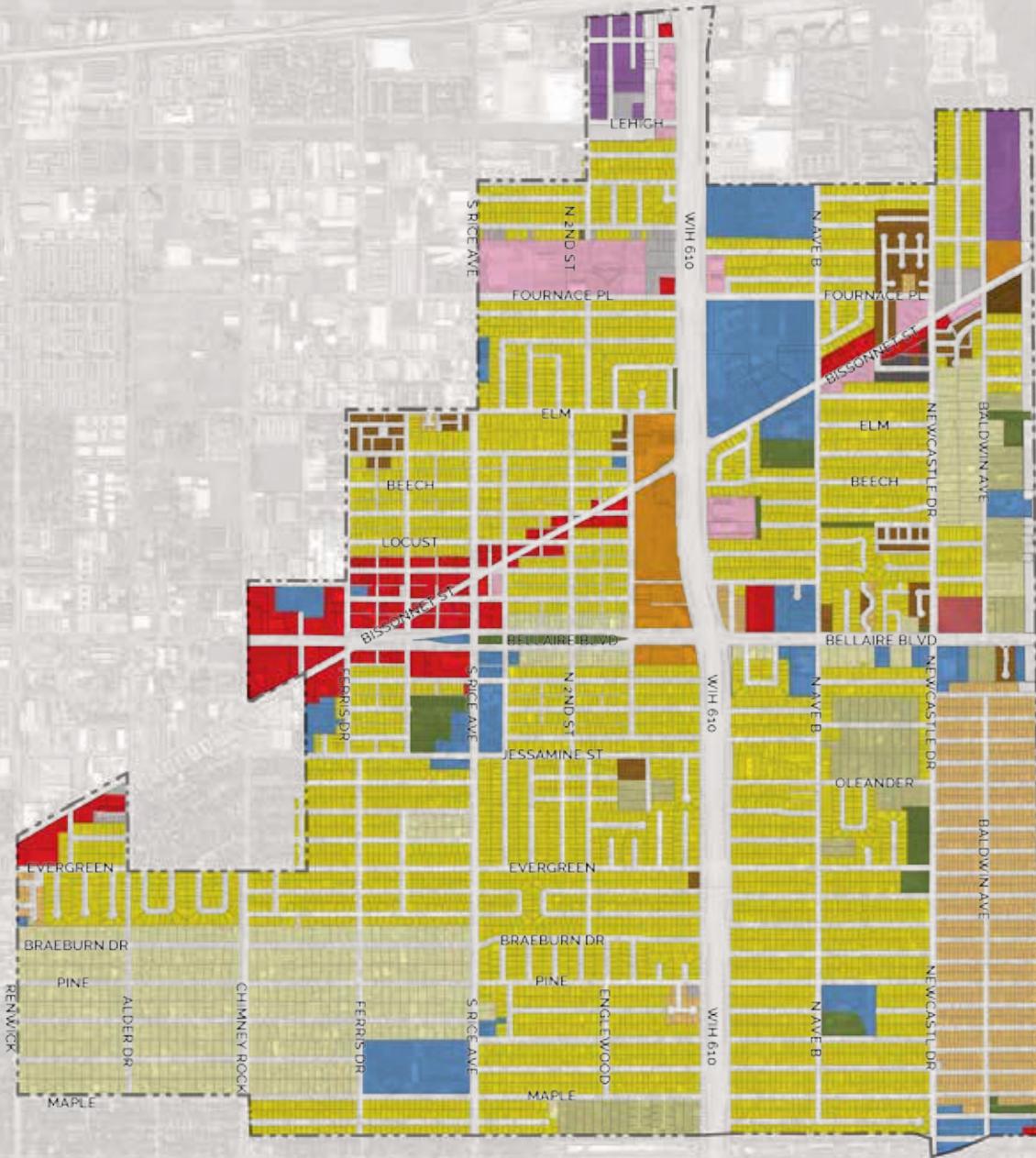
City Comparisons:

- » Bellaire: 48.6% of land in public realm
- » Houston: 52% of land in public realm
- » Uptown Houston: 17% of land in public realm

With the majority of urban design and beautification efforts occurring in the public realm and Bellaire's relatively high ratio of land dedicated to the public realm, the City is fully capable of making significant changes to the overall beauty, connectivity and sustainability.

### LEGEND:

	Suburban Residential
	General Residential
	Small Lot Residential
	Residential-Office Mix
	Corridor Mixed-Use
	Urban Village
	Suburban Office
	Business Park
	Government
	Redevelopment Area
	Parks



## Urban Fabric

### STREET HIERARCHY

#### Regional Highways:

As the major highway running through the center of Bellaire, West Loop better connects the city, versus dividing it. The West Loop provides ample opportunities for residents to easily get to local and regional destinations outside of the city.

#### Major Thoroughfares:

The City's major thoroughfares have direct connections to significant destinations outside of the city. In particular, Bellaire Boulevard has true potential to be a great street on a local, regional, and national scale. However, some challenges exist in activating such potential. Firstly, streets such as Chimney Rock Road, Rice Avenue, and Bissonnet Street are partially within the city's limits, making portions non-accessible under the City's control. This fragmentation makes urban design efforts difficult to continue through corridors. Secondly, the most frequent users are those who use these thoroughfares as a means to get through the city, not to a destination. This lessens the effectiveness of design efforts that aim to create safe streets for all forms of transportation.

#### Connector Streets:

East-West streets, such as Fournace Place, connect to major thoroughfares and the West Loop; while, North-South streets connect to streets beyond the city limits of Bellaire. Each of these

#### CONNECTOR STREETS



NEWCASTLE STREET



FERRIS DRIVE



HOLLY STREET

#### MAJOR THOROUGHFARES



BISSONNET STREET



CHIMNEY ROCK ROAD + BISSONNET STREET



RENWICK DRIVE

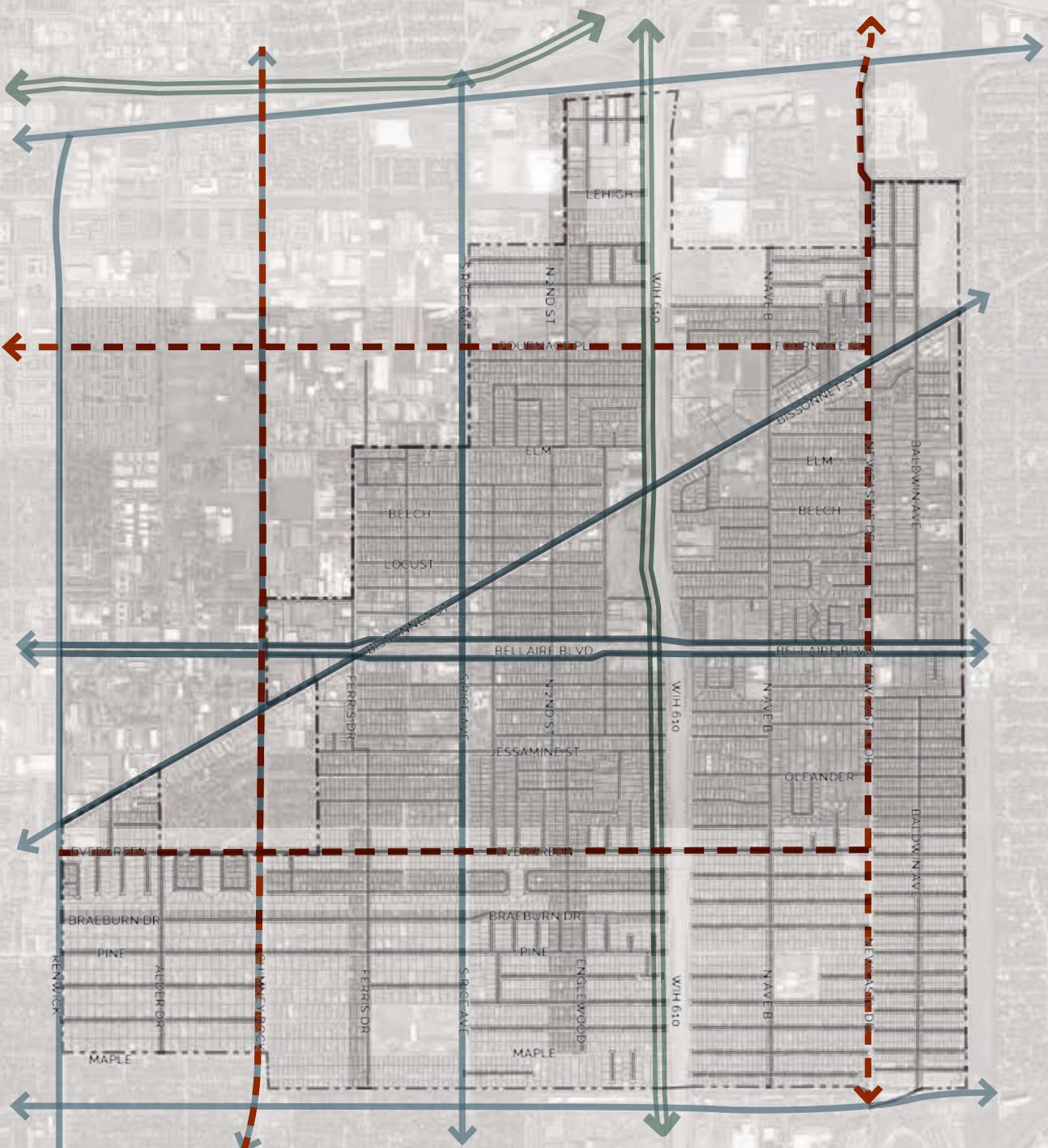
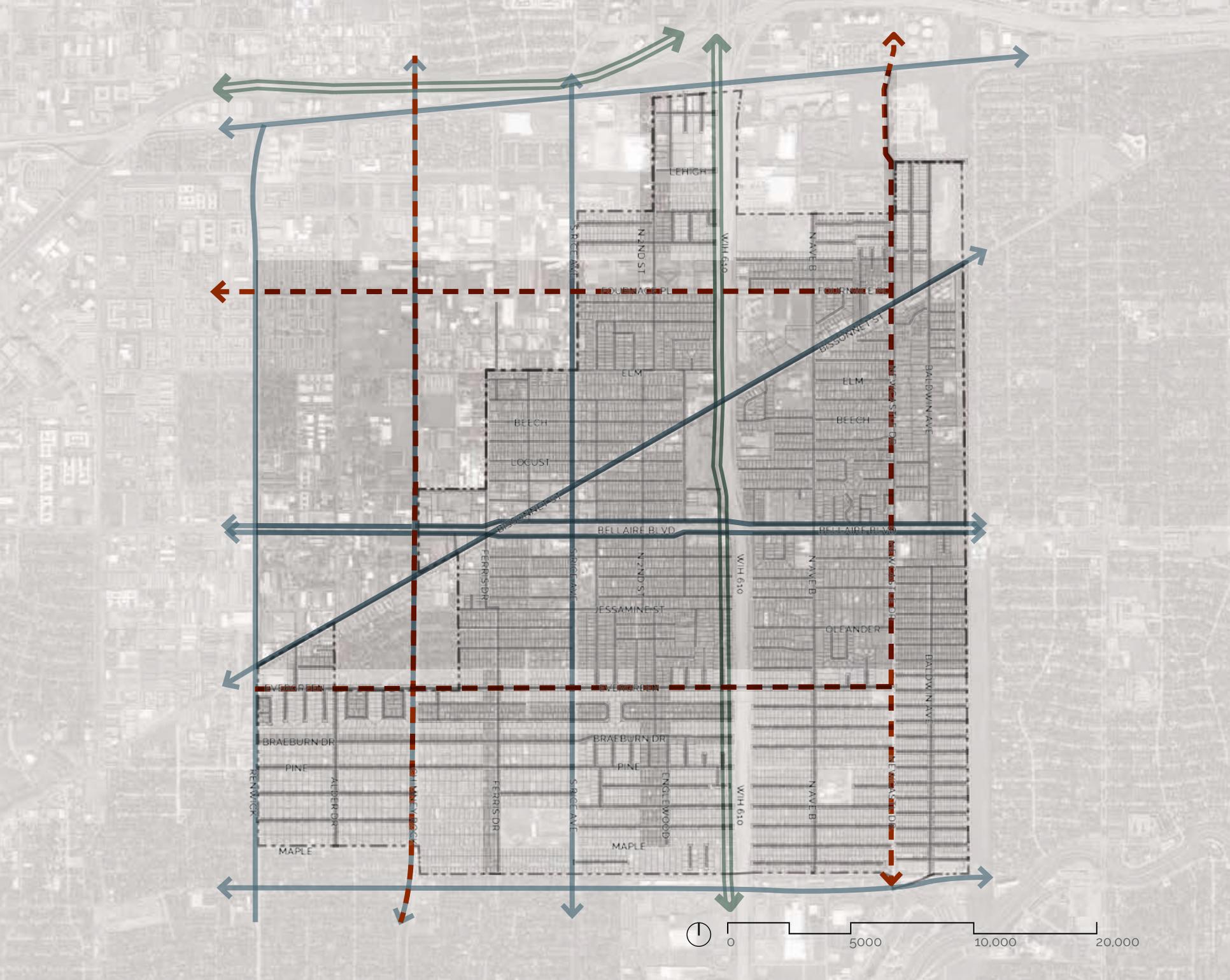
#### REGIONAL HIGHWAYS



#### LEGEND:

-  Neighborhood Street
-  Connector Street
-  Major Thoroughfare
-  Regional Highway

connector streets also have narrower right-of-way widths, making modifications more challenging, but still possible, to implement separated modes of transportation and beautification efforts.



## SIDEWALKS

### Neighborhood Streets:

Bellaire's walkable size makes implementing sidewalks very beneficial for residents, as one may notice in the walk radii shown on the far page. One can also notice that few continuous sidewalks exist along neighborhood streets. Where continuous sidewalks exist, they are often broken and unmatched. With continuous, wide sidewalks along neighborhood streets in conjunction with adequate lighting, residents are able and encouraged to utilize their city's landscape safely, and comfortably.

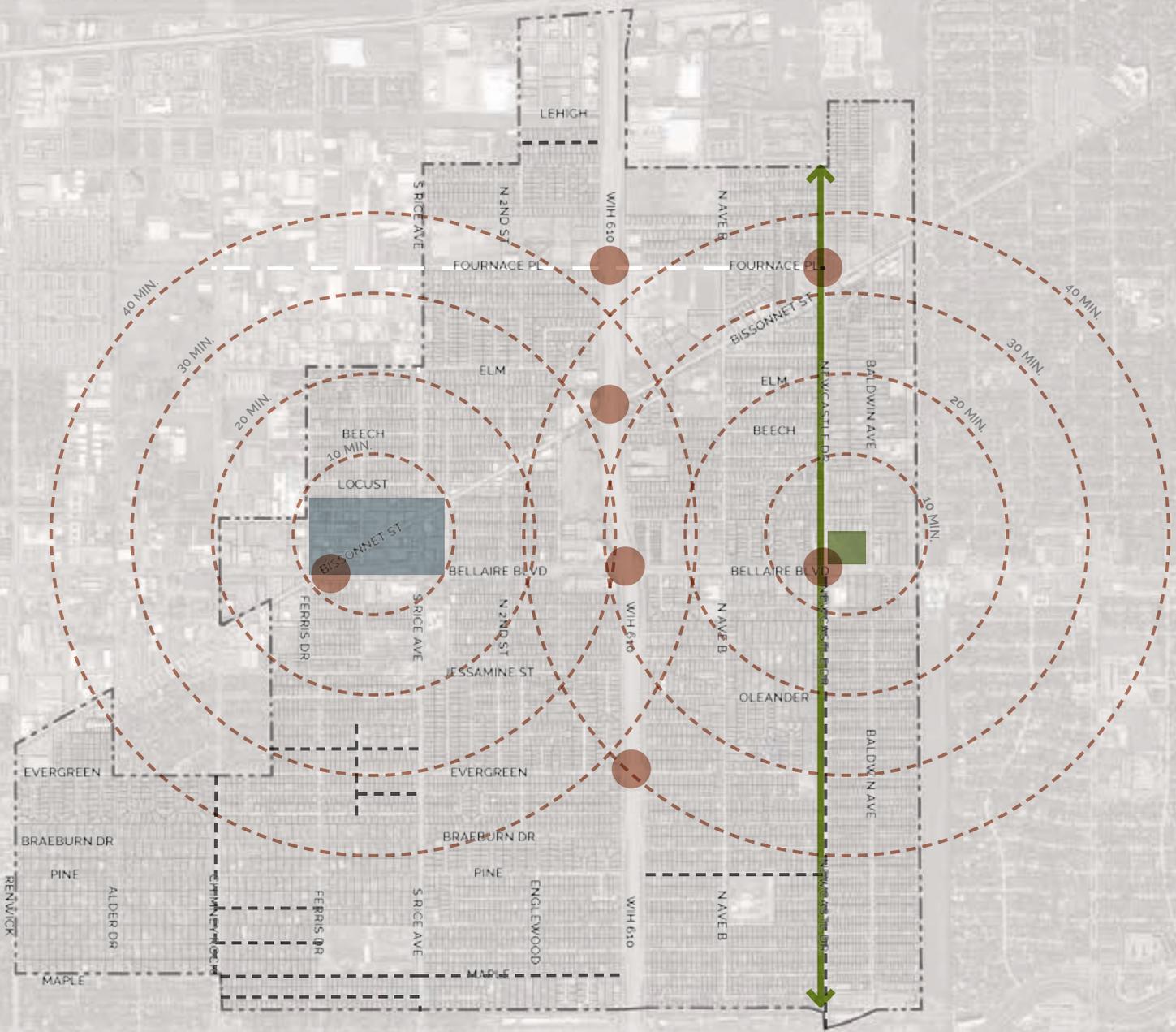


INCONSISTENT SIDEWALKS

STREET CHARACTERS

### LEGEND:

- Continuous Sidewalks
- Challenging Crossings
- ↔ Newcastle Trail
- Urban Village Downtown
- Evelyn's Park



## BICYCLE LANES

The City of Houston has already begun efforts through their bicycle master plan. However, there is a clear void in the planning of Bellaire's bicycle-safe streets. With the clear demand from residents from the community survey, accommodation for avid- and casual-cyclists is needed. The approach to such facilities should be focused around separating bicyclists using a physical barrier when possible. A physical barrier allows a safe mode of transportation for cyclists with varying levels of experience.

Bicycle facilities on neighborhood streets are not necessary due to the minimal right-of-way and lack of regular traffic on these streets. Residents have easy connectivity to connector and major thoroughfares with dedicated facilities.



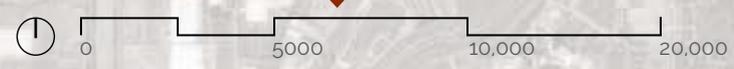
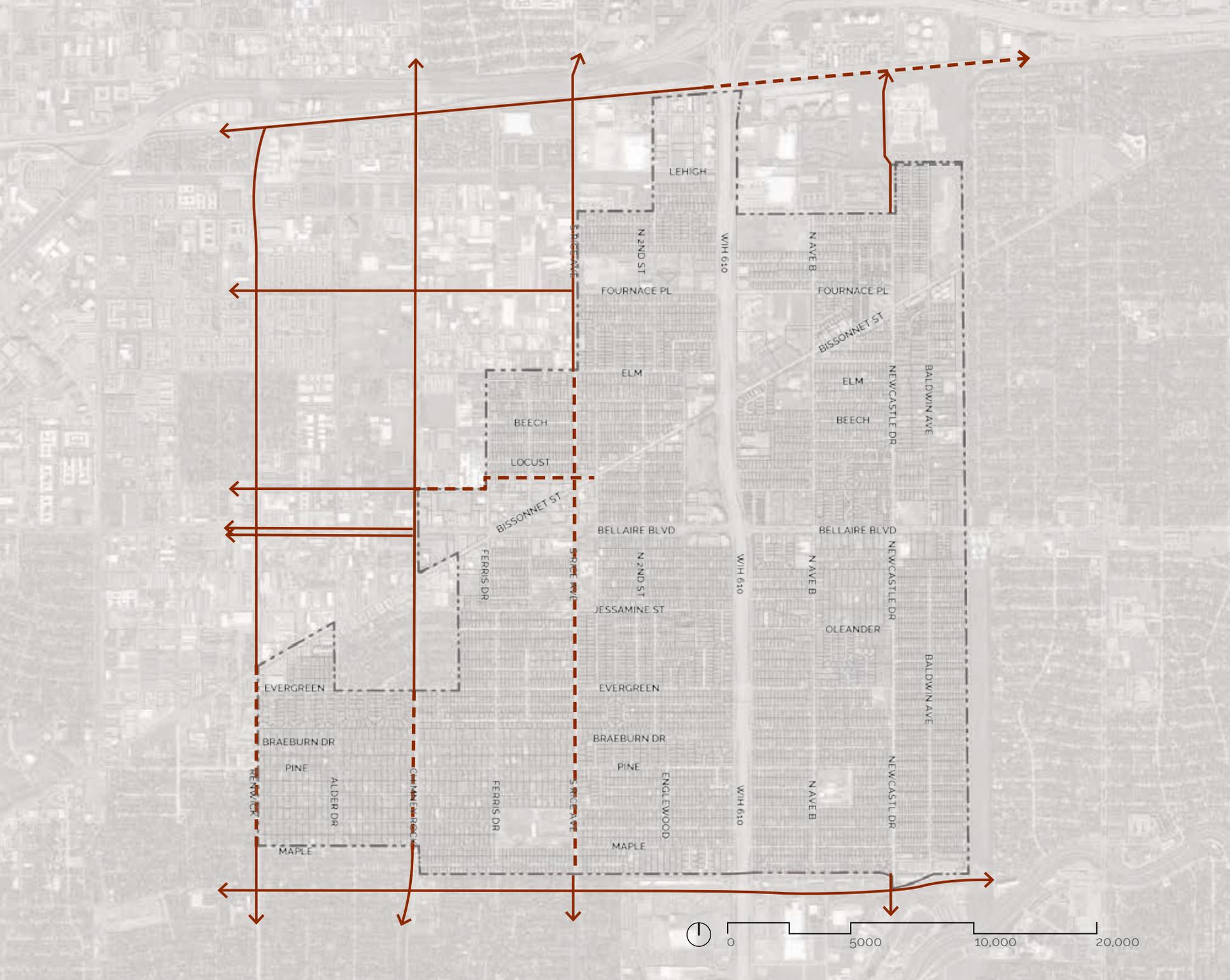
STREET WITHOUT BICYCLE LANE



STREET WITH BICYCLE LANE (CHIMNEY ROCK ROAD)

### LEGEND:

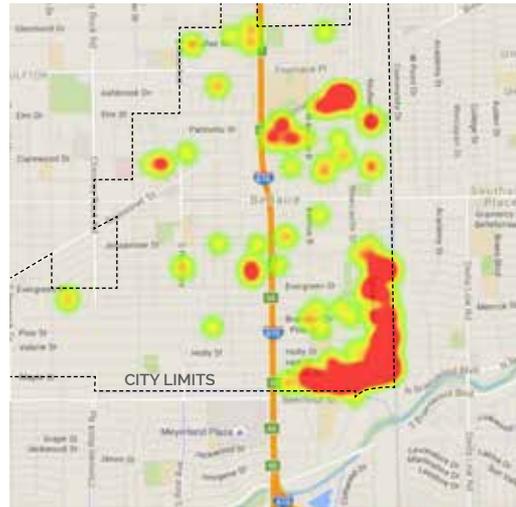
- > City of Bellaire Potential Bicycle Lane
- > City of Houston "Planned" Bicycle Lane



## Natural Systems

### STORMWATER MANAGEMENT

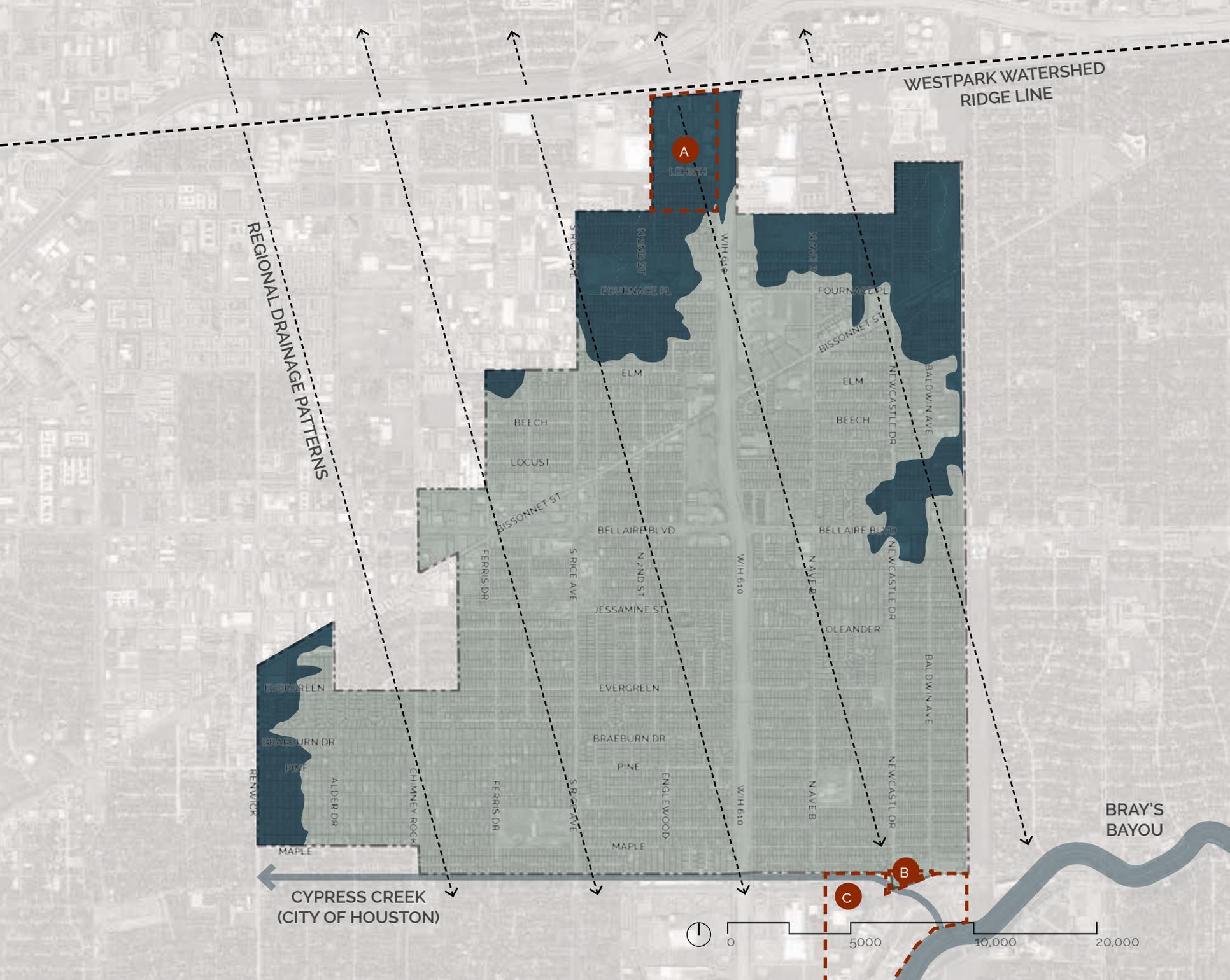
Stormwater interventions are a necessity in future efforts as flooding is a reality of residents and business owners in the city of Bellaire. Drainage and infiltration problems persist throughout the entirety of the city's land, particularly at the northern sites. A large portion of flooding is due to Brays Bayou and local storm sewer systems not able to hold the extreme volume of incoming stormwater.



2015 MEMORIAL DAY FLOODING EVENT - FLOODING LOCATION INTENSITY MAP

#### LEGEND:

- 100 Year Floodplain
- 500 Year Floodplain
- A Drainage Impeding Redevelopment
- B City of Bellaire Waste Water Treatment Facility
- C City of Houston Waste Water Treatment Facility



WESTPARK WATERSHED  
RIDGE LINE

REGIONAL DRAINAGE PATTERNS

A

LEHIGH

B

C

CYPRESS CREEK  
(CITY OF HOUSTON)

BRAY'S  
BAYOU



0 5000 10,000 20,000

EVERGREEN  
BRADBURN DR  
PINE  
ALDER DR  
MAPLE  
RENNICK  
CHIMNEY ROCK

BEECH  
LOCUST  
BISSONNET ST  
FERRIS DR  
S RICE AVE  
BELLAIR BLVD  
JESSAMINE ST  
EVERGREEN  
BRAEBURN DR  
PINE  
MAPLE  
FERRIS DR  
S RICE AVE

FOURNACE PL  
ELM  
N 2ND ST  
WILHELM  
W/H 610  
W/H 610  
N 2ND ST  
ENGLEWOOD

FOURNACE PL  
BISSONNET ST  
ELM  
BEECH  
BELLAIR BLVD  
OLEANDER  
BALDWIN AVE  
NEWCASTLE DR  
N 1/2 AVE B  
NEWCASTLE DR  
BALDWIN AVE

## HISTORIC STORMWATER MANAGEMENT

One constant throughout Bellaire's history is flooding. Countless flood events have occurred in the city since its beginning. Overtime, the impervious land area has also increased dramatically as land use has shifted to a higher built ratio.

Two Approaches can be used: traditional engineering, or green infrastructure.



1955: STREET FLOODING RESULTING FROM RAIN STORMS



2001: THE AFTERMATH OF TROPICAL STORM ALLISON

IMAGES FROM "LIFE AND TIMES AROUND BELLAIRE, TEXAS: 1909-2013" BY J. MICHAEL MCCORKLE

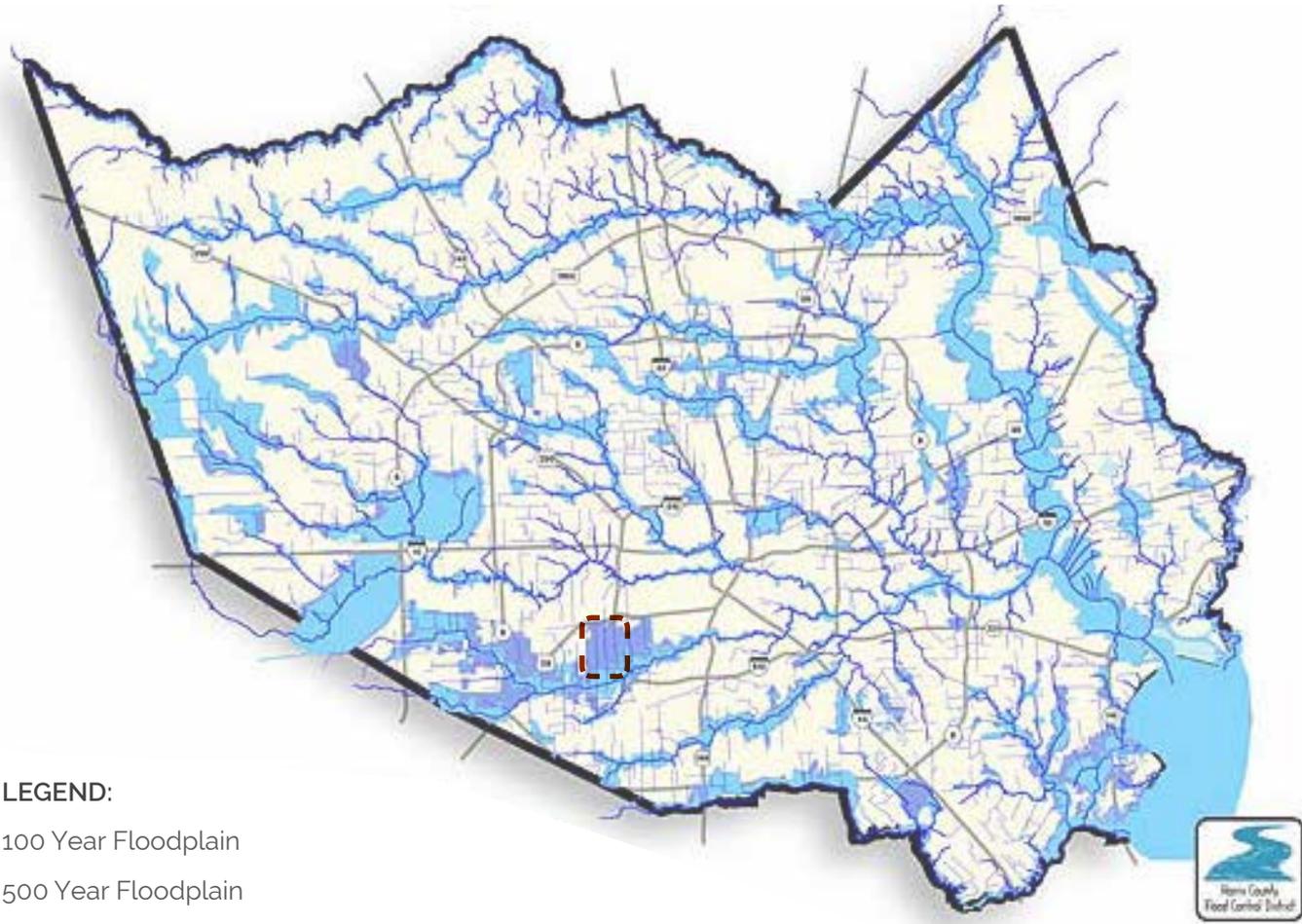


IMAGES FROM 2015 FLOOD



IMAGES FROM 2016 FLOOD

# Harris County's Current Floodplain



**LEGEND:**

-  100 Year Floodplain
-  500 Year Floodplain
-  City of Bellaire

## URBAN FOREST

One proud asset of the community is its strong urban forest. The city's beautiful tree canopy was encouraged to be developed along major corridors including connector streets and major thoroughfares.



LIVE OAK



RED OAK



CYPRESS



CHINESE TALLOW



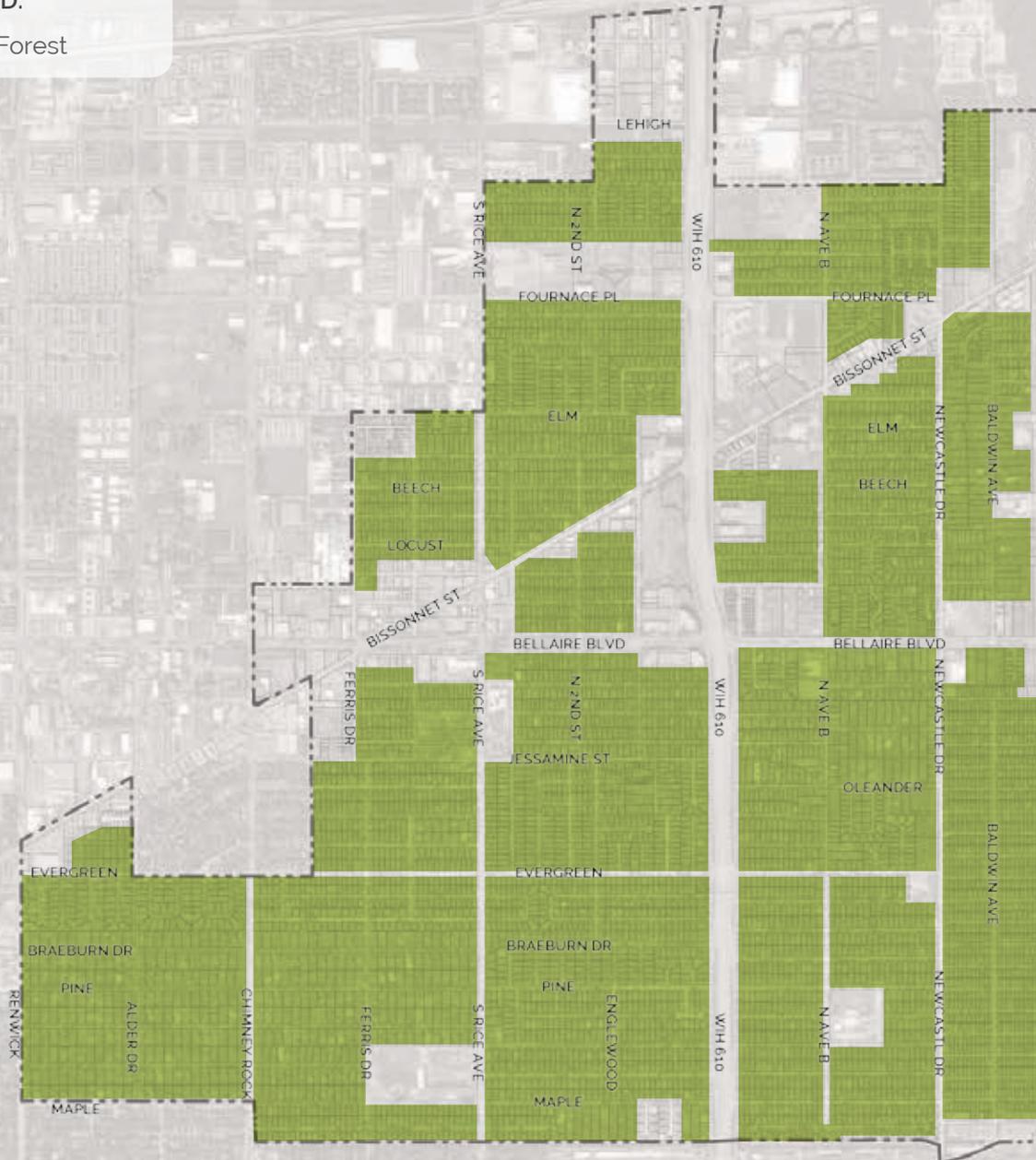
ELM



ASH

LEGEND:

 Urban Forest



## Cultural Resources

### SOCIAL SPACES

A critical component of a better Bellaire is encouraging the use of social spaces such as schools, churches, and parks. Urban design and beautification initiatives can help achieve this effort by physically connecting residents to destinations, while enhancing community pride.

### ART AND HISTORY

The citizens' survey has demonstrated a deep desire for a more vibrant art and design community. Bellaire has already made strides through installations such as the "Open the Door" Art Door installation in Paseo Park. A focused effort in the arts community gives opportunity for residents and artists to embrace Bellaire's amazing historic and cultural depth.

### PARKS AND OPEN SPACE

Parks are dynamic places that provide a vital role in the social, economic and physical welfare of cities and its residents. Parks promote community engagement and civic pride and attract individuals of all ages and backgrounds. Parks are an essential component of any city's infrastructure and because of the many benefits, the return on investment is high.



UTILITY BOX PAINTING AT PASEO PARK, BELLAIRE, TEXAS



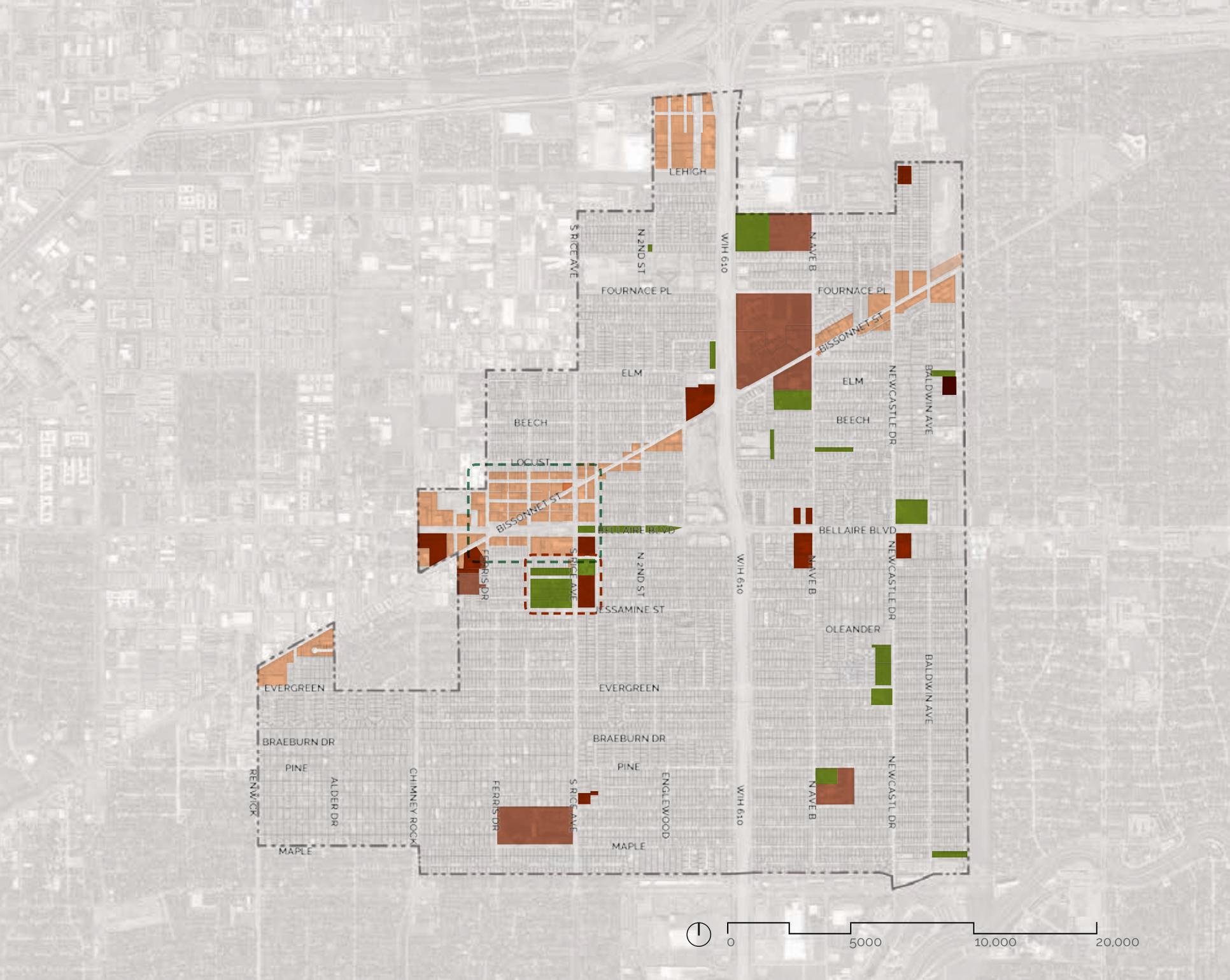
"OPEN THE DOOR" ART DOORS INSTALLATION, PASEO PARK, BELLAIRE, TEXAS



HISTORIC TROLLEY, BELLAIRE, TEXAS

#### LEGEND:

- Schools
- Churches
- Parks
- Corridor Mixed-Use
- Urban Village Downtown
- Municipal Complex



## ARCHITECTURE

Bellaire has a variety of architecture — both residential and commercial. The city's history as a bedroom community provides several types of architecture, along with unique, auto-oriented architecture. This extensive palette of architectural styles is one of Bellaire's greatest assets.

New styles of mainstream architecture have also been introduced in the urban village and West Loop in recent years.

## Historic



Residential



Commercial



Institutional







# Design Principles

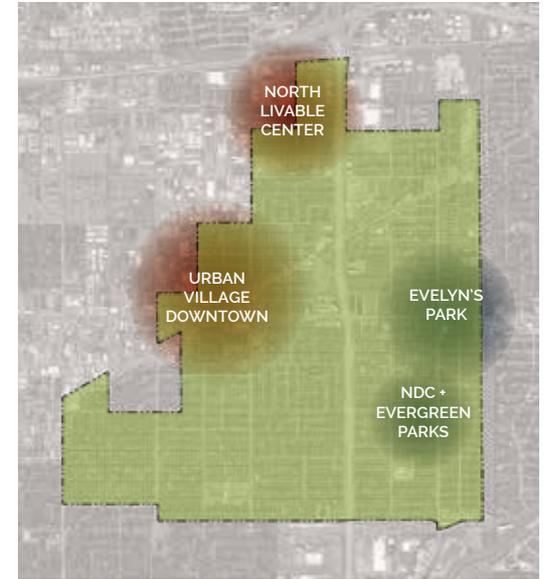
Through understandings gained from listening to the community and the land a set of design principles emerge that form the framework for urban design and beautification initiatives.



01. "One" City



02. Brand Clarity



03. Destinations



04. Connectivity



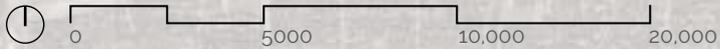
05. Green Infrastructure



06. The Social Landscape



# "ONE" CITY





### 01. "One" City

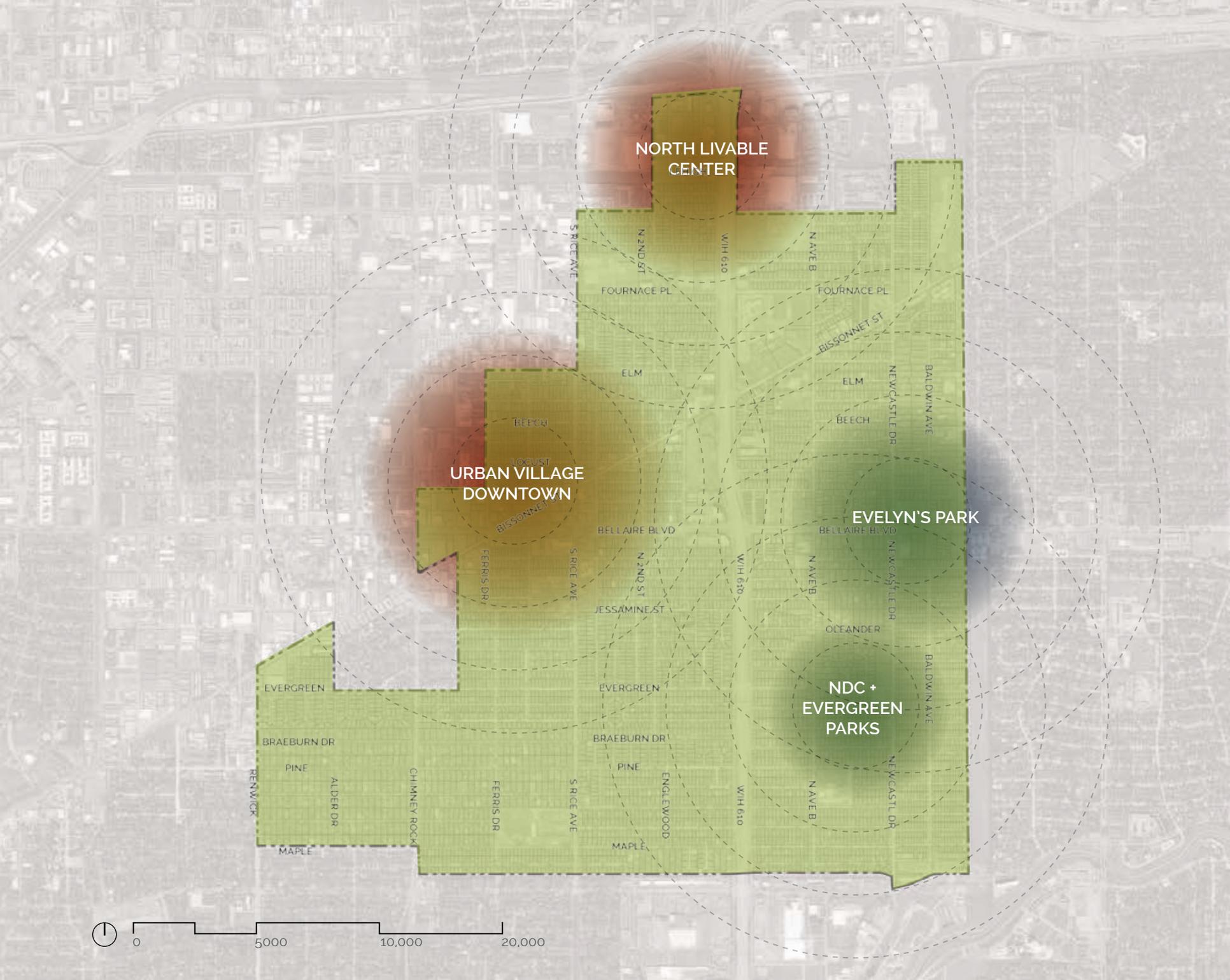
Although the city is subdivided by the West Loop, it's still "ONE" city. Urban design and beautification improvements should establish a brand that reinforces Bellaire's unity. Bellaire's brand can elevate the overall quality of life, as well as quality and real property value for all.





## 02. Brand Clarity

Through a people-oriented design language, Bellaire can build a clear, cohesive brand. Focusing the brand on the public realm and urban hardware will help define the city as a united and unique place to live.



**NORTH LIVABLE CENTER**

**URBAN VILLAGE DOWNTOWN**

**EVELYN'S PARK**

**NDC + EVERGREEN PARKS**

S RICE AVE

N 2ND ST

W/H 610

N AVE B

FOURNACE PL

FOURNACE PL

BISSONNET ST

ELM

ELM

NEWCASTLE DR

BALDWIN AVE

BEECH

LOCUST

BISSONNET ST

BELLAIRE BLVD

BELLAIRE BLVD

FERRIS DR

S RICE AVE

N 2ND ST

W/H 620

N AVE B

JESSAMINE ST

OLEANDER

NEWCASTLE DR

EVERGREEN

EVERGREEN

BRAEBURN DR

BRAEBURN DR

PINE

ALDER DR

CHIMNEY ROCK

FERRIS DR

S RICE AVE

PINE

ENGLEWOOD

MAPLE

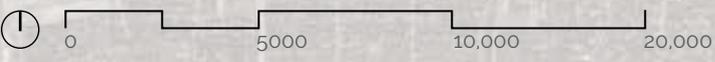
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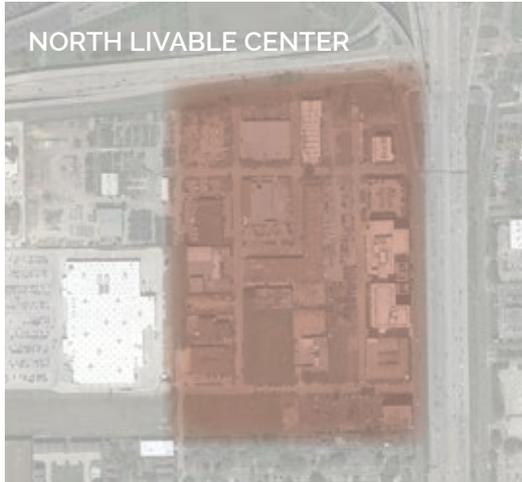
W/H 610

N AVE B

NEWCASTLE DR

BALDWIN AVE





### 03. Destinations

With proper accommodation for all modes of transportation, residents can rely on modes of transportation besides the automobile to get to destinations throughout the city. The city's town center and Evelyn's Park act as "centers of gravity" within the city, creating both urban and green destinations. Bellaire's close proximity of destinations serve as a strong advantage in supporting its overall vision of a great city.

EFT

RIGHT



CULTURAL





#### 04. Connectivity

A major goal is to create multi-modal streets that link destinations and promote walking and biking as safe, pleasant alternatives to the car particularly for families.

heat island mitigation

climate regulation



*curb extension*

infiltration

non-invasive facultative landscapes

erosion control and  
sediment retention

Siskiyou Street  
Portland, Oregon



## 05. Green Infrastructure

Throughout Bellaire, a key component to tackling issues, such as stormwater management, is to employ proven, green infrastructure solutions. These solutions set Bellaire apart as an environmentally conscious community.





## 06. The Social Landscape

Creating a public realm that allows people to socialize, to meet on the street and to know one's neighbor is a key component in bettering Bellaire. These efforts can focus around creating social spaces for gatherings, both large and small. Establishing an annual civic event that is a regional attraction could also be a great addition to Bellaire.





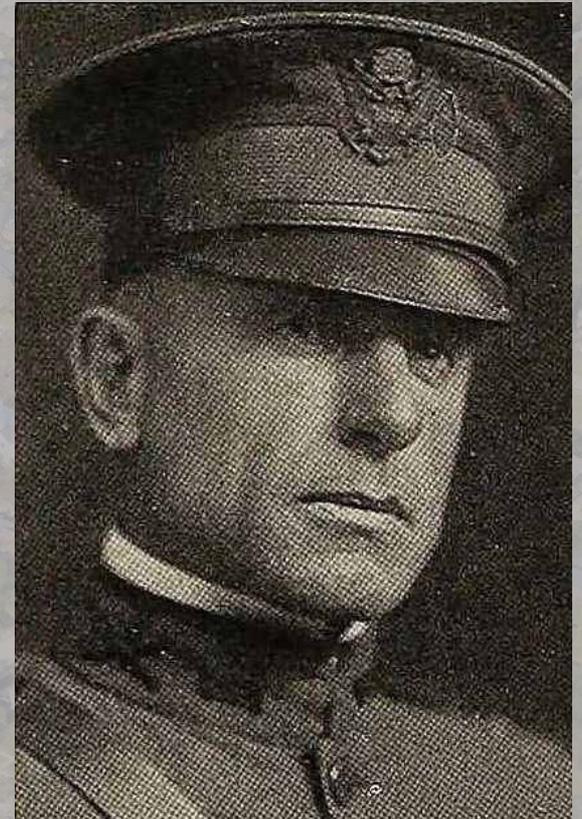
# Renewing the 1908 Vision for Bellaire



1908

Bellaire founded by William Baldwin as part of the 23,000 acre Rice Ranch. It was envisioned to be a

**“GARDEN CITY”**



# Bellaire's Brand

## THE NEW GARDEN CITY

a harmonious, family-oriented community balancing the best  
of town and country

Beautiful

Sustainable

Connected/Social

# Bellaire's Strength

THE BEST  
PLACE  
TO LIVE IN  
HOUSTON

Beautiful

Sustainable

Connected/Social

# Public Investment Strategy

each  
\$  
yields

Beautification + Functionality + Property Value Creation





## Design Initiatives

These design initiatives aim to achieve the grand vision of Bellaire as a "Garden City". Each initiative, represented through the design principles' graphic icons (see right), utilizes one or more of the overall design principles. Some initiatives resonate throughout the entire city, while others focus on site-specific solutions.

### PROJECTS:

01. Overhead Power Lines
02. Urban Elements
03. Connectivity
04. Stormwater Management
05. Bellaire Boulevard
06. Urban Village Downtown
07. City Gateways
08. Easements
09. North Livable Center

### DESIGN PRINCIPLES:



ONE CITY



BRAND CLARITY



DESTINATIONS



CONNECTIVITY



GREEN INFRASTRUCTURE



SOCIAL LANDSCAPES

### LEGEND:



Bellaire Boulevard



Major Thoroughfares



Connector Streets



Neighborhood Streets



Easements



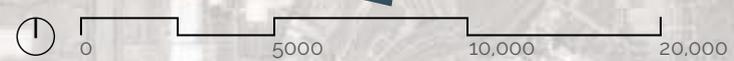
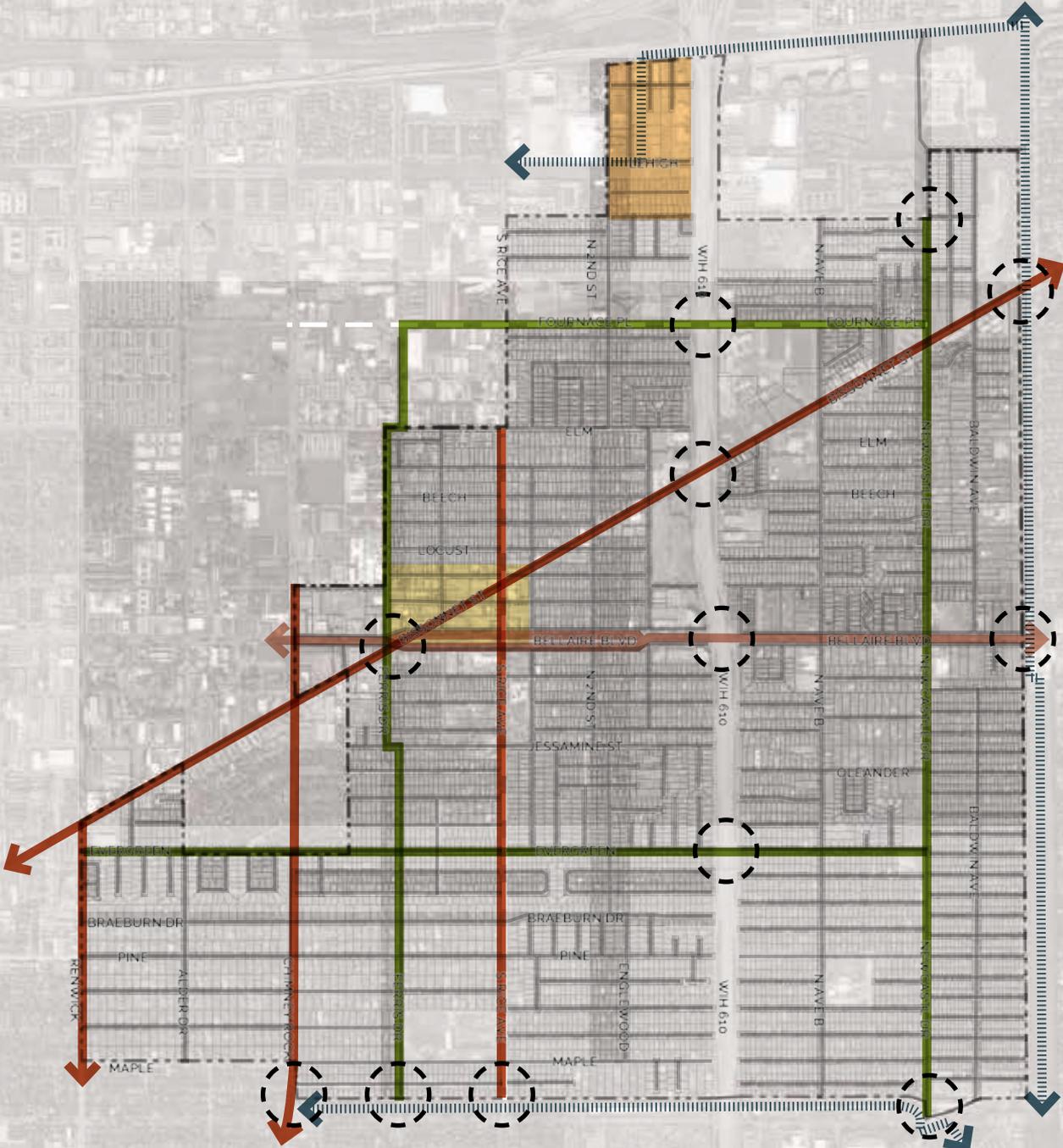
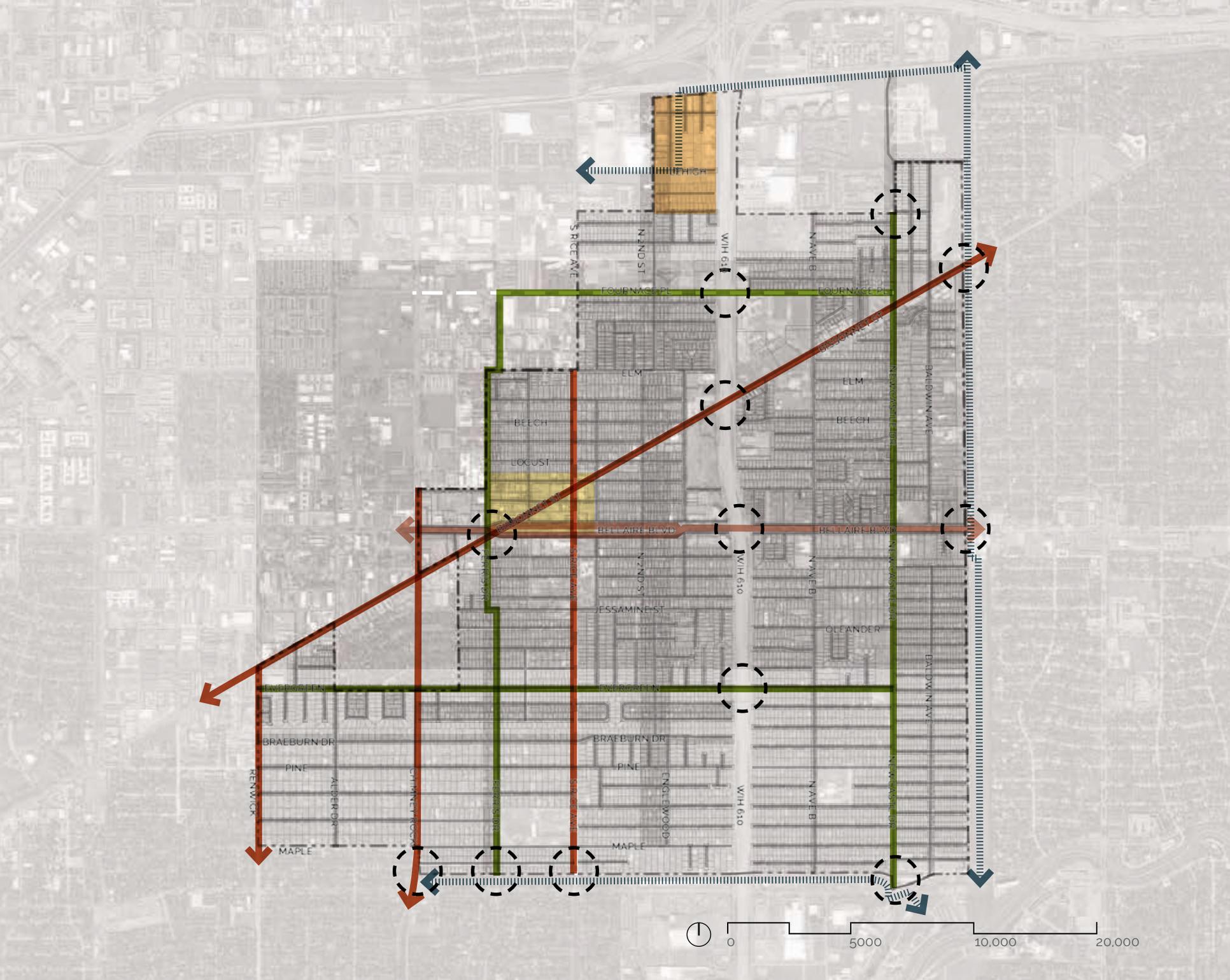
City Gateways



Urban Village Downtown



North Livable Center





## Urban Elements

Urban elements are a key factor in reinforcing a common aesthetic language throughout Bellaire. Some alternations may happen in specialty location, such as the urban village downtown, an important street corner, etc. However, all urban elements should include the same pole fixture, the unique mast, and ellipse-shaped bottom. As funding and reconstruction allows, the newer lights can replace existing light fixtures.

Roughly 4,000 to 7,000 new lights will be installed over time. This can potentially warrant Centerpoint, the local lighting provider, to add Bellaire's proposed fixture to their suite of available options.



PREFERRED FIXTURE

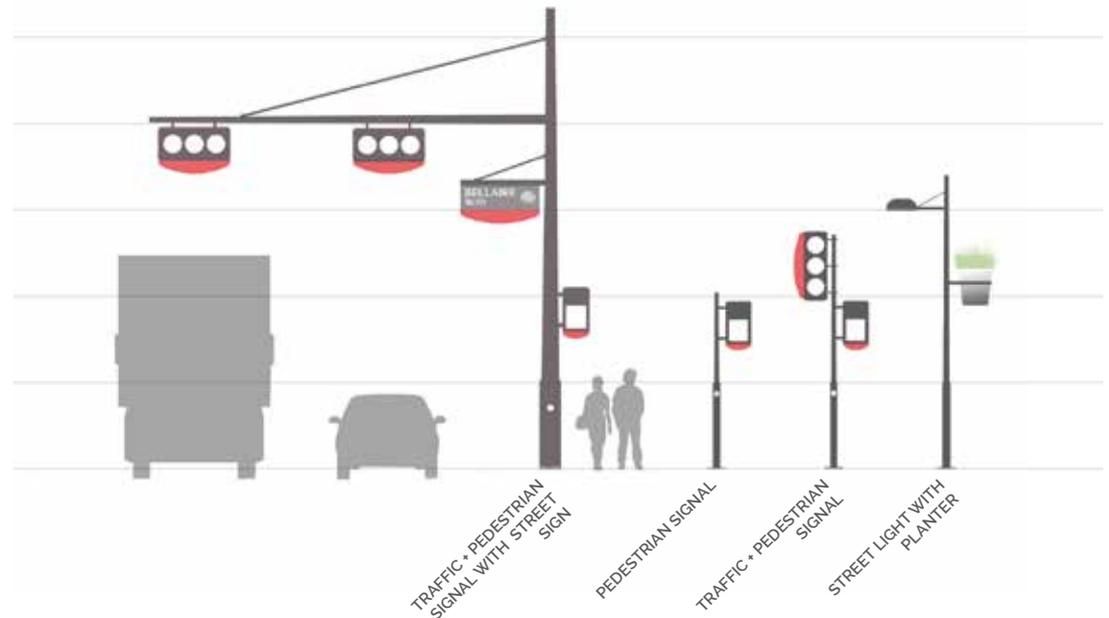


OPTIONAL FIXTURE



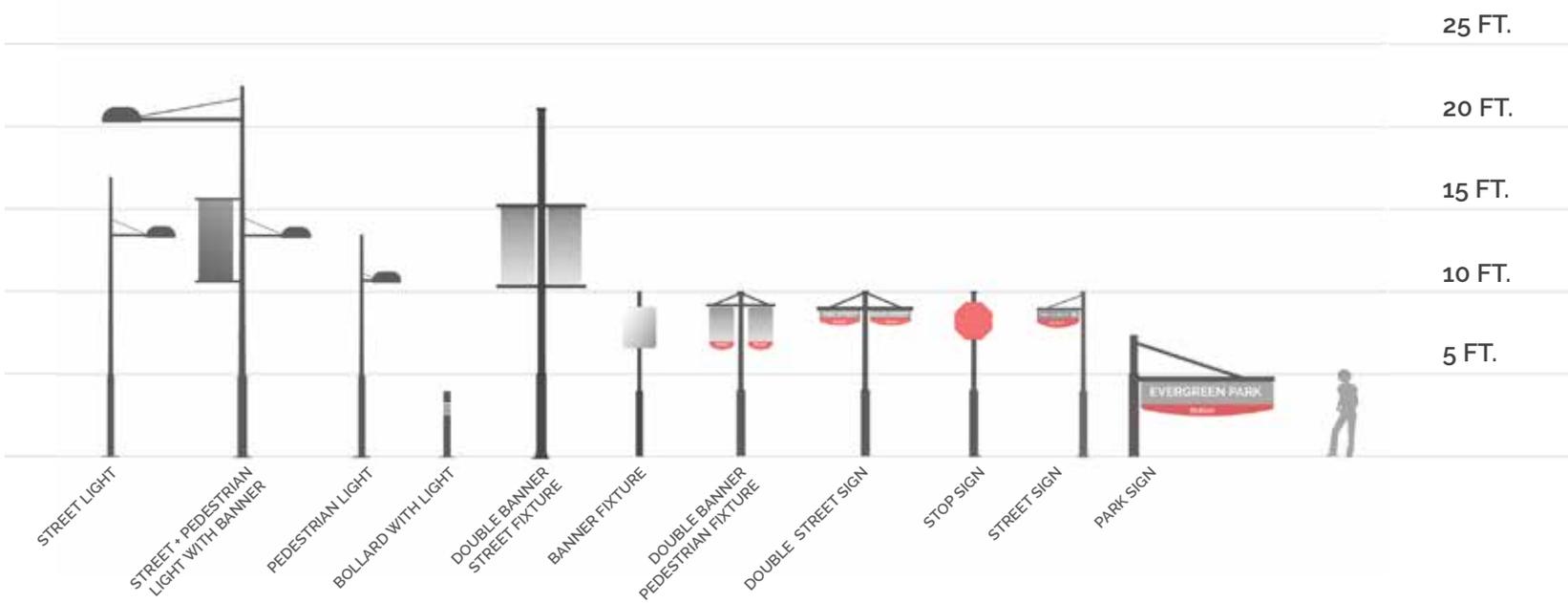
OPTIONAL FIXTURE

## Urban Street Elements Family

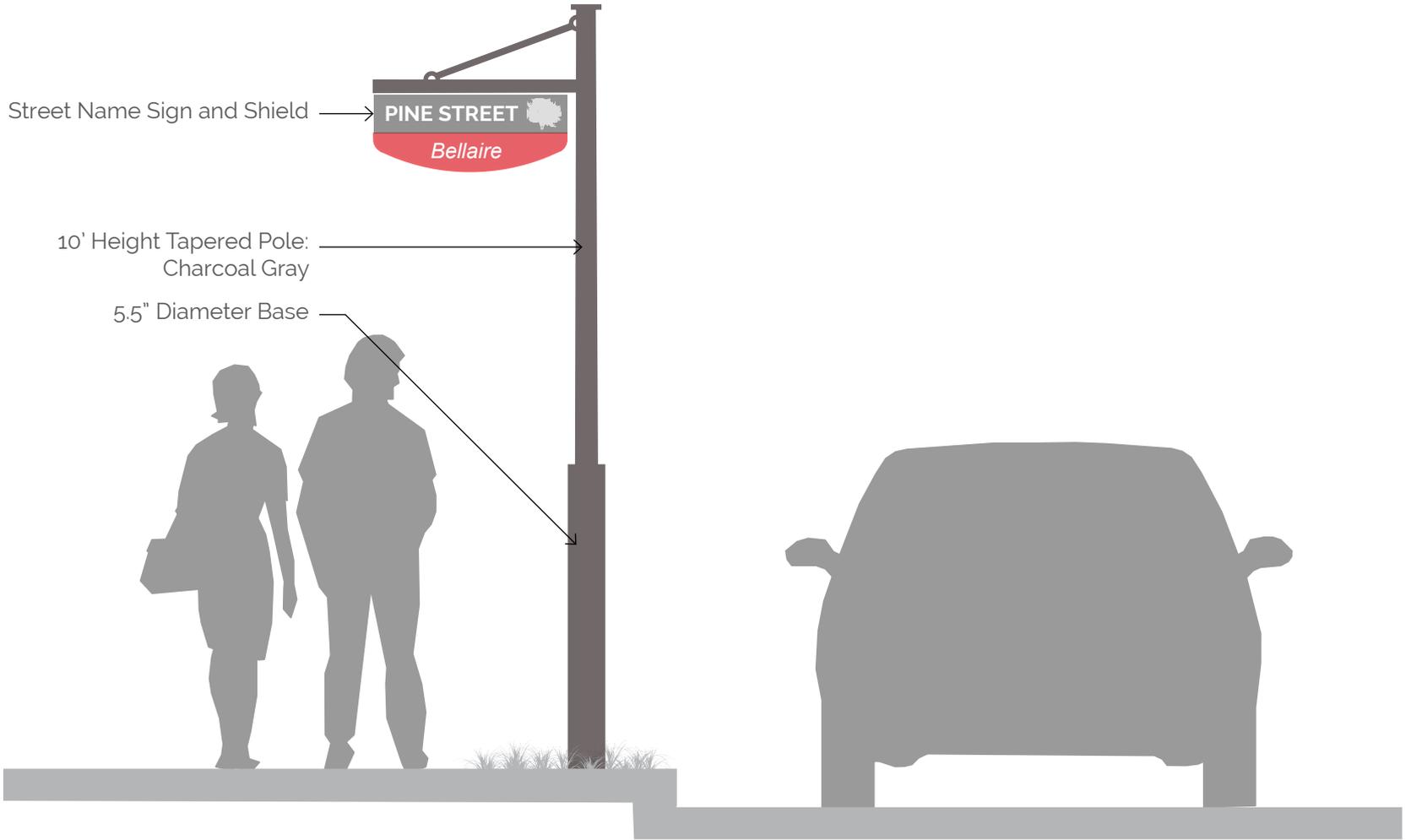




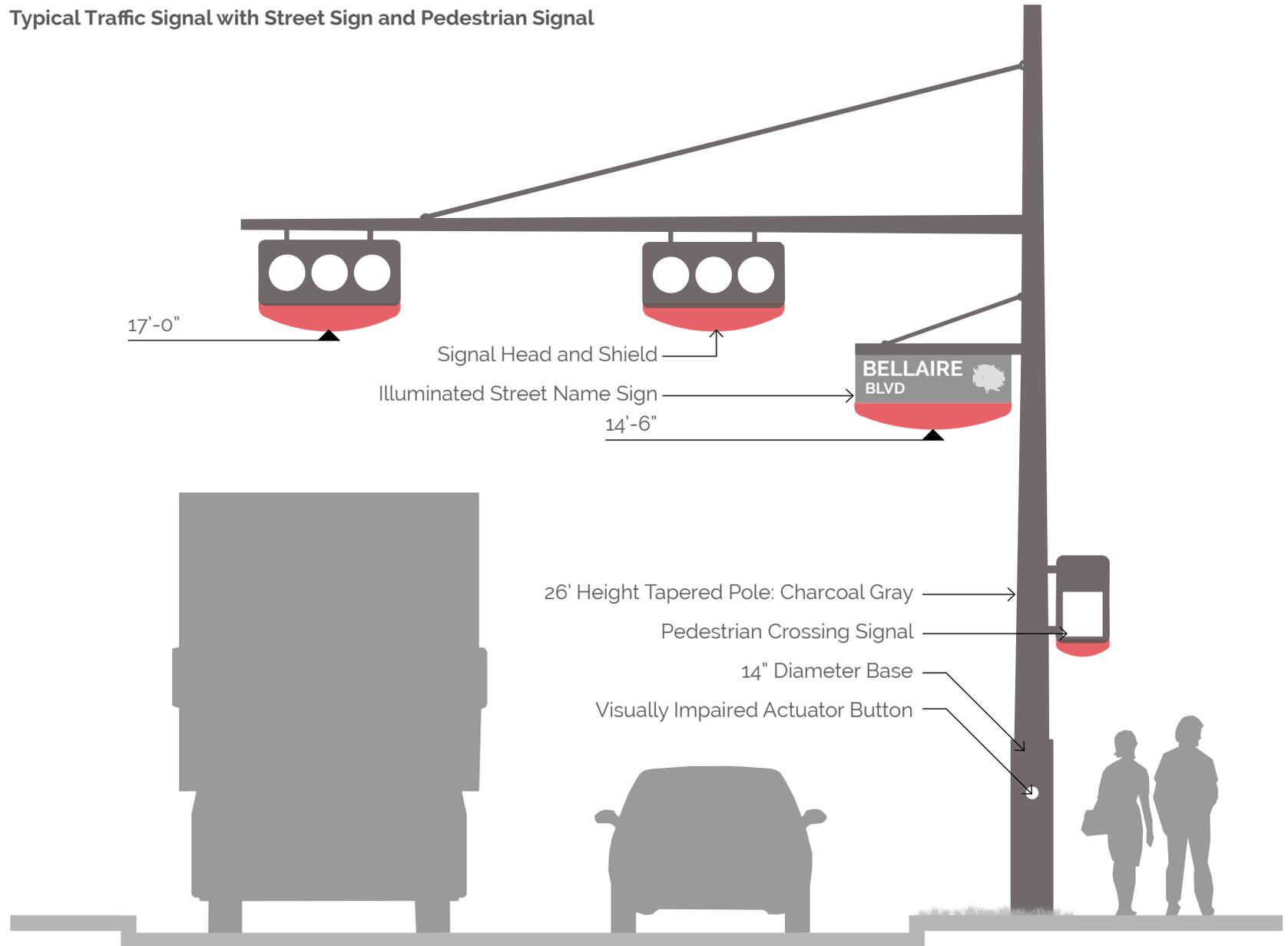
NEIGHBORHOOD INTERSECTION WITH URBAN ELEMENTS FAMILY



### Typical Street Sign



# Typical Traffic Signal with Street Sign and Pedestrian Signal





## Overhead Power Lines

An overall initiative for the city of Bellaire is to bury a portion of the overhead power lines in order to bring the city up to contemporary standards. This standard helps achieve three ideas:

01. Dependability of service
02. Public safety
03. Visual quality

Implementation of such standards can happen in association with street reconstruction. Key locations for burying would be at locations where overhead power lines are extremely visible. Other locations can happen as funding allows.

## Above-Ground Line Locations



### LEGEND:

- Overhead Power Lines Fronting Streets

Before



After





## Neighborhood Streets

### IMPLEMENTATION OF SIDEWALKS

The proposed typical street section for a neighborhood street takes into consideration several factors:

01. Implementation of sidewalks
02. Creation of bellaire intersections (with, or without, an art component)
03. Bio-retention gardens
04. Urban elements component.

Overall, the streets of Bellaire consume 88% of the city's street fabric. Improvements overall are to be made within the existing street footprint and well-within the right-of way. This minimizes disruption to private property.

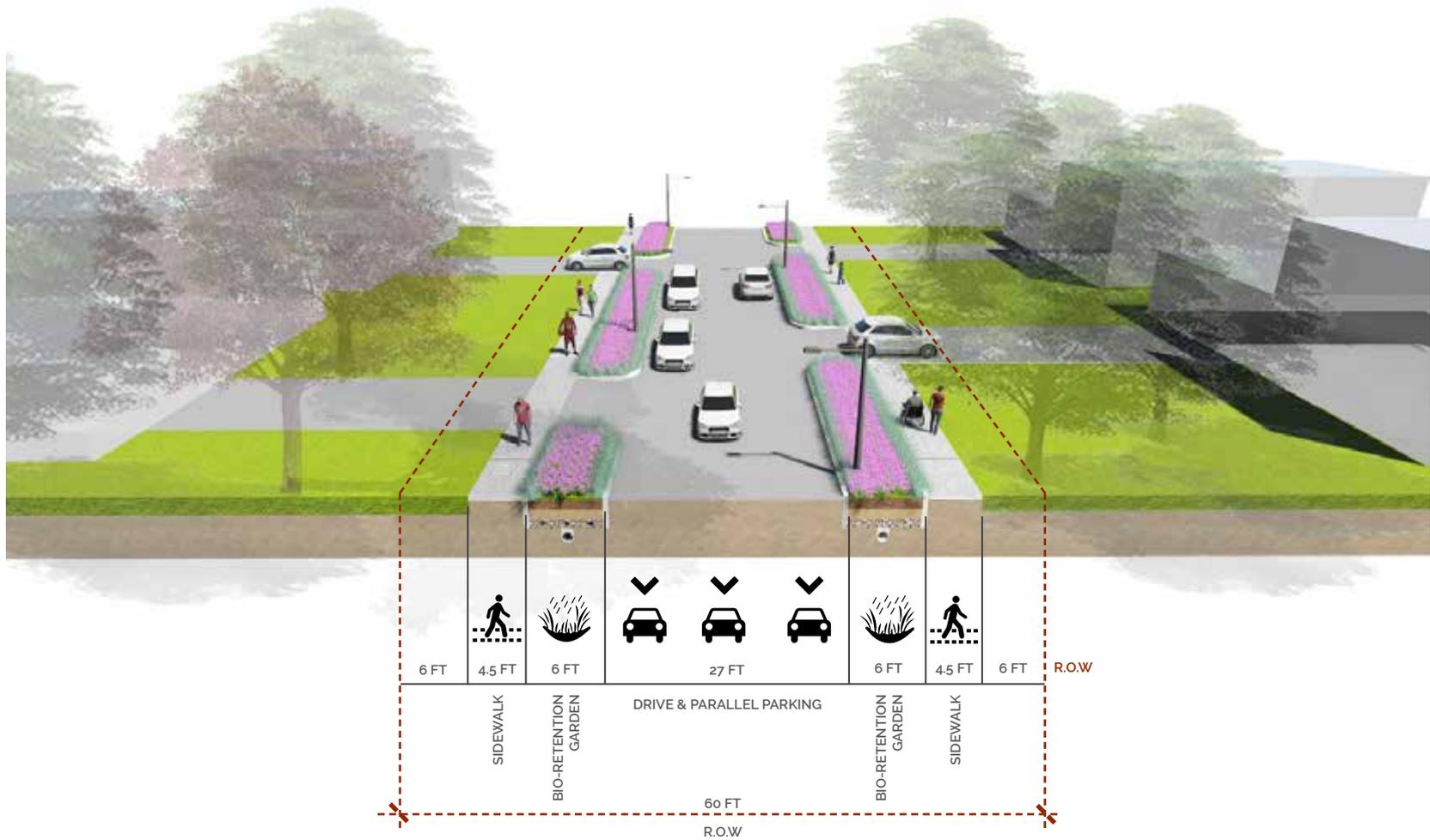
The concerns and demands voiced in the community survey proved that sidewalks are necessary on all neighborhood streets. The proposed neighborhood streets use more of the right-of-way to maximize sidewalk footprints and bio-retention gardens. Specifically, sidewalks are a minimum of four and a half feet in width to allow passing room. Overall improvements to the streetscape are beneficial for all residents as they provide connection to connector streets and major thoroughfares, as well as improve street aesthetic.

Long-term durability is considered when placing the sidewalks. Sidewalks are placed away from the curb in an effort to enhance durability of the sidewalk, itself, and connections at driveways.



EXAMPLE OF SIDEWALK IMPROVEMENTS AT INTERSECTIONS

# Typical Section: Neighborhood Street

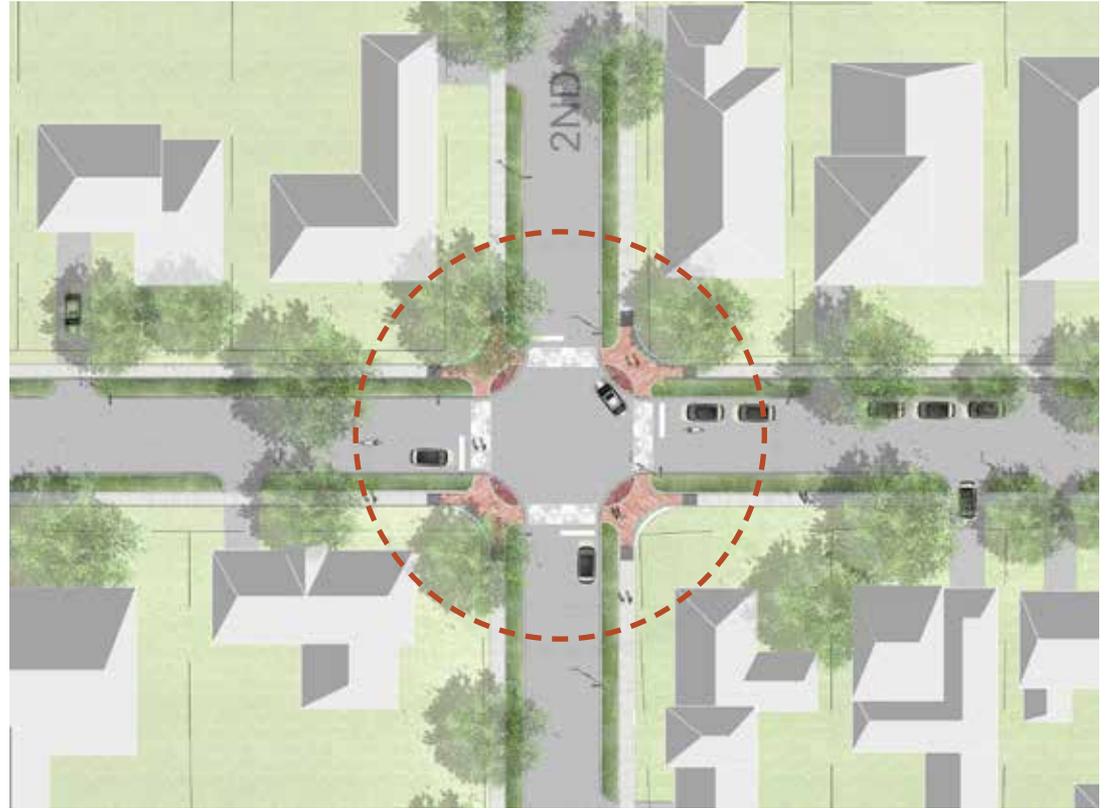


## Neighborhood Streets (cont'd)

### CREATION OF BELLAIRE INTERSECTIONS

Since Bellaire is a grid-city, everyone experiences intersections. This creates opportunity to enhance the common factor among residents through physical enhancements and create common identity within the city.

The enhanced intersections seamlessly take care of several conflicts: connects the neighborhood sidewalks that are pulled back from the curb; takes care of grade change; provides ample space for safe crosswalks insuring accessibility; and, provides ample space for seating and art elements. These intersections encourage social interaction in the landscape while creating an opportunity for a public art program.

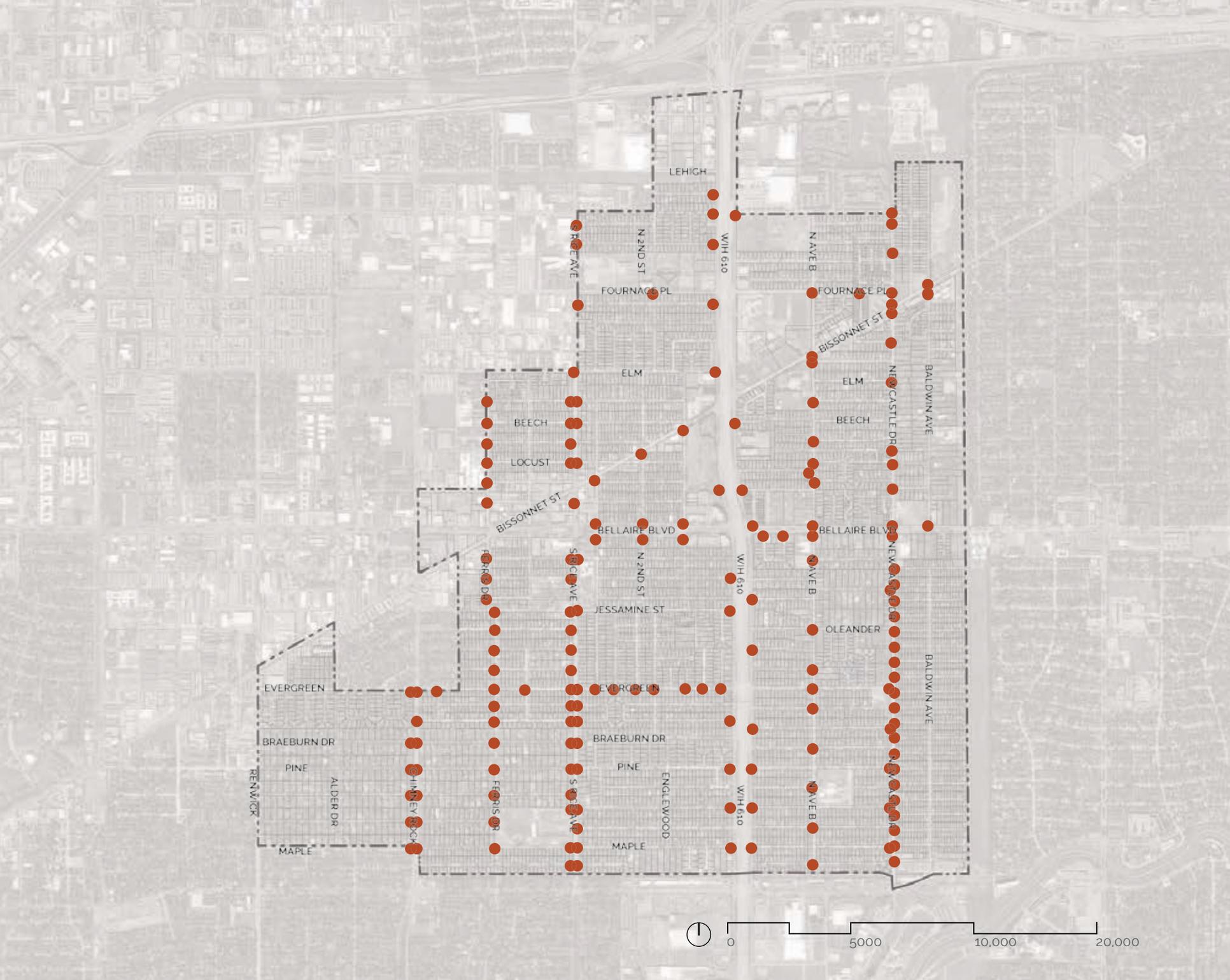


TYPICAL INTERSECTION WITH SPECIAL CORNERS

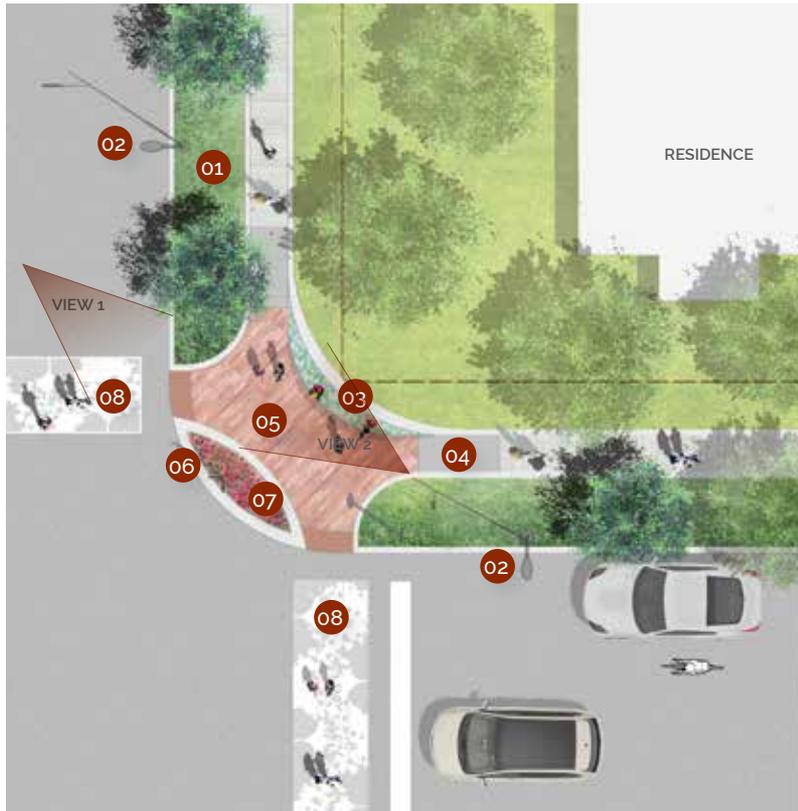
#### LEGEND:



Enhanced Intersection Location



## Typical Street Corner (With Art and Mural Wall)



### LEGEND

- 01. Bio-retention Garden
- 02. Street Light
- 03. The "Bellaire Bench"
- 04. Curb Ramp
- 05. Corner Plaza
- 06. Stop Sign
- 07. Corner Garden Planter
- 08. Art Crosswalk



VIEW 1

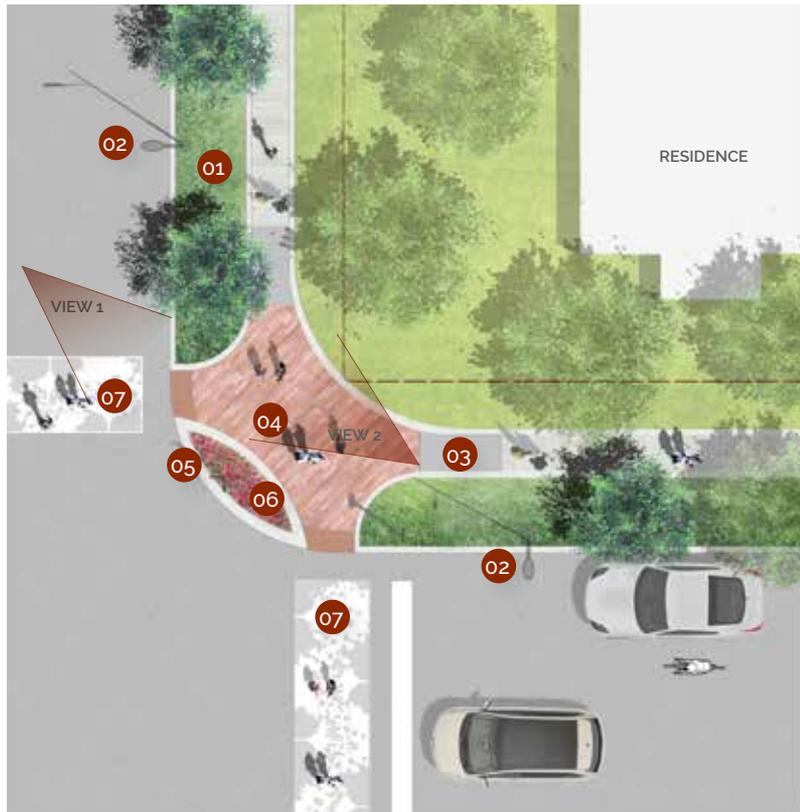


VIEW 2



VIEW OF INTERSECTION

## Typical Street Corner (Without Art and Mural Wall)



### LEGEND

- 01. Bio-retention Garden
- 02. Street Light
- 03. Curb Ramp
- 04. Corner Plaza
- 05. Stop Sign
- 06. Corner Garden Planter
- 07. Art Crosswalk



VIEW 1



VIEW 2



VIEW OF INTERSECTION

## Neighborhood Streets (cont'd)

### BIO-RETENTION GARDENS

Located against the sidewalk between the street curb, bio-retention gardens have several benefits, a few being the following:

01. Stormwater Management and Infiltration
02. Creates Beautiful Environment
03. Improves Curb Appeal

To preserve large trees along neighborhood streets, special care is taken during the implementation process. One example of wrapping tree roots (shown to the right) includes excavating or boring under existing tree roots within these gardens.



BAGBY STREET, HOUSTON, TEXAS



EXCAVATION AROUND EXISTING AND PROTECTIVE WRAPPING OF TREE ROOTS, HERMANN PARK, HOUSTON, TEXAS

### LEGEND:

 Bio-retention Garden Locations



## Neighborhood Streets (cont'd)

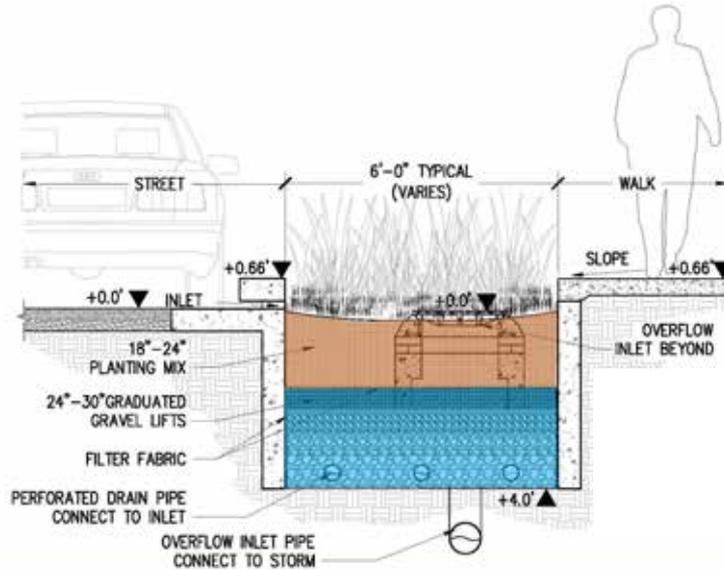
### BIO-RETENTION GARDEN IMPACTS

Bio-retention gardens improve water quality through filtering pollutants, reduce flood impacts through capturing and retaining water on-site, and also create new wildlife habitats (Designing For Impact Guide for Governments, Houston-Galveston Area Council). Along neighborhood streets, trees shall not be placed in bio-retention gardens because of the strong, existing tree canopy. Common plant species for new gardens also grow best in full sun. Plants species should also be robust and shown to have succeeded in other landscapes in the Houston area.

	Life Cycle Cost (\$, NPV) Net Present Value			
	Conventional	LID	Difference	%
Curbs & Gutters	\$ 67,984	\$ 67,984	\$ 0	0 %
Street	\$ 1,110,977	\$ 555,488	\$ 555,489	- 50 %
Conventional Stormwater Storage	\$ 297,208	\$ 297,208	\$ 0	0 %
Bioswale	\$ 157,514	\$ 403,629	(\$ 248,115)	156 %
Trees	\$ 0	\$ 63,922	\$ 63,922	
<b>Total</b>	<b>\$ 1,633,683</b>	<b>\$ 1,388,231</b>	<b>\$ 245,452</b>	<b>- 15 %</b>

*These numbers compare landscape development and stormwater management costs. They do not account for cost to construct buildings.*

COST BENEFIT OF STORMWATER MANAGEMENT INFRASTRUCTURE FROM "DESIGNING FOR IMPACT GUIDE FOR GOVERNMENTS" BY HOUSTON-GALVESTON AREA COUNCIL



TYPICAL CONSTRUCTION DETAIL OF BIO-RETENTION GARDEN

## Bio-Retention Garden Examples



## BIO-RETENTION GARDEN MAINTENANCE

Bio-retention gardens are to be built with robust plant material. Specifically, plants are to be native, naturalized plant material that's proven to do well in Houston area.

Regarding maintenance duties for the proposed bio-retention gardens, two approaches are suggested:

### 01. Residential Approach

Given a variety of circumstances, native, naturalized plant maintenance is typically easier to maintain than traditional lawn. Residents could be given guides to maintain the gardens closest to their house and maintain gardens. This approach is suggested due to the high amount of maintenance given to the existing right-of-way by current residents in the city.

### 02. City Approach

A garden team would be created by the city. This team would specialize in maintaining the plants in bio-retention gardens throughout the city.



LANTANA  
*LANTANA CAMARA*



LOUISIANA IRIS  
*IRIS SER. HEXAGONAE*



ASIAN JASMINE  
*TRACHELOSPERMUM ASIATICUM*



**KNOCKOUT ROSES**  
*ROSA 'DOUBLE KNOCK OUT'*



**SALVIA**  
*SALVIA OFFICINALIS*



**KATY RUELIA**  
*RUELLIA SIMPLEX 'KATIE'*



**MEXICAN FEATHER GRASS**  
*NASSELLA TENUISSIMA*



**GULF COAST MUHLY GRASS**  
*MUHLENBERGIA CAPILLARIS*



**SPIDER LILY**  
*LYCORIS RADIATA*



**GIANT BLUE LIRIOPE**  
*LIRIOPE MUSCARI*



**INDIAN HAWTHORN**  
*RHAPHIOLEPIS INDICA*



**MONKEY GRASS • OPHIOPOGON**  
*OPHIPOGON JAPONICUS*

## West Loop Motor Courts

### MOTOR COURTS

The current connection to the West Loop's frontage roads makes for an unsafe environment for a family-oriented community due to the high volume of commuter traffic. These intersections (such as the "Before" image shown to far right), create an undesirable front door to the West Loop abutment wall.

Design initiatives that disconnect the street to create a motor court could provide a variety of advantages. The closing create social spaces and promote safe, neighborhood activities.

One challenge with closing certain intersections is the impact on current traffic flow and the potential for congestion elsewhere. A traffic study for this initiative is heavily encouraged.

Certain residents may want to keep their street open due to personal concerns. An alternative for the selection of street closings in conjunction with a traffic study might be residents volunteer their block to be disconnected from the frontage road.

### Converted Motor Court Locations





Before



After



## Connector Streets

### TYPICAL STREET SECTION

Connector streets are generally narrow and have more traffic than neighborhood streets. However, they still allow people to get safely to local destinations and their homes. The connector street has similar elements as the neighborhood streets, but instead of a dedicated bicycle lane to promote safety. Like neighborhood streets, connector streets do not touch private property and contain Bellaire's proposed urban elements family. These streets receive street tree treatment on both sides of the street.



FOURNACE PLACE: 75' RIGHT OF WAY WIDTH



NEWCASTLE STREET: 60' RIGHT OF WAY WIDTH



### LEGEND:

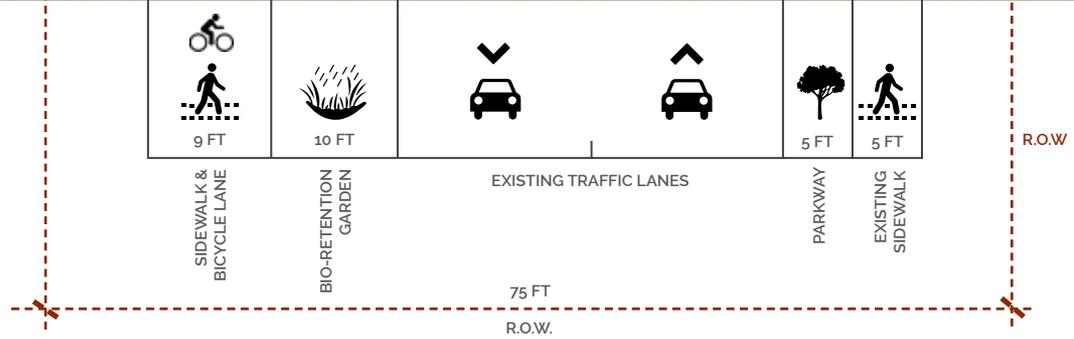
--- ➔ Connector Streets



### Typical Section: Newcastle Street



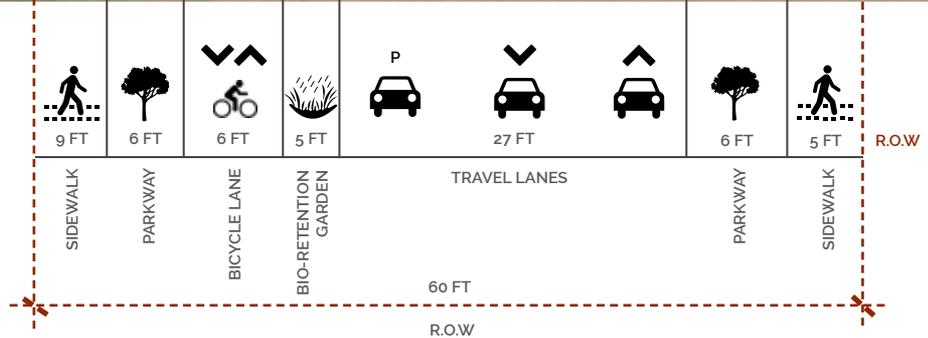
### Key Map:



# Typical Section: Evergreen



Key Map:





## Major Thoroughfares

South Rice is the north/south heart of Bellaire. It is a civic street lined with residences, churches, schools, parks, the Municipal Complex and businesses. It links many of Bellaire's neighborhoods to these and other destinations within and beyond the city limits.

Both South Rice and Chimney Rock exist within a generous 90' right-of-way allowing these streets to become "green" streets in character and sustainable functionality. South Rice can include multi-modal connectivity with two lanes of traffic in each direction, wide sidewalks, dedicated bike lanes, parkway green space, Bio-retention gardens and a planted median. When needed 7' wide Bio-retention Gardens can be paved with pervious paving to accommodate parallel parking.

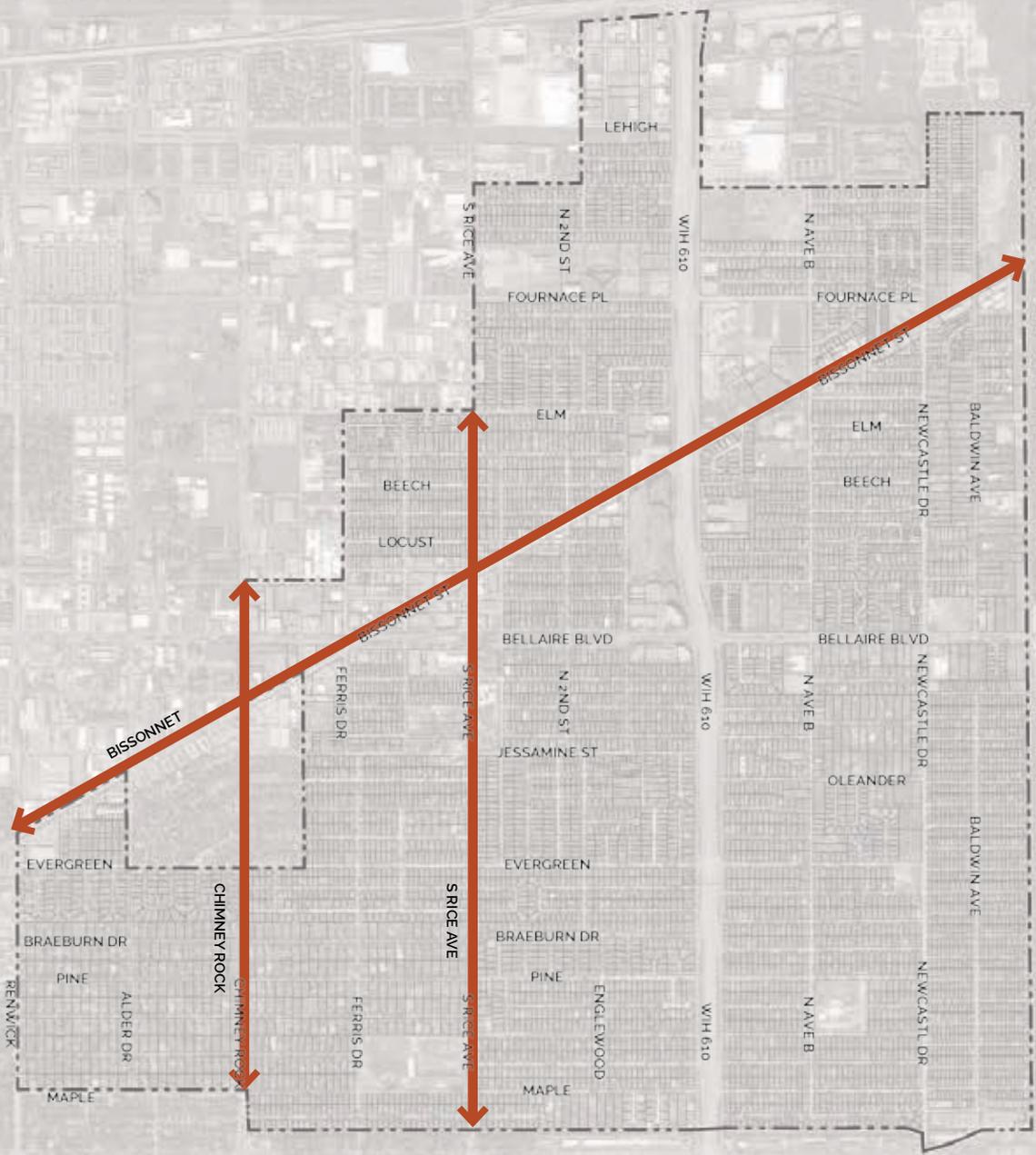
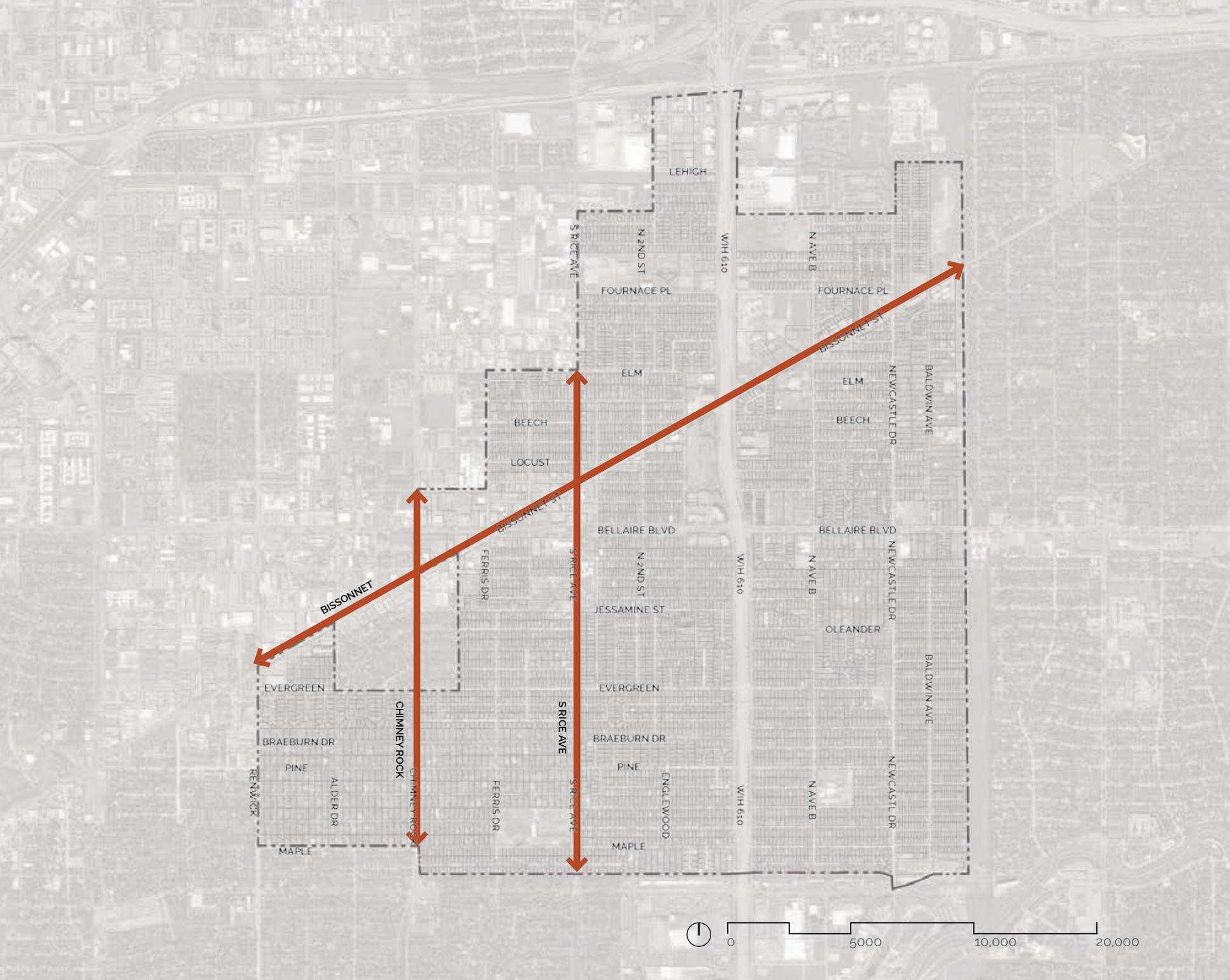
Chimney Rock can include the same functions but given its residential character parallel parking is not required.

Bissonnet is envisioned as Bellaire's urban street allowing the wide variety of land-uses that front Bissonnet to gain vehicular, pedestrian and bike access from it while creating space for coffee shops, restaurants and other businesses to spill out onto generous sidewalks. Additional sidewalk space is created by removing the existing "chicken lane" in the middle of the street while maintaining four (4) lanes of traffic, two (2) in each direction. Recently the "chicken lane" on Westheimer east of Shepherd was removed, a corridor with much higher traffic demands than Bissonnet through Bellaire, a model that Bissonnet can emulate.

### LEGEND:



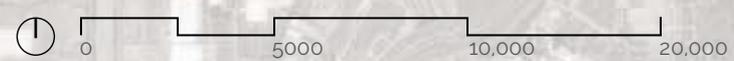
Major Thoroughfares



BISSONNET

CHIMNEY ROCK

S RICE AVE



## BISSONNET STREET:

This corridor not only slides through Bellaire's downtown, but also has varying land-uses. The right-of-way width is also only seventy feet wide, making it the one urban corridor in the city of Bellaire. Bissonnet allows Bellaire to stretch its urbanity through the city, and is a great example of where urban elements can vary (e.g. pots, banners on poles, etc.). Unique streetscape elements along Bissonnet include infiltration beds and trees in tree grates. These infiltration beds allow a significant amount of stormwater infiltration.

Major changes to this two-way street would be getting rid of the middle lane that allows left and right turns. A successful example of this is Westheimer at Shepard (shown in image to the right). The middle lane removal allows the sidewalks to be widened.

### Key Map:

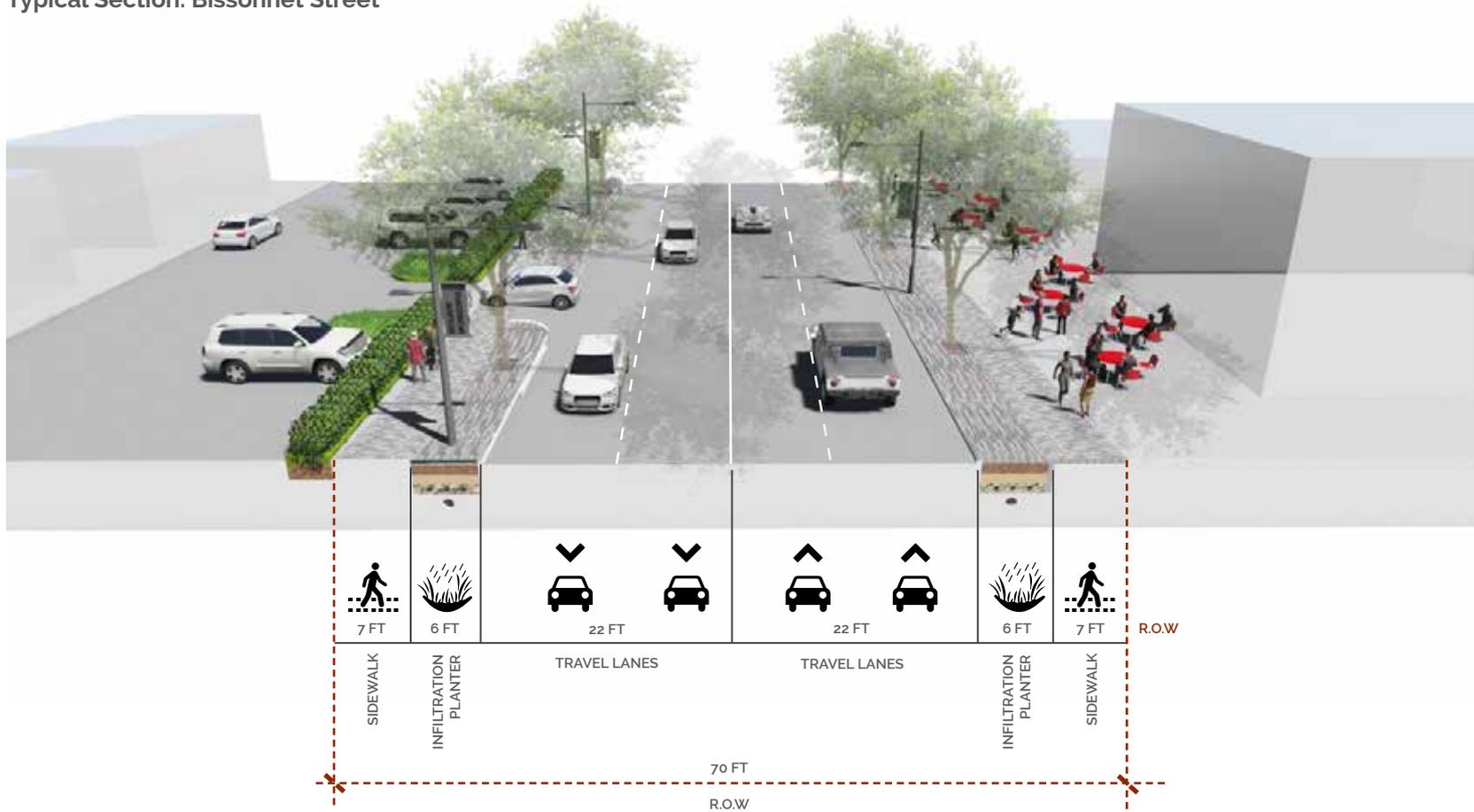


EXAMPLE AT WESTHEIMER STREET AND SHEPARD STREET OF HOW MIDDLE LANE CAN BE REMOVED WITHOUT SIGNIFICANTLY CONGESTING TRAFFIC



MULTI-MODAL STREET EXAMPLES

# Typical Section: Bissonnet Street

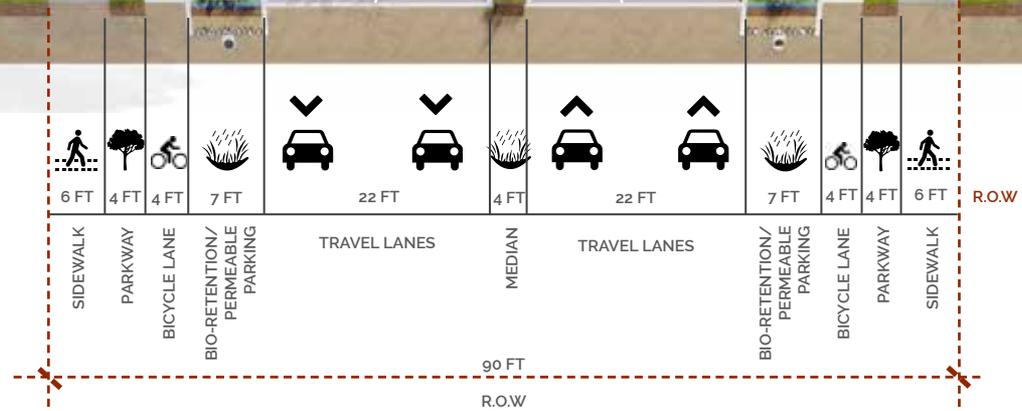


**CHIMNEY ROCK ROAD:**

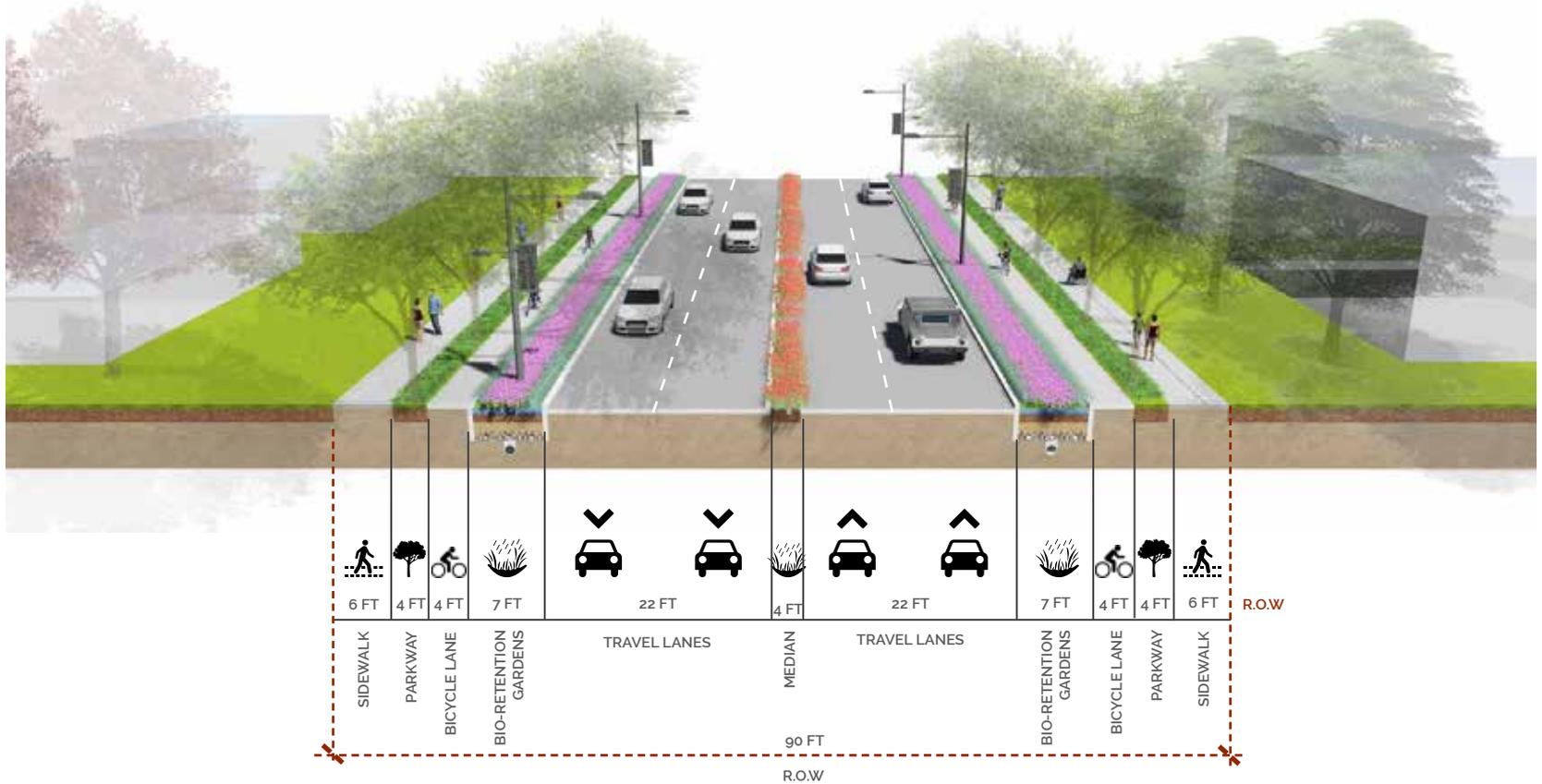
Chimney Rock Road has vastly different land-uses than South Rice Boulevard, but still carries the same treatment in its similar ninety-foot right-of-way.

**Key Map:**

# Typical Section: Chimney Rock Street



## Typical Section: South Rice Boulevard (Without Street Parking)



### Key Map:



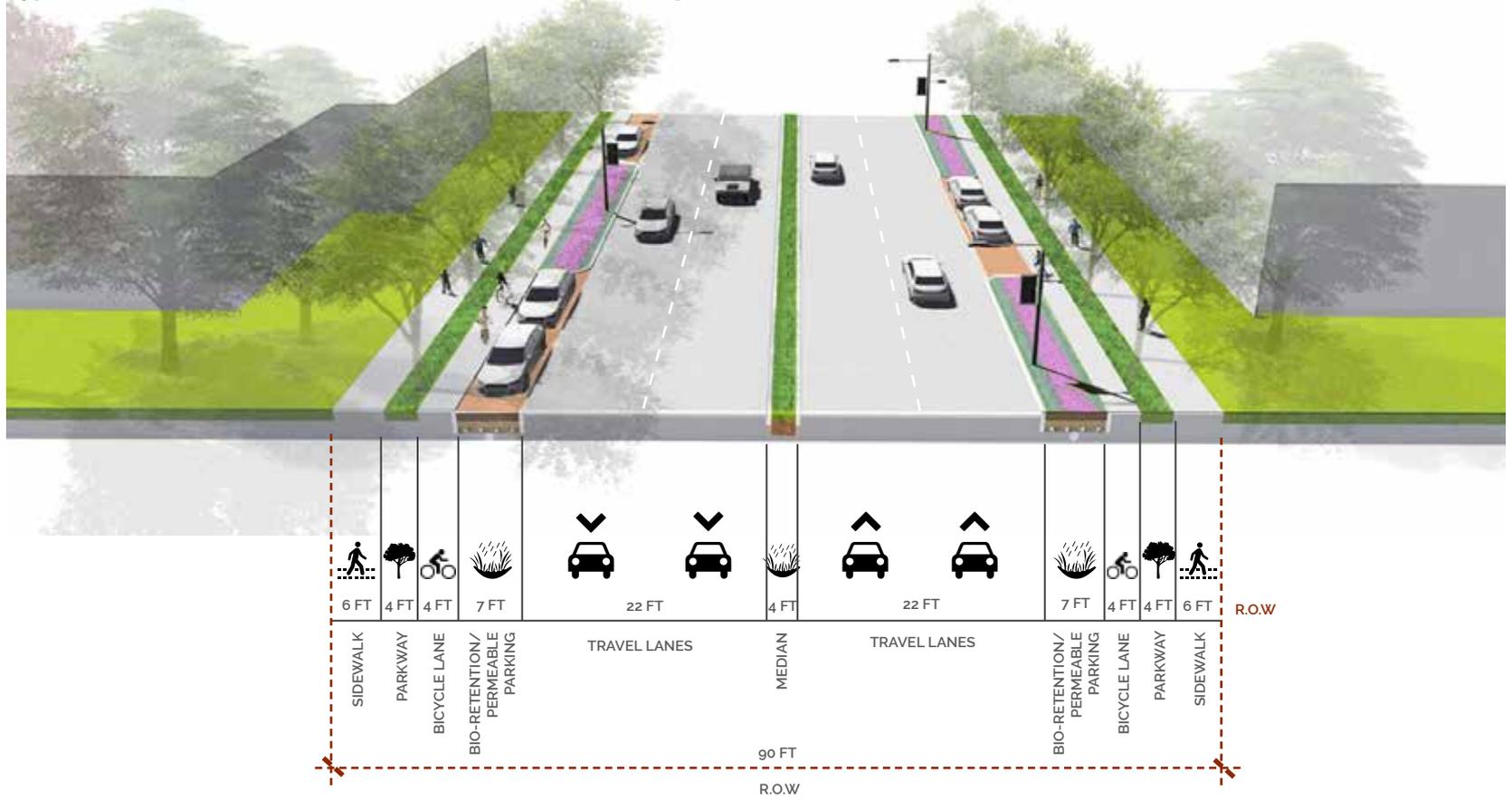
### SOUTH RICE BOULEVARD (NO PARKING):

South Rice Boulevard exists as one of the major streets in the city of Bellaire. There are several aspects that make it a unique street:

01. Able to create sidewalks on both sides for walkability
02. Dedicated bicycle lanes with physical barriers separating one-way bicycle lanes on both traffic directions

03. Seven-foot continuous bio-retention gardens that are made to accommodate parallel parking widths in parts of the corridor that require street parking
04. Two, eleven-foot lanes that allow for a vegetated median to help establish beautiful streetscape
05. Streetscape is able to create a garden street that enables all modes of transportation and ample green infrastructure

Typical Section: South Rice Boulevard (With Street Parking)



**SOUTH RICE BOULEVARD (PARKING):**

White continuing down South Rice Boulevard, portions of the bio-retention gardens will be eliminated to accommodate parking. This parking accommodates parking portion of the street adjacent to civic buildings.



## Stormwater Management

### BIO-RETENTION GARDENS

Throughout the entire city of Bellaire, bio-retention gardens shall be placed on all neighborhood streets, connector streets, and major thoroughfares. The impact of placing bio-retention gardens throughout the city has an enormous impact on overall stormwater infiltration.

### INFILTRATION PLANTERS

Infiltration planters are specified for Bissonnet Street because of its urbanity as a corridor. With the small right-of-way width, incorporating stormwater management is still a primary priority.

### EASEMENT SWALES

At easements, there lies a perfect opportunity to create bio-retention swales with the proposed undulating topography. The significant impact on stormwater management for Bellaire while utilizing this application is extremely beneficial.

### CUMULATIVE DETENTION BENEFITS

In aggregate “green infrastructure” stormwater management initiatives will store a total of 3, 111,705 cubic feet of stormwater. This equates to 71.43 acre-feet of storage (71.43 acres detaining water 12” deep).

This is equivalent to the amount of water held within 1,300 typical 20’x40’x3’ residential swimming pools.

#### LEGEND:

-  Bio-retention Gardens
-  Infiltration Planters
-  Easement Swales
-  Shared Detention

**BIO-RETENTION GARDENS:**

1,275,000 Cubic Feet of Detention

**INFILTRATION PLANTERS:**

11,976 Cubic Feet of Detention

**EASEMENT SWALES:**

1,630,278 Cubic Feet of Detention

**SHARED DETENTION:**

194,460 Cubic Feet of Detention



## Bellaire Boulevard: The Heart of Bellaire

As the corridor running through the heart of the city, it links destinations such as the Urban Village Downtown, Evelyn's Park, and the municipal complex. Bellaire Boulevard plays a crucial role in connecting pedestrians and bicyclists to the remainder of the city.

Similar to other proposed streetscapes throughout the city of Bellaire, Bellaire Boulevard's edges keep the same treatment of multi-modal accommodation and bio-retention gardens within the existing right-of-way. A double allee of live oak trees will be planted, one row living in the bio-retention gardens. These bio-retention gardens should include shade tolerant species.





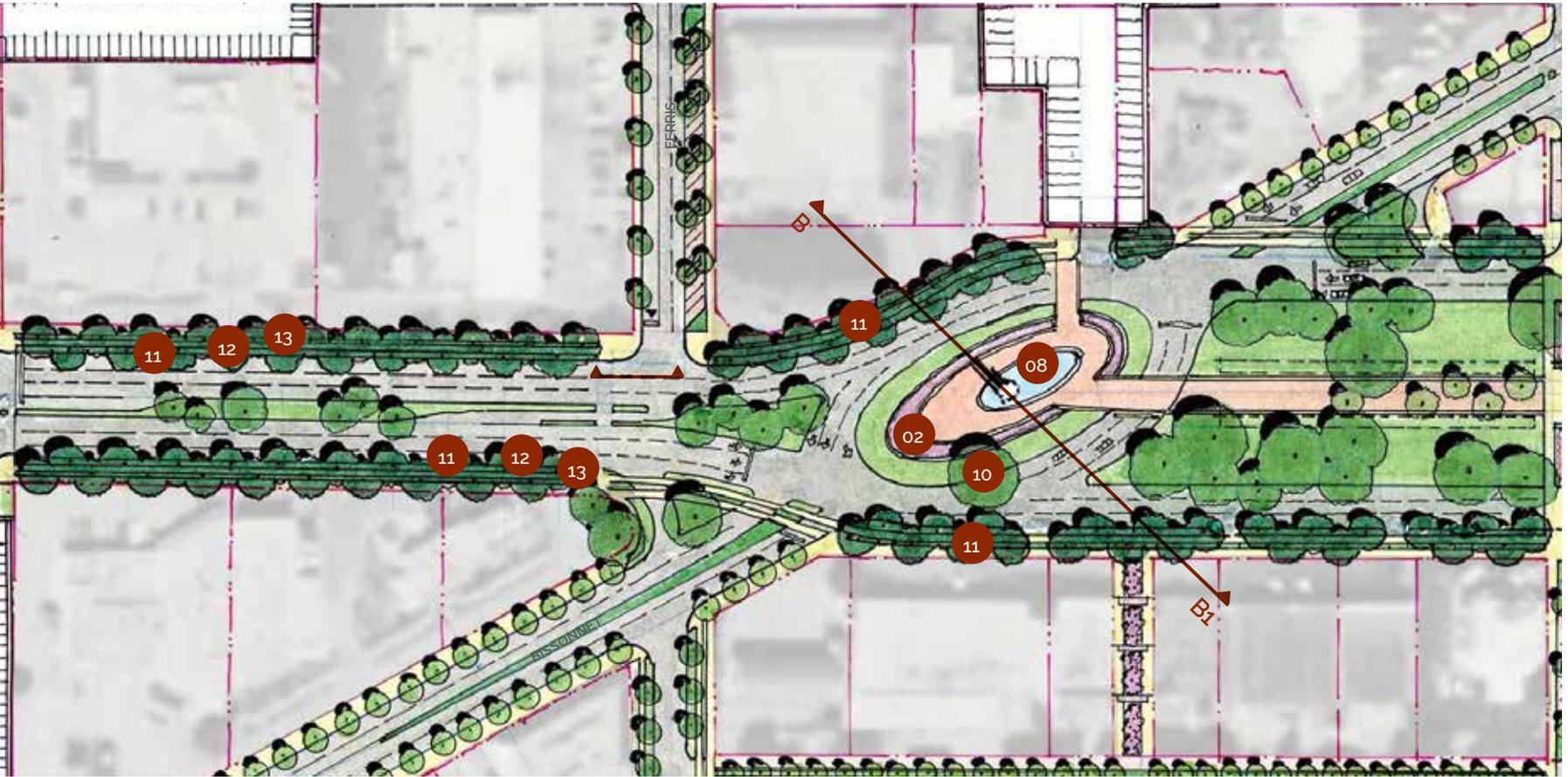
**LEGEND:**

-  Bellaire Boulevard East
-  Office
-  Paseo Park
-  Urban Village

## BELLAIRE BOULEVARD WEST

At the west end of this central corridor, Bellaire's city limits weave into the fabric of the city of Houston. So, a city gateway opportunity is best recognized at the intersection of Bissonnet Street and Bellaire Boulevard. The streetscape treatment from Chimney Rock Street to South Rice Boulevard is similar to South Rice Boulevard, but has the ability to utilize the median as a bio-retention swale and extending eight-foot sidewalks, parkway green space, a double allee of Live Oak Trees and six-foot wide dedicated bike lane to Chimney Rock.

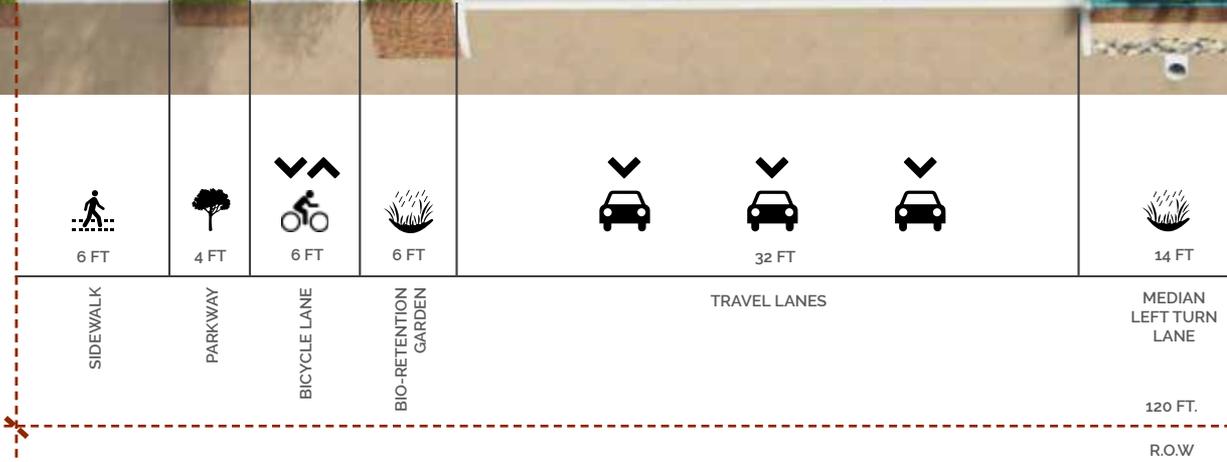




**LEGEND:**

- |  |                                     |
|--|-------------------------------------|
| 01. The Paseo – 20' Wide with Decomposed Granite | 08. Bellaire Water Gardens          |
| 02. Park Architecture / Cafe's / Coffee Shops    | 09. Bellaire Weekend Farmers Market |
| 03. Art Terrace                                  | 10. Existing Trees to Remain        |
| 04. Public Art                                   | 11. Live Oak Allee                  |
| 05. Metro Transit Stop                           | 12. Dedicated Bicycle Lane          |
| 06. Connector Plazas                             | 13. 8' Sidewalk                     |
| 07. Annual/Perennial Display                     |                                     |

# Bellaire Boulevard West: Section A-A1





32 FT

TRAVEL LANES



6 FT

BIO-RETENTION  
GARDEN



6 FT

BICYCLE LANE



4 FT

PARKWAY



6 FT

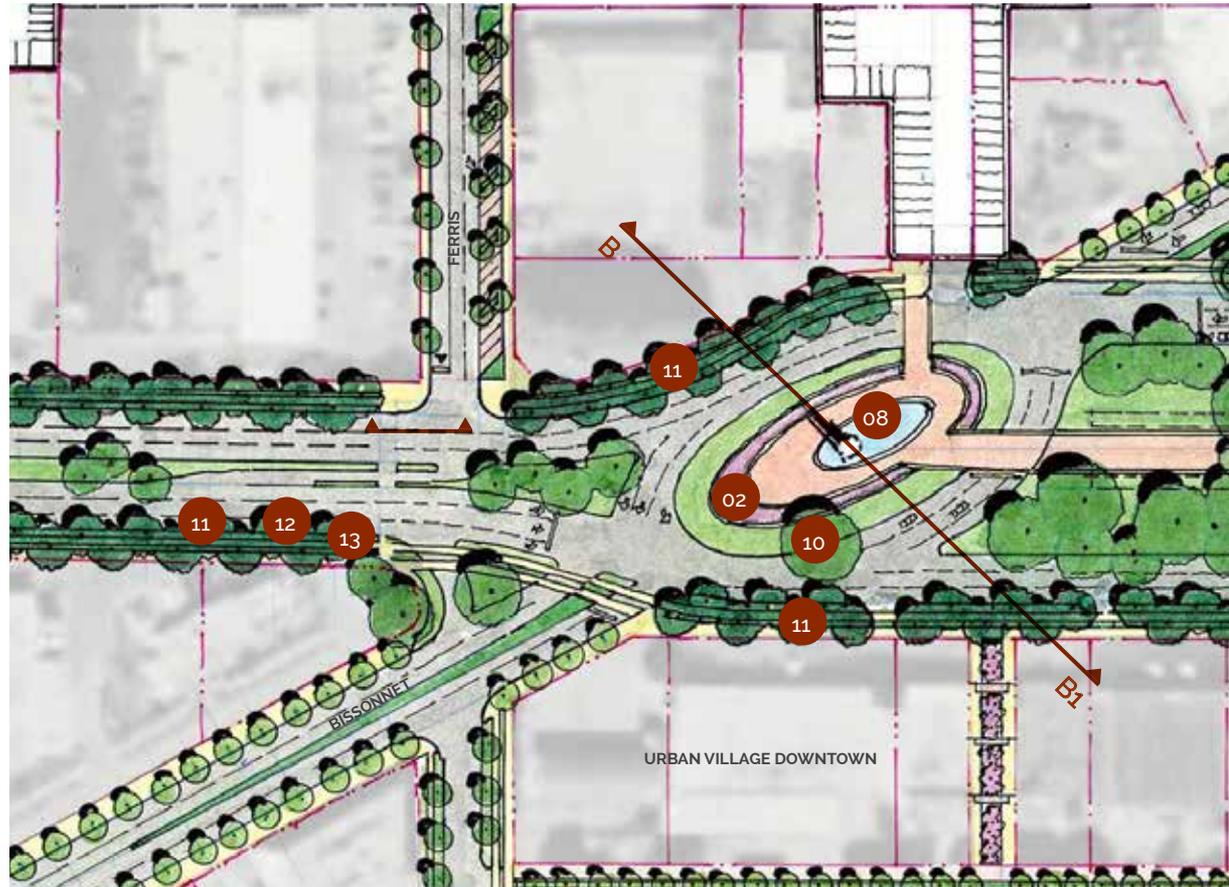
SIDEWALK

R.O.W

## PASEO PARK WEST

At the west end of the Paseo Park, a large intersection at Bissonet and Bellaire Boulevard provides opportunity for a welcoming water garden that emphasizes the entrance into the “Garden City” around a new traffic circle. Visitors then enter the extension of Paseo Park to the west. This portion of the streetscape holds the existing location for the Metro Station.

The widening of Paseo Park in the west section allows sidewalks to be adjacent to developments on the north and south sides of Bellaire Boulevard. Paseo park itself helps activate necessary north-south connections.

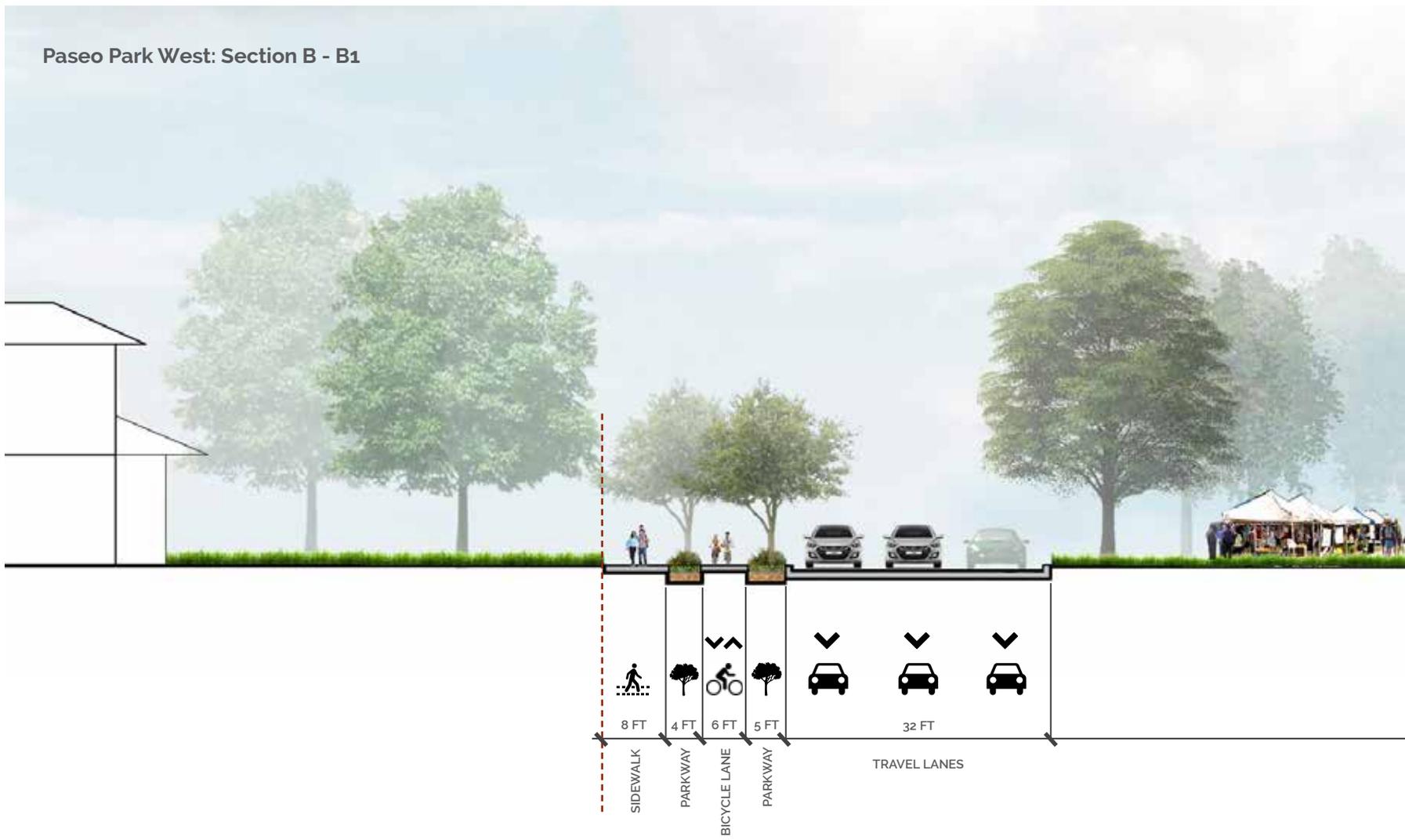


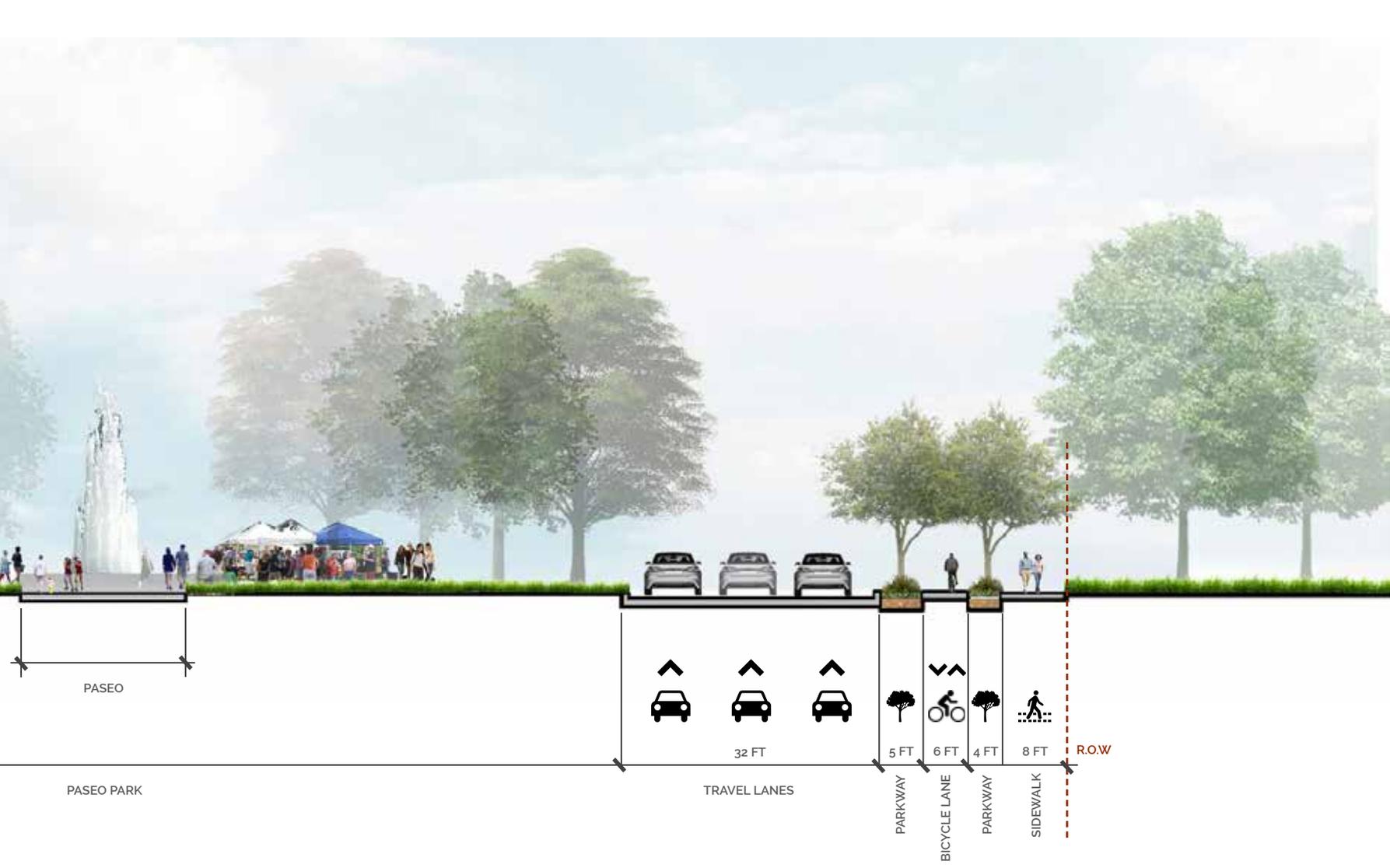


#### LEGEND:

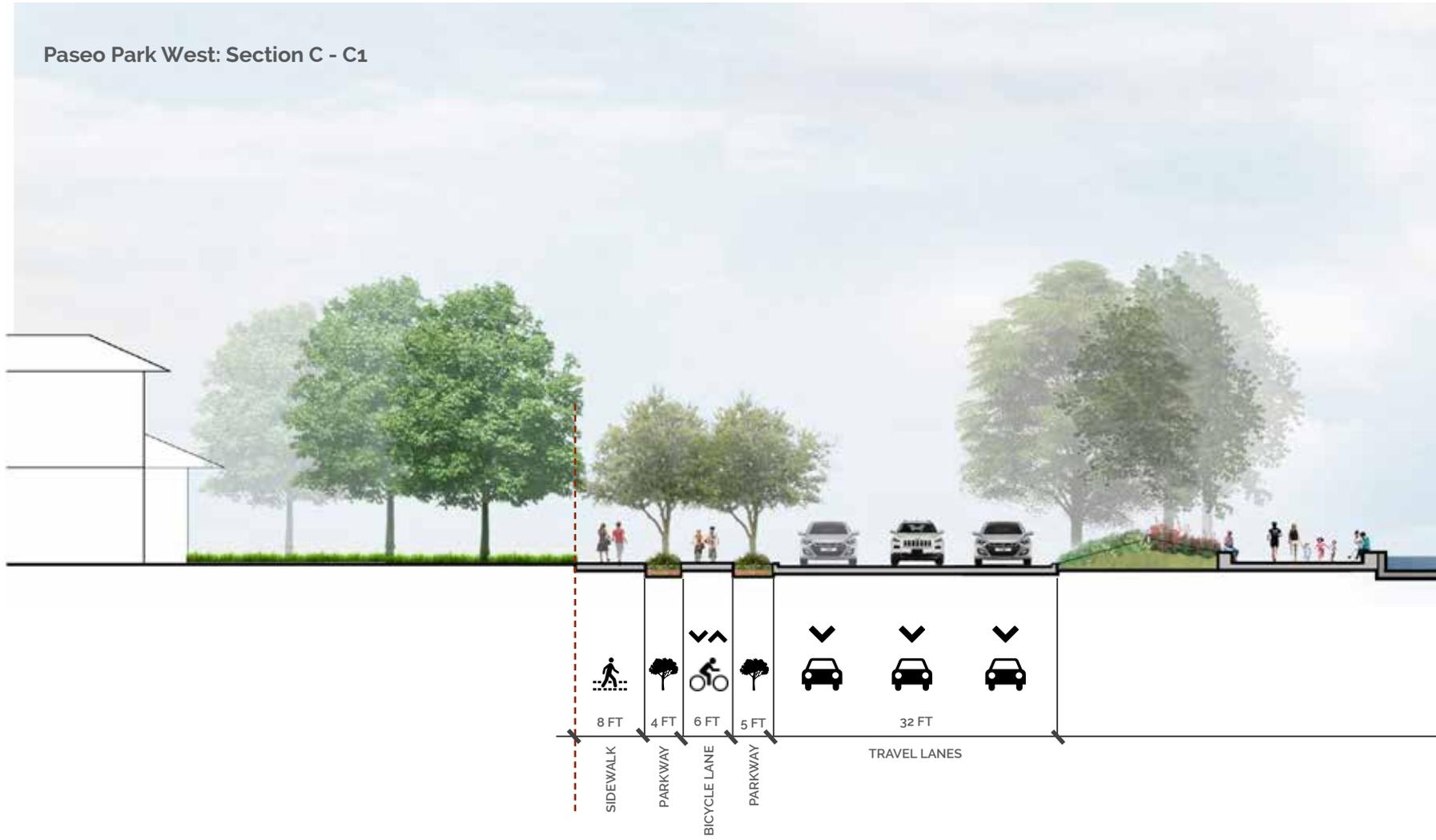
- |     |  |     |                                 |
|-----|--|-----|---------------------------------|
| 01. | The Paseo – 20' Wide with Decomposed Granite | 08. | Bellaire Water Gardens          |
| 02. | Park Architecture / Cafe's / Coffee Shops    | 09. | Bellaire Weekend Farmers Market |
| 03. | Art Terrace                                  | 10. | Existing Trees to Remain        |
| 04. | Public Art                                   | 11. | Live Oak Alley                  |
| 05. | Metro Transit Stop                           | 12. | Dedicated Bicycle Lane          |
| 06. | Connector Plazas                             | 13. | 8' Sidewalk                     |
| 07. | Annual/Perennial Display                     |     |                                 |

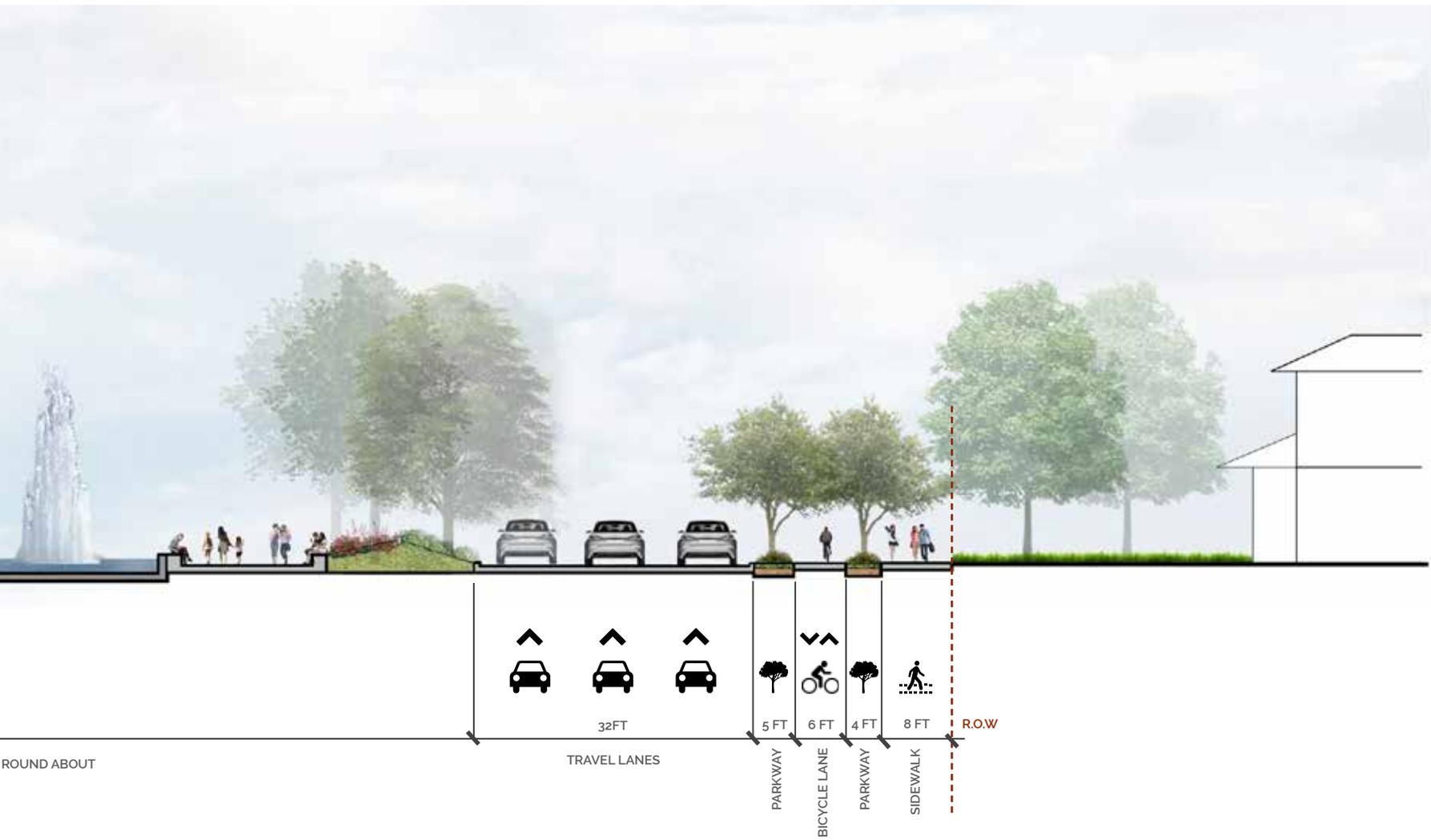
# Paseo Park West: Section B - B1





### Paseo Park West: Section C - C1





# PASEO PARK WEST

## Without Metro Station

METRO transit serves patrons by bus stops at street corners along the new Bellaire Boulevard



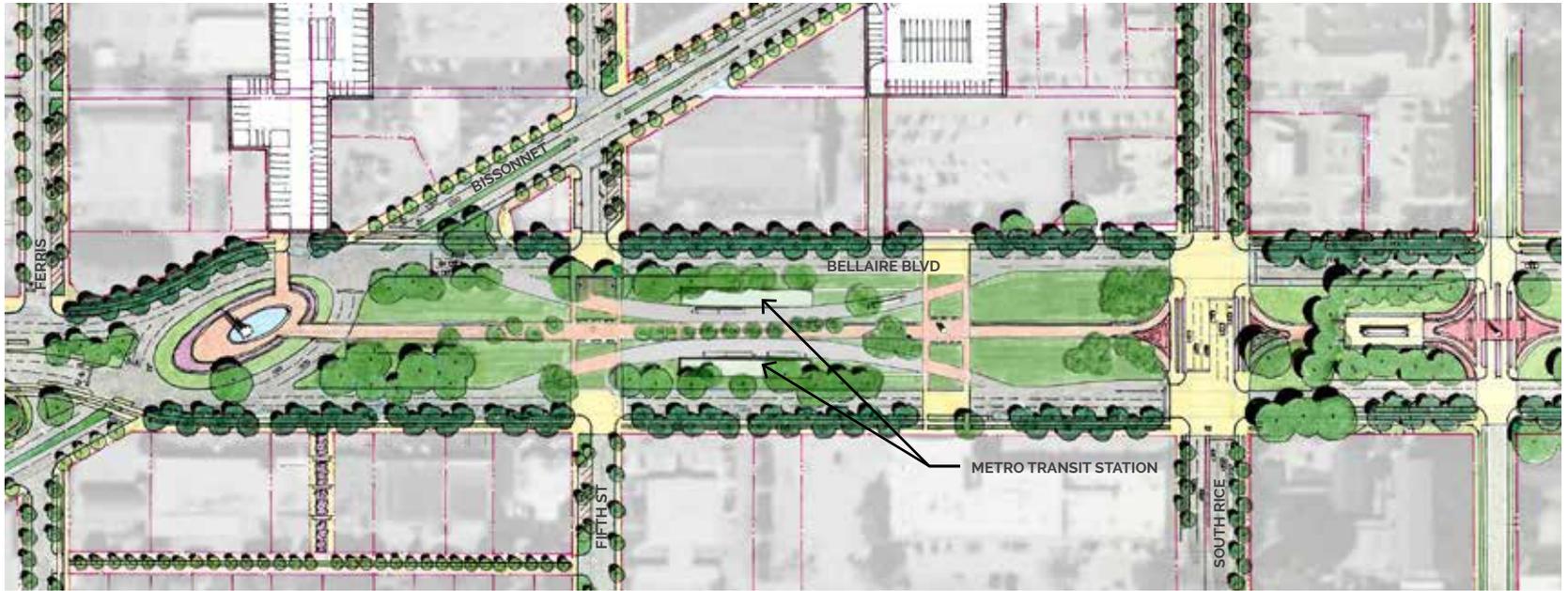
LEGEND:



METRO Transit Stop

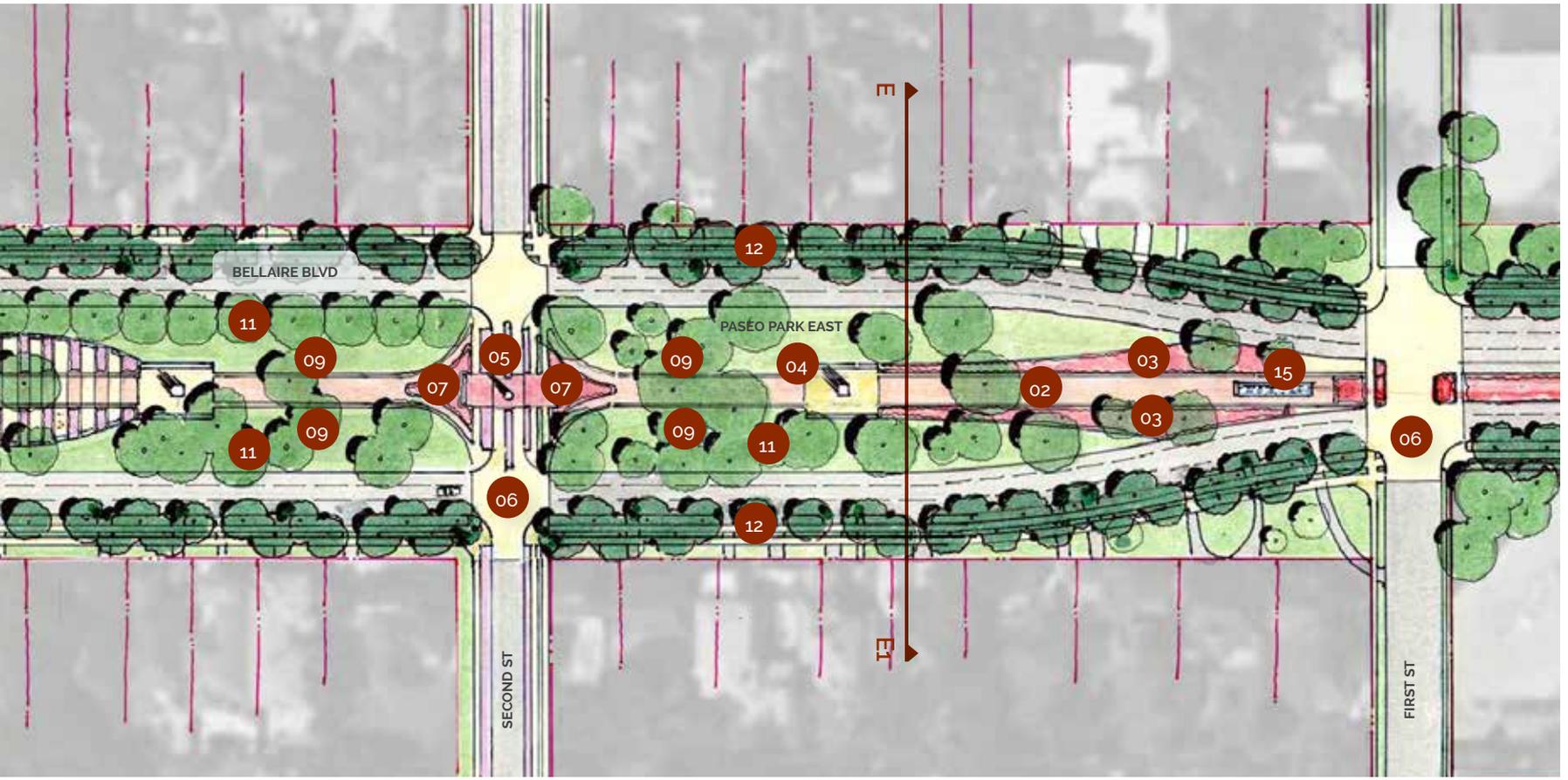
### With Metro Station

METRO transit station is reconstructed within the new Paseo Park and designed to accommodate longer articulated buses.



# PASEO PARK EAST

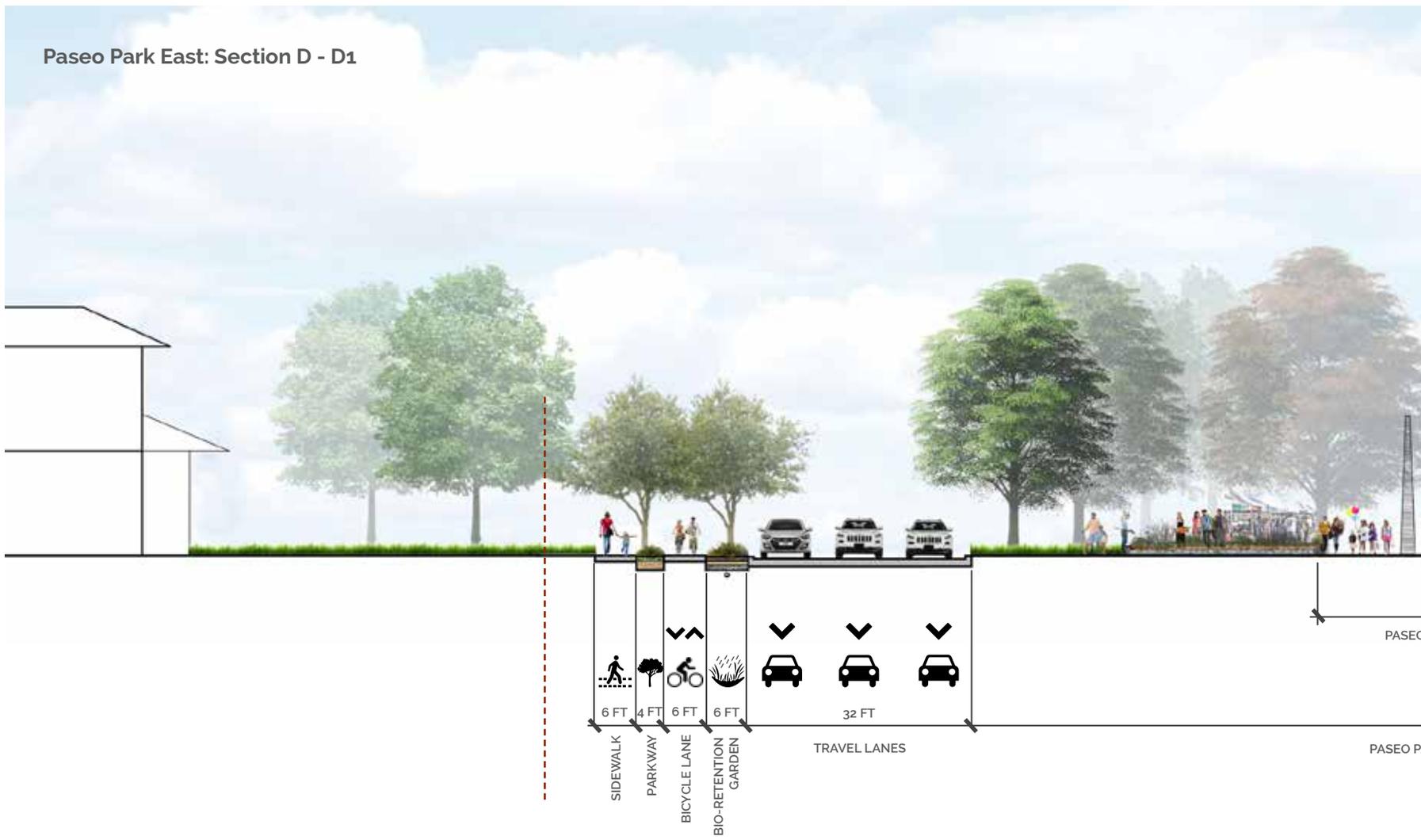


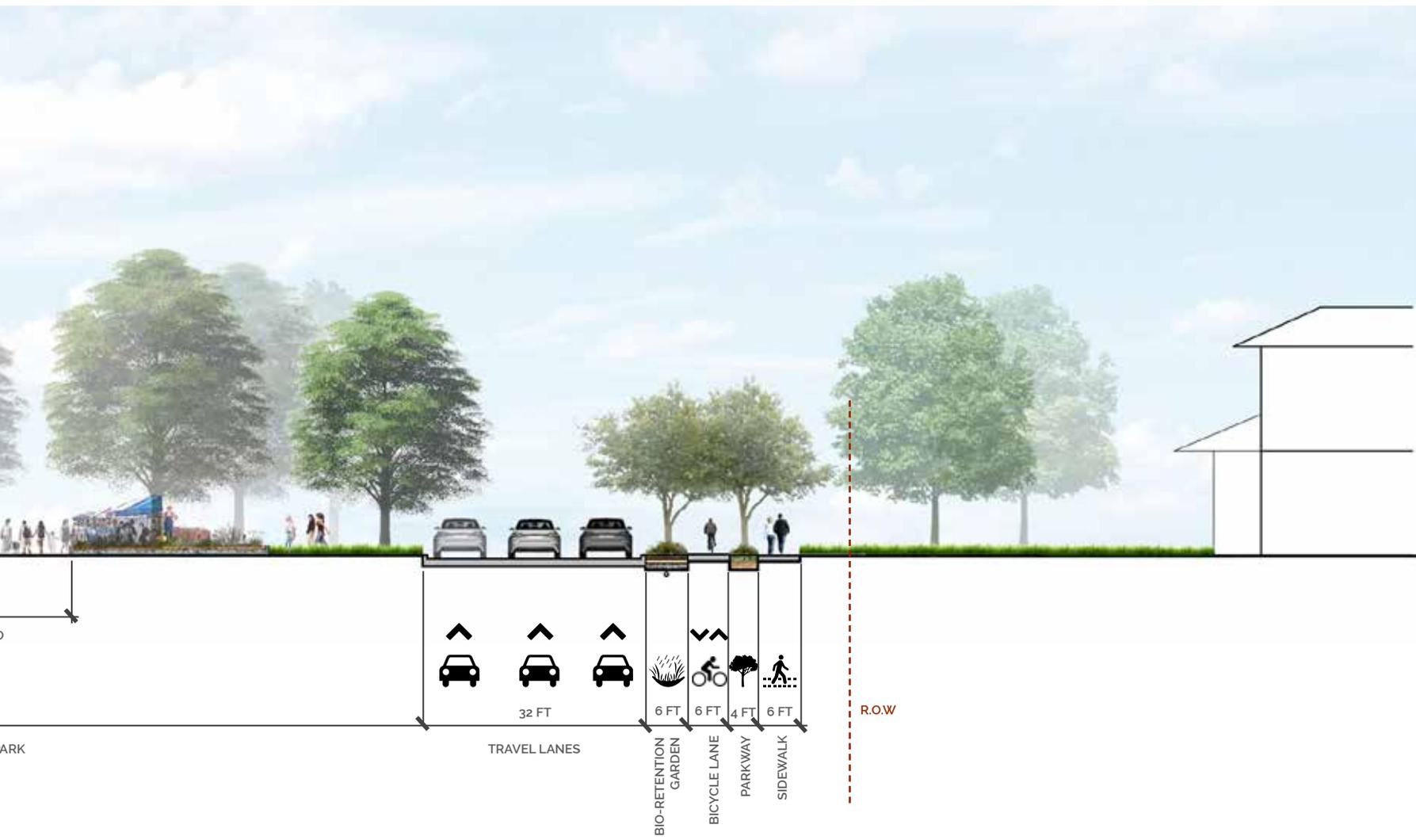


**LEGEND:**

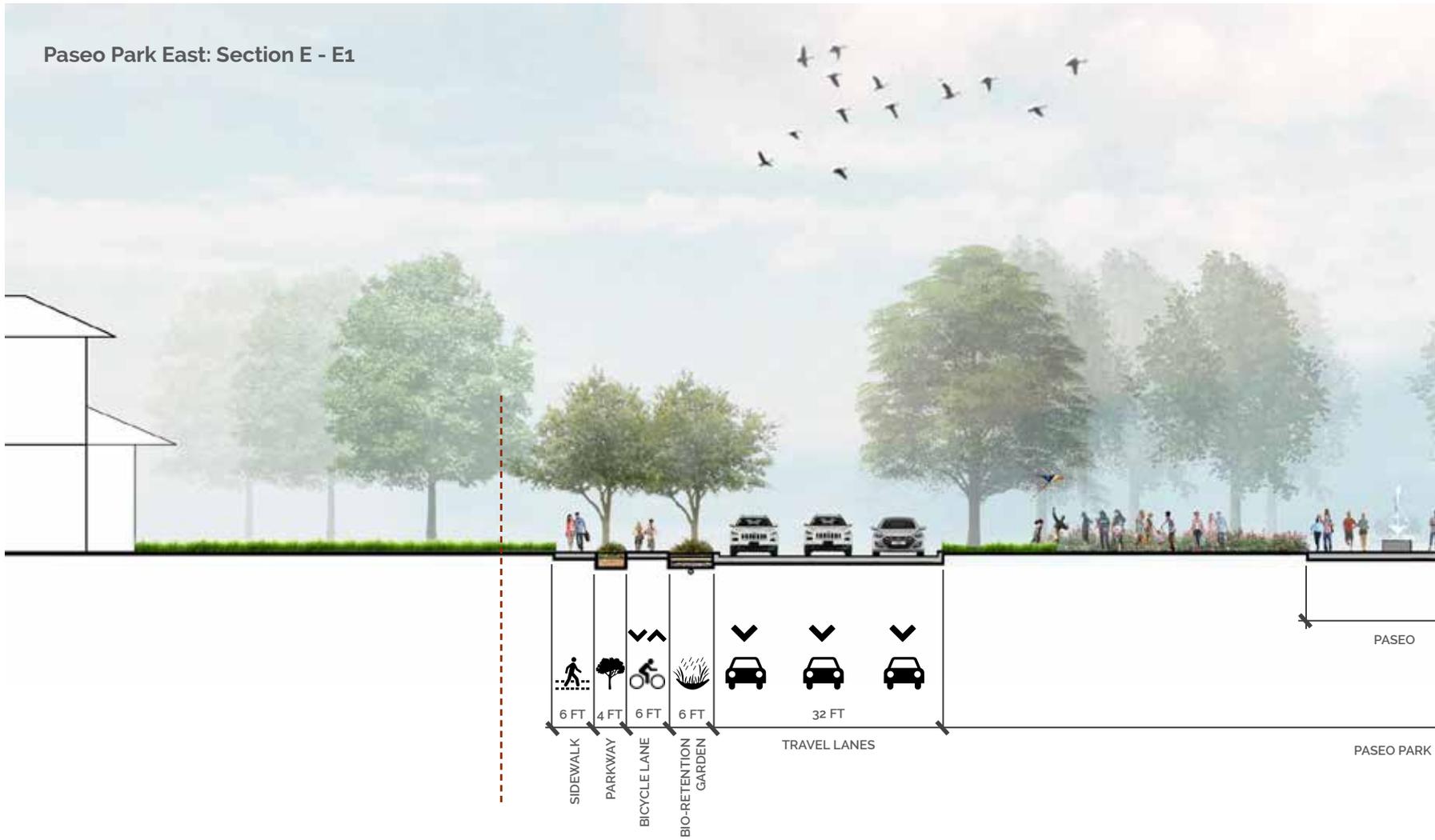
- 01. West Loop Gateway
- 02. The Paseo – 20' Wide with Decomposed Granite
- 03. Teas Legacy Rose Garden
- 04. Art Terrace
- 05. Public Art
- 06. Connector Plazas
- 07. Annual/Perennial Display
- 08. Community Gardens
- 09. Weekend Farmers Market
- 10. Trolley Pavilion
- 11. Existing Trees to Remain
- 12. Live Oak Allee
- 13. Dedicated Bicycle Lane
- 14. 6' Sidewalk
- 15. Founders Fountain

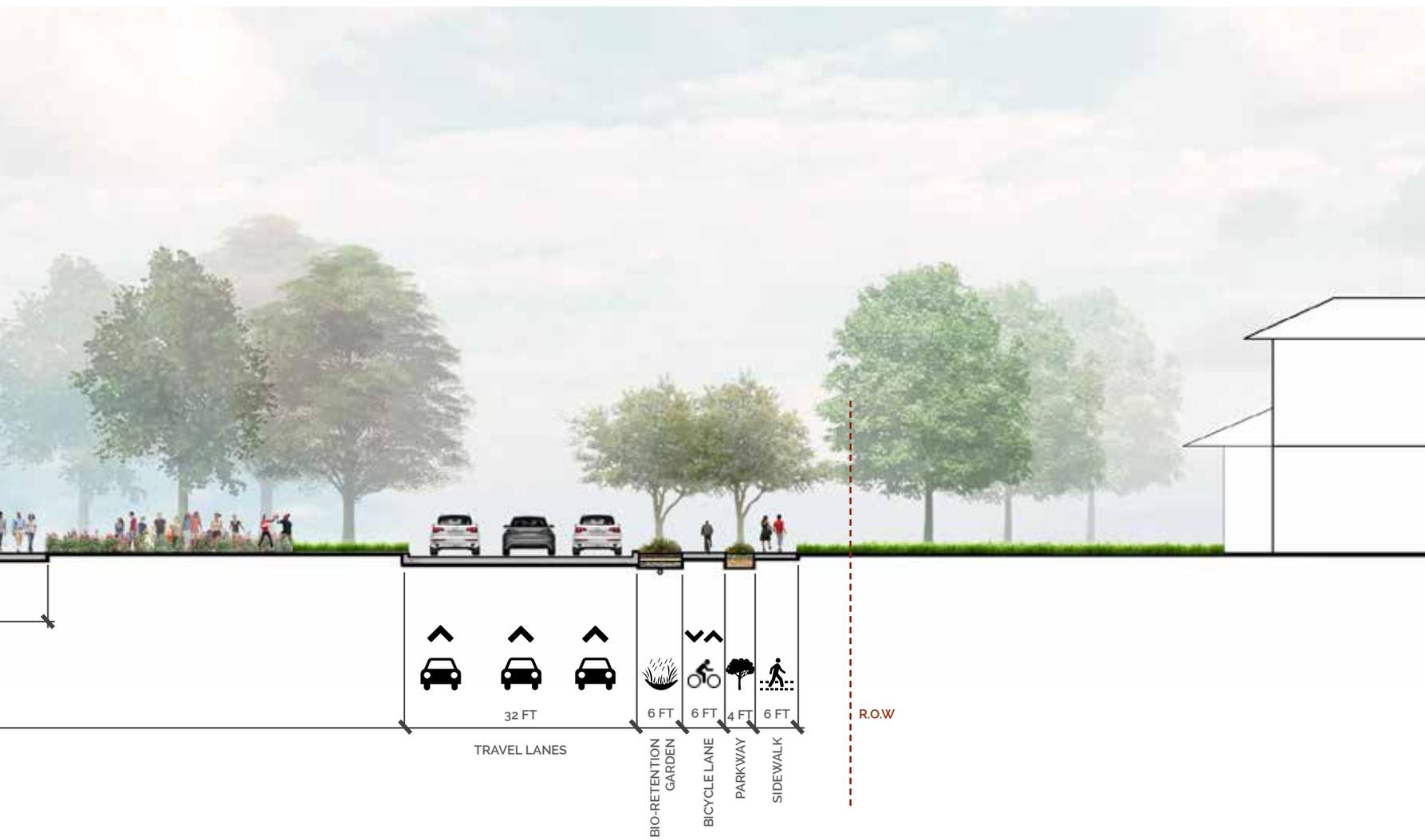
# Paseo Park East: Section D - D1





# Paseo Park East: Section E - E1





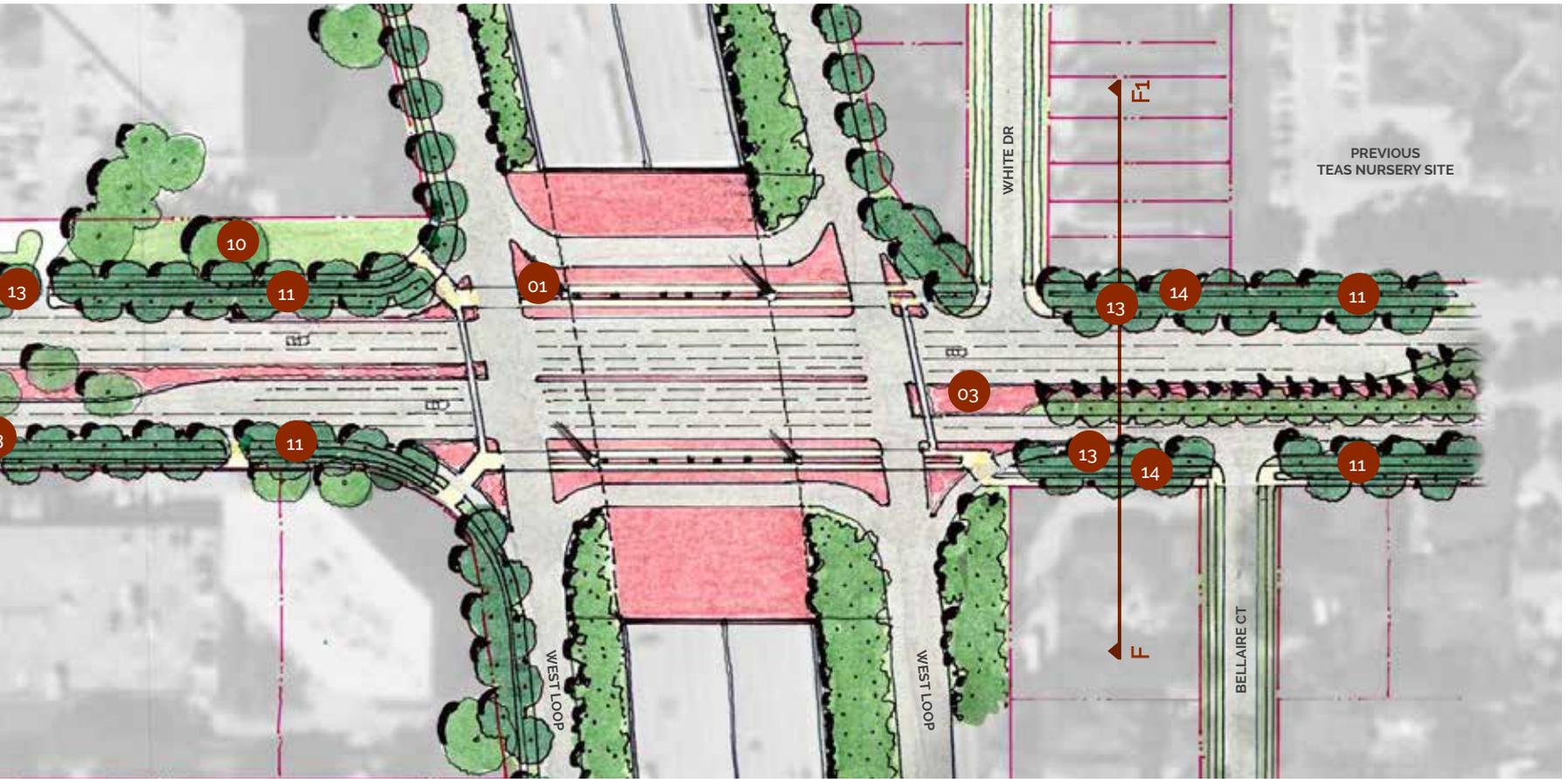
## BELLAIRE BOULEVARD MIDDLE

Rebuilding the street to have contemporary vehicular lane widths gives twelve feet for additional green space, as well as space for wider sidewalks and bicycle facilities. The special paving at intersections helps embrace identity in the city and acts as a traffic calming device along Bellaire Boulevard's busy corridor.

## BELLAIRE BOULEVARD EAST

The portion of Bellaire Boulevard East of West Loop has a 150-foot right-of-way that, after a "road diet", could provide space for a large median. A large median in Bellaire Boulevard East has the potential to be a significant space for stormwater infiltration using bio-retention swales.

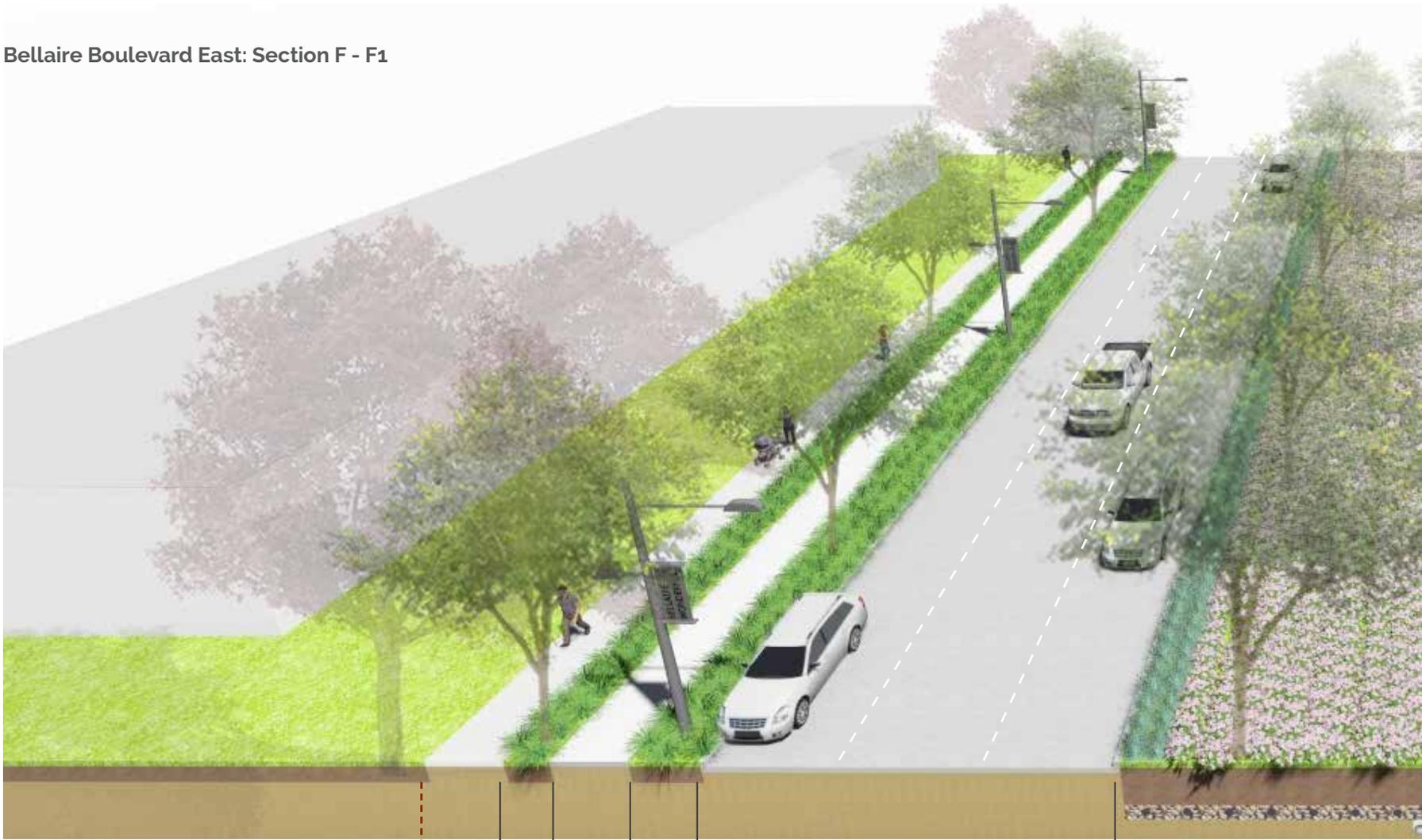




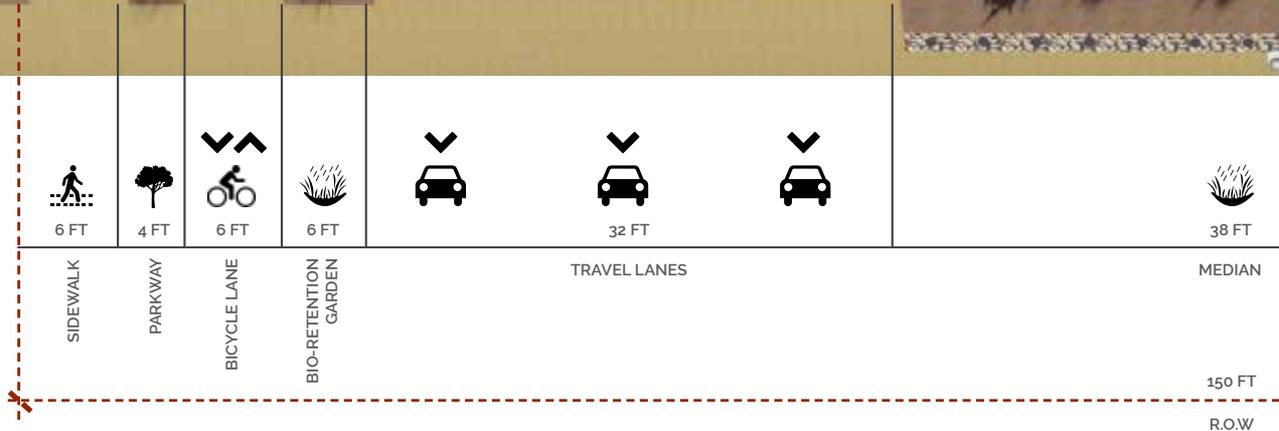
**LEGEND:**

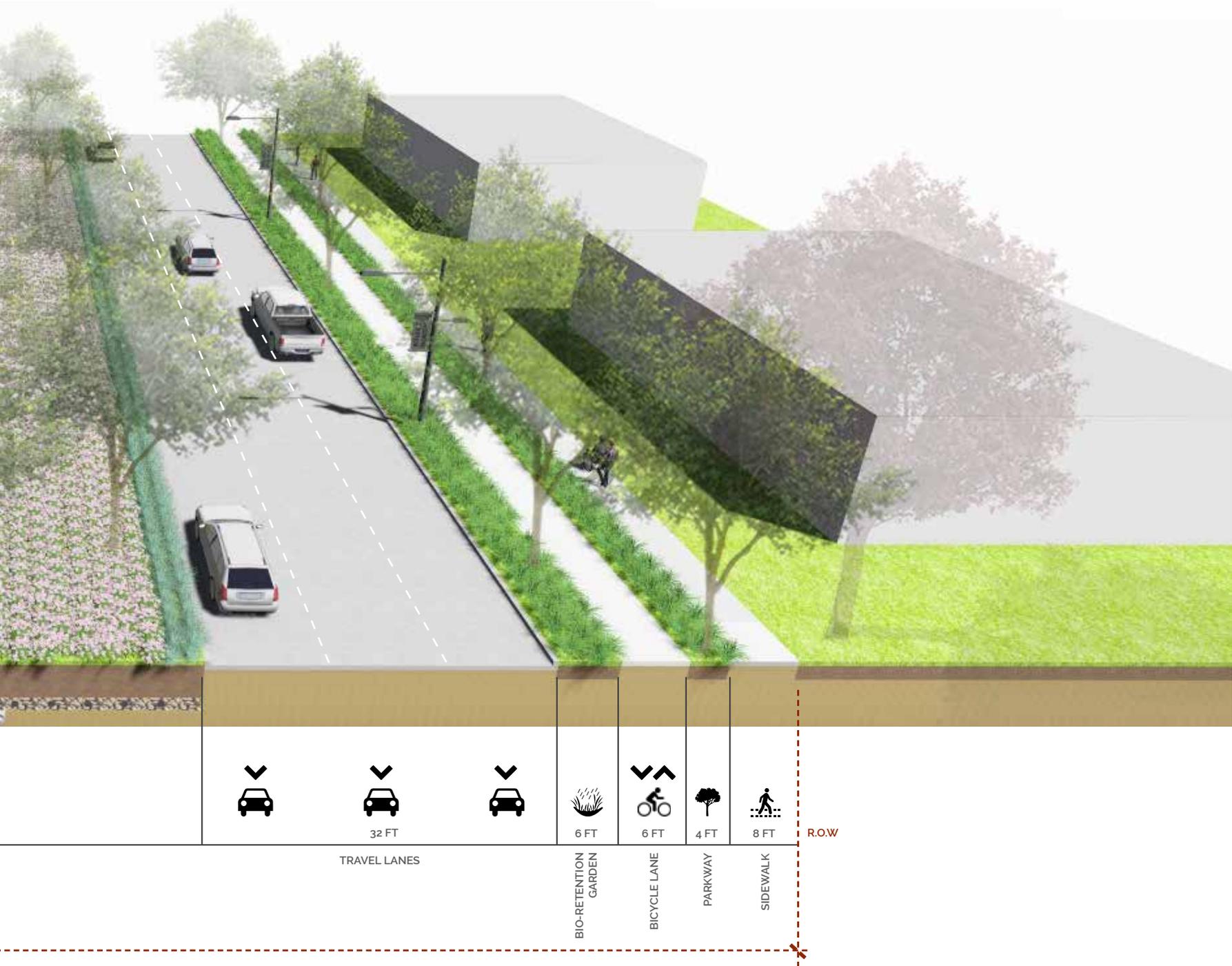
- |  |                              |
|--|------------------------------|
| 01. West Loop Gateway                            | 08. Community Gardens        |
| 02. The Paseo – 20' Wide with Decomposed Granite | 09. Weekend Farmers Market   |
| 03. Teas Legacy Rose Garden                      | 10. Trolley Pavilion         |
| 04. Art Terrace                                  | 11. Existing Trees to Remain |
| 05. Public Art                                   | 12. Live Oak Allee           |
| 06. Connector Plazas                             | 13. Dedicated Bicycle Lane   |
| 07. Annual/Perennial Display                     | 14. 6' Sidewalk              |
|  | 15. Founders Fountain        |

### Bellaire Boulevard East: Section F - F1



Key Map:







## Urban Village Downtown

Acting as a major destination in the city of Bellaire, the urban village downtown functions as a "center of gravity". The idea of this small mixed-use village focuses on local needs and businesses, rather than attracting regional or national businesses.

The area that encompasses the urban village downtown has great access, visibility and demographics. However, two major challenges exist: parking and stormwater infiltration detention. These requirements become barriers to renewal and redevelopment for the areas small parcels and local businesses.

### LEGEND:

01. Urban Village Complete Streets (500 Spaces)
02. Angled Parking; Pervious Paving; Shared Parking District
03. Detention and Water Harvesting below Angled Parking
04. Parallel Parking
05. Structured Parking; 4 to 5 Levels; Shared Parking District
06. Renewal or Redevelopment Parcel
07. Urban Paseo
08. Dedicated Bicycle Lane
09. 6' Sidewalk
10. Transition Alley
11. Proposed Private Property



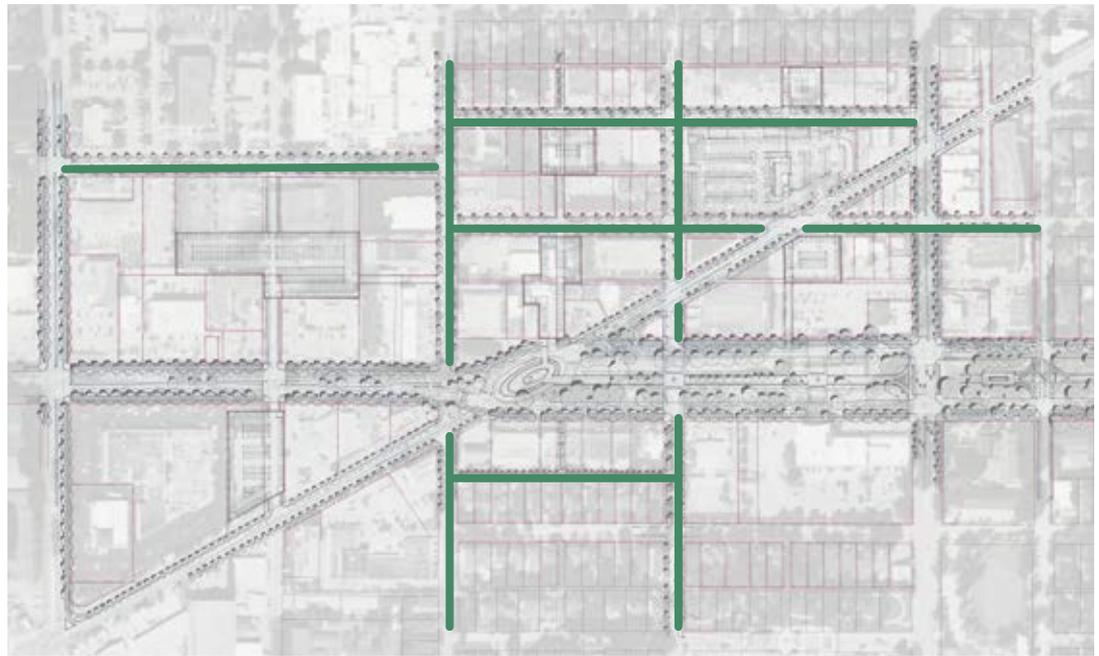


## Urban Village Downtown (cont'd)

### INCENTIVIZE DEVELOPMENT

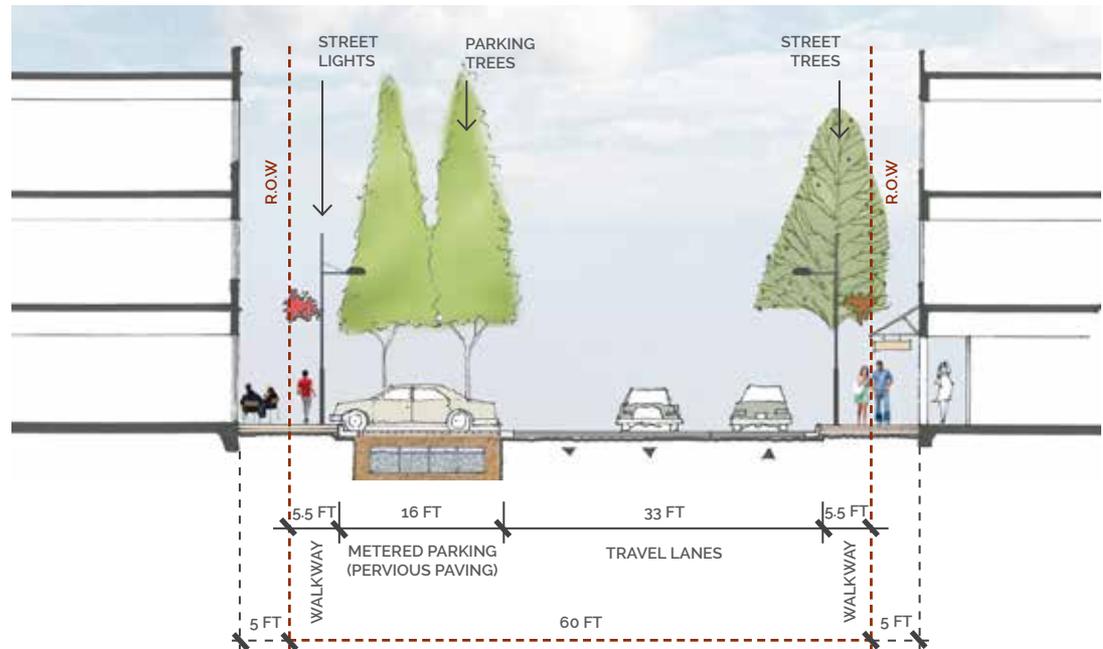
To overcome these the challenges in the existing downtown, the city can utilize the public right-of-way by establishing complete streets that offset burdensome parking requirements, as well as building parking structures strategically within city blocks.

These complete streets would include shared street parking and water detention zones via pervious paving, along with beautification and connectivity efforts.

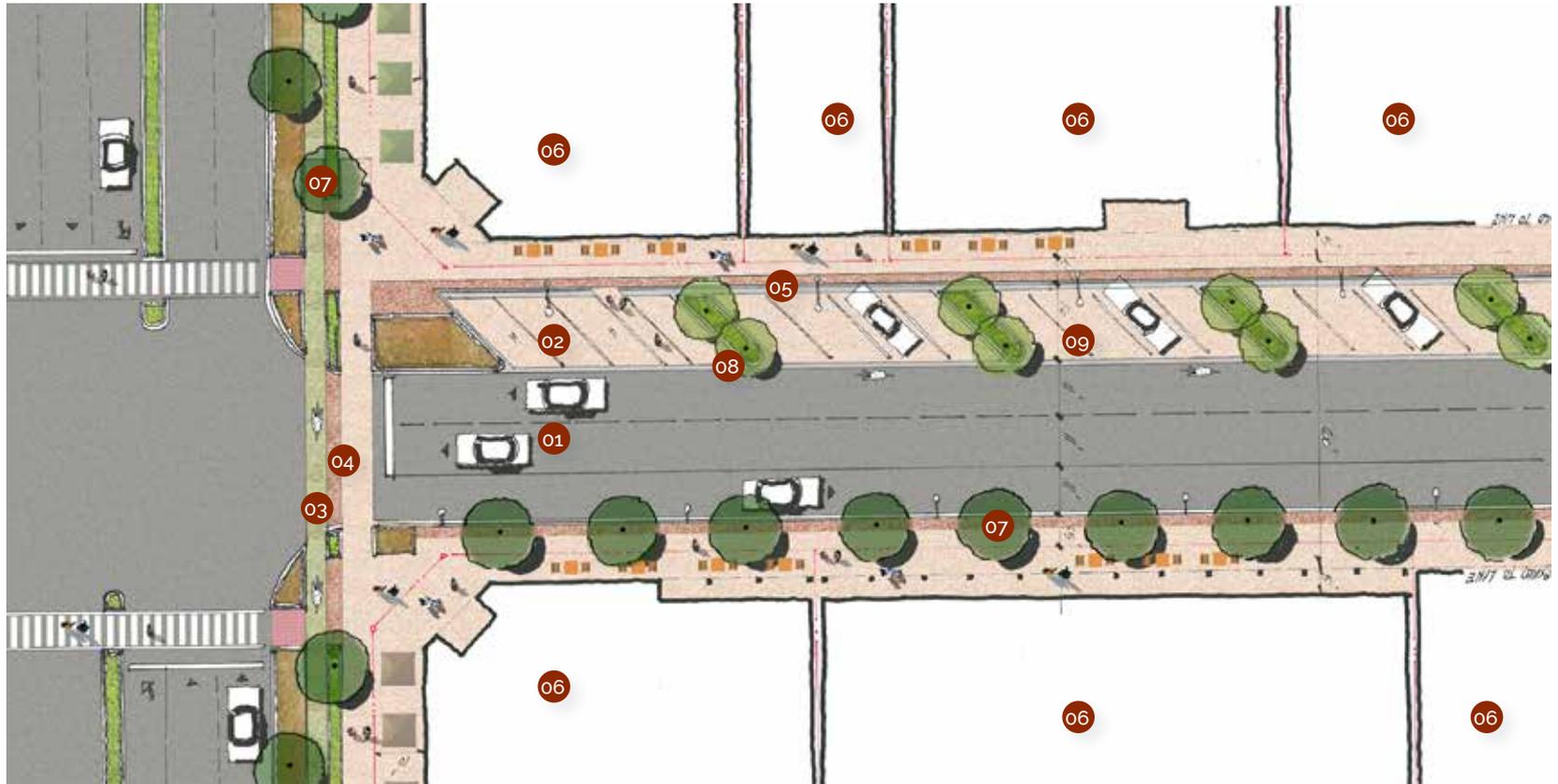


SHARED STORMWATER DETENTION ZONES

### Typical Urban Village Downtown Streetscape, Section View



# Typical Urban Village Downtown Streetscape, Plan View



## LEGEND

- 01. Travel Lanes
- 02. Metered Parking
- 03. Bicycle Lane
- 04. Walkways
- 05. Street Lights
- 06. Future Mixed-Use Development
- 07. Street Trees
- 08. Parking Trees
- 09. Pervious Paving

## Urban Village Downtown (cont'd)

### SHARED PARKING ZONE SUMMARY

- » Developable Area: 1.0 Floor Area Ratio
- » Required Parking: 5 spaces per 1,000 square feet
- » Shared Parking in Street
- » Shared Parking in Garages, roughly five level
- » 50% Required Parking within the Public Realm

### Shared Parking Zone 01

Development Area	436,035 SF
1.0 Floor Area Ratio	436,035 SF
Parking Spaces: 5/1,000SF	2,180 SP
Garage: 4 Levels (240 ea.)	960 SP
Street Parking	96 SP
Shared Parking %	48%

### Shared Parking Zone 2

Development Area	315,100 SF
1.0 Floor Area Ratio	315,100 SF
Parking Spaces: 5/1,000SF	1,576 SP
Garage: 5 Levels (150 ea.)	750 SP
Street Parking	0 SP
Shared Parking %	48%

### Shared Parking Zone 3

Development Area	198,508 SF
1.0 Floor Area Ratio	198,508 SF
Parking Spaces: 5/1,000SF	993 SP
Garage: 6 Levels (66 ea.)	396 SP
Street Parking	74 SP
Shared Parking %	47%

### Shared Parking Zone 4

Development Area	138,075 SF
1.0 Floor Area Ratio	138,075 SF
Parking Spaces: 5/1,000SF	690 SP
Garage: 3 Levels (84 ea.)	252 SP
Street Parking	78 SP
Shared Parking %	48%

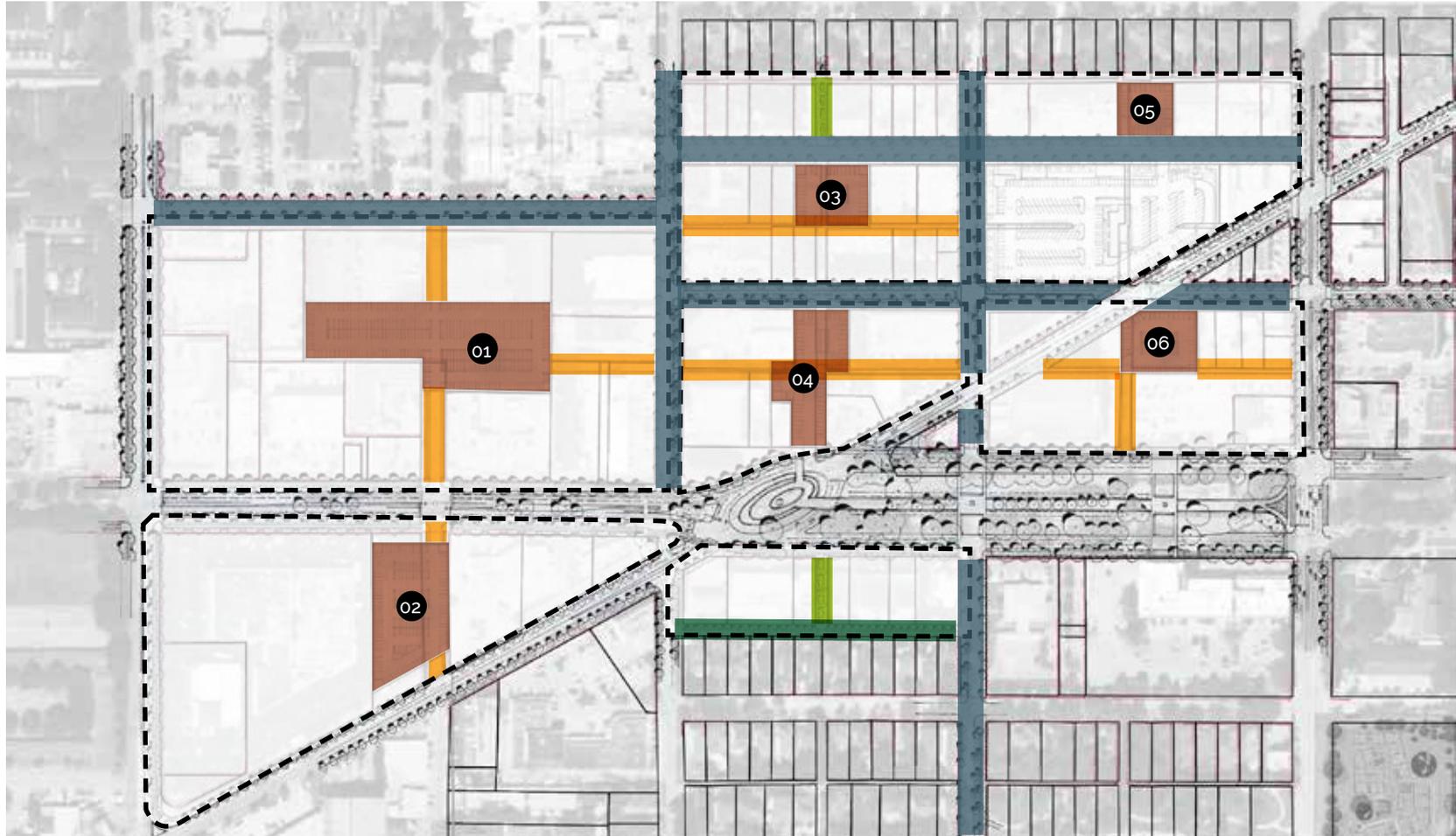
### Shared Parking Zone 5

Development Area	84,440 SP
1.0 Floor Area Ratio	84,440 SP
Parking Spaces: 5/1,000SF	422 SP
Garage: 3 Levels (44 ea.)	132 SP
Street Parking	74 SP
Shared Parking %	49%

### Shared Parking Zone 6

Development Area	155,288 SP
1.0 Floor Area Ratio	155,288 SF
Parking Spaces: 5/1,000SF	776 SP
Garage: 4 Levels (49 ea.)	196 SP
Street Parking	195 SP
Shared Parking %	50%

# Shared Parking Zone Summary



## LEGEND

-  Complete/Parking Streets
-  Shared Parking Garages
-  Access Alleys
-  Urban Paseos
-  Buffer Alley

## Urban Village Downtown (cont'd)

### ARCHITECTURAL GUIDELINES

Guidelines for architecture within the Urban Village Downtown are recommended through a comprehensive plan of the downtown. An additional method of establishing these guidelines is from a form-based code where a "build-to" line is established (see "Typical Urban Village Downtown Streetscape, Section View" for example).

### Typical Development in Commercial Mixed-Use District



Urban Village Downtown Character



IMAGE COURTESY OF BUTLER PLANNING

### Urban Village Downtown Character



IMAGE COURTESY OF BUTLER PLANNING



IMAGE COURTESY OF BUTLER PLANNING

## Urban Village Downtown (cont'd)

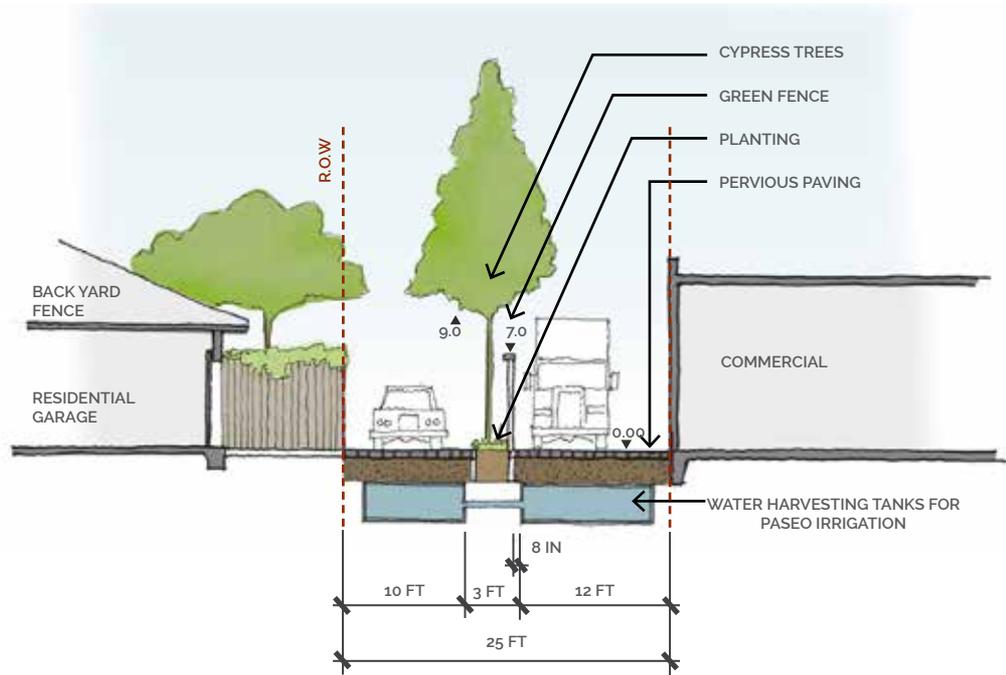
### URBAN PASEO ALLEYS

Alleyways occurring between developments in the Urban Village Downtown can be utilized as small park-like spaces such as "urban paseos". Property owners can utilize these alleys as public space.

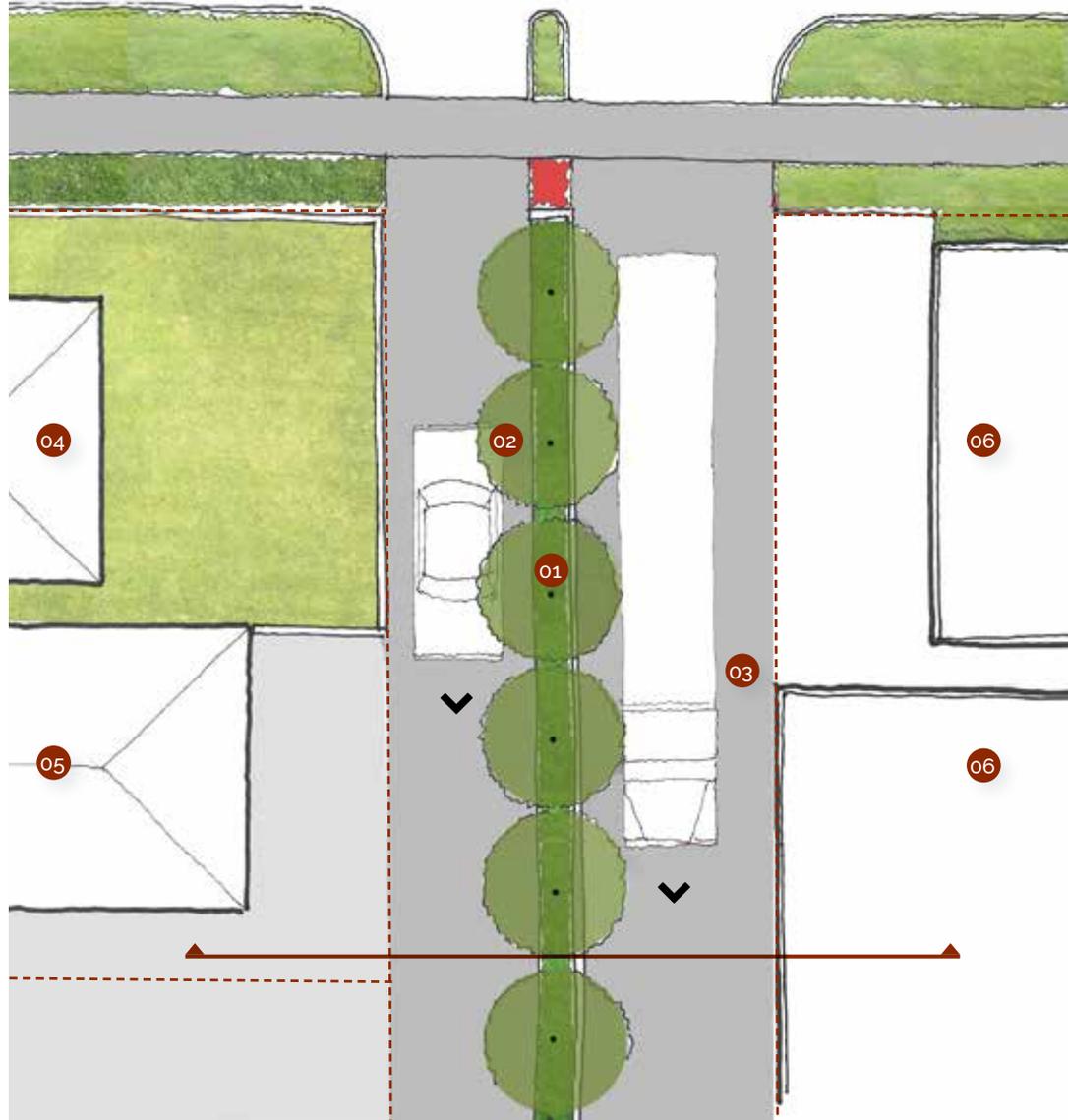
### TRANSITION ALLEYS

Alleyways can be utilized as transition alleys that aid in shifting the landscape of one type of zoning to another.

### Typical Transition Alley, Section View



# Typical Transition Alley, Plan View



## LEGEND

- 01. Planting
- 02. Cypress Trees
- 03. Pervious Paving
- 04. Residential Building
- 05. Residential Garage
- 06. Commercial Building



## City Gateways

### WEST LOOP GATEWAYS

Instead of shying away, the city can embrace the underpasses of the West Loop. These underpasses are the chance to have an iconic moment that give an architectural elegance, as well as an opportunity for art. Additionally, lighting is extremely important in these spaces, as it makes the new gateways a comfortable space for pedestrians — day and night.

Through adding a wrap-like facade to the existing structure that floats away from the West Loop wall, lanterns and columns can landmark the threshold to form a elegant piece of civic architecture.

### PERIMETER CITY GATEWAYS:

A theme of landscaped columns and lanterns would continue to the perimeter gateways at the east. Rose gardens in memory of the Teas Nursery could also continue throughout medians and planted edges. At the west end, the water gardens at Bellaire Boulevard and Bissonnet Street act as a beautiful statement entering the city of Bellaire.

### City Gateway Locations



#### LEGEND:

- West Loop City Gateway
- Perimeter City Gateway
- Bellaire Water Gardens — West City Gateway



## Perimeter City Gateway



### West Loop Gateway Option







## Coastal Prairie Park

### CREATING OPPORTUNITIES

A game-changing opportunity to create a Coastal Prairie Park lies at the east side of Bellaire - the Centerpoint easements. These long spans of open lawn used for electricity towers create: an affordable way to detail stormwater infiltration and detention where's it's needed (see Heat Map, page 28); provide local and regional connections; and, reconnect to the region's historic coastal prairie ecosystem.

### CONNECTIVITY

The landscape is elevated as both a recreational destination and string of bio-retention swales through undulating topography and shared-use trails. Bicyclists and pedestrians would have direct, safe access to connection points at Bellaire's east edge, the Nature Discovery Center, and Evelyn's Park.

Other connections that are possible through the easements, but require working with the city of Houston are the north edges of Bellaire, North Livable Center, Memorial Park, and Hermann Park (via bridge over Brays Bayou).



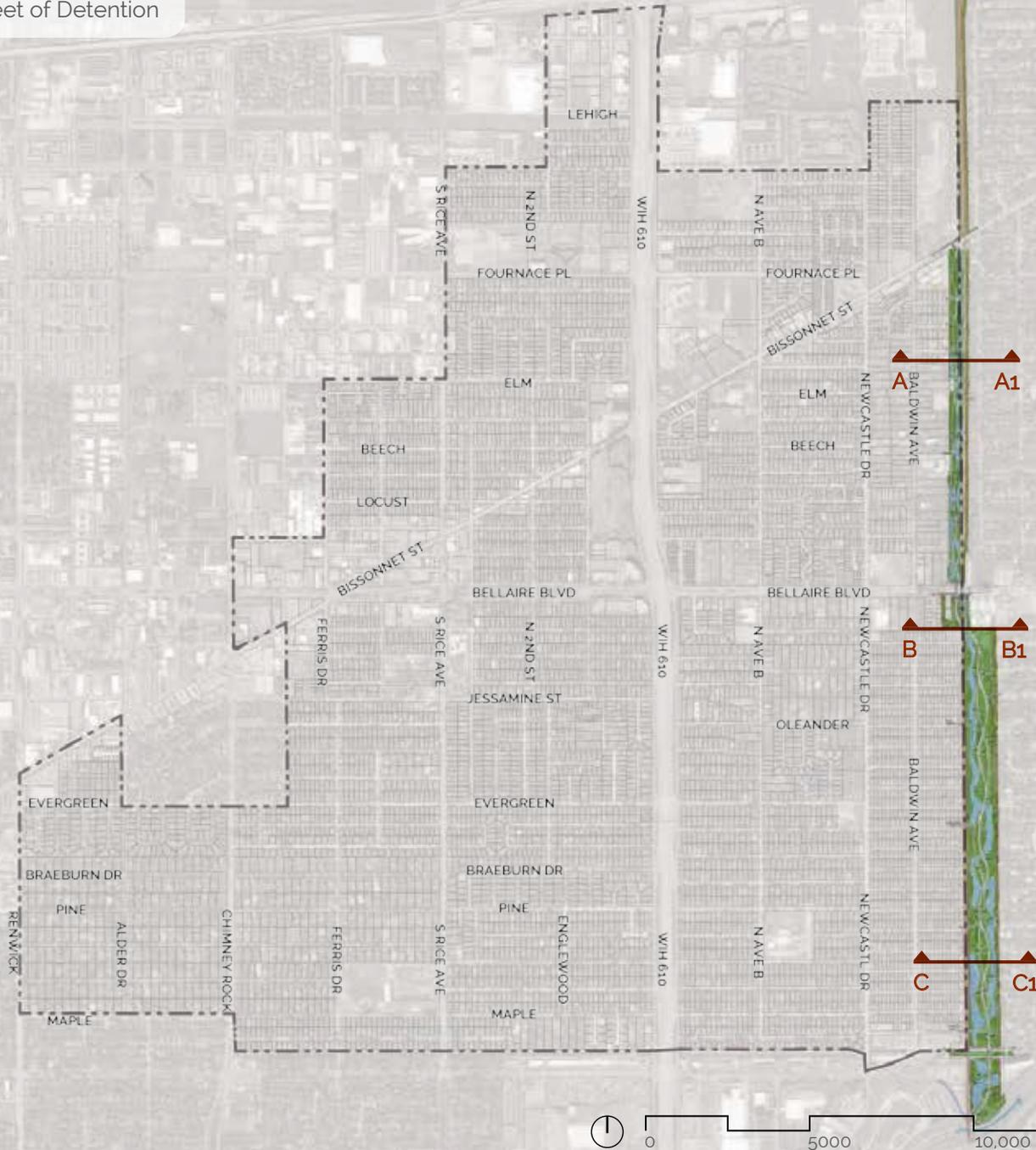
EXISTING CENTERPOINT EASEMENTS

### LEGEND

- 01. Memorial Park
- 02. Buffalo Bayou Park
- 03. Discovery Green
- 04. Hermann Park
- 05. Brays Bayou Open Space

**EASEMENT SWALES:**

1,630,278 Cubic Feet of Detention

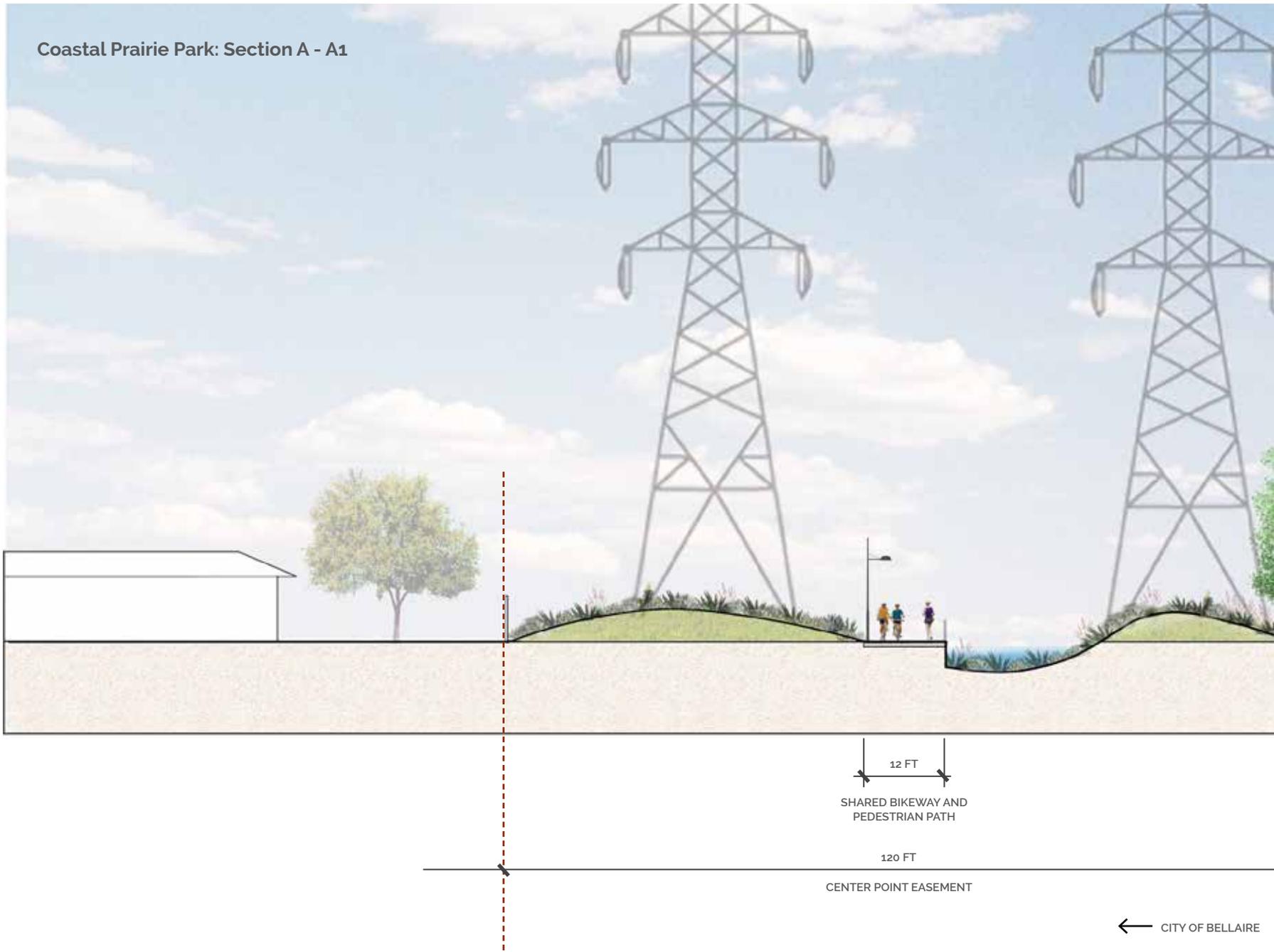


### CHARACTER IMAGERY



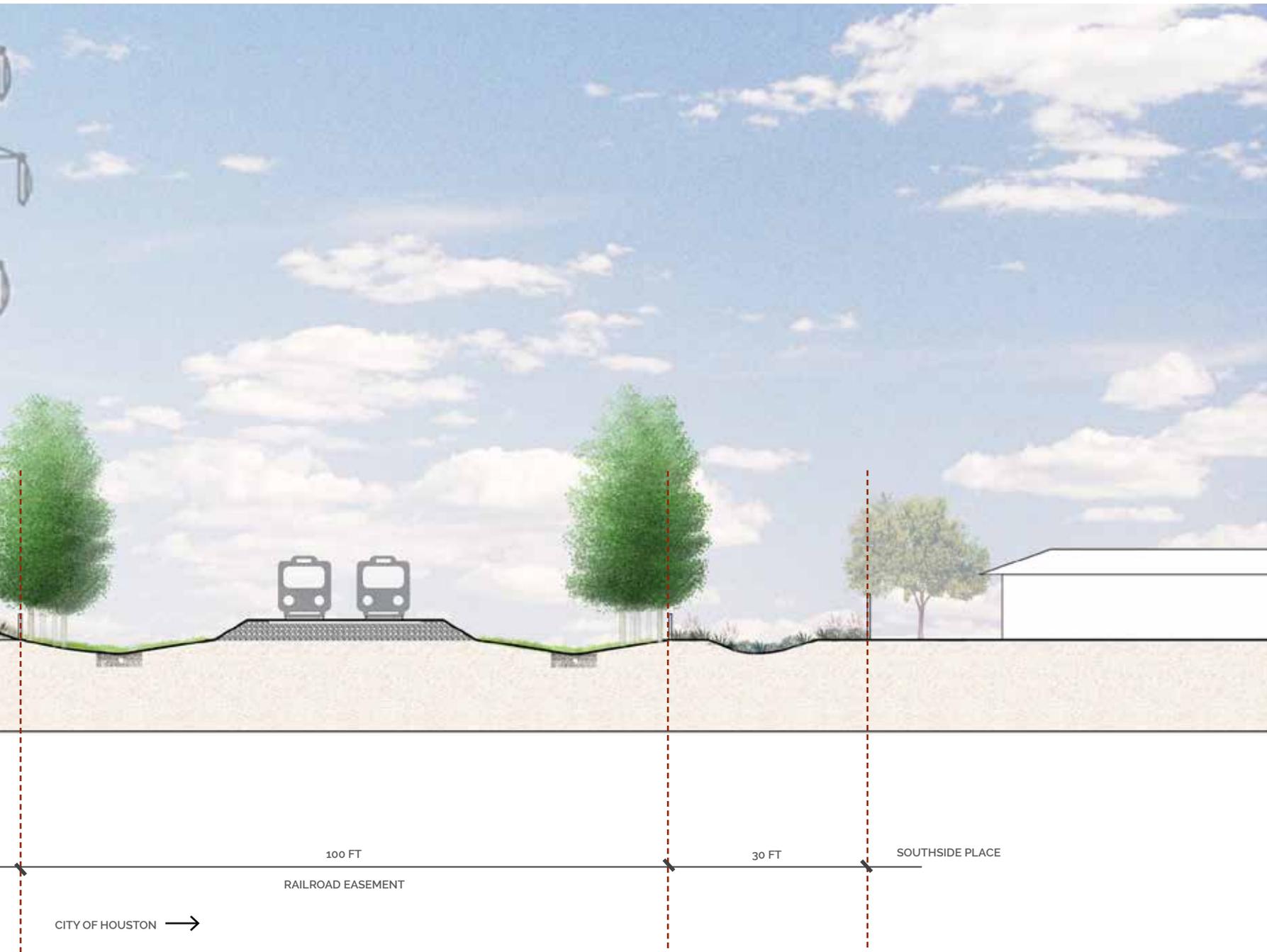


# Coastal Prairie Park: Section A - A1

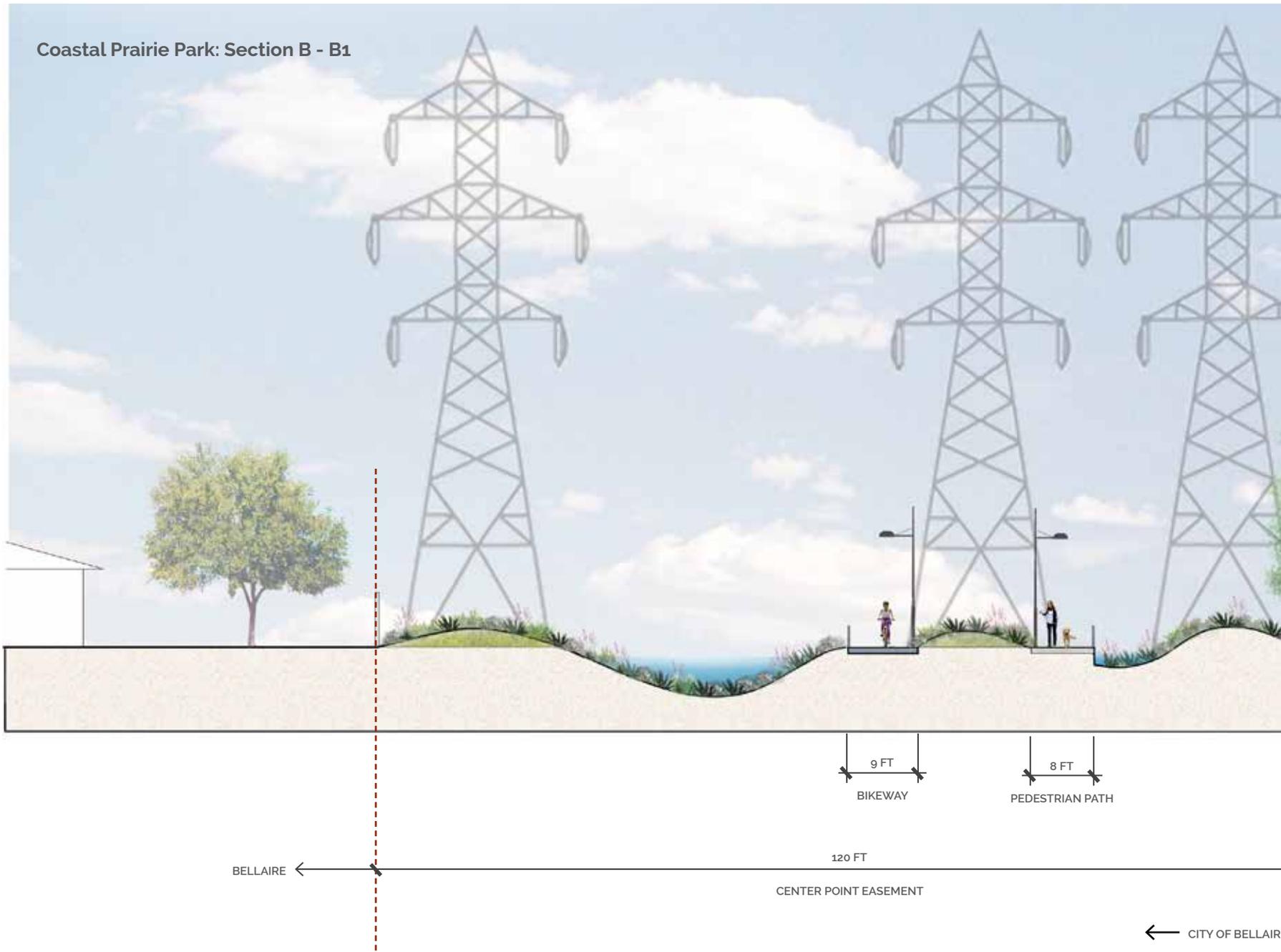


12 FT  
SHARED BIKEWAY AND  
PEDESTRIAN PATH

120 FT  
CENTER POINT EASEMENT



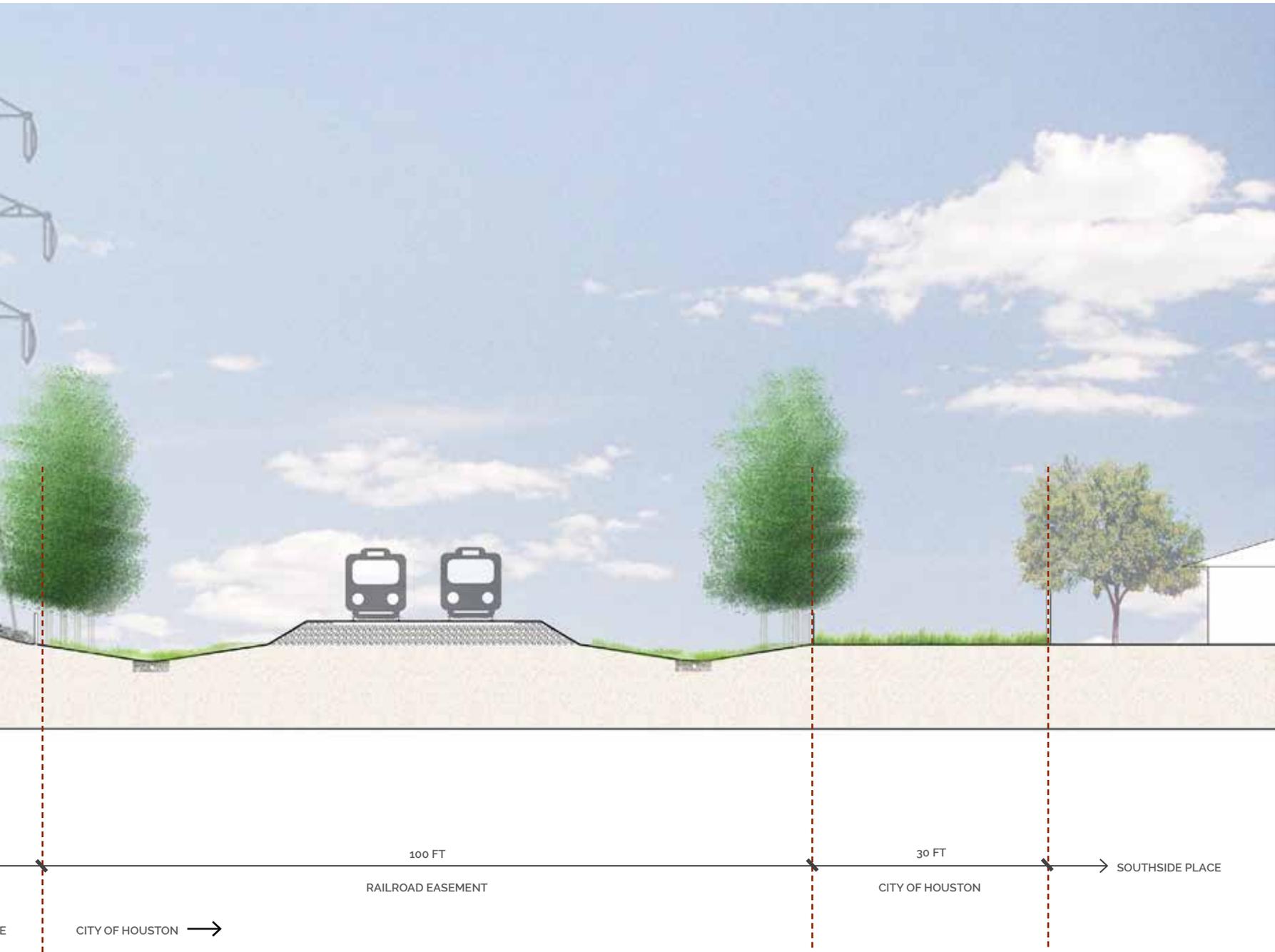
### Coastal Prairie Park: Section B - B1



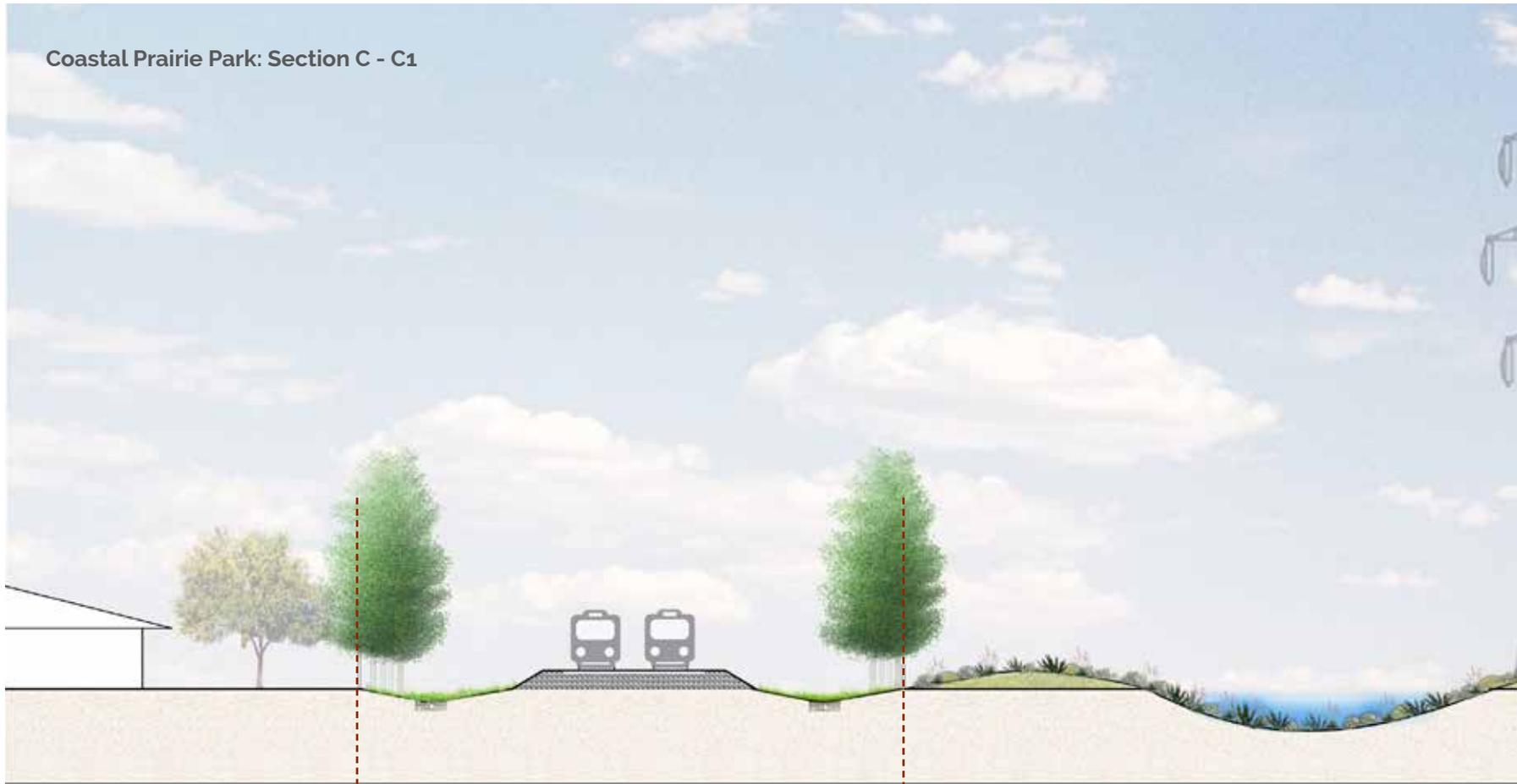
BELLAIRE ←

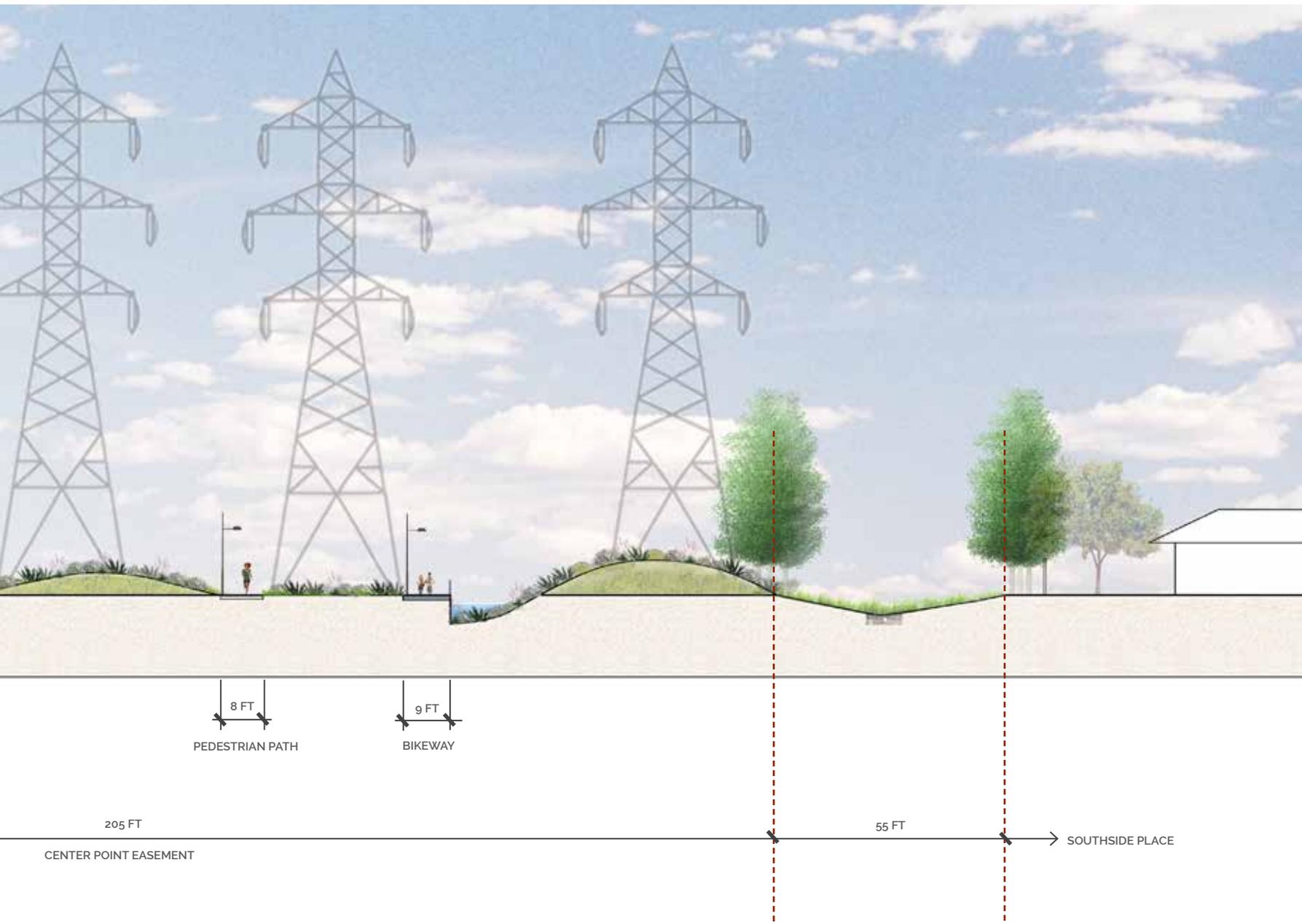
CENTER POINT EASEMENT

← CITY OF BELLAIRE



# Coastal Prairie Park: Section C - C1





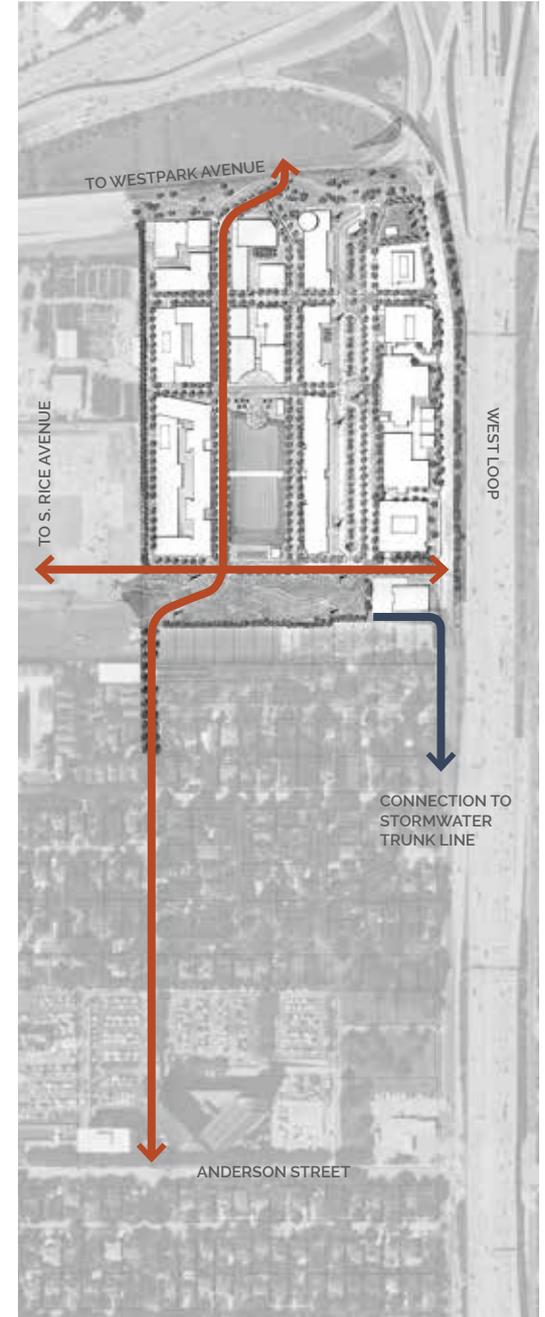


## North Livable Center

The intent of the North Livable Center is to create a vibrant area that encourages dynamic economic development focused around live, work, and play opportunities with a mix of development types; retail, office, hospitality, and residential.

The concept plan includes a range of residential options that reflect changing lifestyles. Design of streets, squares, plazas, parks, open spaces and other civic spaces emphasize pedestrian connectivity.

The Centerpoint easement on the Plan's southern edge has been utilized as an environmental transition zone between existing residential and the North Livable Center. The environmental feature — a Coastal Prairie Park that functions as storm water catchment, hike-and-bike connectivity, and buffers edge conditions maximizing value to the livable center development.











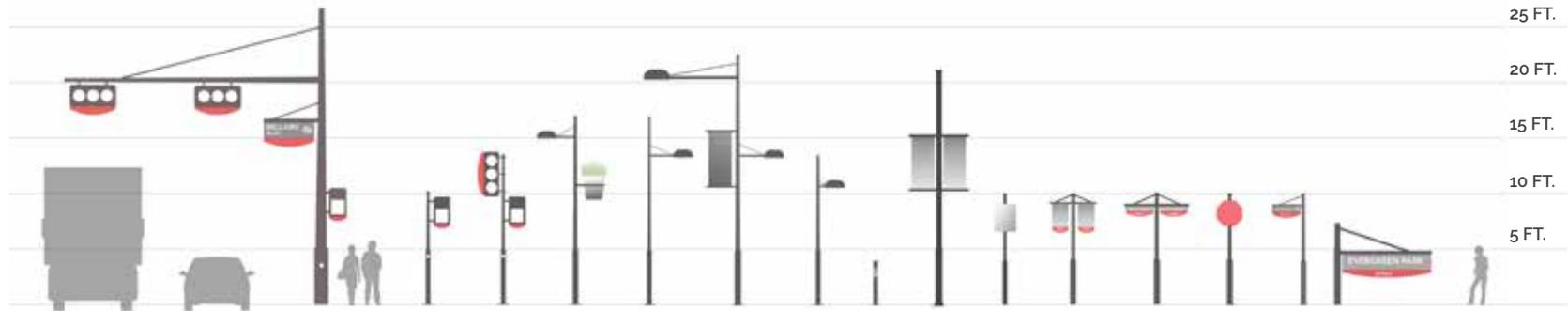
# Initiatives and Implementation Strategies

# Urban Elements - Branding Bellaire

LOW HANGING  
FRUIT  
BANG FOR THE  
BUCK

INITIATIVES & IMPLEMENTATION STRATEGIES			TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Bellaire Street Lighting</b>								
STEP ONE - BELLAIRE URBAN ELEMENTS DETAILED DESIGN (LIGHTING, SIGNALIZATION AND SIGNAGE)	X	H	YR 1	\$100,000				<ul style="list-style-type: none"> <li>ENERGY EFFICIENCY AND LAMP LONGEVITY IMPROVED THROUGH LED AND NEW TECHNOLOGY</li> <li>MAINTENANCE BY CENTERPOINT PAID FOR BY THE CITY OF BELLAIRE THROUGH TARIFF CHARGES.</li> <li>A CUSTOM DESIGN WILL MEAN STOCKING AND REPLACING FABRICATED COMPONENTS</li> </ul>
STEP TWO - BEGIN WITH NEWCASTLE TRAIL LIGHTING	X	H	YR 1	TBD				
STEP THREE - IMPLEMENT ALONG NEIGHBORHOOD STREETS NOT PLANNED FOR RECONSTRUCTION		H	YRS 1-5	TBD				
STEP FOUR - IMPLEMENT AS PART OF FUTURE STREET RECONSTRUCTION		H	YRS 1-20	TBD				
<b>Bellaire Traffic Signalization</b>								
STEP ONE - BEGIN WITH BELLAIRE BOULEVARD AT SOUTH RICE	X	H	YR 1	\$120,000				<ul style="list-style-type: none"> <li>MINIMIZED THROUGH NEW TECHNOLOGIES, BUT A CUSTOM DESIGN WILL MEAN STOCKING AND REPLACING FABRICATED COMPONENTS</li> </ul>
STEP TWO - BELLAIRE BOULEVARD AT CHIMNEY ROCK, WEST LOOP AND NEWCASTLE		M	YRS 5-10		\$420,000			
STEP THREE - IMPLEMENT TOGETHER WITH FUTURE STREET RECONSTRUCTION		M	YRS 1-20			TBD	TBD	
<b>Bellaire Regulatory and Community Facility Signage</b>								
STEP ONE - IMPLEMENT ALONG STREETS NOT PLANNED FOR RECONSTRUCTION	X	M	YRS 1-5	TBD				<ul style="list-style-type: none"> <li>A CUSTOM DESIGN WILL MEAN STOCKING AND REPLACING FABRICATED COMPONENTS</li> </ul>
STEP TWO - IMPLEMENT AS PART OF FUTURE STREET RECONSTRUCTION		M	YRS 5-20		TBD	TBD	TBD	

## Urban Street Elements Family



INITIATIVES & IMPLEMENTATION STRATEGIES

**Bury Overhead Power Lines**

	LOW/HANGING FRUIT BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
STEP ONE - INTERSECTION OF BELLAIRE BOULEVARD AND SOUTH RICE (200' EACH DIRECTION)	X	H	YRS 1	\$1,368,000			<ul style="list-style-type: none"> <li>POWER OUTAGES WILL BE REDUCED RESULTING FROM STORM EVENTS AND/OR DOWNED LINES PUBLIC SAFETY AND MAINTENANCE ARE IMPROVED</li> </ul>
STEP TWO - BELLAIRE BOULEVARD, SOUTH RICE, CHIMNEY ROCK AND BISSONNET		H	YRS 5-10		\$7,725,000		
STEP THREE - NEWCASTLE, FOURNACE, EVERGREEN, FERRIS, AVE B		H	YRS 10-15			\$11,550,000	
STEP FOUR - REMAINING OVERHEAD POWER LINES FRONTING STREETS ON CONCRETE POLES		H	YRS 10-20			TBD	

**Above-Ground Line Locations**



**LEGEND:**

— Overhead Power Lines Fronting Streets

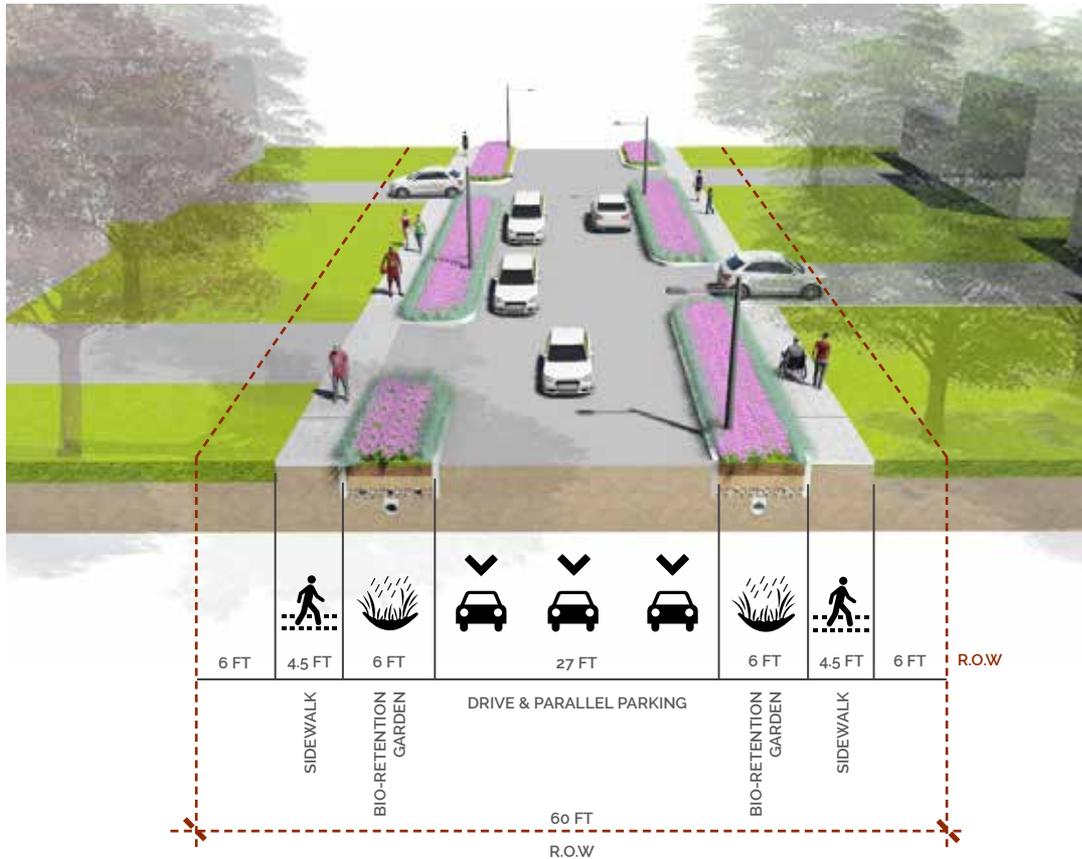
**Typical Example: South Rice Avenue and Bellaire Boulevard**



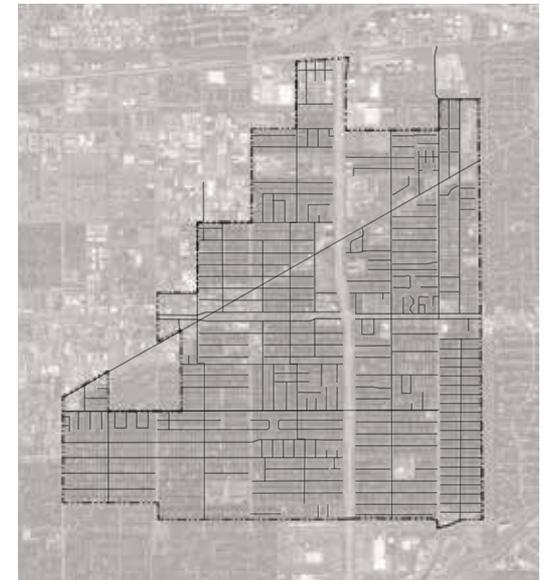
# Neighborhood Streets

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT	BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>General</b>								
STEP ONE - DETAILED URBAN DESIGN STANDARDS AND ENGINEERING	X	H	YR 1	\$250,000				• PRIVATE PROPERTY RELATED DAMAGE REPAIRED BY PRIVATE PROPERTY OWNER
STEP TWO - NEIGHBORHOOD STREET PROTOTYPICAL BLOCK (600' + 2 INTERSECTIONS)	X	H	YR 1	\$756,509				
<b>Sidewalks</b>								
STEP ONE - IMPLEMENT AS PART OF FUTURE STREET RECONSTRUCTION (PER LINEAR FOOT)		H	YRS 1 -10	\$87	\$87			• PRIVATE PROPERTY RELATED DAMAGE REPAIRED BY PRIVATE PROPERTY OWNER
STEP TWO - IMPLEMENT ALONG EXISTING STREETS (PER LINEAR FOOT)		H	YRS 10-20			\$107	\$107	

## Typical Section: Neighborhood Street



## Street Locations



### LEGEND:

— Neighborhood Streets

# Neighborhood Streets (cont'd)

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Bellaire Intersections with, w/o Art</b>							
STEP ONE - IMPLEMENT AS PART OF FUTURE STREET RECONSTRUCTION (EACH)	H	YRS 1 -10	\$29,000	\$29,000			<ul style="list-style-type: none"> <li>OCCASIONAL REPAIR OF PAVERS IF USED</li> <li>ART ELEMENTS CLEANING AND REPAIR</li> </ul>
STEP TWO - IMPLEMENT ALONG EXISTING STREETS (EACH)	H	YRS 10-20			\$29,000	\$2,900	

Typical Street Corner (With Art and Mural Wall)



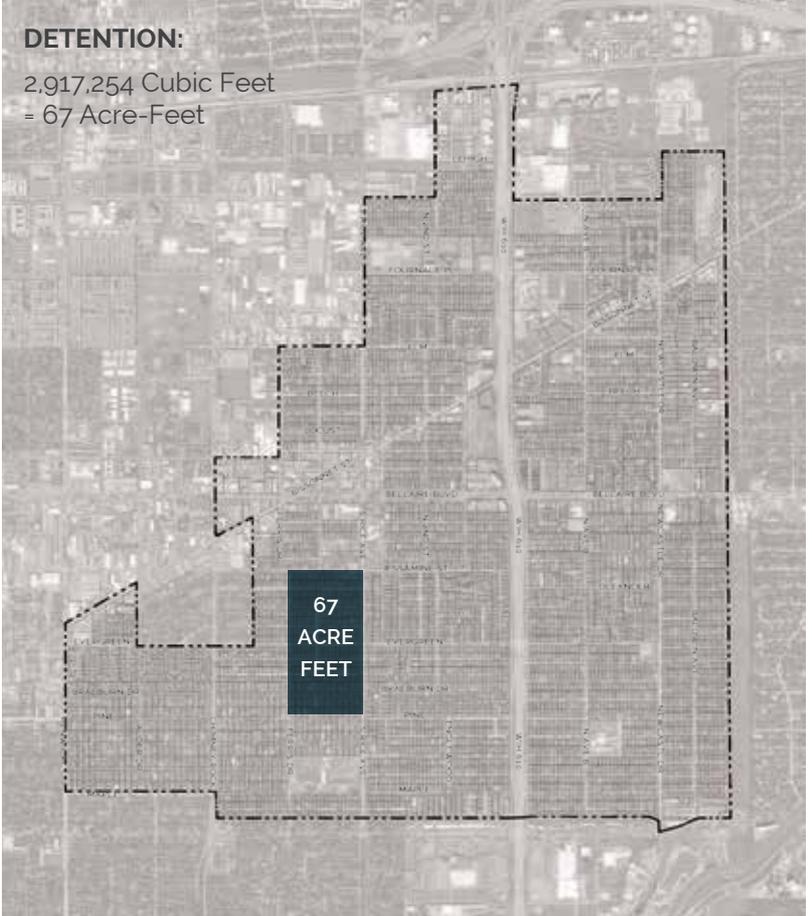
Typical Sidewalk Improvements at Intersections



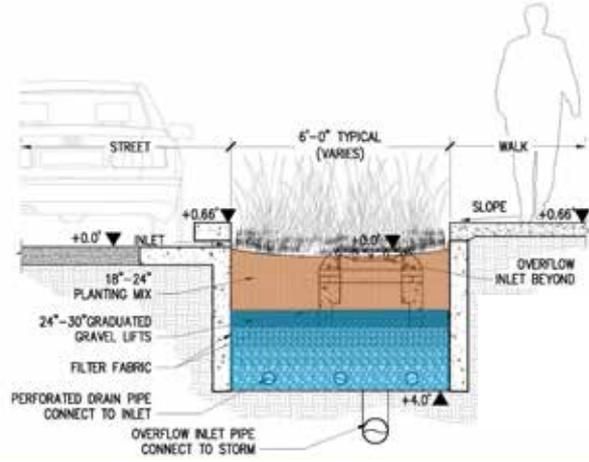
# Neighborhood Streets (cont'd)

LOW HANGING  
FRUIT  
BANG FOR THE  
BUCK

INITIATIVES & IMPLEMENTATION STRATEGIES		TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Bio-Retention Gardens</b>							
STEP ONE - IMPLEMENT AS PART OF FUTURE STREET RECONSTRUCTION (PER LINEAR FOOT)	H	YRS 1 -5	\$230	\$230			<ul style="list-style-type: none"> <li>TWO VIABLE STRATEGIES:</li> <li>1) PRIVATE PROPERTY MAINTAINED</li> <li>2) CITY GARDEN TEAM MAINTAINED</li> </ul>
STEP TWO - IMPLEMENT ALONG EXISTING STREETS (PER LINEAR FOOT)	H	YRS 5-20			\$282	\$282	



Typical Construction Detail of Bio-retention Garden



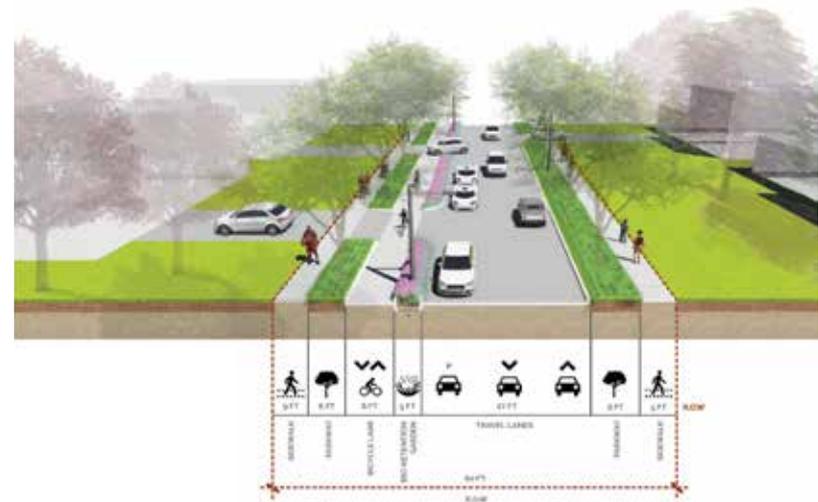
# Connector Streets

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Newcastle</b> STEP ONE - BELLAIRE INTERSECTIONS, SIDEWALKS, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS	H	YRS 1-5	\$9,081,245				
<b>Fournace</b> STEP ONE - BELLAIRE INTERSECTIONS, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS	H	YRS 5-10		\$4,272,072			
<b>Evergreen</b> STEP ONE - BELLAIRE INTERSECTIONS, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS	H	YRS 10-15			\$9,980,904		
<b>Ferris</b> STEP ONE - BELLAIRE INTERSECTIONS, SIDEWALKS, BIKE LANES, STREET TREES, PLANTING, BIO-RETENTION GARDENS	H	YRS 15-20				\$7,050,192	

Typical Section: Newcastle



Typical Section: Evergreen



# Bellaire Boulevard and Paseo Park

LOW HANGING  
FRUIT  
BANG FOR THE  
BUCK

INITIATIVES & IMPLEMENTATION STRATEGIES

**Bellaire Boulevard West (West of Bissonnet to South Rice)**

STEP ONE - AGREEMENT WITH METRO

X H

YR 1

TBD

STEP TWO - NEW STREET, BELLAIRE CIRCLE, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS

H

YRS 1-5

\$9,378,682

STEP THREE - CREATE PASEO PARK WEST

H

YRS 5-10

\$4,425,530

- REMOVAL OF METRO STATION AVOIDS A PUBLIC SAFETY CONCERN
- SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS
- EXPANDED PASEO PARK WILL REQUIRE ADDED PARK MAINTENANCE
- MAINTAIN SPECIAL PAVERS "TRAFFIC CALMING" IN STREET

## Bellaire Boulevard West



INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT BANK FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Bellaire Boulevard (South Rice to West Loop)</b>							
STEP ONE - CONSTRUCT SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PARKWAY PLANTING & BIO-RETENTION GARDENS	H	YRS 5-10		\$5,036,914			<ul style="list-style-type: none"> <li>SEE ITEMS UNDER NEIGHBORHOOD &amp; CONNECTOR STREETS</li> <li>DESIGN WILL REDUCE MOWING AND IRRIGATION DEMAND</li> </ul>
STEP TWO - IMPROVE PASEO PARK	H	YRS 5-10		\$3,423,960			

**Bellaire Boulevard**



## Bellaire Boulevard and Paseo Park (cont'd)

INITIATIVES & IMPLEMENTATION STRATEGIES

LOW/HANGING  
FRUIT  
BANG FOR THE  
BUCK

TIME  
FRAME  
(YRS)

CAPITAL  
COSTS  
YRS 1-5

CAPITAL  
COSTS  
YRS 5-10

CAPITAL  
COSTS  
YRS 10-15

CAPITAL  
COSTS  
YRS 10-20

O&M IMPLICATIONS

### Bellaire Boulevard East (West Loop to Railroad Tracks)

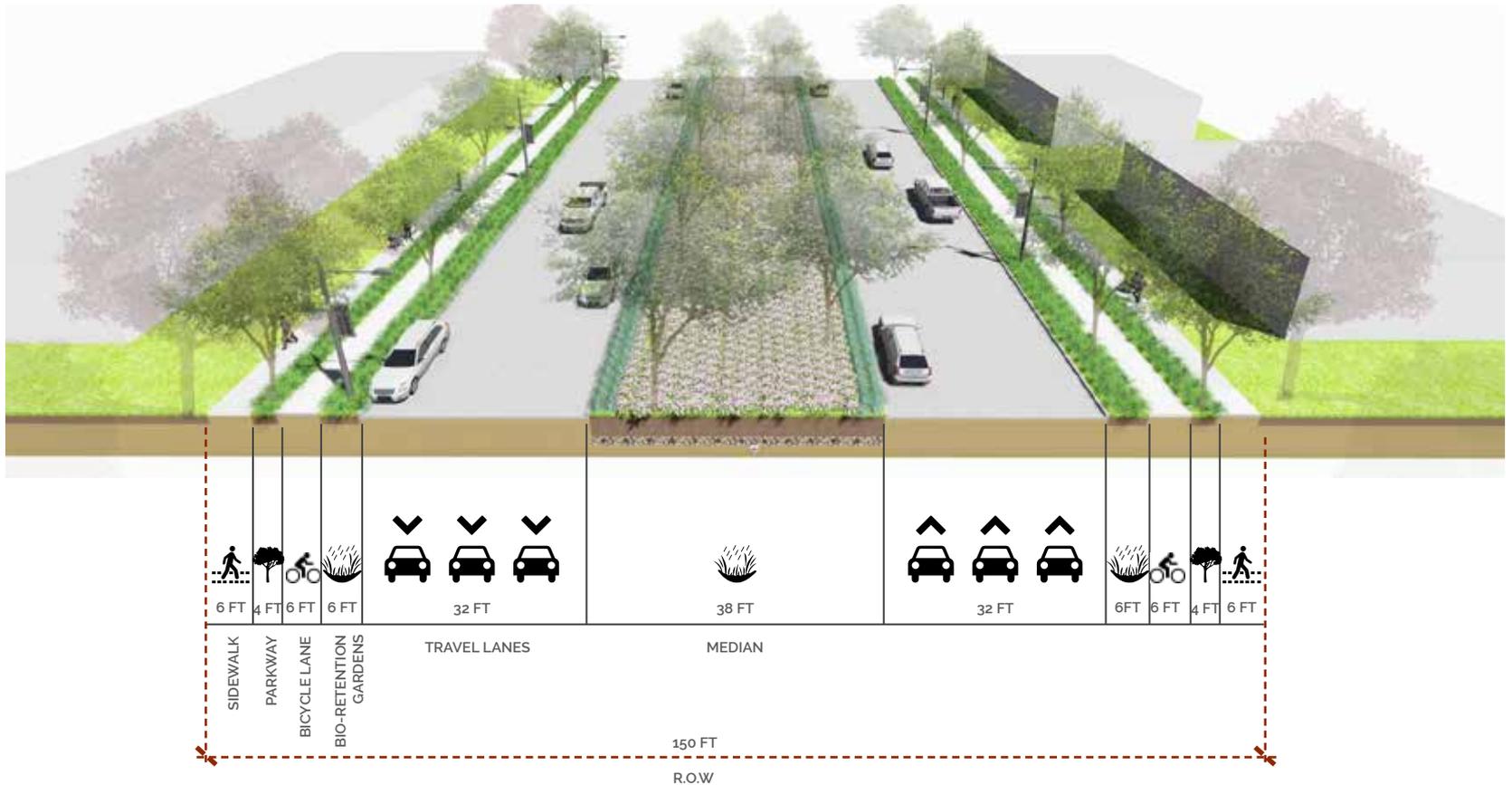
STEP ONE - CONSTRUCT STREET, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PARKWAY PLANTING & BIO-RETENTION GARDENS

M YRS 10  
-20

\$5,911,738

- SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS
- INCREASED MEDIAN MAINTENANCE

### Typical Section: Bellaire Boulevard East



# South Rice Avenue

## INITIATIVES & IMPLEMENTATION STRATEGIES

### South Rice - South (Bellaire Blvd to Cypress Ditch)

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS

H YRS 5-10

\$16,974,926

- SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS
- INCREASED MEDIAN MAINTENANCE

### South Rice - North (Fournace to Bellaire Blvd)

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, PLANTING, BIO-RETENTION GARDENS

M YRS 10-15

\$7,534,154

- SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS
- INCREASED MEDIAN MAINTENANCE

LOW/HANGING  
FRUIT  
BANG FOR THE  
BUCK

TIME  
FRAME  
(YRS)

CAPITAL  
COSTS  
YRS 1-5

CAPITAL  
COSTS  
YRS 5-10

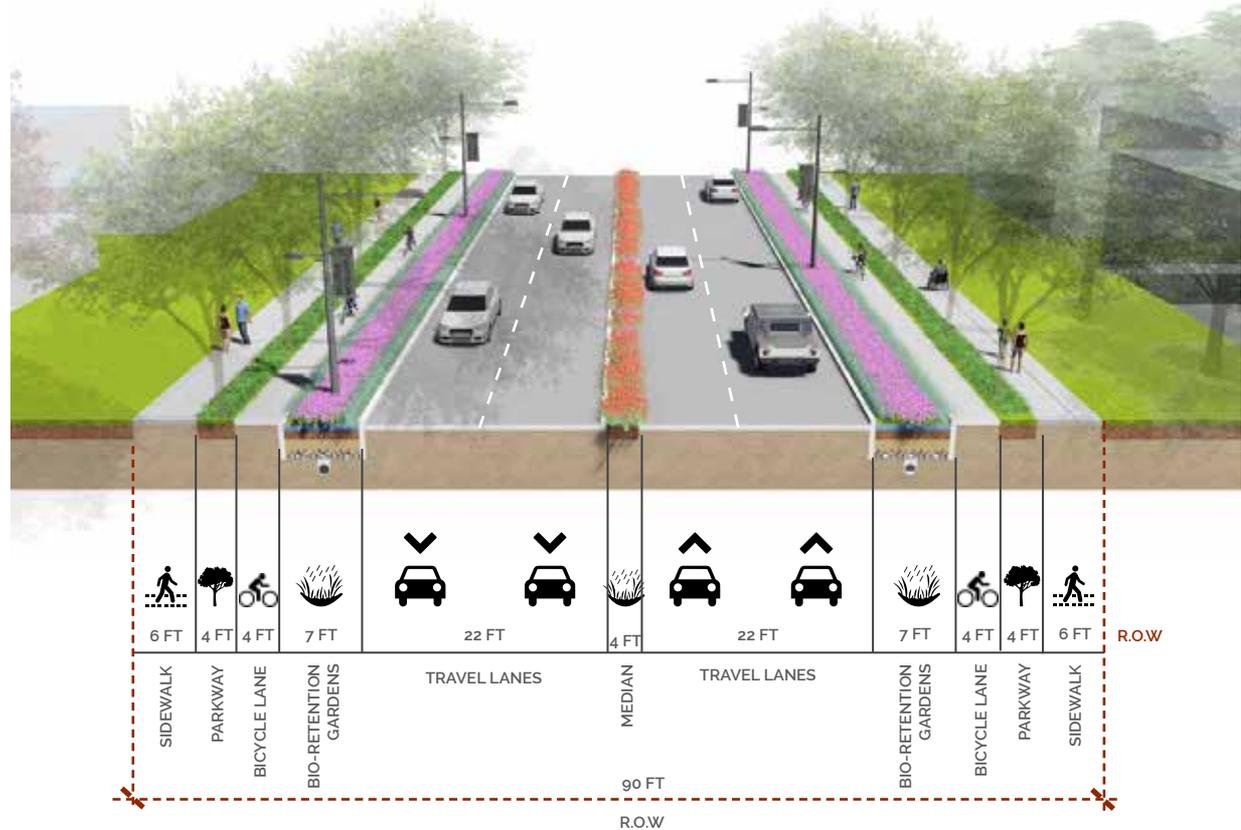
CAPITAL  
COSTS  
YRS 10-15

CAPITAL  
COSTS  
YRS 10-20

O&M IMPLICATIONS

## Typical Section: South Rice Boulevard (Without Street Parking)

### Key Map:



# Chimney Rock Road

LOW-HANGING  
FRUIT  
BANG FOR THE  
BUCK

## INITIATIVES & IMPLEMENTATION STRATEGIES

### Chimney Rock - South (Evergreen to Cypress Ditch)

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTS, PLANTING, BIO-RETENTION GARDENS

M YRS 10-15

\$8,529,775

SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS;  
INCREASED MEDIAN MAINTENANCE

### Chimney Rock - North (Dashwood to Bissonnet)

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, LIGHTING, PLANTING, BIO-RETENTION GARDENS

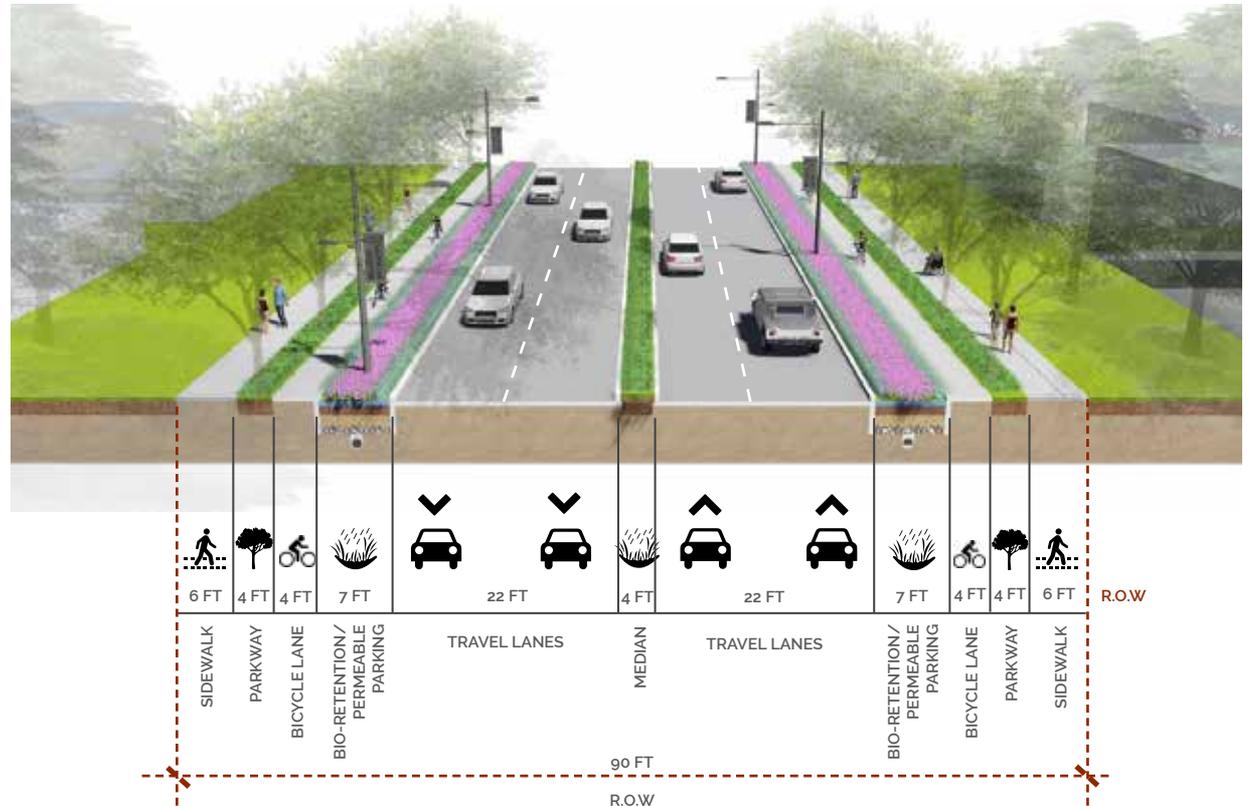
L YRS 15-20

\$3,897,286

- SEE ITEMS UNDER NEIGHBORHOOD & CONNECTOR STREETS
- INCREASED MEDIAN MAINTENANCE

## Typical Section: Chimney Rock Street

### Key Map:



# Bissonnet Street

LOW/HANGING  
FRUIT  
BANG FOR THE  
BUCK

INITIATIVES & IMPLEMENTATION STRATEGIES

**Bissonnet - Middle (Chimney Rock to the West Loop)**

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANE, STREET TREES, BIO-INFILTRATION

H

YRS 5-10

\$14,850,066

- SIDEWALKS, TREES TO BE MAINTAINED BY THE CITY, PAVER
- STOCKING AND REPLACEMENT REQUIRED. PRIVATE PROPERTY
- COMPENSATES CITY FOR DAMAGE

**Bissonnet - East (West Loop to Rail Road Tracks)**

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, BIO-INFILTRATION

M

YRS 10-15

\$12,363,192

- SIDEWALKS, TREES TO BE MAINTAINED BY THE CITY, PAVER
- STOCKING AND REPLACEMENT REQUIRED. PRIVATE PROPERTY
- COMPENSATES CITY FOR DAMAGE

**Bissonnet - South (Alder to Renwick)**

STEP ONE - NEW STREET, SIDEWALKS, BIKE LANES, STREET TREES, BIO-INFILTRATION

L

YRS 15-20

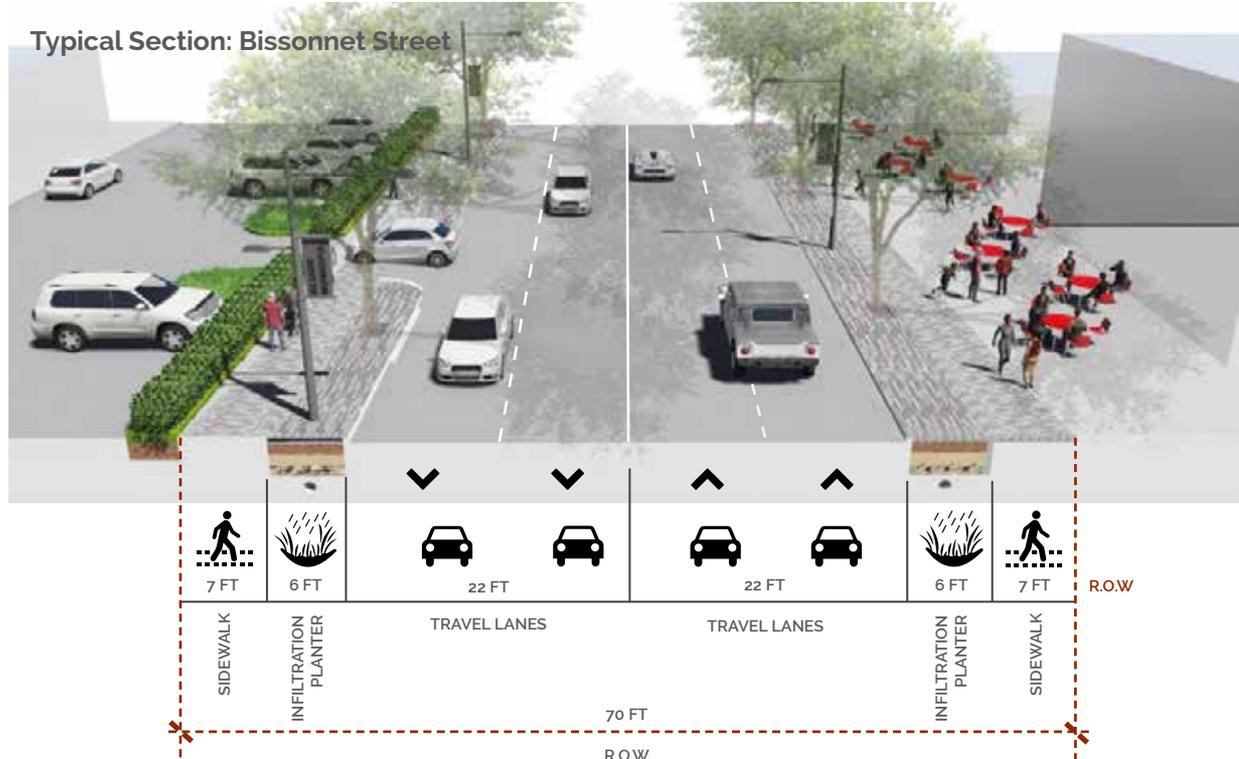
\$3,974,460

- SIDEWALKS, TREES TO BE MAINTAINED BY THE CITY, PAVER
- STOCKING AND REPLACEMENT REQUIRED. PRIVATE PROPERTY
- COMPENSATES CITY FOR DAMAGE

Key Map:



Typical Section: Bissonnet Street



# West Loop Motor Courts

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT	BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>West Loop Motor Courts - General</b>								
STEP ONE - TRAFFIC IMPACT STUDY & DEDICATION OF ACCESS EASEMENTS	X	M	YR 1	TBD				<ul style="list-style-type: none"> <li>• MAINTAIN MOTOR COURT SURFACES LIKE A STREET</li> <li>• IS MAINTAINED, MAINTAIN POCKET PARKS IN THE</li> <li>• CENTER OF MOTOR COURTS, IRRIGATION BY ADJACENT PRIVATE PROPERTY</li> </ul>
STEP TWO - EAST SIDE OF THE WEST LOOP		M	YRS 5-10		\$1,590,758			
STEP THREE - WEST SIDE OF THE WEST LOOP		M	YRS 10-15			\$1,391,914		

## Converted Motor Court Locations



## Typical Example: Converted Motor Court



# The Coastal Prairie Park

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT	BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Coastal Prairie Park - General</b>								
STEP ONE - COASTAL PRAIRIE PARK PRELIMINARY DESIGN	X	H	YR 1	TBD				<ul style="list-style-type: none"> <li>AS NATIVE PRAIRIE LANDSCAPE THE PARK SHOULD BE DESIGNED</li> <li>TO REQUIRE MINIMAL MAINTENANCE, IRRIGATION</li> <li>FOR ESTABLISHMENT OF PLANT MATERIALS (2 YRS),</li> <li>GRASSES MOWN ONCE A YEAR, NO FERTILIZATION OR EDGING</li> </ul>
STEP TWO - JOINT DEVELOPMENT AGREEMENTS WITH CENTERPOINT, HCFCO, COH, COWU	X	H	YR 1	TBD				
<b>Coastal Prairie Park - South (Brays Bayou to Bellaire)</b>								
STEP ONE - GRADING, DETENTION, PLANTING, HIKE AND BIKE TRAILS, NEIGHBORHOOD CONNECTIONS			H	YRS 1-5	\$4,996,800			<ul style="list-style-type: none"> <li>BOTTOM OF DETENTION SWALES MAY NEED SEDIMENT</li> <li>REMOVAL EVERY TEN (10) TO TWENTY (20) YRS.</li> </ul>
STEP TWO - PEDESTRIAN BRIDGE AT BRAYS BAYOU / CONNECTION TO HERMANN PARK			M	YRS 5-10		\$1,500,000		
<b>Coastal Prairie Park - North (Bellaire to Westpark)</b>								
STEP ONE - GRADING, DETENTION, PLANTING, HIKE AND BIKE TRAILS, NEIGHBORHOOD CONNECTIONS			H	YRS 10-15			\$2,712,240	
STEP TWO - ADVOCATE FOR CONNECTION TO RICHMOND / MEMORIAL PARK WITH COH	X	H	YRS 5-10	TBD				

## Typical Section: Coastal Prairie Park



## Existing Centerpoint Easements



# North Livable Center

LOW/HANGING  
FRUIT  
BANG FOR THE  
BUCK

INITIATIVES & IMPLEMENTATION STRATEGIES

**Planning**

	LOW/HANGING FRUIT BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
STEP ONE - DEVELOP AN URBAN DESIGN MASTER PLAN WITH STAKEHOLDER INPUT	X	H	YR 1	TBD			
STEP TWO - UPDATE COMPREHENSIVE PLAN TO INCENT MIXED-USE HIGH DENSITY DEVELOPMENT	X	H	YR 1	TBD			
STEP THREE - UPDATE COMPREHENSIVE PLAN REQUIRING EXTENSION OF ANDERSON ST NORTH FROM FOURNACE TO WESTPARK	X	H	YR 1	TBD			
STEP FOUR - UPDATE COMPREHENSIVE PLAN EXTENDING LEHIGH ST WEST TO SOUTH RICE	X	H	YR 1	TBD			
STEP FIVE- UPDATE COMPREHENSIVE PLAN TO DEDICATE NORTHPARK	X	H	YR 1	TBD			
STEP SIX- JOINT DEVELOPMENT AGREEMENTS WITH CENTERPOINT, HCFCD, COH, TXDOT	X	H	YR 1	TBD			



Proposed North Livable Center Conceptual Plan



INITIATIVES & IMPLEMENTATION STRATEGIES

LOW/HANGING  
FRUIT  
BANG FOR THE  
BUCK

TIME  
FRAME  
(YRS)

CAPITAL  
COSTS  
YRS 1-5

CAPITAL  
COSTS  
YRS 5-10

CAPITAL  
COSTS  
YRS 10-15

CAPITAL  
COSTS  
YRS 10-20

O&M IMPLICATIONS

**Infrastructure**

STEP ONE - EXTEND WEST LOOP BOX CULVERT NORTH TO LEHIGH STREET

H

YRS 5-10

\$1,542,240

STEP TWO - CONSTRUCT ANDERSON STREET, A CONNECTOR STREET, BETWEEN FOURNACE AND WESTPARK

H

YRS 5-10

\$6,081,134

STEP THREE - ADVOCATE CONSTRUCTION OF LEHIGH STREET, A CONNECTOR STREET, WEST TO SOUTH RICE

H

YRS 1-5

TBD

**Parks and Open Space**

STEP ONE - BUILD THE NORTH COASTAL PRAIRIE PARK WITHIN CENTERPOINT EASEMENT

H

YRS 5-10

\$593,184

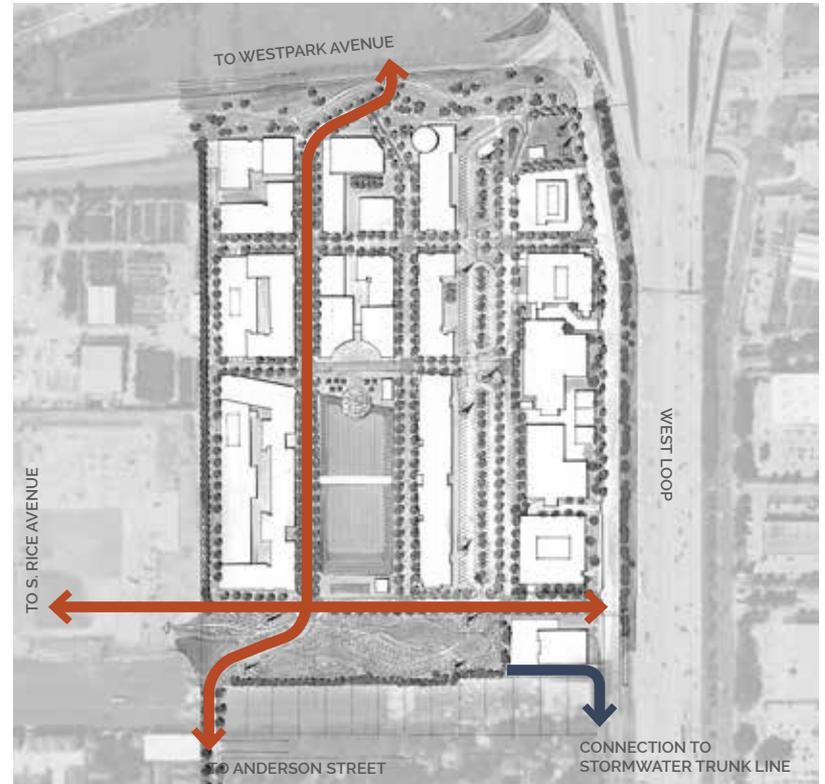
- SEE COASTAL PRAIRIE PARK
- ADDITIONAL PARKS MAINTENANCE

STEP TWO - BUILD NORTHPARK

H

YRS 10-15

\$2,090,400



# Urban Village Downtown

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT	BANG FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>Planning</b>								
STEP ONE - CREATE A UVD REDEVELOPMENT MASTER PLAN WITH STAKEHOLDER INPUT, SITE PLANNING AND DESIGN GUIDELINES	X	H	YR 1	TBD				
STEP TWO - DEVELOP A SHARED PARKING ORDINANCE / DISTRICT	X	H	YR 1	TBD				• IF PARKING IS METERED FUND REQUIRED SUPPORT STAFF
STEP THREE - DEVELOP A SHARED DETENTION ORDINANCE	X	H	YR 1	TBD				
STEP FOUR - UPDATE COMPREHENSIVE PLAN ESTABLISHING A "BUILD-TO LINE" INCENTING ADAPTIVE RE-USE/ DENSITY	X	H	YR 1	TBD				
<b>Complete / Parking Streets and Shared Detention</b>								
STEP ONE - BUILD TRANSITION ALLEY BETWEEN FERRIS AND 5TH (SOUTH OF BELLAIRE)	X	H	YRS 1					• SIDEWALKS, TREES TO BE MAINTAINED BY THE CITY, PAVER
STEP TWO - BUILD COMPLETE STREETS - SPRUCE, CEDAR, FERRIS AND 5TH (NORTH OF BELLAIRE)		H	YRS 1-5					• STOCKING AND REPLACEMENT REQUIRED. PRIVATE PROPERTY
STEP THREE - BUILD COMPLETE STREETS - DASHWOOD AND 5TH (SOUTH OF BELLAIRE)		H	YRS 5-10					• COMPENSATES CITY FOR DAMAGE. SHARED DETENTION CELLS • SEDIMENT REMOVAL EVERY TEN (10) TO TWENTY (20) YRS

## Typical Urban Village Downtown, Plan View



IMAGE COURTESY OF BUTLER PLANNING



IMAGE COURTESY OF BUTLER PLANNING

# City Gateways

INITIATIVES & IMPLEMENTATION STRATEGIES	LOW/HANGING FRUIT BANK FOR THE BUCK	TIME FRAME (YRS)	CAPITAL COSTS YRS 1-5	CAPITAL COSTS YRS 5-10	CAPITAL COSTS YRS 10-15	CAPITAL COSTS YRS 10-20	O&M IMPLICATIONS
<b>West Loop Gateways</b>							
STEP ONE - BELLAIRE BOULEVARD @ WEST LOOP	X	H	YRS 1-5				<ul style="list-style-type: none"> <li>• PAY FOR POWER AND MAINTENANCE OF COLUMNS AND ART UPLIGHTING</li> <li>• INCREASE SUPPLEMENTAL MAINTENANCE OF UNDERPASSES TO A QUARTERLY BASIS, CLEAN ART WALLS AS NEEDED, SHEAR GREEN WALLS/COLUMNS</li> <li>• TWICE ANNUALLY, MAINTAIN SPECIAL PAVING AND ANNUALS</li> <li>• IRRIGATE GREEN WALLS AND PLANTINGS</li> </ul>
STEP TWO - BISSONNET @ WEST LOOP		M	YRS 5-10				
STEP THREE - FOURNACE PLACE @ WEST LOOP		H	YRS 1-5				
STEP FOUR - EVERGREEN @ WEST LOOP		M	YRS 5-10				
<b>Perimeter Gateways</b>							
STEP ONE - BELLAIRE BOULEVARD @ RR TRACK	X	H	YRS 1-5				<ul style="list-style-type: none"> <li>• PAY FOR POWER AND MAINTENANCE OF COLUMNS AND GREEN WALLS UPLIGHTING</li> <li>• QUARTERLY BASIS, SHEAR GREEN WALLS/COLUMNS</li> <li>• SHEAR GREEN WALLS/COLUMNS TWICE ANNUALLY</li> <li>• MAINTAIN SPECIAL PAVING IN STREET</li> <li>• IRRIGATE GREEN WALLS AND PLANTINGS</li> <li>• MEDIAN PLANTINGS LANDSCAPE MAINTENANCE</li> </ul>
STEP TWO - SOUTH RICE @ CYPRESS DITCH		H	YRS 1-5				
STEP THREE - BISSONNET @ RR TRACK		H	YRS 5-10				
STEP FOUR - CHIMNEY ROCK @ CYPRESS DITCH		M	YRS 10-15				
STEP FIVE - FERRIS @ CYPRESS DITCH		L	YRS 15-20				

## Key Map:



### LEGEND:

- West Loop City Gateway
- Perimeter City Gateway
- Bellaire Water Gardens — West City Gateway





# Initiative Cost Estimates

## Initiative: Bury Overhead Power Lines

### Step One - Bellaire @ South Rice Intersection

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
BELLAIRE POWER LINES	980	LF	\$500	\$490,000	
SOUTH RICE POWER LINES	1300	LF	\$500	\$650,000	
HARD COSTS TOTAL				\$1,140,000	
SOFT COSTS @20%				\$228,000	
<b>TOTAL PROJECT COST</b>				<b>\$1,368,000</b>	

### Step Two - Bellaire Blvd, Bissonnet, South Rice, Chimney Rock

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
BELLAIRE BLVD	9250	LF	\$500	\$4,625,000	
BISSONNET	11950	LF	\$500	\$5,975,000	
SOUTH RICE	10275	LF	\$500	\$5,137,500	
CHIMNEY ROCK	2600	LF	\$500	\$1,300,000	
HARD COSTS TOTAL				\$6,437,500	
SOFT COSTS @20%				\$1,287,500	
<b>TOTAL PROJECT COST</b>				<b>\$7,725,000</b>	

### Step Three - Fournace, Newcastle, Evergreen, Ferris, Ave B

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
FOURNACE	4850	LF	\$500	\$2,425,000	
NEWCASTLE	12100	LF	\$500	\$6,050,000	
EVERGREEN	10100	LF	\$500	\$5,050,000	
FERRIS	8450	LF	\$500	\$4,225,000	
AVE B	10800	LF	\$500	\$5,400,000	
HARD COSTS TOTAL				\$9,625,000	
SOFT COSTS @20%				\$1,925,000	
<b>TOTAL PROJECT COST</b>				<b>\$11,550,000</b>	

## Initiative: Neighborhood Streets

<b>Sidewalks (200' Segment)</b>						
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>	
CONCRETE SIDEWALKS	900	SF	\$11	\$9,900	4.5' WIDE WINDOW PANE FINISH, TURNDOWN EDGE AT BIO-RETENTION GARDENS	
REPAIR ADJACENT LANDSCAPE	800	SF	\$10	\$8,000	LANDSCAPE, WALKS, DRIVES.	
HARD COSTS TOTAL				\$17,900		
SOFT COSTS @20%				\$3,580		
<b>TOTAL PROJECT COST</b>				<b>\$21,480</b>		
<b>COST PER FOOT</b>				<b>\$107</b>		

<b>Bellaire Intersection without Art (1 Corner)</b>						
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>	
REMOVE EXISTING CURB AND GUTTER	54	LF	\$5	\$270		
REMOVE EXIST PAVING / LANDSCAPE	800	SF	\$3	\$2,400		
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500		
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500		
NEW CURB AND GUTTER	98	LF	\$18	\$1,764		
DETECTABLE PAVERS	18	SF	\$10	\$180		
CORNER PLAZA PAVERS	195	LF	\$18	\$3,413		
SIDEWALK CURB RAMPS	2	EA	\$1,000	\$2,000		
BACK EDGE CURB	32	LF	\$18	\$576		
PLANTING AND IRRIGATION	255	SF	\$8	\$2,040		
BELLAIRE SIGNAGE	1	LS	\$3,000	\$3,000		
HARD COSTS TOTAL				\$14,973		
SOFT COSTS @20%				\$2,995		
<b>TOTAL COST EACH CORNER</b>				<b>\$17,967</b>		
NUMBER OF CORNERS	300					
<b>TOTAL PROJECT COST</b>				<b>\$5,390,100</b>		

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Neighborhood Streets (cont'd)

<b>Bellaire Intersection with Art (1 Corner)</b>					
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
REMOVE EXISTING CURB AND GUTTER	54	LF	\$5	\$270	
REMOVE EXIST PAVING / LANDSCAPE	800	SF	\$3	\$2,400	
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500	
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500	
NEW CURB AND GUTTER	98	LF	\$18	\$1,764	
DETECTABLE PAVERS	18	SF	\$10	\$180	
CORNER PLAZA PAVERS	195	LF	\$18	\$3,413	
ART WALL	196	SFF	\$75	\$14,700	42" HIGH - MOSAIC TILE OVER PRE-CAST CONCRETE
BENCH	18	LF	\$200	\$3,600	WOOD OR WROUGHT IRON
SIDEWALK CURB RAMPS	2	EA	\$1,000	\$2,000	
BACK EDGE CURB	32	LF	\$18	\$576	
PLANTING AND IRRIGATION	255	SF	\$8	\$2,040	
BELLAIRE SIGNAGE	1	LS	\$3,000	\$3,000	
HARD COSTS TOTAL				\$33,273	
SOFT COSTS @20%				\$6,655	
<b>TOTAL COST EACH CORNER</b>				<b>\$39,927</b>	
NUMBER OF CORNERS	300				
<b>TOTAL PROJECT COST</b>				<b>\$11,978,100</b>	

**Bio-Retention Gardens (200' Segment - Existing Street)**

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
REMOVE EXISTING CURB AND GUTTER	200	LF	\$5	\$1,000	
REMOVE EXIST PAVING / LANDSCAPE	1200	SF	\$3	\$3,600	
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500	
ADJUST UTILITY BOXES TO GRADE	1	LS	\$3,000	\$3,000	
EXCAVATE SOIL TO SUB-GRADE	178	CY	\$15	\$2,670	
CATCH BASIN & OVERFLOW PIPE	1	EA	\$2,500	\$2,500	
4" PERFORATED PIPE IN BRG (3)	600	LF	\$8	\$4,800	
CIP CONC GUTTER WITH TURN DOWN EDGE	200	LF	\$30	\$6,000	
PRE-CAST CONCRETE SLOTTED CURB	144	SF	\$18	\$2,592	
DRIVEWAY APRON	200	LF	\$15	\$3,000	
GRAVEL BACKFILL	111	CY	\$30	\$3,330	2.5' DEEP, GRADATED WRAPPED IN FILTER FABRIC
PREPARED SOIL	67	CY	\$50	\$3,350	
PLANTING, MULCH, FINE GRADING	1200	SF	\$8	\$9,600	
IRRIGATION ADJUSTMENTS	1200	SF	\$1	\$1,200	
HARD COSTS TOTAL				\$47,142	
SOFT COSTS @20%				\$9,428	
<b>TOTAL PROJECT COST</b>				<b>\$56,570</b>	
COST PER FOOT				\$282.85	
LINEAL FEET OF BIO-RETENTION GARDENS	212,500				
<b>TOTAL PROJECT COST</b>				<b>\$60,106,050</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Neighborhood Streets (cont'd)

### Bio-Retention Gardens (200' Segment - New Street)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
REMOVE EXIST PAVING / LANDSCAPE	1200	SF	\$3	\$3,600	
EXCAVATE SOIL TO SUB-GRADE	178	CY	\$7	\$1,246	
CATCH BASIN & OVERFLOW PIPE	1	EA	\$2,500	\$2,500	
4" PERFORATED PIPE IN BRG (3)	600	LF	\$8	\$4,800	
CIP CONC GUTTER WITH TURN DOWN EDGE	200	LF	\$20	\$4,000	
PRE-CAST CONCRETE SLOTTED CURB	144	SF	\$12	\$1,728	
DRIVEWAY APRON	200	LF	\$15	\$3,000	
GRAVEL BACKFILL	111	CY	\$30	\$3,330	2.5' DEEP. GRADATED WRAPPED IN FILTER FABRIC
PREPARED SOIL	67	CY	\$50	\$3,350	
PLANTING, MULCH, FINE GRADING	1200	SF	\$8	\$9,600	
IRRIGATION ADJUSTMENTS	1200	SF	\$1	\$1,200	
HARD COSTS TOTAL				\$38,354	
SOFT COSTS @20%				\$7,671	
<b>TOTAL PROJECT COST</b>				<b>\$46,025</b>	
COST PER FOOT				\$230.12	
LINEAL FEET OF BIO-RETENTION GARDENS	212,500				
<b>TOTAL PROJECT COST</b>				<b>\$48,901,350</b>	

### Step Two - Prototypical Neighborhood Street (600' Length, One Block, Two Intersections)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
SIDEWALK	1080	LF	\$90	\$96,660	BOTH SIDES OF STREET 4.5' WIDE
BIO-RETENTION GARDENS	1010	LF	\$236	\$238,067	
BELLAIRE INTERSECTIONS WITHOUT ART	4	EA	\$14,973	\$59,892	
BELLAIRE INTERSECTIONS WITH ART	4	EA	\$33,272	\$133,088	
STREET LIGHTING (120' O.C.)	5	EA	\$5,500	\$27,500	
SIGNAGE	1	LS	\$50,000	\$50,000	
HARD COSTS TOTAL				\$605,207	
SOFT COSTS @25%				\$151,302	
<b>TOTAL PROJECT COST</b>				<b>\$756,509</b>	
<b>COST PER FOOT</b>				<b>\$3,782.54</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Connector Streets

### Streetscape Elements Fournace, Ferris, Evergreen (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
DEMOLITION	6600	SF	\$3	\$19,800	200
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500	
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500	
SIDEWALKS	1800	SF	\$10	\$18,000	
BIKE LANE	1200	SF	\$12	\$14,400	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	200	LF	\$282	\$56,400	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
<b>HARD COSTS TOTAL</b>				<b>\$132,100</b>	
<b>TOTAL COST</b>				<b>\$132,100</b>	
<b>COST PER FOOT</b>				<b>\$660.50</b>	

### Streetscape Elements Newcastle (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
DEMOLITION	4000	SF	\$3	\$12,000	200
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500	
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500	
SIDEWALKS	900	SF	\$10	\$9,000	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	1000	SF	\$3	\$3,000	
BIO-RETENTION GARDEN	200	LF	\$345	\$69,000	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
<b>HARD COSTS TOTAL</b>				<b>\$109,300</b>	
<b>TOTAL COST</b>				<b>\$109,300</b>	
<b>COST PER FOOT</b>				<b>\$546.50</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Connector Streets (cont'd)

<b>Fournace</b>					
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREETSCAPE ELEMENTS	4691	LF	\$660	\$3,096,060	
INTERSECTIONS W/O ART	8	EA	\$18,000	\$144,000	
INTERSECTIONS W/ ART	8	EA	\$40,000	\$320,000	
HARD COSTS TOTAL				\$3,560,060	
SOFT COSTS @20%				\$712,012	
<b>TOTAL COST</b>				<b>\$4,272,072</b>	

<b>Evergreen</b>					
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREETSCAPE ELEMENTS	9087	LF	\$660	\$5,997,420	
INTERSECTIONS W/O ART	40	EA	\$18,000	\$720,000	
INTERSECTIONS W/ ART	40	EA	\$40,000	\$1,600,000	
HARD COSTS TOTAL				\$8,317,420	
SOFT COSTS @20%				\$1,663,484	
<b>TOTAL COST</b>				<b>\$9,980,904</b>	

<b>Ferris</b>					
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREETSCAPE ELEMENTS	5826	LF	\$660	\$3,845,160	
INTERSECTIONS W/O ART	35	EA	\$18,000	\$630,000	
INTERSECTIONS W/ ART	35	EA	\$40,000	\$1,400,000	
HARD COSTS TOTAL				\$5,875,160	
SOFT COSTS @20%				\$1,175,032	
<b>TOTAL COST</b>				<b>\$7,050,192</b>	

<b>Newcastle</b>					
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREETSCAPE ELEMENTS	8124	LF	\$546	\$4,435,704	
INTERSECTIONS W/O ART	54	EA	\$18,000	\$972,000	
INTERSECTIONS W/ ART	54	EA	\$40,000	\$2,160,000	
HARD COSTS TOTAL				\$7,567,704	
SOFT COSTS @20%				\$1,513,541	
<b>TOTAL COST</b>				<b>\$9,081,245</b>	

## Initiative: Bellaire Boulevard

### Bellaire Blvd West Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREET RECONSTRUCTION	400	LF	\$815	\$326,000	BASED ON 4.3M PER MILE
SIDEWALKS	3200	SF	\$10	\$32,000	
BIKE LANE	2400	SF	\$12	\$28,800	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	400	LF	\$230	\$92,000	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$500,300	
<b>TOTAL COST</b>				<b>\$500,300</b>	
<b>COST PER FOOT</b>				<b>\$2,501.50</b>	

### Bellaire Blvd Middle Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREET EDGE RECONSTRUCTION	2400	SF	\$20	\$48,000	6' ON EDGE OR ROADS REMOVED, INLETS ADJUSTED, NARROWER LANES RE-STRIPPED
SIDEWALKS	2400	SF	\$10	\$24,000	
BIKE LANE	2400	SF	\$12	\$28,800	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	400	LF	\$230	\$92,000	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$214,300	
<b>TOTAL COST</b>				<b>\$214,300</b>	
<b>COST PER FOOT</b>				<b>\$1,071.50</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Bellaire Boulevard (cont'd)

### Bellaire Blvd East Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREET EDGE RECONSTRUCTION	400	LF	\$815	\$326,000	3 LANE STREET BASED ON 4.3M PER MILE
SIDEWALKS	2400	SF	\$10	\$24,000	
BIKE LANE	2400	SF	\$12	\$28,800	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	400	LF	\$230	\$92,000	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$492,300	
<b>TOTAL COST</b>				<b>\$492,300</b>	
<b>COST PER FOOT</b>				<b>\$2,461.50</b>	

### Bellaire West Streets / Streetscape (South Rice - Chimney Rock)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETSCAPE ELEMENTS	3064	LF	\$2,502	\$7,666,128	
PAVER INTERSECTIONS TYPICAL	7680	SF	\$18	\$138,240	1920 SF EACH SIDE
PAVER INTERSECTIONS PASEO	640	SF	\$18	\$11,200	320 SF EACH CROSSING
INTERSECTIONS W/O ART	0	EA	\$18,000	\$0	
INTERSECTIONS W/ ART	0	EA	\$40,000	\$0	
HARD COSTS TOTAL				\$7,815,568	
SOFT COSTS @20%				\$1,563,114	
<b>TOTAL COST</b>				<b>\$9,378,682</b>	

### Paseo Park West

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
PARK DEVELOPMENT	162500	SF	\$12	\$1,950,000	
BELLAIRE WATER GARDENS	1	LS	\$1,000,000	\$1,000,000	
MEDIAN BISSONNET TO CHIMNEY ROCK	1274	LF	\$383	\$487,942	BIO-RETENTION
ARTS AND ACTIVATORS	1	LS	\$250,000	\$250,000	
HARD COSTS TOTAL				\$3,687,942	
SOFT COSTS @20%				\$737,588	
<b>TOTAL COST</b>				<b>\$4,425,530</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

**Bellaire Middle Streets / Streetscape (South Rice - West Loop)**

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETSCAPE ELEMENTS	2594	LF	\$1,072	\$2,780,768	
PAVER INTERSECTIONS TYPICAL	59370	SF	\$18	\$1,068,660	1920 SF EACH SIDE
INTERSECTIONS W/O ART	6	EA	\$18,000	\$108,000	
INTERSECTIONS W/ ART	6	EA	\$40,000	\$240,000	
HARD COSTS TOTAL				\$4,197,428	
SOFT COSTS @20%				\$839,486	
<b>TOTAL COST</b>				<b>\$5,036,914</b>	

**Paseo Park Middle**

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
PARK DEVELOPMENT	207875	SF	\$12	\$2,494,500	
ART / ACTIVATORS	1	LS	\$300,000	\$300,000	
MEDIAN 1ST STREET TO WEST LOOP	7350	SF	\$8	\$58,800	
HARD COSTS TOTAL				\$2,853,300	
SOFT COSTS @20%				\$570,660	
<b>TOTAL COST</b>				<b>\$3,423,960</b>	

**Bellaire East Streets / Streetscape / Medians (West Loop - RR Tracks)**

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETSCAPE ELEMENTS	2594	LF	\$1,072	\$2,780,768	
PAVER INTERSECTIONS TYPICAL	30800	SF	\$18	\$554,400	RR TACKS, NEWCASTLE, AVE. B
MEDIAN LANDSCAPE	148160	SF	\$8	\$1,185,280	
INTERSECTIONS W/O ART	7	EA	\$18,000	\$126,000	
INTERSECTIONS W/ ART	7	EA	\$40,000	\$280,000	
HARD COSTS TOTAL				\$4,926,448	
SOFT COSTS @20%				\$985,290	
<b>TOTAL COST</b>				<b>\$5,911,738</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: South Rice Avenue

### South Rice Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
NEW STREET RECONSTRUCTION	400	LF	\$720	\$288,000	2 LANES - \$720 / LF
SIDEWALKS	2400	SF	\$10	\$24,000	
BIKE LANE	1600	SF	\$12	\$19,200	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	300	LF	\$240	\$72,000	75% OF STREET LENGTH
PERVIOUS PAVING PARALLEL PARKING	100	LF	\$140	\$14,000	25% OF STREET LENGTH
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$438,700	
TOTAL COST				\$438,700	
<b>COST PER FOOT</b>				<b>\$2,193.50</b>	

### South Rice - South - Streets / Streetscape (Bellaire Blvd - Cypress Ditch)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETSCAPE ELEMENTS	5598	LF	\$2,194	\$12,282,012	
PAVER INTERSECTIONS TYPICAL	11,680	SF	\$18	\$210,240	CITY GATEWAY / CYPRESS DITCH 200', PINE, EVERGREEN, ANDERSON
MEDIAN PLANTING	4638	LF	\$40	\$185,520	4' WIDE ROSES
INTERSECTIONS W/O ART	26	EA	\$18,000	\$468,000	
INTERSECTIONS W/ ART	25	EA	\$40,000	\$1,000,000	
HARD COSTS TOTAL				\$14,145,772	
SOFT COSTS @20%				\$2,829,154	
<b>TOTAL COST</b>				<b>\$16,974,926</b>	

### South Rice - North - Streets / Streetscape (Elm- Bellaire Blvd)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETSCAPE ELEMENTS	2563	LF	\$2,194	\$5,623,222	
PAVER INTERSECTIONS TYPICAL	2,640	SF	\$18	\$47,520	ELM
MEDIAN PLANTING	2143	LF	\$40	\$85,720	4' WIDE ROSES
INTERSECTIONS W/O ART	9	EA	\$18,000	\$162,000	
INTERSECTIONS W/ ART	9	EA	\$40,000	\$360,000	
HARD COSTS TOTAL				\$6,278,462	
SOFT COSTS @20%				\$1,255,692	
<b>TOTAL COST</b>				<b>\$7,534,154</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Chimney Rock Road

Chimney Rock Street / Streetscape Elements (200' prototype)					
ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
NEW STREET RECONSTRUCTION	400	LF	\$720	\$288,000	2 LANES - \$720 / LF
SIDEWALKS	2400	SF	\$10	\$24,000	
BIKE LANE	1600	SF	\$12	\$19,200	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	10	EA	\$450	\$4,500	
PLANTING AND IRRIGATION	2400	SF	\$3	\$7,200	
BIO-RETENTION GARDEN	400	LF	\$240	\$96,000	
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$448,700	
<b>TOTAL COST</b>				<b>\$448,700</b>	
<b>COST PER FOOT</b>				<b>\$2,243.50</b>	

Chimney Rock - South - Streets / Streetscape (Evergreen - Cypress Ditch)					
ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETScape ELEMENTS	3069	LF	\$2,194	\$6,733,386	
PAVER INTERSECTIONS TYPICAL	5,400	SF	\$18	\$97,200	EVERGREEN
MEDIAN PLANTING	2589	LF	\$40	\$103,560	4' WIDE ROSES
INTERSECTIONS W/O ART	3	EA	\$18,000	\$54,000	
INTERSECTIONS W/ ART	3	EA	\$40,000	\$120,000	
HARD COSTS TOTAL				\$7,108,146	
SOFT COSTS @20%				\$1,421,629	
<b>TOTAL COST</b>				<b>\$8,529,775</b>	

Chimney Rock - North - Streets / Streetscape (Dashwood - Bissonnet)					
ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETScape ELEMENTS	1457	LF	\$2,194	\$3,196,658	
MEDIAN PLANTING	1277	LF	\$40	\$51,080	4' WIDE ROSES
INTERSECTIONS W/O ART	0	EA	\$18,000	\$0	
INTERSECTIONS W/ ART	0	EA	\$40,000	\$0	
HARD COSTS TOTAL				\$3,247,738	
SOFT COSTS @20%				\$649,548	
<b>TOTAL COST</b>				<b>\$3,897,286</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Bissonnet Street

### Bissonnet Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
NEW STREET RECONSTRUCTION	400	LF	\$720	\$288,000	2 LANES = \$720 / LF
SIDEWALKS	5200	SF	\$15	\$78,000	PAVERS
BIKE LANE	0	SF	\$12	\$0	ON STREET
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
TREES	16	EA	\$450	\$7,200	25' OC
PLANTING AND IRRIGATION	0	SF	\$3	\$0	
INFILTRATION PLANTERS	16	LF	\$3,000	\$48,000	25' OC
BELLAIRE SIGNAGE	1	LS	\$5,000	\$5,000	
HARD COSTS TOTAL				\$431,000	
<b>TOTAL COST</b>				<b>\$431,000</b>	
<b>COST PER FOOT</b>				<b>\$2,155.00</b>	

### Bissonnet - Middle - Streets / Streetscape (Chimney Rock - West Loop)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETScape ELEMENTS	5581	LF	\$2,155	\$12,027,055	
INTERSECTIONS W/O ART	6	EA	\$18,000	\$108,000	
INTERSECTIONS W/ ART	6	EA	\$40,000	\$240,000	
HARD COSTS TOTAL				\$12,375,055	
SOFT COSTS @20%				\$2,475,011	
<b>TOTAL COST</b>				<b>\$14,850,066</b>	

### Bissonnet - East - Streets / Streetscape (West Loop - RR Tracks)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETScape ELEMENTS	4492	LF	\$2,155	\$9,680,260	
PAVERS IN STREET AT CITY GATEWAY	8800	SF	\$18	\$158,400	200' LONG X 44' WIDE
INTERSECTIONS W/O ART	8	EA	\$18,000	\$144,000	
INTERSECTIONS W/ ART	8	EA	\$40,000	\$320,000	
HARD COSTS TOTAL				\$10,302,660	
SOFT COSTS @20%				\$2,060,532	
<b>TOTAL COST</b>				<b>\$12,363,192</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

**Bissonnet - South - Streets / Streetscape (Alder - Renwick)**

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREETS - STREETSCAPE ELEMENTS	1510	LF	\$2.155	\$3,254,050	
INTERSECTIONS W/O ART	1	EA	\$18,000	\$18,000	
INTERSECTIONS W/ ART	1	EA	\$40,000	\$40,000	
<b>HARD COSTS TOTAL</b>				<b>\$3,312,050</b>	
SOFT COSTS @20%				\$662,410	
<b>TOTAL COST</b>				<b>\$3,974,460</b>	

## Initiative: West Loop Motor Courts

West Loop Motor Court West						
ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS	
REMOVE EXISTING CURB AND GUTTER	200	LF	\$5	\$1,000		
REMOVE EXIST PAVING / LANDSCAPE	2700	SF	\$3	\$8,100		
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500		
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500		
NEW CURB AND GUTTER	98	LF	\$18	\$1,764		
MOTOR COURT PLAZA PAVERS	4600	SF	\$18	\$80,500		
SIDEWALK CURB RAMPS	2	EA	\$1,000	\$2,000		
POCKET PARK	800	SF	\$15	\$12,000	20' X 40'	
COURT WALL AND GATE	120	LF	\$200	\$24,000	20' X 40'	
PLANTING AND IRRIGATION	5055	SF	\$8	\$40,440		
BELLAIRE SIGNAGE	1	LS	\$3,000	\$3,000		
HARD COSTS TOTAL				\$165,704		
SOFT COSTS @20%				\$33,141		
<b>TOTAL COST EACH</b>				<b>\$198,845</b>		
NUMBER OF COURTS	7					
<b>TOTAL PROJECT COST</b>				<b>\$1,391,914</b>		

<b>West Loop Motor Court East</b>						
<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>	
REMOVE EXISTING CURB AND GUTTER	200	LF	\$5	\$1,000		
REMOVE EXIST PAVING / LANDSCAPE	2700	SF	\$3	\$8,100		
REMOVE / RELOCATE EXIST SIGNAGE	1	LS	\$500	\$500		
ADJUST UTILITY BOXES TO GRADE	1	LS	\$1,500	\$1,500		
NEW CURB AND GUTTER	98	LF	\$18	\$1,764		
MOTOR COURT PLAZA PAVERS	4600	SF	\$18	\$80,500		
SIDEWALK CURB RAMPS	2	EA	\$1,000	\$2,000		
POCKET PARK	800	SF	\$15	\$12,000	20' X 40'	
COURT WALL AND GATE	120	LF	\$200	\$24,000	20' X 40'	
PLANTING AND IRRIGATION	5055	SF	\$8	\$40,440		
BELLAIRE SIGNAGE	1	LS	\$3,000	\$3,000		
<b>HARD COSTS TOTAL</b>				<b>\$165,704</b>		
<b>SOFT COSTS @20%</b>				<b>\$33,141</b>		
<b>TOTAL COST EACH</b>				<b>\$198,845</b>		
NUMBER OF COURTS	8					
<b>TOTAL PROJECT COST</b>				<b>\$1,590,758</b>		

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Coastal Prairie Park

South					
ITEM	QTY	UNIT	\$/UNIT	UNIT TOTAL	REMARKS
<i>EARTHWORK</i>					
DEMOLITION & GRADING	2,400,000	SF	\$0.50	\$1,200,000	BRAYS TO BELLAIRE
<i>HARDSCAPE</i>					
6' CONCRETE WALK	7,500	LF	\$60.00	\$450,000	BRAYS TO BELLAIRE; 6' WIDE
10' BIKE LANE	7,500	LF	\$100.00	\$750,000	BRAYS TO BELLAIRE; 10' WIDE
N'HOOD CONNECTIONS	3	EA	\$100,000.00	\$300,000	BRAYS TO BELLAIRE; 150 LF AVG. +RR X-ING
PAINT/MARKINGS/SIGNAGE	1	LS	\$30,000.00	\$30,000	BRAYS TO BELLAIRE
<i>PLANTING &amp; IRRIGATION</i>					
SEED - NATIVE TRAIL MIX	1,800,000	SF	\$0.44	\$792,000	BRAYS TO BELLAIRE; 1/3 OF AREA
SEED - COMMON BERMUDA	200,000	SF	\$0.06	\$12,000	BRAYS TO BELLAIRE; ALONG TRAILS
<i>DRAINAGE</i>					
ALLOWANCE	1	LS	\$50,000.00	\$50,000	BRAYS TO BELLAIRE
<i>LIGHTING &amp; SITE FURNISHINGS</i>					
SITE FURNISHINGS	1	LS	\$30,000.00	\$30,000	
PED LIGHTING	100	EA	\$5,500.00	\$550,000	75' OC
HARD COSTS TOTAL				\$4,164,000	
SOFT COSTS @20%				\$832,800	
<b>TOTAL COST</b>				<b>\$4,996,800</b>	

**North**

<i>ITEM</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>UNIT TOTAL</i>	<i>REMARKS</i>
<i>EARTHWORK</i>					
DEMOLITION & GRADING	723,000	SF	\$0.50	\$361,500	BELLAIRE TO WESTPARK
<i>HARDSCAPE</i>					
6' CONCRETE WALK	6,500	LF	\$60.00	\$390,000	BRAYS TO BELLAIRE; 6' WIDE
10' BIKE LANE	6,500	LF	\$100.00	\$650,000	BRAYS TO BELLAIRE; 10' WIDE
N'HOOD CONNECTIONS	2	EA	\$100,000.00	\$200,000	BELLAIRE TO WESTPARK; 150 LF AVG. +RR X-ING
PAINT/MARKINGS/SIGNAGE	1	LS	\$20,000.00	\$20,000	BELLAIRE TO WESTPARK
<i>PLANTING &amp; IRRIGATION</i>					
SEED - NATIVE TRAIL MIX	530,000	SF	\$0.44	\$233,200	BELLAIRE TO WESTPARK
SEED - COMMON BERMUDA	50,000	SF	\$0.06	\$3,000	BELLAIRE TO WESTPARK; ALONG TRAILS
<i>DRAINAGE</i>					
ALLOWANCE	1	LS	\$25,000.00	\$25,000	BELLAIRE TO WESTPARK
<i>SITE FURNISHINGS</i>					
SITE FURNISHINGS	1	LS	\$20,000.00	\$20,000	
PEDESTRIAN LIGHTING	65		5500	\$357,500	
HARD COSTS TOTAL				\$2,260,200	
SOFT COSTS @20%				\$452,040	
<b>TOTAL COST</b>				<b>\$2,712,240</b>	

## Initiative: North Livable Center

### Extend West Lop Box Culvert

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
9' X 7' R C BOX CULVERT	840	LF	\$1,050	\$882,000	BASED ON REYTECH BID, BEGIN AN GLENMONT
DEMO SURFACE	10080	SF	\$10	\$100,800	12' WIDE CORRIDOR
RESTORE SURFACE CONDITION	10080	SF	\$20	\$201,600	
MISC	10080	SF	\$10	\$100,800	
HARD COSTS TOTAL				\$1,285,200	
SOFT COSTS @20%				\$257,040	
<b>TOTAL COST</b>				<b>\$1,542,240</b>	

### Extend Anderson Street (Fournace to West Park)

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
STREET / STREETScape ELEMENTS	3438	LF	\$1,474	\$5,067,612	200
HARD COSTS TOTAL				\$5,067,612	
SOFT COSTS @20%				\$1,013,522	
<b>TOTAL COST</b>				<b>\$6,081,134</b>	

## Initiative: North Livable Center (cont'd)

### Coastal Prairie Park

ITEM	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
<i>EARTHWORK</i>				
DEMOLITION & GRADING	SF	\$1.00	\$160,000	
<i>HARDSCAPE</i>				
6' CONCRETE WALK	LF	\$60.00	\$48,000	BRAYS TO BELLAIRE; 6' WIDE
10' BIKE LANE	LF	\$100.00	\$80,000	BRAYS TO BELLAIRE; 10' WIDE
PAINT/MARKINGS/SIGNAGE	LS	\$20,000.00	\$20,000	BELLAIRE TO WESTPARK
<i>PLANTING &amp; IRRIGATION</i>				
SEED - NATIVE TRAIL MIX	SF	\$0.44	\$63,360	BELLAIRE TO WESTPARK
SEED - COMMON BERMUDA	SF	\$0.06	\$960	BELLAIRE TO WESTPARK; ALONG TRAILS
<i>DRAINAGE</i>				
ALLOWANCE	LS	\$25,000.00	\$25,000	BELLAIRE TO WESTPARK
<i>SITE FURNISHINGS</i>				
SITE FURNISHINGS	LS	\$20,000.00	\$20,000	
PEDESTRIAN LIGHTING		5500	\$77,000	

HARD COSTS TOTAL	\$494,320
SOFT COSTS @20%	\$98,864
<b>TOTAL COST</b>	<b>\$593,184</b>

### BUILD NORTH PARK

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
PARK DEVELOPMENT	87100	SF	\$20	\$1,742,000	
<i>HARD COSTS TOTAL</i>					
				\$1,742,000	
<i>SOFT COSTS @20%</i>					
				\$348,400	
<b>TOTAL COST</b>					
				<b>\$2,090,400</b>	



IMAGE COURTESY OF BUTLER PLANNING

## Initiative: Urban Village Downtown

### Complete Street / Streetscape Elements (200' prototype)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
NEW STREET RECONSTRUCTION	200	LF	\$690	\$138,000	3 LANES
PAVER SIDEWALKS	2200	SF	\$10	\$22,000	
DRIVEWAY REPLACEMENTS	480	SF	\$10	\$4,800	
PERVIOUS PAVING PARALLEL PARKING	3200	SF	\$18	\$57,600	
SUB-GRADE DETENTION CELLS	200	LF	\$240	\$48,000	10' WIDE 3' DEEP
TREES	12	EA	\$750	\$9,000	
PLANTING AND IRRIGATION	240	SF	\$8	\$1,920	
LIGHTING BETTERMENTS	18	LS	\$5,500	\$99,000	
BELLAIRE SIGNAGE / FURNISHINGS	1	LS	\$10,000	\$10,000	
HARD COSTS TOTAL				\$390,320	
<b>TOTAL COST</b>				<b>\$390,320</b>	
<b>COST PER FOOT</b>				<b>\$1,951.60</b>	

### South Rice - South - Streets / Streetscape (Bellaire Blvd - Cypress Ditch)

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
STREETS - STREETScape ELEMENTS	5598	LF	\$2,194	\$12,282,012	
PAVER INTERSECTIONS TYPICAL	11,680	SF	\$18	\$210,240	
MEDIAN PLANTING	4638	LF	\$40	\$185,520	
INTERSECTIONS W/O ART	26	EA	\$18,000	\$468,000	
INTERSECTIONS W/ ART	25	EA	\$40,000	\$1,000,000	
HARD COSTS TOTAL				\$14,145,772	
SOFT COSTS @20%				\$2,829,154	
<b>TOTAL COST</b>				<b>\$16,974,926</b>	

THIS ESTIMATE INCLUDES RECONSTRUCTION OF THE STREET AND UTILITIES AT A COST OF \$4.3M PER MILE FOR A 3-LANE SECTION AND \$3.8M PER MILE FOR A 2 LANE SECTION. SIDEWALKS, PARKWAY GREEN SPACES, DEDICATED BIKE LANES, BIO-RETENTION GARDENS CAN BE IMPLEMENTED WITHOUT RE-CONSTRUCTING THE STREET DRAMATICALLY LOWERING COSTS

## Initiative: Urban Village Downtown (cont'd)

### Step Two - Complete Streets - Spruce, Cedar, Ferris and 5th (North of Bellaire Blvd)

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
SPRUCE - STREETS - STREETSCAPE ELEMENTS	1573	LF	\$2.194	\$3,451.162	
CEDAR - STREETS - STREETSCAPE ELEMENTS	1567	LF	\$2.194	\$3,437.998	
FERRIS - STREETS - STREETSCAPE ELEMENTS	1077	LF	\$2.194	\$2,362.938	
5TH STREET - STREETS - STREETSCAPE ELEMENTS	966	LF	\$2.194	\$2,119,404	
INTERSECTIONS W/O ART	16	EA	\$18,000	\$288,000	
INTERSECTIONS W/ ART	16	EA	\$40,000	\$640,000	
HARD COSTS TOTAL				\$12,299,502	
SOFT COSTS @20%				\$2,459,900	
<b>TOTAL COST</b>				<b>\$14,759,402</b>	

### Step Two - Complete Streets - Spruce, Cedar, Ferris and 5th (North of Bellaire Blvd)

<i>ITEM</i>	<i>QTY</i>	<i>UNIT</i>	<i>\$/UNIT</i>	<i>SUB-TOTAL</i>	<i>REMARKS</i>
SPRUCE - STREETS - STREETSCAPE ELEMENTS	1573	LF	\$2.194	\$3,451.162	
CEDAR - STREETS - STREETSCAPE ELEMENTS	1567	LF	\$2.194	\$3,437.998	
FERRIS - STREETS - STREETSCAPE ELEMENTS	1077	LF	\$2.194	\$2,362.938	
5TH STREET - STREETS - STREETSCAPE ELEMENTS	966	LF	\$2.194	\$2,119,404	
INTERSECTIONS W/O ART	16	EA	\$18,000	\$288,000	
INTERSECTIONS W/ ART	16	EA	\$40,000	\$640,000	
HARD COSTS TOTAL				\$12,299,502	
SOFT COSTS @20%				\$2,459,900	
<b>TOTAL COST</b>				<b>\$14,759,402</b>	

## Initiative: Paseo Park: Bellaire Boulevard Middle

### Step x - Paseo Park, Bellaire Blvd; First St. to South Rice Intersection 100' Width Typical

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
DG PAVING, 3" DEPTH X 20' WIDTH	1	LF	\$100	\$100	20SF X \$5.00 SF
STEEL EDGE	1	LF	\$10	\$10	3/16" STEEL EDGE @ \$5.00 LF
GENERAL LANDSCAPING	1	LF	\$160	\$160	PLANTING, SOIL IMPRVTS, IRRIGATION
HARD COSTS TOTAL				\$270	
SOFT COSTS @20%				\$54	
<b>TOTAL PROJECT COST</b>				<b>\$324</b>	

### Step x - Bellaire Blvd, Intersections at Paseo Park

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
BELLAIRE CONCRETE PAVER	15000	SF	\$17	\$255,000	PAVER ON VEHICULAR CONCRETE
CROSSWALK STRIPING	180	LF	\$6	\$1,080	
HARD COSTS TOTAL				\$256,080	
SOFT COSTS @20%				\$51,216	
<b>TOTAL PROJECT COST</b>				<b>\$307,296</b>	

### Step x - Objects, Art, Features

ITEM	QTY	UNIT	\$/UNIT	SUB-TOTAL	REMARKS
ALLOWANCES	3	LS	\$7,500	\$22,500	
NEWCASTLE	12100	LF	\$500	\$6,050,000	
EVERGREEN	10100	LF	\$500	\$5,050,000	
FERRIS	8450	LF	\$500	\$4,225,000	
AVE B	10800	LF	\$500	\$5,400,000	
HARD COSTS TOTAL				\$9,625,000	
SOFT COSTS @20%				\$1,925,000	
<b>TOTAL PROJECT COST</b>				<b>\$11,550,000</b>	



# First Steps

**1** BUILD NEWCASTLE STREET LIGHTING AND URBAN ELEMENTS DETAILED DESIGN



\$185,000

**2** BUILD ONE BLOCK NEIGHBORHOOD STREET PROTOTYPE AND URBAN ELEMENTS DETAILED DESIGN



\$756,500

**3** BUILD CITY GATEWAY BELLAIRE BOULEVARD AT RAILROAD TRACKS



\$852,720

**4** BUILD CITY GATEWAY BELLAIRE BOULEVARD AT WEST LOOP



\$1,674,000

**5** BUILD COASTAL PRAIRIE PARK SOUTH AND STORMWATER DETENTION



\$5,000,000

**6** BUILD BELLAIRE BOULEVARD AND PASEO PARK



\$13,804,212

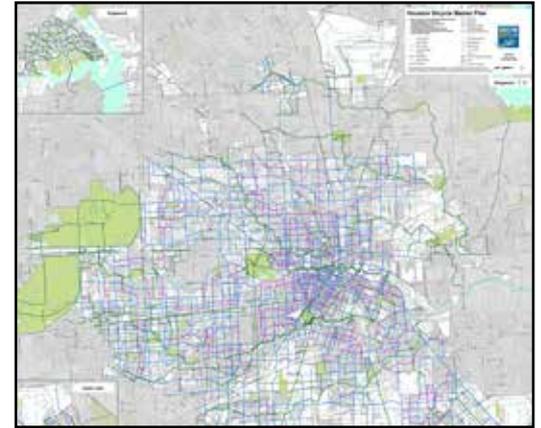




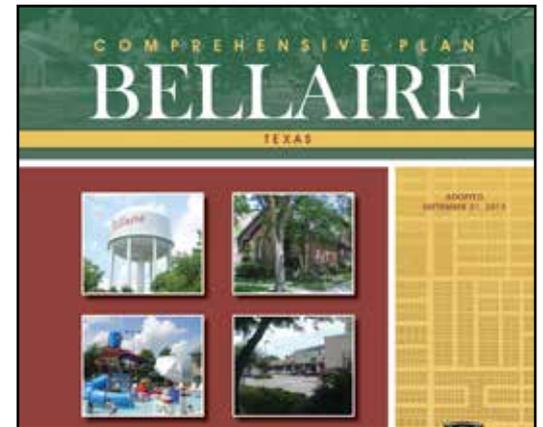
## On-Going/Parallel Efforts

In preparing the Conceptual Master Plan, the planning team reviewed and incorporated many recently completed studies and City plans, including the following:

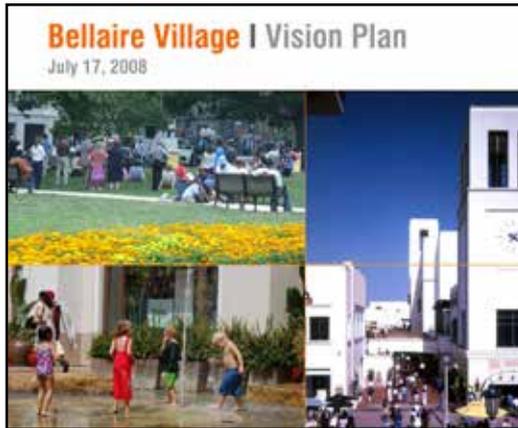
- » City Of Houston Bicycle Master Plan, 2016
- » City Of Bellaire Municipal Buildings Plan, 2008
- » City Of Bellaire Parks Master Plan 2015-2025
- » Evergreen Park Master Plan, 2016
- » City Of Bellaire Comprehensive Plan, 2015
- » City Of Bellaire, Economic Development Workshop, 2012
- » City Of Bellaire, Framework For Desirable Growth, 2005



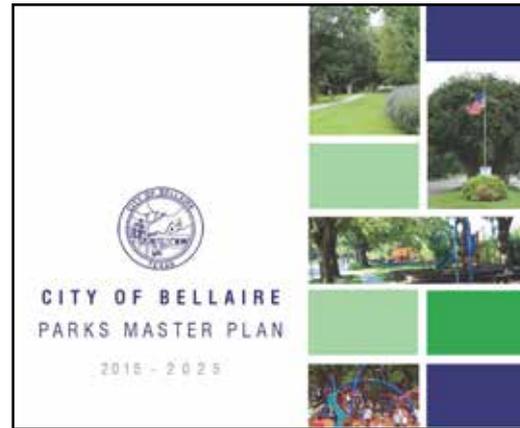
CITY OF HOUSTON BICYCLE MASTER PLAN, 2016



CITY OF BELLAIRE COMPREHENSIVE PLAN, 2015



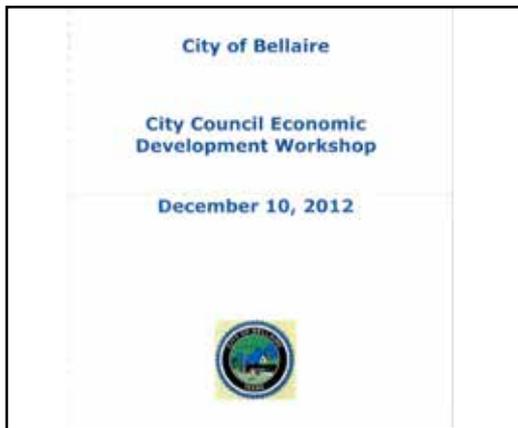
CITY OF BELLAIRE MUNICIPAL BUILDINGS PLAN, 2008



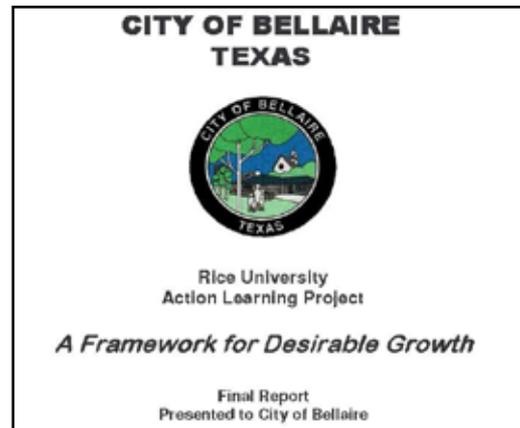
CITY OF BELLAIRE PARKS MASTER PLAN 2015-2025



EVERGREEN PARK MASTER PLAN, 2016



CITY OF BELLAIRE, ECONOMIC DEVELOPMENT WORKSHOP, 2012



CITY OF BELLAIRE, FRAMEWORK FOR DESIRABLE GROWTH, 2005







## ACKNOWLEDGMENTS:

In addition to the 1,021 residents who responded to the Citizens for a Beautiful Bellaire's Citizen's Survey and the many who participated in the nine (9) workshops and presentations conducted during the planning and design process as well as members of City of Bellaire Boards and Commissions we would like to recognize the contributions of the following individuals to this plan:

### CITY COUNCIL

City of Bellaire Mayor

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City of Bellaire Council Members

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Gus Pappas

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Bei Zhang

Landscape Designer

Dongwan Xie

Landscape Designer

Yuening Pu



terrain

landscape architecture - planning - urbanism

San Francisco, California

Houston, Texas