CITY OF FORT LAUDERDALE

REIMAGINING BREAKERS AVENUE: CONCEPT DESIGN SUMMARY

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Dover, Kohl & Partners

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Project Overview

Breakers Avenue lies at the center of the North Beach district in Fort Lauderdale Beach, FL. The North Beach district is blossoming and has the opportunity to become a more desirable destination for tourists and locals alike. Breakers Avenue is situated adjacent to A1A, stretching from Riomar St. to Vistamar St., behind the hotels and restaurants that front the beach. New business and development is encouraging Breakers Avenue to become a more important corridor for pedestrian and vehicular traffic. With the reinvigoration and personalization of Breakers Avenue's street design, it can not only increase the desirability of the North Beach District, but also return breath life back into its artistic community. The new design of Breakers Avenue will keep tourism, history, and the arts in mind to design a street that improves the existing transportation and infrastructure. The goal of the project is to make Breakers Avenue comfortable, connected, safe, and a memorable destination experience. Breakers Avenue, will become a complete street that reduces the excess pavement, formalizes the seating and gathering spaces, and creates event spaces with the use of street trees, varied seating options, a unified material design, and a pedestrian friendly approach.

Existing Studies

Crash Data

Crash data obtained from SignalFour Analytics for a five-year period from 2014-2018 indicates that 15 crashes occurred in the Breaker Avenue corridor (Appendix, page 11).

Below are highlights of key characteristics discernible from crash data analysis:

- None of the crashes involved pedestrian or bicyclist. Further, two out of 15 crashes (approximately 13% of total crashes) were injury crashes. There have been no fatal crashes in the corridor.
- One crash out of 15 crashes involved driving under influence. Further, majority of the crashes (13 crashes, which is approximately 87%) occurred during daytime and only two (approximately 13%) occurred during night time. One of the two crashes that occurred during night time was alcohol related and involved an injury.
- Approximately 40% crashes (6 crashes) resulted when vehicle backed out.. Three crashes (approximately 20%) occurred at intersections while other 13 crashes (approximately 20%) occurred in the corridor.

Albeit, few injury (approximately 13%) crashes and no fatalities have occurred in the Breakers Avenue corridor, the frequency of crashes has increased from two crashes in 2014 to five crashes in both 2017 and 2018.

Relevant Planning Documents & Studies

The project team reviewed the following documents and studies completed in the past five years to develop a better understand planning context and stakeholders' vision for Breakers Avenue.

- Breakers District Streetscape, TBG, June 2016
- Central Beach Master Plan, North Beach Village Streetscape Design Review, January 2017
- Botanizing the Asphalt of North Beach Village: Integrating Art and Resilient Design, School of Architecture, FAU; City of Fort Lauderdale, April 2017
- Citywide Parking Study, City of Fort Lauderdale, July 2018
- Central Beach Master Plan Update, Department of Sustainable Development, City of Fort Lauderdale, October 2018
- Antioch Avenue Design (Rendering), Florida Atlantic University
- Terramara Drive Improvements (Rendering)

Design Concepts

Breakers Avenue was conceptualized in a variety ways that balanced the desire for parking, public gathering space, future flexibility, and the pedestrian experience. See diagrams in Appendix, pages 16-18.

- Existing Condition - Breakers today is a two-way street that is divided down the center by a 20 ft wide diagonal parking island. Measuring 48 ft from sidewalk edge to sidewalk edge, the street has excessive pavement at the intersections and longer-than-neccesary crosswalks.
- Concept 1 was imagined as a two-way street with on-street parallel parking, street trees, and wider sidewalks. Concept 1A features a curbed design that accommodates more parking, but is less flexible and inviting for pedestrians and potential future public gatherings. Concept 1B is similar to 1A with the difference lying in its curbless design. While the curbless design accommodates less parking than the curbed design and could create conflicts between communal space, it allows for some parking, it can support more shade trees and bioswales, and it a creates seamless, flexible pedestrian experience.
- Concept 2 is centered around a central Rambla design. Breakers Ave. would still be a two-way street, but alternatively have very-limited parking, a center alley of street trees that surround a large central area for public gathering, furnishing, dining, and art. This concept has room creates shade, has room for bioswales, and encourages the use of the central Rambla.
- Concept 3 is a one-way street with an asymmetrical Rambla on the east side. This design contains a low curb with the opportunity to go curbless, three rows of street trees and bioswales, and on-street parking on one side. It maintains a large area for pedestrian gathering space and further divides pedestrian and vehicular traffic.
- Other proposed concepts integrated Concept 1a and 2 to employ the Rambla design only from Windamar to Auramar Street.

Proposed Design

The preferred option, as selected by the community and stakeholders, is Option 1b. The curbless design allows Breakers Avenue to exceed its potential as it accommodates pedestrian and vehicular traffic, but can easily be transformed into an event space.

AutoTurn Analysis

The project team used Transoft Solution's AutoTurn software application to conduct vehicle swept path analysis for evaluating adequacy of turning radii at the intersections to accommodate a 95-foot mid-mount aerial fire truck engine, which is the largest fire truck the City operates. Appendix pages 12-15 includes plan sheets showing vehicle swept path at each intersection along Breakers Avenue. This analysis indicated that proposed design concept accommodated turn radius to allow easy maneuverability for City's fire trucks. The analysis was reviewed and approved by City staff and fire chief during April 18, 2019 meeting. While the turning radii was adequate, the project team acknowledge that the pavement width (20 feet) would require motorist to yield to fire trucks.

On-Street Parking

The proposed on-street parking is less than Option 1A, but still maintains 22 public parallel parking spaces and 10 private head-in parking spaces. This results in a net loss of 32 public parking spaces.

Additional parking solutions can relieve the pressure of on-street and instead promote the usage of existing garages or vacant surface parking lots. The parking division has agreed to review the proposed alternatives to mitigate the loss of parking. The alternatives include:

1. Short and Long-Term Pricing Strategies: Changes in policy that work to rebalance the demand and supply of parking by lowering the cost of a parking in areas with excess supply and increase cost in areas with excess demand.
2. Public-Private Partnership: A negotiation between the owners of private garages with excess parking and the City of Fort Lauderdale to reserve a pre-defined number of parking spaces in those garages to be shared with or leased by the city.
3. Redevelopment with Built-In Parking: A longer-term solution that encourages or requires the inclusion of public parking as a part of future redevelopment in large opportunity sites.
4. Temporary Parking: A short-term solution whereby the temporary fire station on Vistamar provides a new public parking area; the initial site plan already includes a surface parking lot outside of the fire-station parking area that can accommodate up to 79 cars.

Drainage

The drainage options balance the factors of maintenance, cost, and stormwater capacity to ensure the longevity and safety of Breakers Avenue.

The three design concepts considered to manage these concerns were a trench drain, a concrete valley gutter, and a valley gutter with pavers. Both valley gutter options assume a french drain below the roadway, while the trench drain considers a system of connected bioswales for drainage which can also connect to an outflow if necessary.

The proposed design uses a french drain system underneath the roadway with injection wells to make it an independent drainage system. The design also specifies valley gutters on both roadway edges built with traditional rectangular pavers, This is a cost-effective option that is easy to construct.

Materials

Material considerations take into account durability, use, cost, and aesthetic to create an unified overall vision of an appealing public space that safely moves pedestrian and vehicular traffic.

The streetscape aesthetics were divided into three options: contemporary, transitional, and traditional. Among all the options, contemporary was preferred by the residents and is the basis for the material choices. The roadway is recommended to be made out of three tones of tumbled concrete cobble pavers; the crosswalks and valley gutter out of rectangular concrete pavers; and the roadway edges out of tactile pavers. Providing a textural contrast to the roadway, the sidewalk will be made of out three tones of tinted, poured-in-place concrete slabs. Colors for both the street and the sidewalk will be three contrasting tones of grey. Rectangular or square pavers can be used as a more economical alternative to the poured concrete and the tumbled cobble pavers. More detail is provided in Appendix pages 34-35.

Landscape

The landscaping will consist of 58 new trees and planting areas, not counting the potential future Bonnet House Plaza. Recommended street trees include Mahogany, Gumbo Limbo, Wild Tamarind, and Live Oak, all of which are native Florida species of varying size that are all salt-water tolerant and provide ample shade. Gumbo Limbos and Live Oaks would require more involved pruning to ensure proper proportions as the trees grow. Planting areas surrounding the trees contain local grasses, shrubs, and flowers and are designed with a low concrete curb and at least two drainage cuts to allow water to filter through them during rain events.

Proposed Design

Street Furnishings

Street furnishings are recommended to enhance the pedestrian experience, adding life and comfort to the sidewalk, and making Breakers a destination for visitors and locals to safely gather.

Seating options include street benches made of wood and concrete, durable enough to last and serving as a place where pedestrians can sit and rest. Benches are oriented toward views of people walking by and towards each other to encourage interactions between people. Concrete and retractable steel bollards line portions of the street that are not protected by vegetation. Bollards are crash-resistant and are an attractive and non-intrusive alternative to other barriers that harden the division between pedestrian and motorized traffic. Breakers Ave. will become an after-dark destination with contemporary LED Street Lighting. LED lighting is a sustainable and energy efficient option. Better street lighting is proposed to ensure safety and improve activity after-dark.

Other design components include festival/string lighting, interactive elements, public art, public fountains, shade structures, pedestrian and vehicular lighting, community Wi-Fi, EV charging stations, and pedestrian way finding signage. Interactive elements and public art add a personalization and signature to the street that creates a sense of place. Wayfinding signage is an important element of safety and allows tourists to feel safe and in control in an unfamiliar space.

Renderings

Project renderings, featured in the Appendix, pages 24-26, demonstrate the realized concept for Breakers Avenue from a ground-level view.

- Rendering 1 depicts the enhancement of the walking and outdoor dining experience on Breakers Ave. The new multi-colored sidewalk is shaded and blends seamlessly into the street. It is surrounded by planted ares and places to sit. The sidewalk is sheltered by the vertical bollards that further ensure the safety of the pedestrian experience.
- Rendering 2 looks out onto the street, now paved and shaded. The brightly-colored public art on the facade of the adjacent building reinforce the visual cue that Breakers Avenue is indeed in the Arts District of Fort Lauderdale. Also feature is the on-street outdoor dining option and the opportunity for multi-modal transit with bicyclists and bike racks street side.
- Rendering 3 offers a view of the intersection of Breakers and Belmar Street. The change in color from the sweeping gray gradient of pavers on the rests of the street to the traditional striped safely indicates a pedestrian crossing to motorists. The circular bollards on each street corner provide an additional layer of protection for pedestrians from vehicular traffic

Cost Estimates

The Breakers Avenue proposed streetscape design was priced out in its full scope, as well as two reduced cost options, as described in the summary table below.

The Proposed Design Option uses the originally intended material selections and encompasses the full scope of the project. Cost Reduction Option 1 fulfills the project's intended extent, but reduces overall project costs by substituting the tinted concrete slabs in the sidewalks for pavers of the same color and by swapping out the concrete cobble pavers on the street for rectangular pavers that are less costly to install. Cost Reduction Option 2 reduces the extent of the paving pattern design to each intersection and the central three blocks of Breakers Avenue, centered on Terramar Street and extending one and a half blocks north and south. For this portion of the corridor, the original materials would be used, with the remainder of the street constructed in asphalt and concrete.

The following discussion summarizes T.Y. Lin International's (TYLI) team's approach to develop planning level construction cost estimate for the Breakers Avenue project. The project team used a combination of unit costs for various pay items or line items based on Florida Department of Transportation's (FDOT) Item Average Unit Cost, Broward County's construction bids for roadway projects received in 2018/2019 through the County's General Engineering Consultant (GEC) contract and as built construction costs from the Clematis Street Streetscape project for the City of West Palm Beach completed in early 2019. The quantities for various pay items were based on conceptual design plans. Both the quantities and unit costs were placed in a cost stream format to compute construction costs for Breakers Avenue improvements.

Conservative cost estimates were included for landscaping and undergrounding overhead utilities. Cost estimates for water and sewer infrastructure improvements in the Breakers Avenue corridor provided by the City's Public Works Department were incorporated 'as is.'

To account for uncertainties and limitations in developing cost estimates given the conceptual level of design, the project team added design contingency (20%). As such for the purpose of this study water and sewer improvement was considered as a separate scope. A detailed cost breakdown, and supporting images are included in the Appendix, pages 37-41.

Cost Estimates	Proposed Design	Cost Optimization 1	Cost Optimization 2
Street Design & Construction	$8,719,491	$5,570,982	$6,694,839
Undergrounding Utilities	$750,000	$750,000	$750,000
Total Project Cost	$9,469,491	$6,320,982	$7,714,839
Current Available Funding	$2,979,417	$2,979,417	$2,979,417
Funding Gap	$6,490,074	$3,341,565	$4,735,422

Community Outreach

Dover, Kohl, & Partners hosted a variety of community outreach meetings to communicate the design process to and receive feedback from all stakeholders in order to better understand their needs and wants. All information public information was made available on a dedicated city web page for the project from beginning to end. Project meetings and times included:

- Kick-Off Meeting - January 9, 2019
- City Departments & Owners Meeting 1 - February 6, 2019
- Public Open House 1 - March 20, 2019
- City Departments & Owners Meeting 2 - April 18, 2019
- Public Open House 2 - May 8, 2019
- Owners Meeting 3 - May 30, 2019

The design was presented to the City and Stakeholders in three separate meetings, all of which were sensitive to the City's expectations and design considerations. These meetings delineated precedents, goals, and project schedules, while receiving feedback through open discussion and follow-up correspondence with city staff and owners. During these meetings, the firm asked specific questions concerning usage, future development, parking needs, maintenance, and overall design.

Dover, Kohl, & Partners also hosted two open houses where the public was invited to see draft work, give feedback through interactive exhibits, and voice their opinions and concerns. The first open house introduced the public to the initial design concepts and let them vote on their preferred concept and aesthetic preferences. The second open house showcased the full proposed design and initial cost estimates and welcomed input from residents for any other considerations or elements they wanted to see incorporated. In both meetings, Victor Dover and his team walked the the public through the street design concepts, pros, cons, and opportunities for future plans.

The team also assembled and released an online survey, which was live from April 26th to May 11th, to identify the community's priorities for the corridor. It asked respondents to rank design elements under the three plan goals: 'Community Identity & Placemaking', 'Health & Sustainability', and 'Safety & Access'. The survey link was advertised on social media, as well as during Public Open House 2. It received 80 responses, with the most highly ranked design elements being:

1. Shade Trees
2. Social Spaces
3. Bury/Underground Power Lines
4. Flexible Street Design & Usage (Festivals/Events)
5. Better Lighting

Appendix

1. Existing Studies
- Crash Data

2. Initial Design Concepts

3. Proposed Design
- Street Section
- Illustrative Plan
- Diagrams
- Technical Drawings

4. Materials
- Lighting
- Street Furnishings
- Softscape
- Hardscape
- Educational Elements

5. Renderings

6. Cost Estimates
- Proposed Design Detailed Cost Estimates
- Detailed Cost Optimization Options

7. Community Outreach
- Public Open House 1 Results
- Online Survey Results
- Meeting Minutes

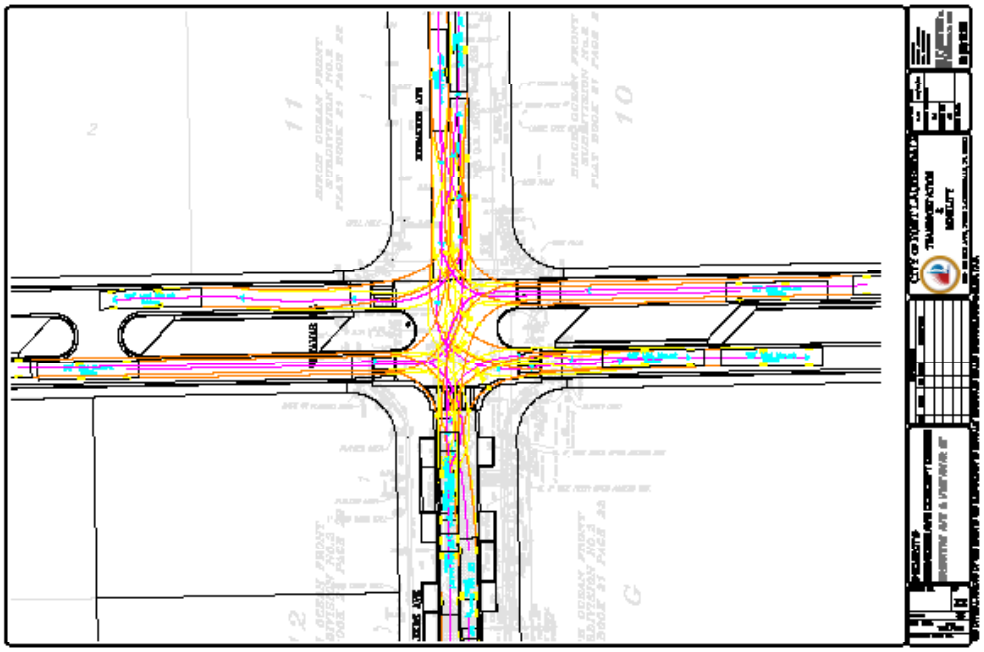
Existing Studies

Crash Data Map

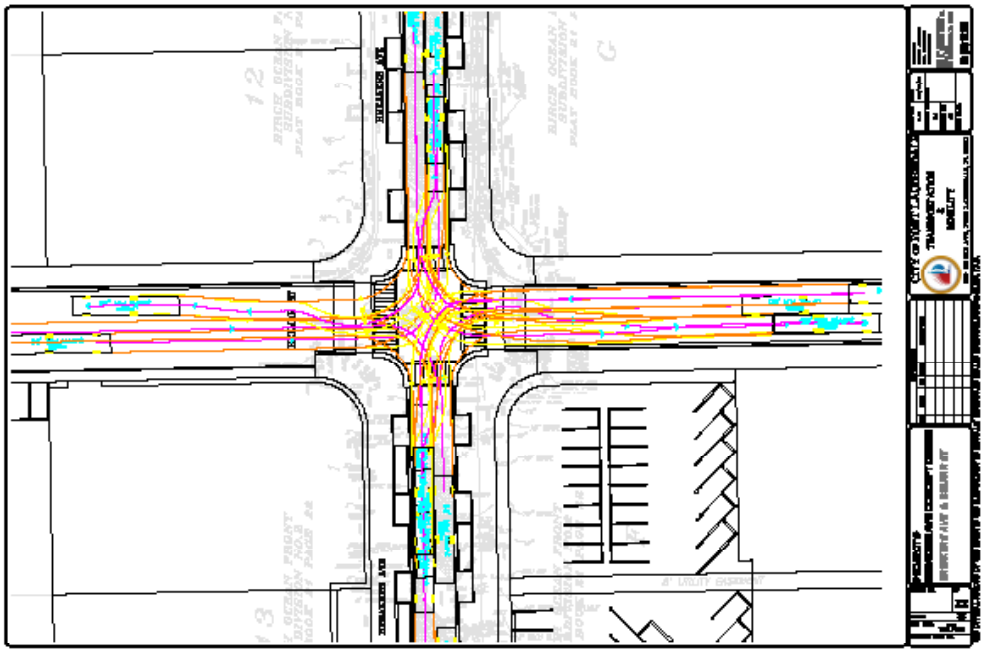
Crashes in Breakers Avenue Corridor,
2014-2018 (Signal Four Analytics)

Auto Turn Plans

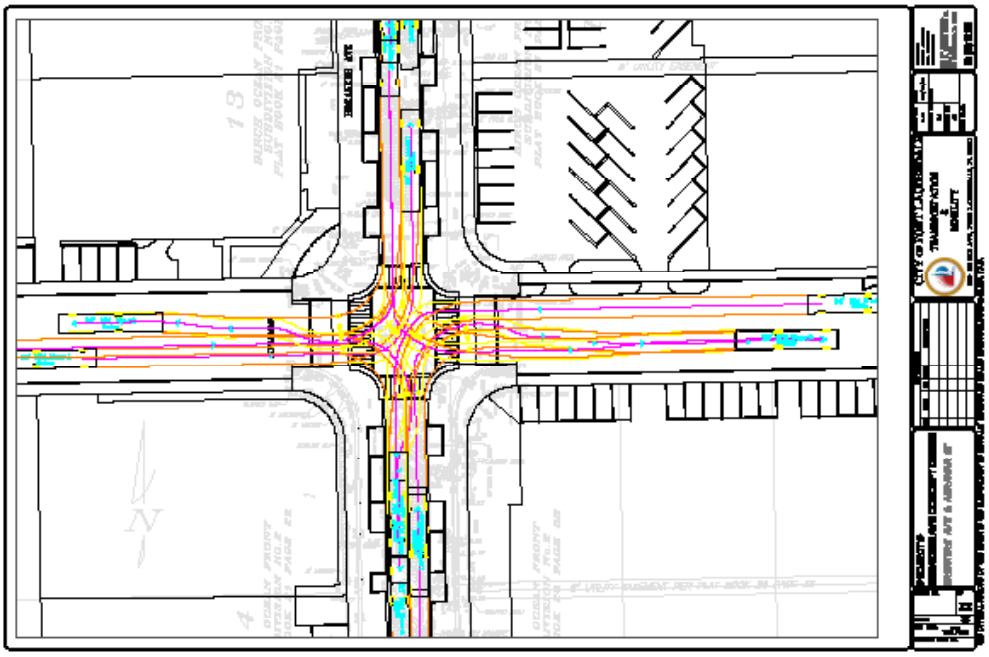
Vistamar & Breakers Intersection



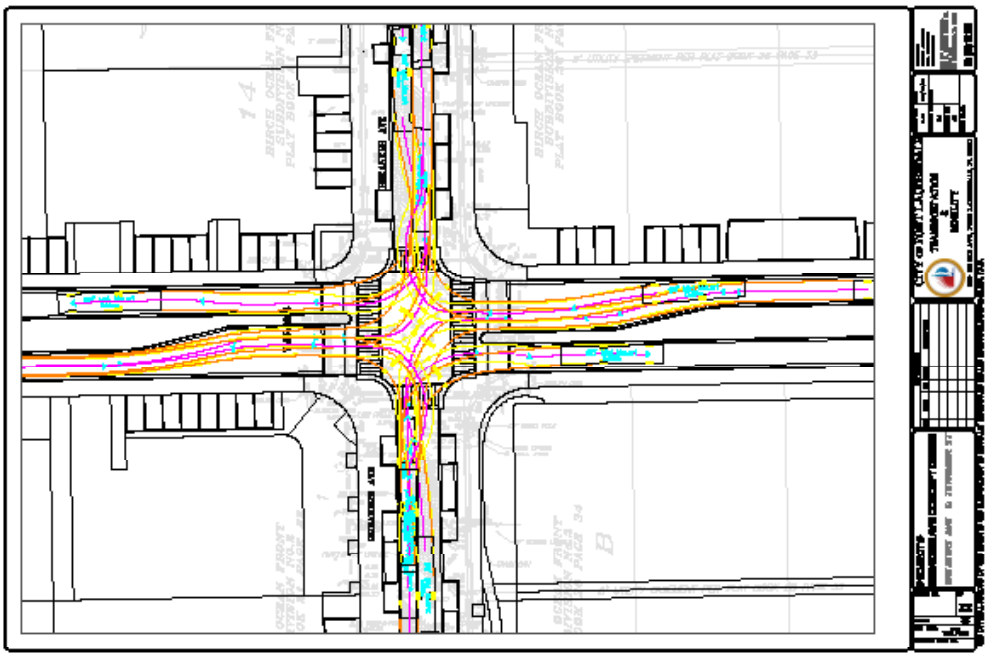
Belmar & Breakers Intersection



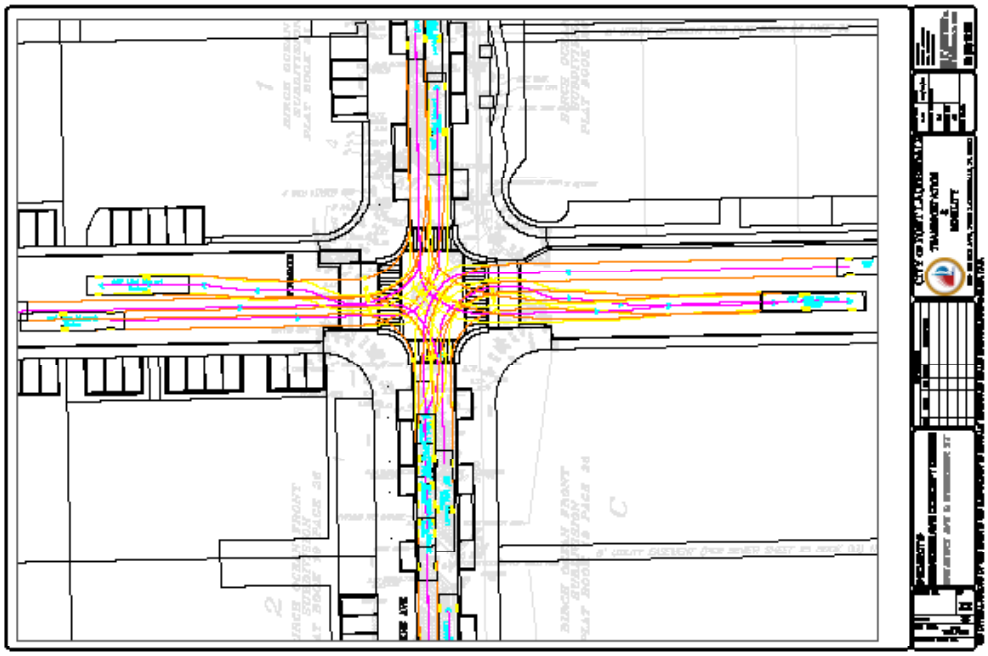
Auramar & Breakers Intersection



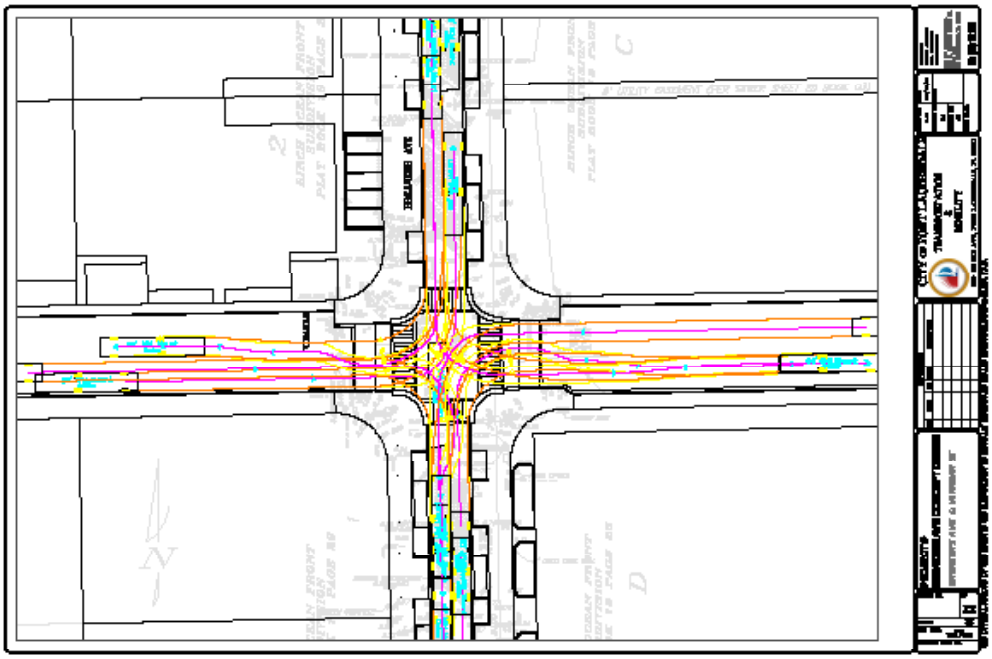
Terramar & Breakers Intersection



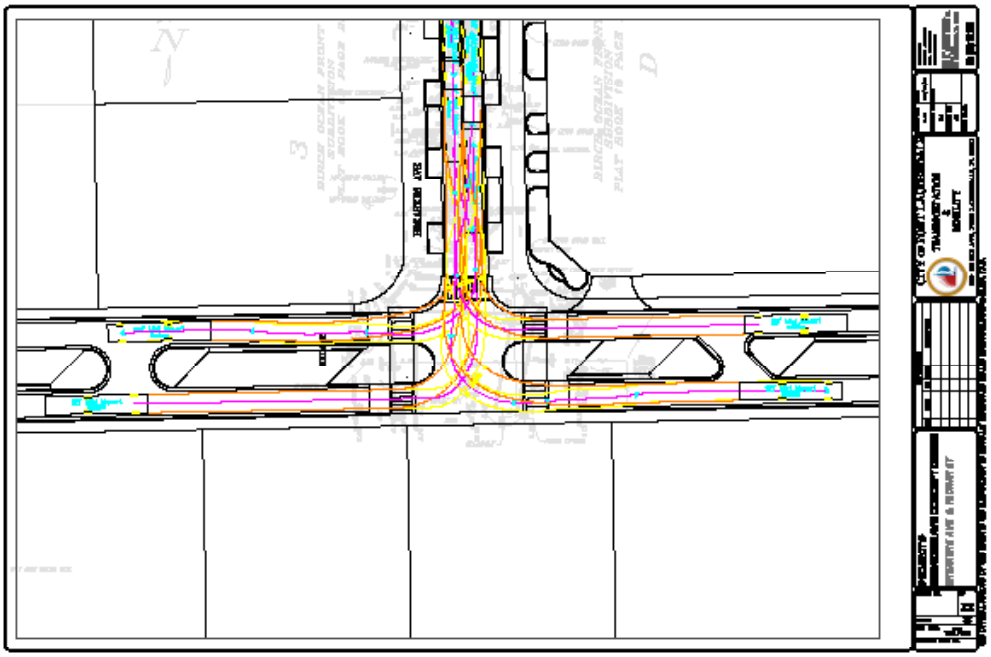
Windomar & Breakers Intersection



Viramar & Breakers Intersection



Riomar & Breakers Intersection



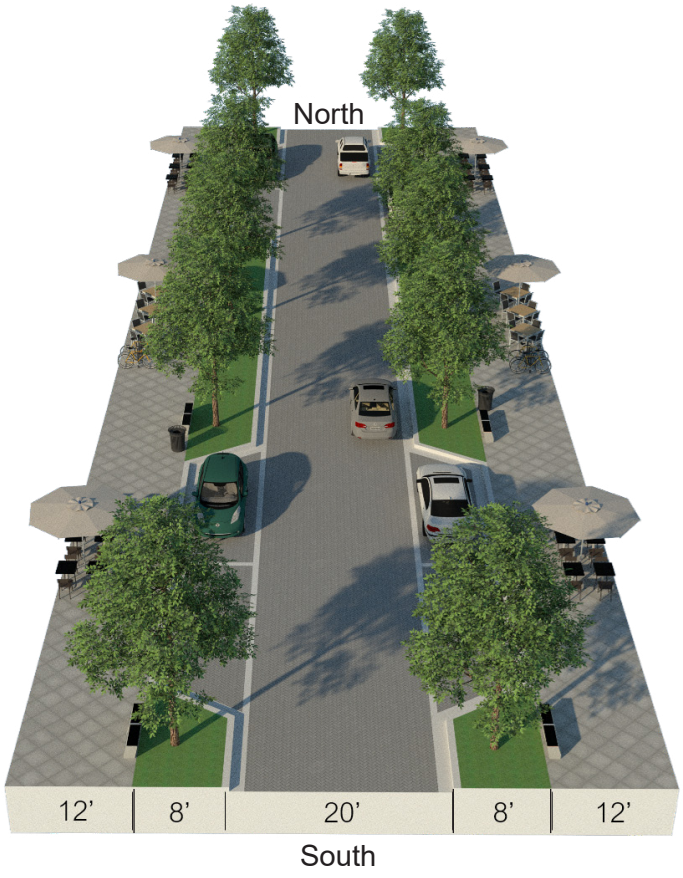
Initial Design Concepts

Existing Conditions

Two-Way Street
Central Diagonal Parking Island
No Shade Trees
Curbed

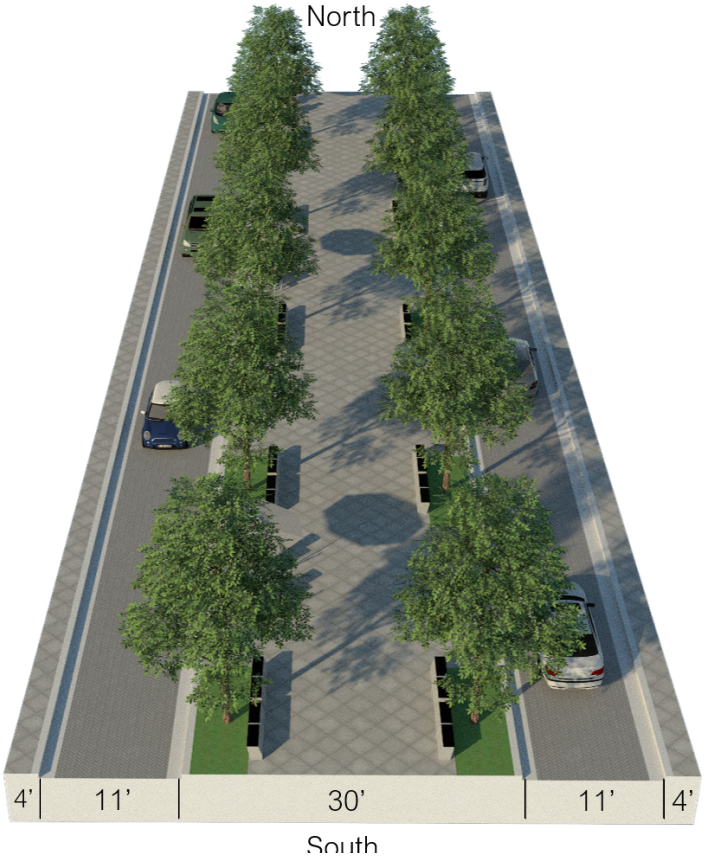
Concept 1a

Two-Way Street
On-Street Parallel Parking
Street Trees
Wider Sidewalks
Curbed Design



Concept 1b

Two-Way Street
On-Street Parallel Parking
Street Trees
Wider Sidewalks
Curbless Design



Concept 2

Two-Way Street
No or Very-Limited Parking
Center Rambla Design
Center Allee of Street Trees
Low Curb (with option to go curbless)

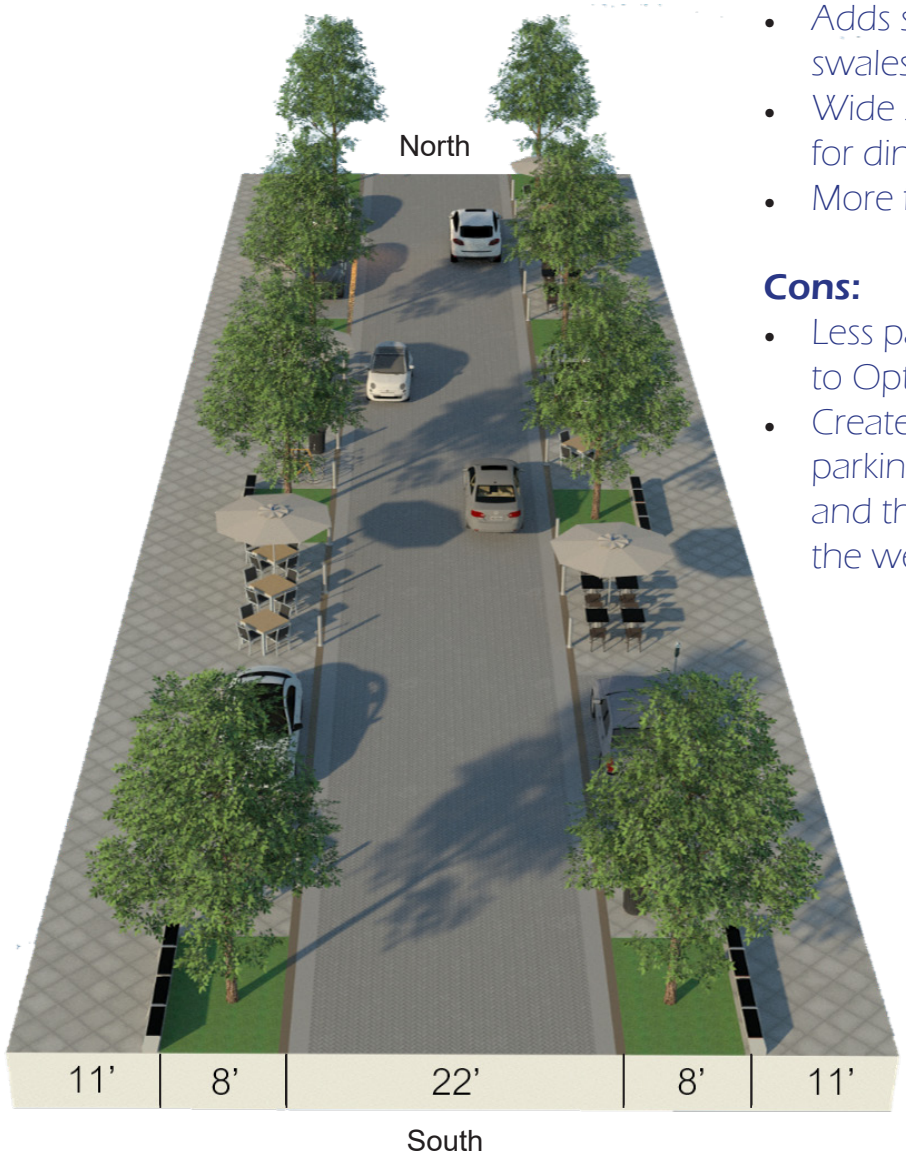
Initial Design Concepts Cont'd

Concept 3

One-Way Street
On-Street Parallel Parking (One-Side)
Asymmetrical Rambla
Three Rows of Street Trees
Low Curb (with option to go curb-less)

Proposed Design

Street Section



Pros:

- Accommodates some parking
- Adds shade trees and room for bio-swales
- Wide sidewalks with separated spaces for dining/seating and walking
- More flexibility due to curbless design

Cons:

- Less parking accommodated compared to Option 1A
- Creates conflicts between designated parking, dining, and pedestrian space and the existing head-in parking along the west side

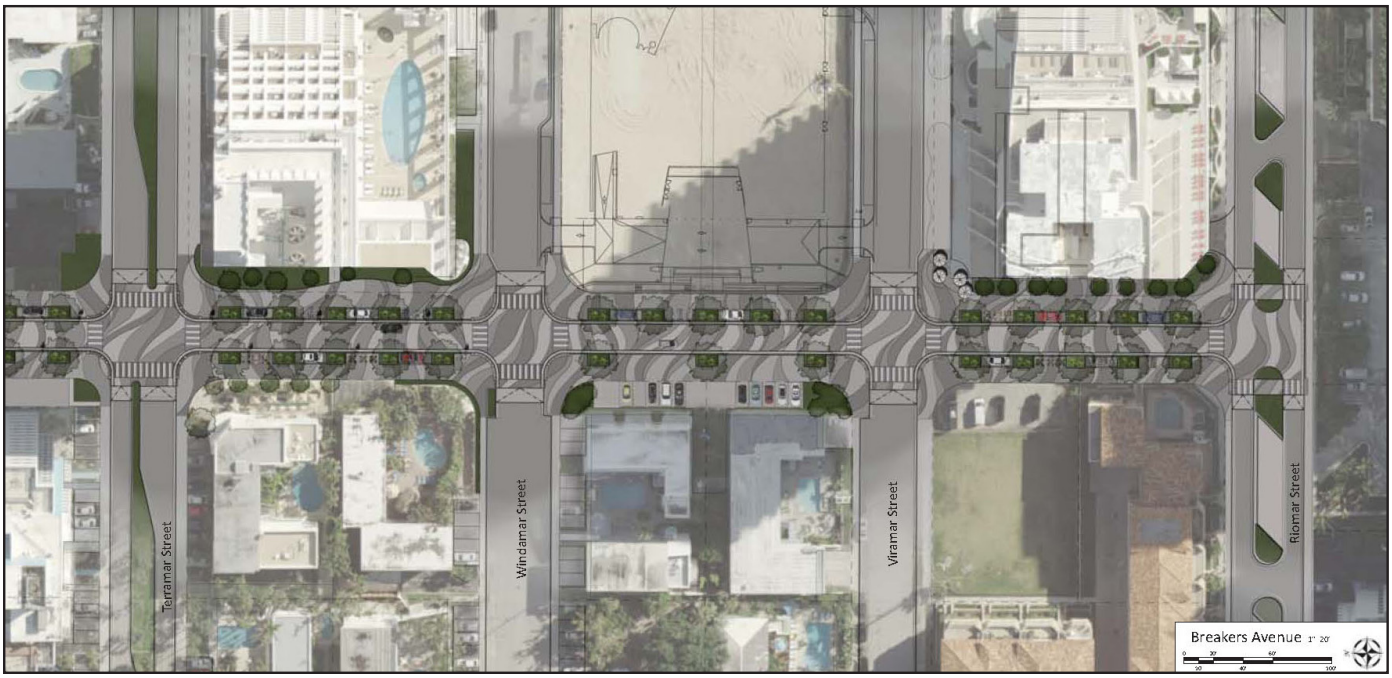
Illustrative Plan

Vistamar St

Belmar St

Auramar St

Terramar St



Terramar St

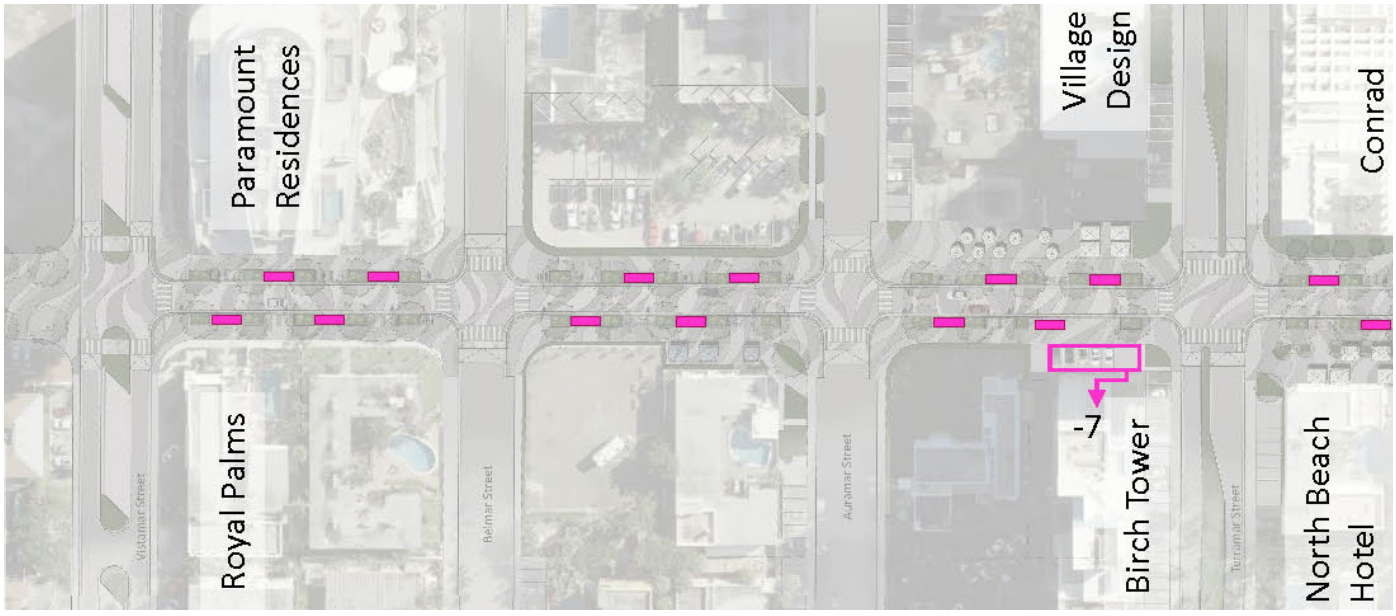
Windamar St

Viramar St

Riomar St

Street Trees and Seating

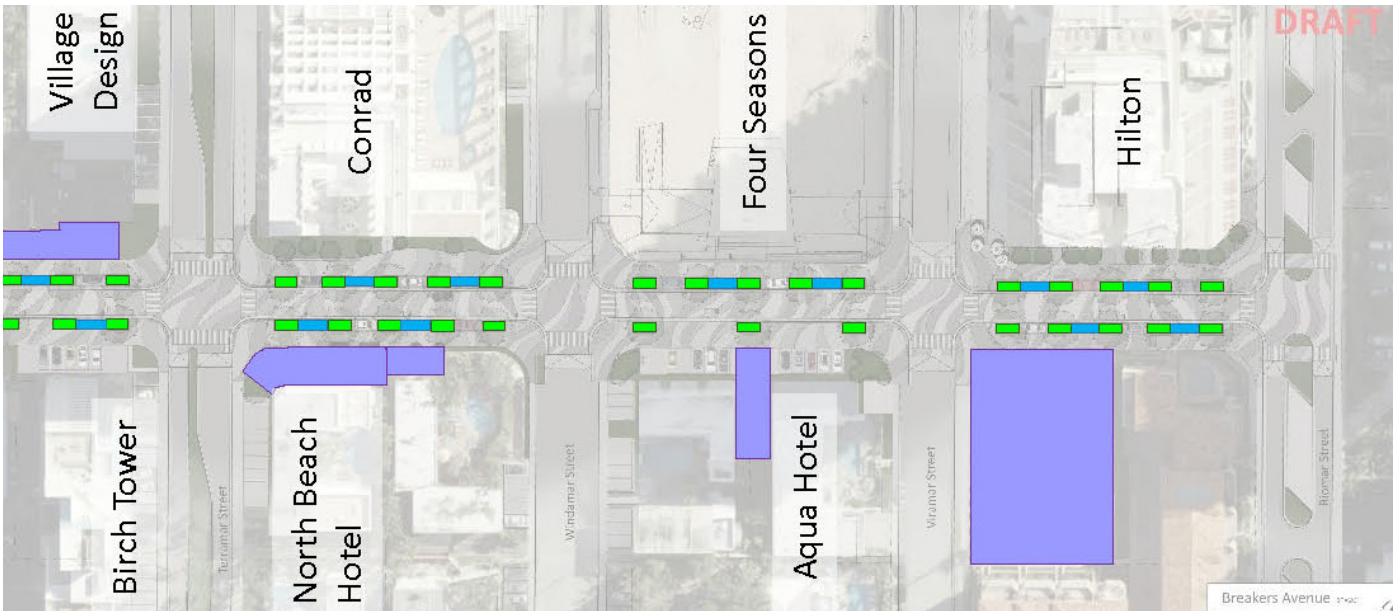
Parking Spaces



57 New Trees/Planting Areas (Not Counting Bonnet House Plaza)

Public Seating/Dining/Gathering Space

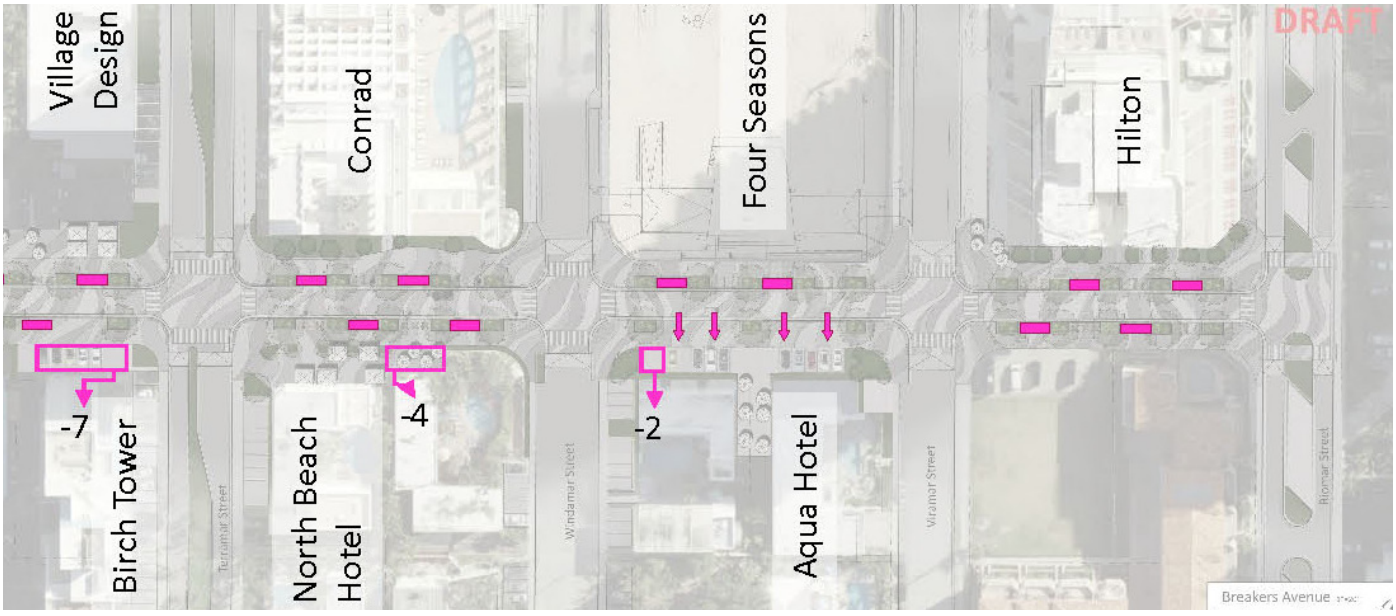
Private Seating/Dining/Gathering Space



22 Public Parallel Parking Spaces

13 Private Head-In Spaces Converted to Seating/Gathering Space (not counting the long-term conversion of the Covenant House parking spaces into a new plaza)

Clear sidewalk for head-in parking and driveways



Renderings

Rendering 1

- Multi-colored paved street and sidewalk
- Shaded walking and sitting areas
- Vertical bollards securing on-street parking

Rendering 2

- Brightly colored public art
- Shaded outdoor dining
- Curbless street design
- Bike racks and safe bicycling

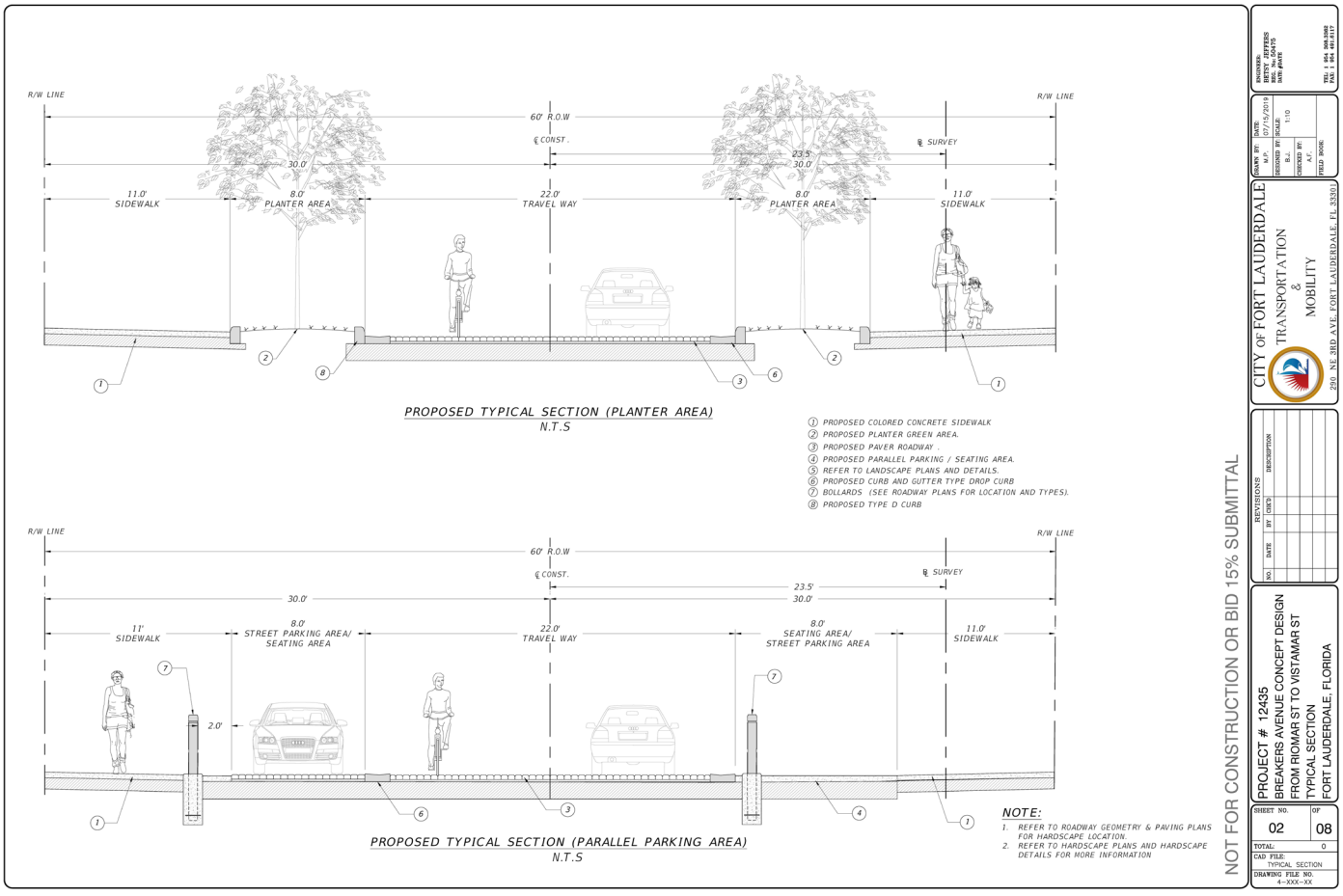
Renderings

Rendering 3

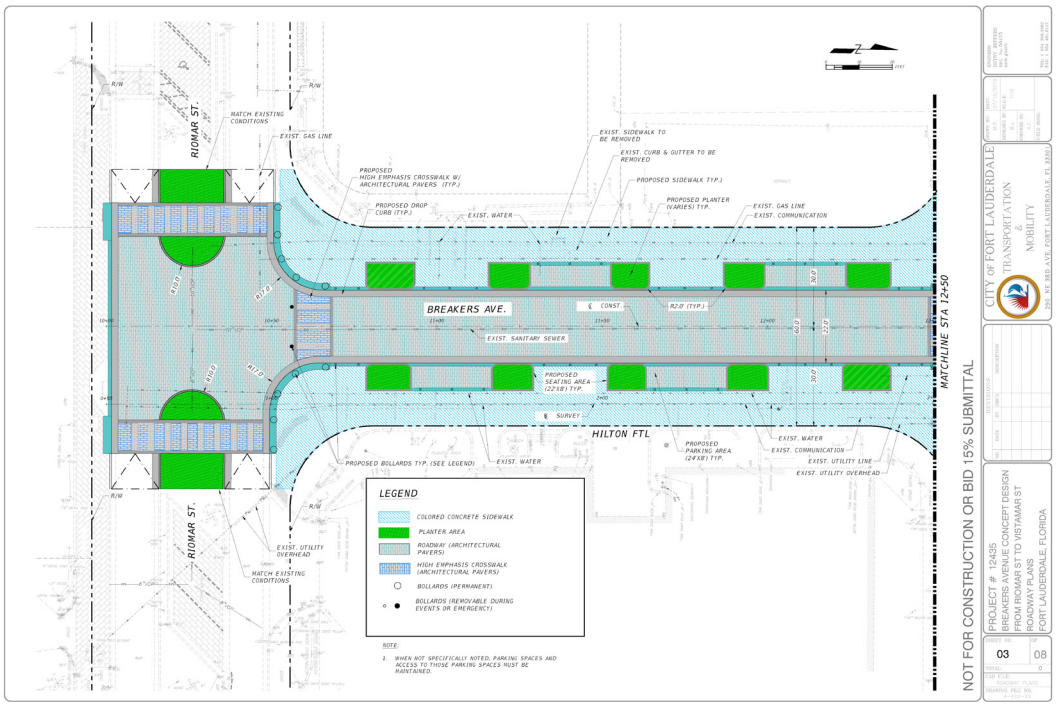
- Change in crosswalk pavers
- Integrated street design
- Circular bollards on intersection corners

Technical Drawings

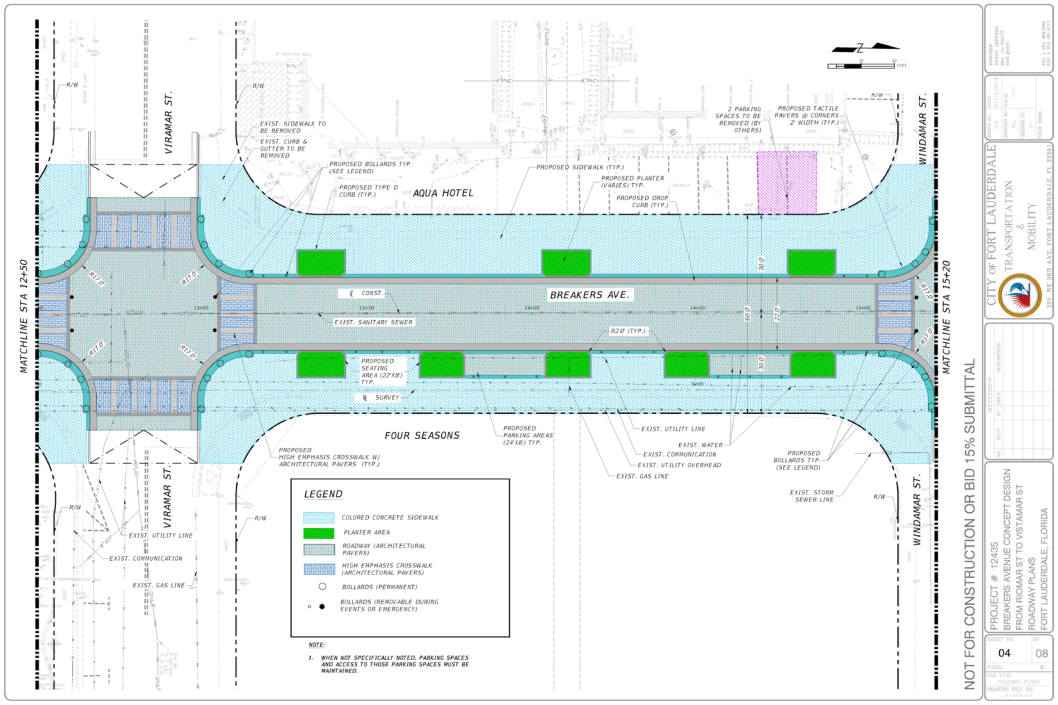
Typical Street Sections



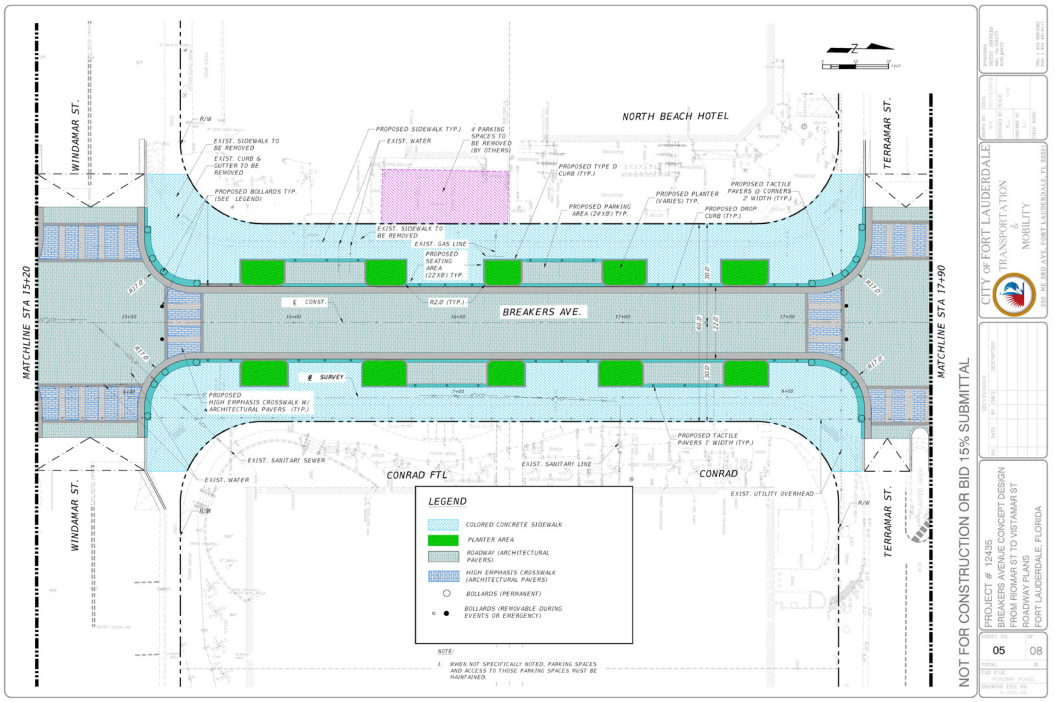
Roadway Plans: Riomar to Viramar Streets



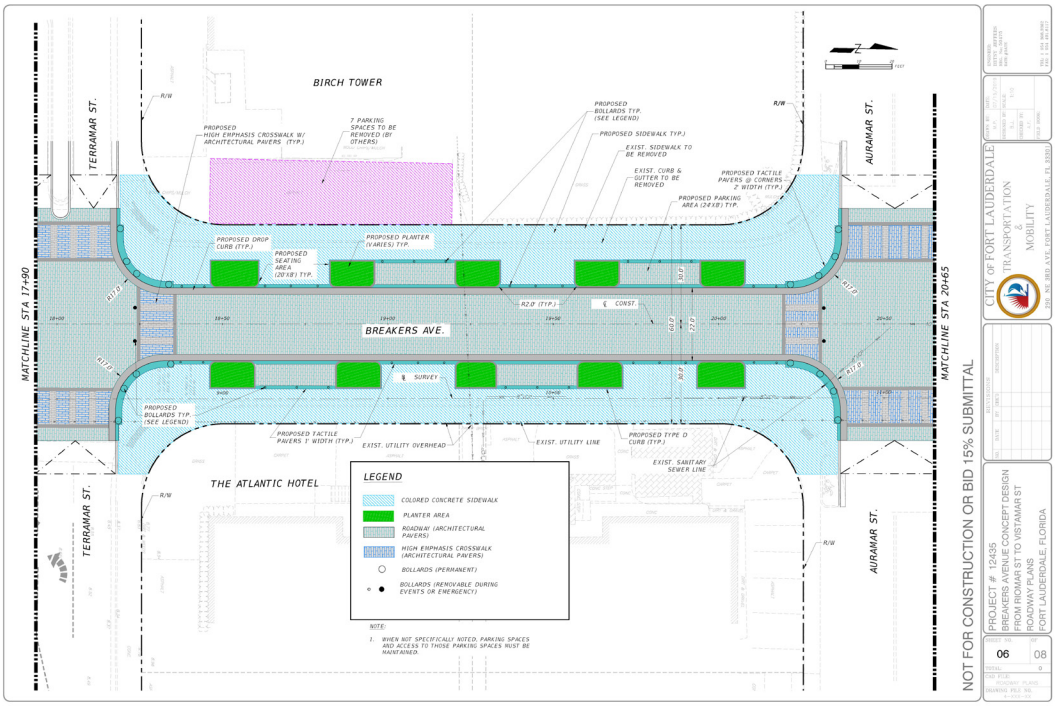
Roadway Plans: Viramar to Windamar Streets



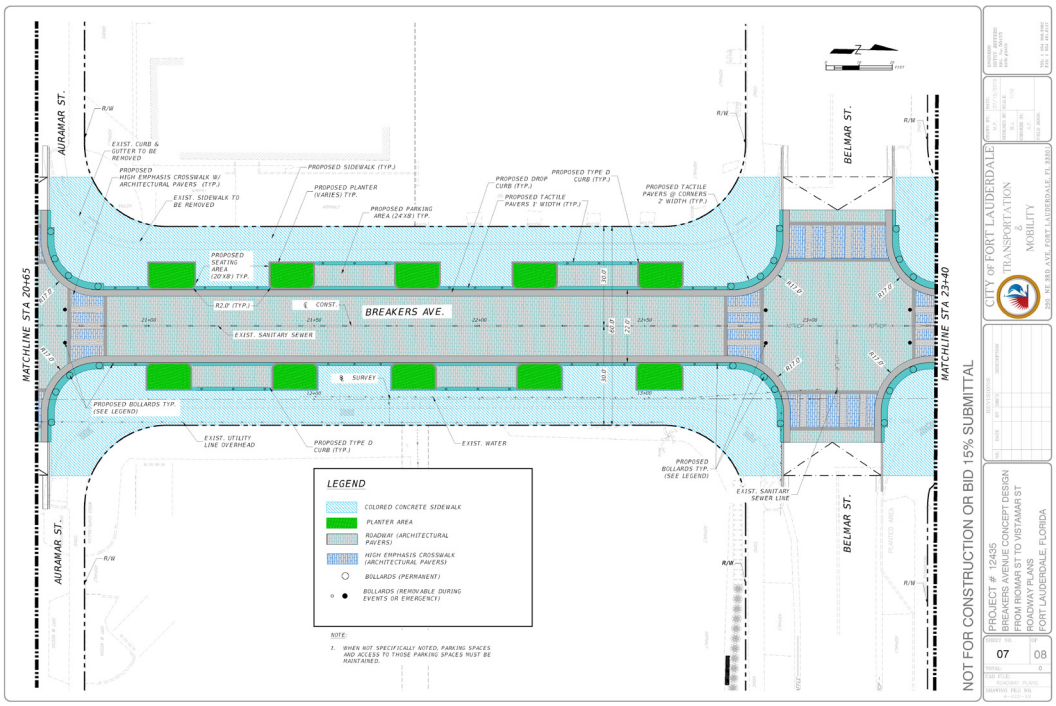
Roadway Plans: Windamar to Terramar Streets



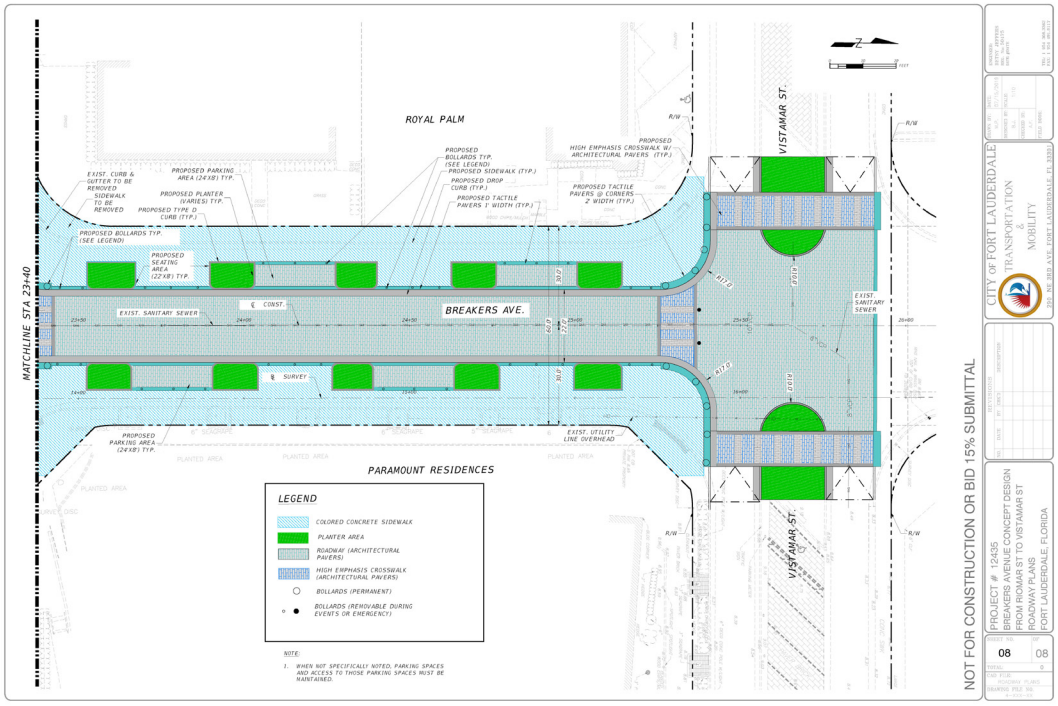
Roadway Plans: Terramar to Auramar Streets



Roadway Plans: Auramar to Belmar Streets

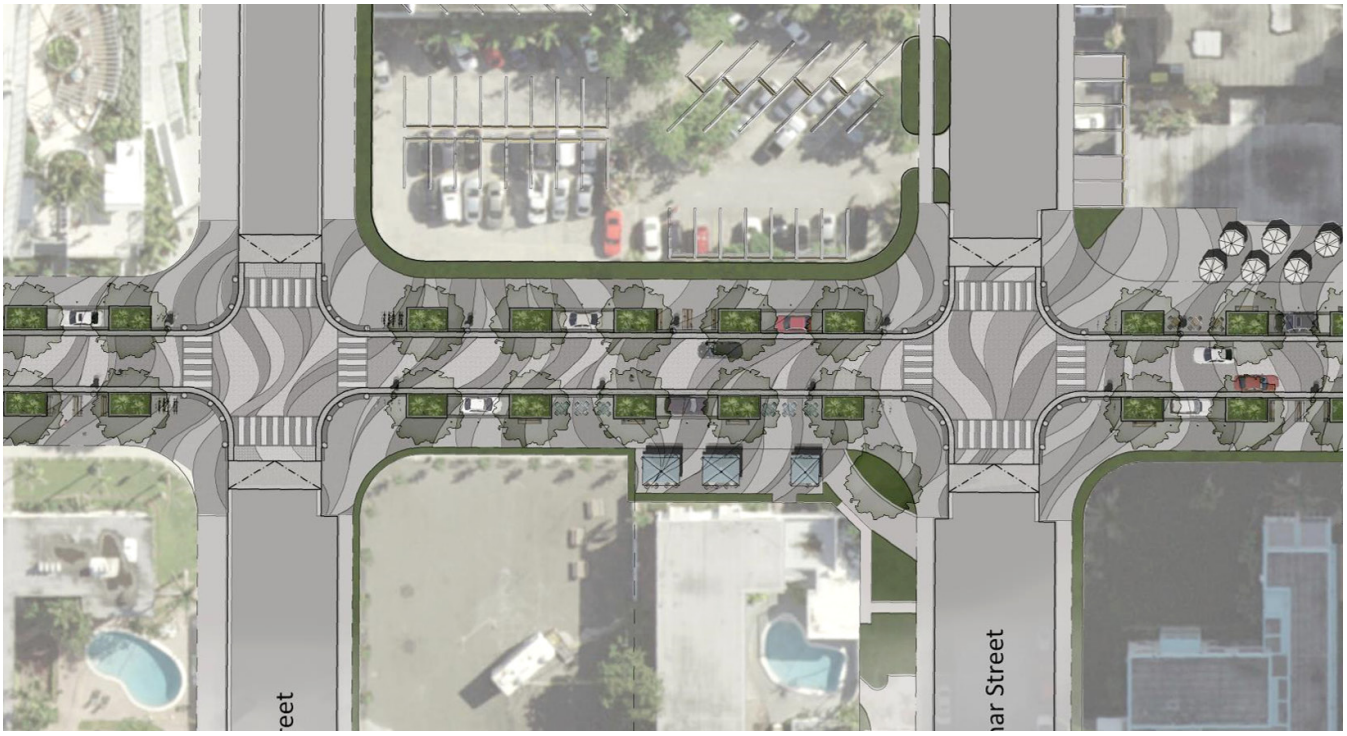


Roadway Plans: Belmar to Vistamar Streets

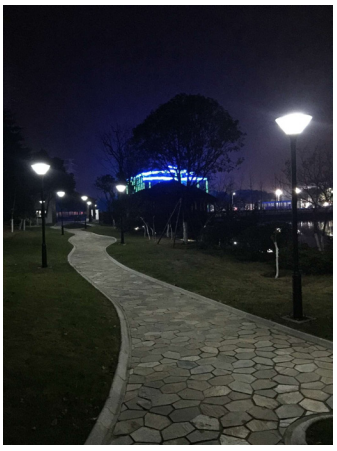


Material Selections

Illustrative Plan - A Closer Look



Lighting



Street Furnishings

Vertical Bollards

Circular Bollards

Street Benches

Landscaping

Mahogany
Native FL Species
Medium Salt Water Tolerance
Mature Size: 30x50'

Gumbo Limbo
Native FL Species
High Salt Water Tolerance
Mature Size: 35x60'
Requires Pruning

Wild Tamarind
Native FL Species
High Salt Water Tolerance
Mature Size: 25x50'

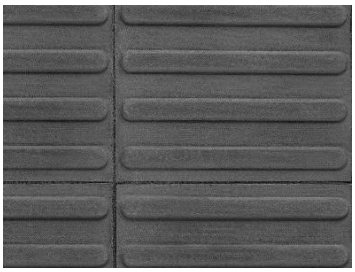
Live Oak
Native FL Species
High Salt Water Tolerance
Mature Size: 40x60'
Requires Pruning

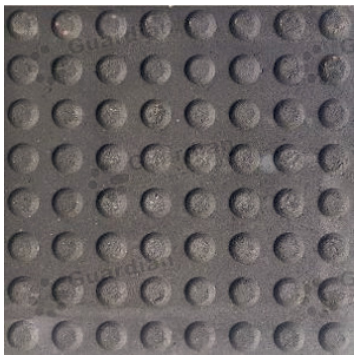
Bioswale

Traditional Planting Area

Hardscape

Rectangular Pavers for Crosswalk and Valley Gutter





Roadway Edges

Roadway - Tumbled Concrete Pavers

Sidewalks

Tinted Concrete

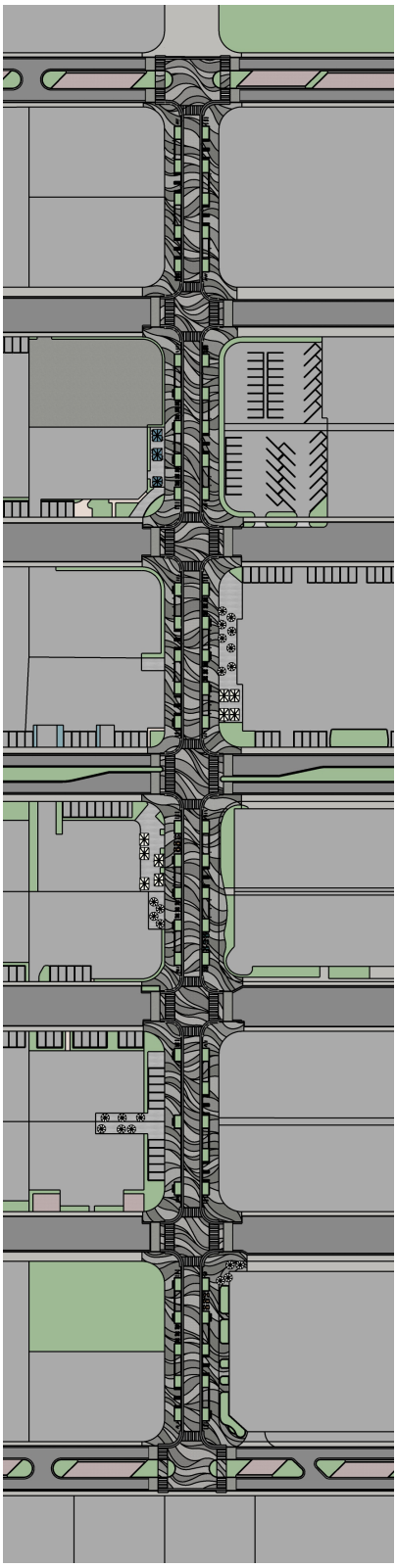
Scored Concrete

Educational Elements

Educational Parklet

Bioswale Educational Sign

Phasing Diagram



Phase 2

Phase 1

Phase 3

Proposed Design Cost

Total Project Cost - $9,469,491

P12435 Breakers Avenue Streetscape
PRELIMINARY COST ESTIMATE

CONSTRUCTION COST

A DEMOLITION

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	REMOVAL OF EXISTING CONCRETE PAVEMENT	1,889	SY	$24.00	$45,333.33
	CLEARING & GRUBBING	4	AC	$15,000.00	$58,500.00
	REGULAR EXCAVATION	4,593	CY	$5.00	$22,963.35
			Sub Total A	=	**$126,796.68**

B PAVING

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	TYPE B STABILIZATION	5782	SY	$30.00	$173,460.00
	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	933	SY	$3.00	$2,799.99
	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B	250	TN	$170.00	$42,500.00
	TUMBLED PAVERS, ROADWAY	5782	SY	$200.00	$1,156,400.00
	CONCRETE CURB & GUTTER, TYPE F	4800	LF	$26.00	$124,800.00
	CONCRETE CURB TYPE D	4000	LF	$17.00	$68,000.00
	CIRCULAR PATTERN SIDEWALK, 6" THICK	6000	SY	$270.00	$1,620,000.00
	SIGNING AND MARKING	1	LS	$10,000.00	$10,000.00
			Sub Total B	=	**$3,197,959.99**

D LANDSCAPING (IRRIGATION)

No.	Description	Quantity	Unit	Unit Price	Amount
	LANDSCAPING	1	LS	$500,000.00	$500,000.00
	IRRIGATION	1	LS	$200,000.00	$200,000.00
			Sub Total D		**$700,000.00**

E STREET FURTNITURE, LIGHTING (PEDESTRIAN + FESTIVAL LIGHTING)

No.	Description	Quantity	Unit	Unit Price	Amount
	LIGHTING	1	LS	$540,000.00	$540,000.00
	BOLLARDS	1	LS	$122,050.00	$122,050.00
	STREET FURNITURE	1	LS	$208,000.00	$208,000.00
			Sub Total E		$870,050.00

F UNDERGROUNDING (OVERHEAD) **UTILITIES**

No.	Description	Quantity	Unit	Unit Price	Amount
	UNDERGROUNDING OF OVERHEAD UTILITIES	1	LS	$1,000,000.00	$1,000,000.00
			Sub Total F	=	**$1,000,000.00**

Sub Total	=	$5,894,807
Mobilization (8 %)	=	$471,585
MOT (5 %)	=	$294,740
Contingency (20 %)	=	$1,178,961
Total Construction*	=	**$7,840,093**

**Includes Construction, MOT, Mobilization, and Contingency*

Total Project Cost

	Construction Cost (including Contingency)	$ 7,840,093
	Consultant Fees (Engineering Design, post-construction-15%)	$ 1,176,014
	Construction Manager or Construction Adminstration Inspections (10%)	$ 784,009
	SUE, Soil testing, Survey	$ 85,000
	Total Project Cost	$ 9,885,116

Total Funding

TAM	Current Funding	$2,979,417.00
	FUNDING GAP	**$6,905,699.09**

Cost Optimization Option 1

Total Project Cost - $6,320,982

P12435 Breakers Avenue Streetscape
PRELIMINARY COST ESTIMATE

CONSTRUCTION COST

A DEMOLITION

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	REMOVAL OF EXISTING CONCRETE PAVEMENT	1,889	SY	$24.00	$45,333.33
	CLEARING & GRUBBING	4	AC	$15,000.00	$58,500.00
	REGULAR EXCAVATION	4,593	CY	$5.00	$22,963.35
			Sub Total A	=	**$126,796.68**

B PAVING

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	TYPE B STABILIZATION	5782	SY	$30.00	$173,460.00
	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B	250	TN	$170.00	$42,500.00
	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	933	SY	$3.00	$2,799.99
	STANDARD ROADWAY PAVERS WITH CIRCULAR PATTERN (ENTIRE LIMITS)	5782	SY	$80.00	$462,560.00
	CONCRETE CURB & GUTTER, TYPE F	4800	LF	$26.00	$124,800.00
	CONCRETE CURB TYPE D	4000	LF	$17.00	$68,000.00
	STANDARD BRICK PAVER SIDEWALK WITH CIRCULAR PATTERN (ENTIRE LIMITS)	6000	SY	$70.00	$420,000.00
	SIGNING AND MARKING	1	LS	$10,000.00	$10,000.00
			Sub Total B	=	**$1,304,119.99**

D LANDSCAPING (IRRIGATION)

No.	Description	Quantity	Unit	Unit Price	Amount
	LANDSCAPING	1	LS	$500,000.00	$500,000.00
	IRRIGATION	1	LS	$200,000.00	$200,000.00
			Sub Total D		**$700,000.00**

E STREET FURTNITURE, LIGHTING (PEDESTRIAN + FESTIVAL LIGHTING)

No.	Description	Quantity	Unit	Unit Price	Amount
	LIGHTING	1	LS	$540,000.00	$540,000.00
	BOLLARDS	1	LS	$122,050.00	$122,050.00
	STREET FURNITURE	1	LS	$208,000.00	$208,000.00
			Sub Total E		$870,050.00

F UNDERGROUNDING (OVERHEAD) **UTILITIES**

No.	Description	Quantity	Unit	Unit Price	Amount
	UNDERGROUNDING OF OVERHEAD UTILITIES	1	LS	$750,000.00	$750,000.00
			Sub Total F	=	**$750,000.00**

Sub Total	=	**$3,750,967**
Mobilization (8%)	=	**$300,077**
MOT (5%)	=	**$187,548**
Contingency (20%)	=	**$750,193**
Total Construction*	=	**$4,988,786**

**Includes Construction, MOT, Mobilization, and Contingency*

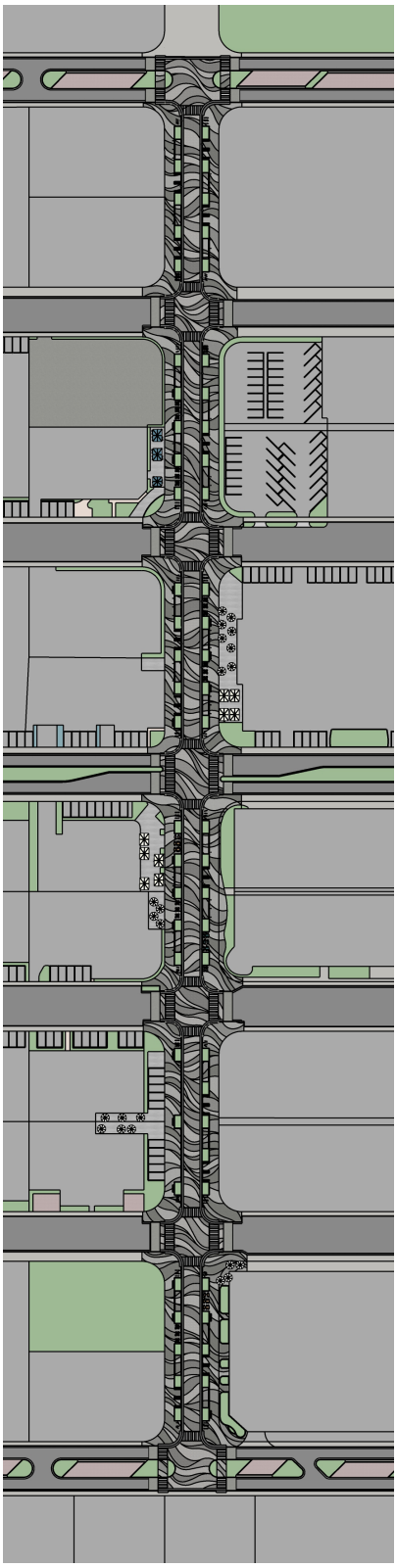
Total Project Cost

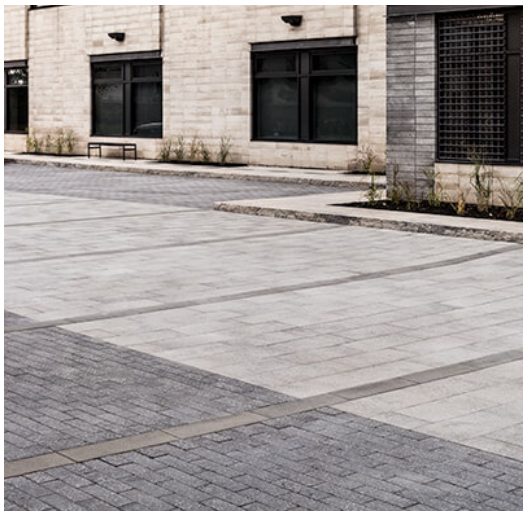
	Construction Cost (including Contingency)	$ 4,988,786
	Consultant Fees (Engineering Design, post-construction-15%)	$ 748,318
	Construction Manager or Construction Adminstration Inspections (10%)	$ 498,879
	SUE, Soil testing, Survey	$ 85,000
	Total Project Cost	**$ 6,320,982**

Total Funding

TAM Current Funding $2,979,417.00

FUNDING GAP $3,341,565.09





- Roadway Pavers - Standard rectangular pavers in three tones

- Sidewalk Pavers - Standard long or larger square pavers in three tones

Cost Optimization Option 2

Total Project Cost - $7,714,839

P12435 Breakers Avenue Streetscape
PRELIMINARY COST ESTIMATE

CONSTRUCTION COST

A DEMOLITION

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	REMOVAL OF EXISTING CONCRETE PAVEMENT	1,889	SY	$24.00	$45,333.33
	CLEARING & GRUBBING	4	AC	$15,000.00	$58,500.00
	REGULAR EXCAVATION	4,593	CY	$5.00	$22,963.35
			Sub Total A	=	**$126,796.68**

B PAVING

FDOT pay Item No.	Description	Quantity	Unit	Unit Price	Amount
	TYPE B STABILIZATION	5782	SY	$20.00	$115,640.00
	OPTIONAL BASE GROUP 9	2500	SY	$20.00	$50,000.00
	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC B (3 BLOCKS)	569	TN	$170.00	$96,730.00
	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	933	SY	$3.00	$2,799.99
	STANDARD ROADWAY PAVERS (CROSSWALKS + 3 BLOCKS)	2882	SY	$80.00	$230,560.00
	TUMBLED ROADWAY PAVERS (3 BLOCKS + ALL INTERSECTIONS)	2900	SY	$200.00	$580,000.00
	CONCRETE CURB & GUTTER, TYPE F	4800	LF	$26.00	$124,800.00
	CONCRETE CURB TYPE D	4000	LF	$17.00	$68,000.00
	CONCRETE SIDEWALK 6" THICK (3 BLOCKS)	3150	SY	$30.00	$94,500.00
	PATTERNED CONC SIDEWALK 6" THICK (3 BLOCKS)	2850	SY	$270.00	$769,500.00
	SIGNING AND MARKING	1	LS	$10,000.00	$10,000.00
			Sub Total B	=	**$2,142,529.99**

D LANDSCAPING (IRRIGATION)

No.	Description	Quantity	Unit	Unit Price	Amount
	LANDSCAPING	1	LS	$500,000.00	$500,000.00
	IRRIGATION	1	LS	$200,000.00	$200,000.00
			Sub Total D		**$700,000.00**

E STREET FURTNITURE, LIGHTING (PEDESTRIAN + FESTIVAL LIGHTING)

No.	Description	Quantity	Unit	Unit Price	Amount
	LIGHTING	1	LS	$540,000.00	$540,000.00
	BOLLARDS	1	LS	$122,050.00	$122,050.00
	STREET FURNITURE	1	LS	$208,000.00	$208,000.00
			Sub Total E		$870,050.00

F UNDERGROUNDING (OVERHEAD) UTILITIES

No.	Description	Quantity	Unit	Unit Price	Amount
	UNDERGROUNDING OF OVERHEAD UTILITIES	1	LS	$750,000.00	$750,000.00
			Sub Total F	=	**$750,000.00**

Sub Total	=	**$4,589,377**
Mobilization (8%)	=	**$367,150**
MOT (5%)	=	**$229,469**
Contingency (20%)	=	**$917,875**
Total Construction*	=	**$6,103,871**

**Includes Construction, MOT, Mobilization, and Contingency*

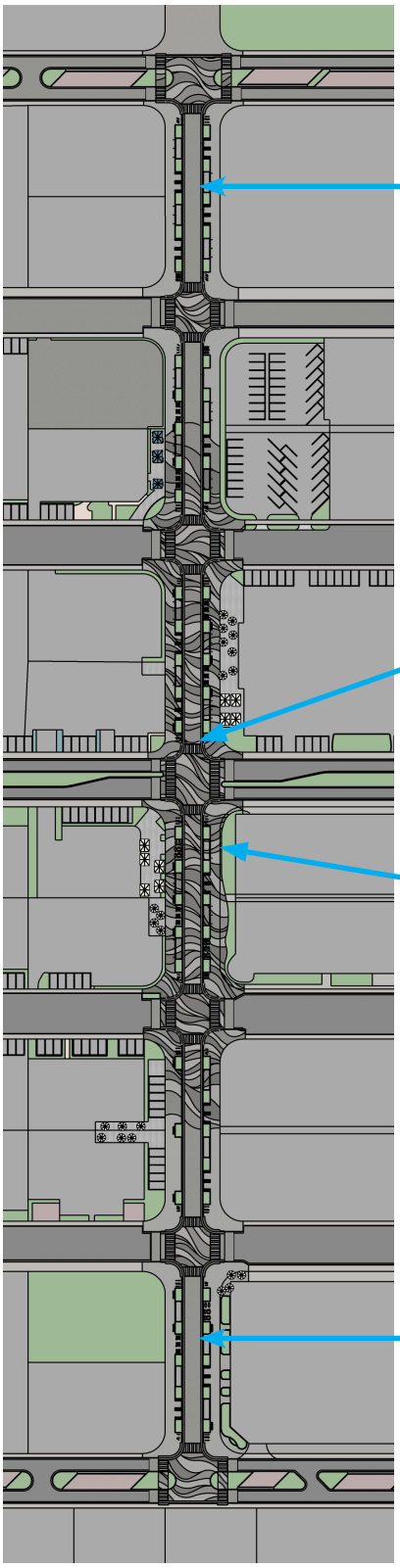
Total Project Cost

	Construction Cost (including Contingency)	$ 6,103,871
	Consultant Fees (Engineering Design, post-construction-15%)	$ 915,581
	Construction Manager or Construction Adminstration Inspections (10%)	$ 610,387
	SUE, Soil testing, Survey	$ 85,000
	Total Project Cost	**$ 7,714,839**

Total Funding

TAM Current Funding $2,979,417.00

FUNDING GAP $4,735,421.72



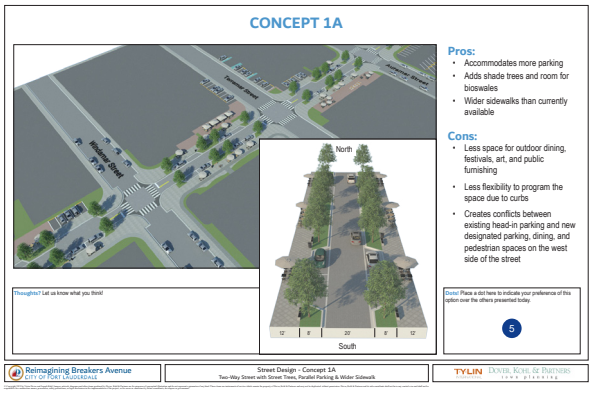
Regular Asphalt Road and Standard Concrete Sidewalks

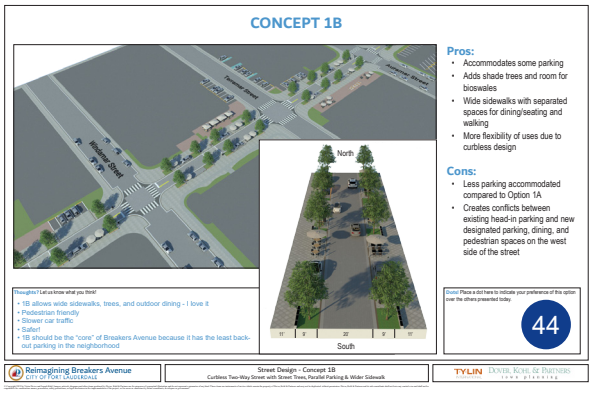
Roadway - Tumbled Concrete Pavers in three tones

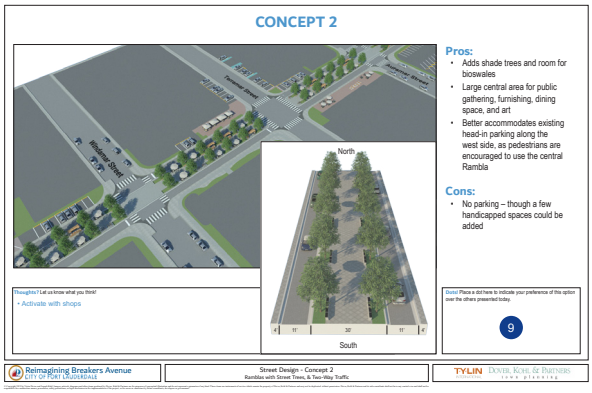
Sidewalk Tinted & Scored Concrete in three tones

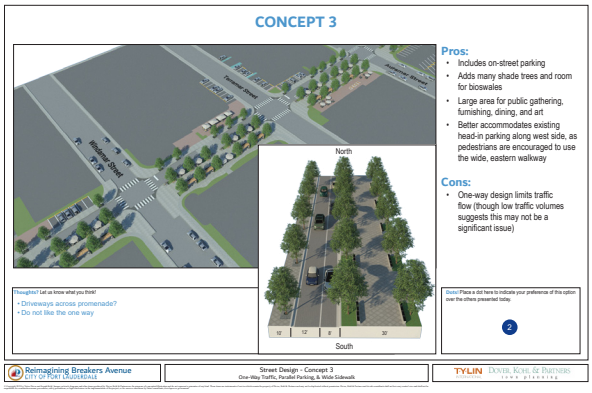
Regular Asphalt Road and Standard Concrete Sidewalks

Community Outreach





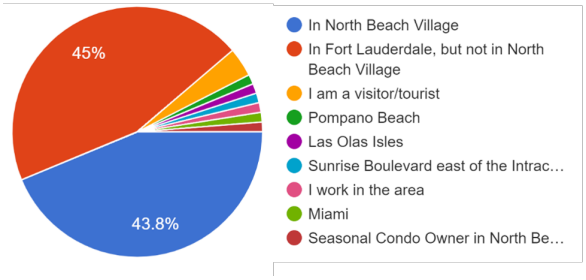




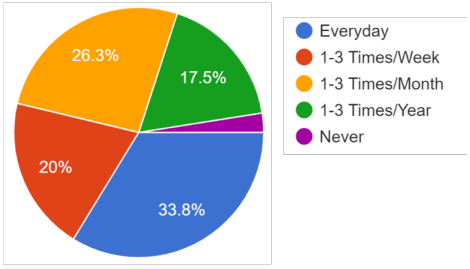
Survey Results

Open from April 27th - May 11th
80 Community Member Responses

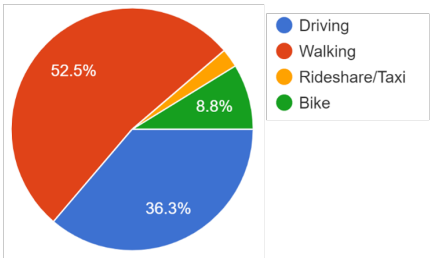
Where do you live?



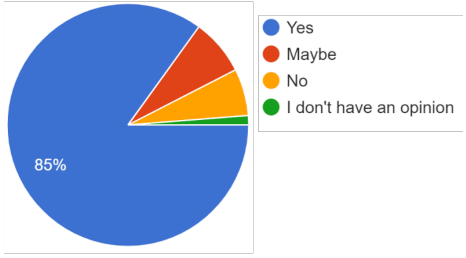
How often do you come to Breakers Ave?



How do you get to Breakers Ave?

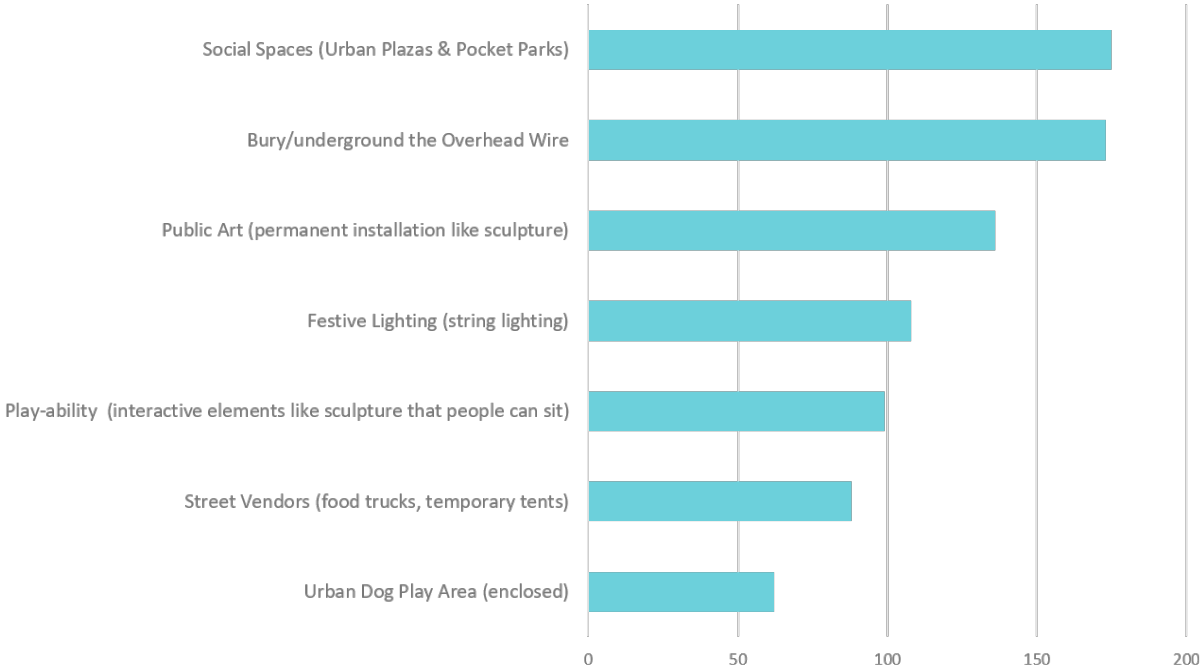


Do you want to see Breakers as a street that hosts public events like farmers markets, concerts, art shows, and other festivals?

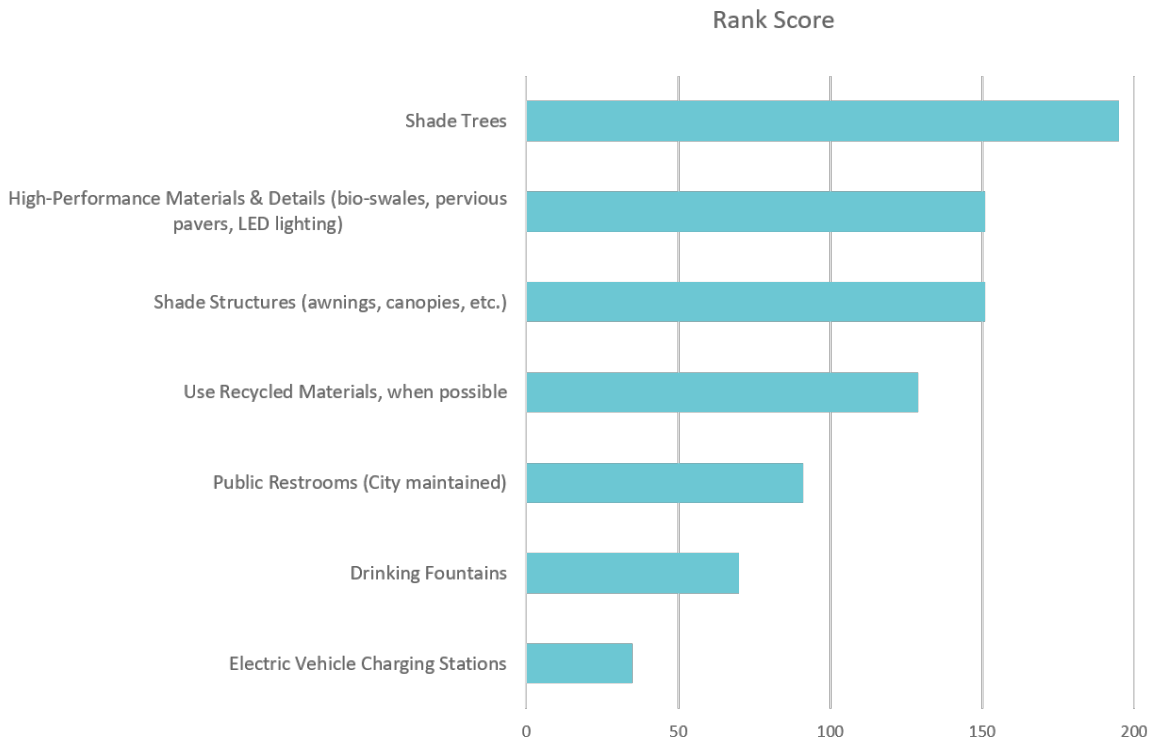


Goal 1: Community Identity & Placemaking

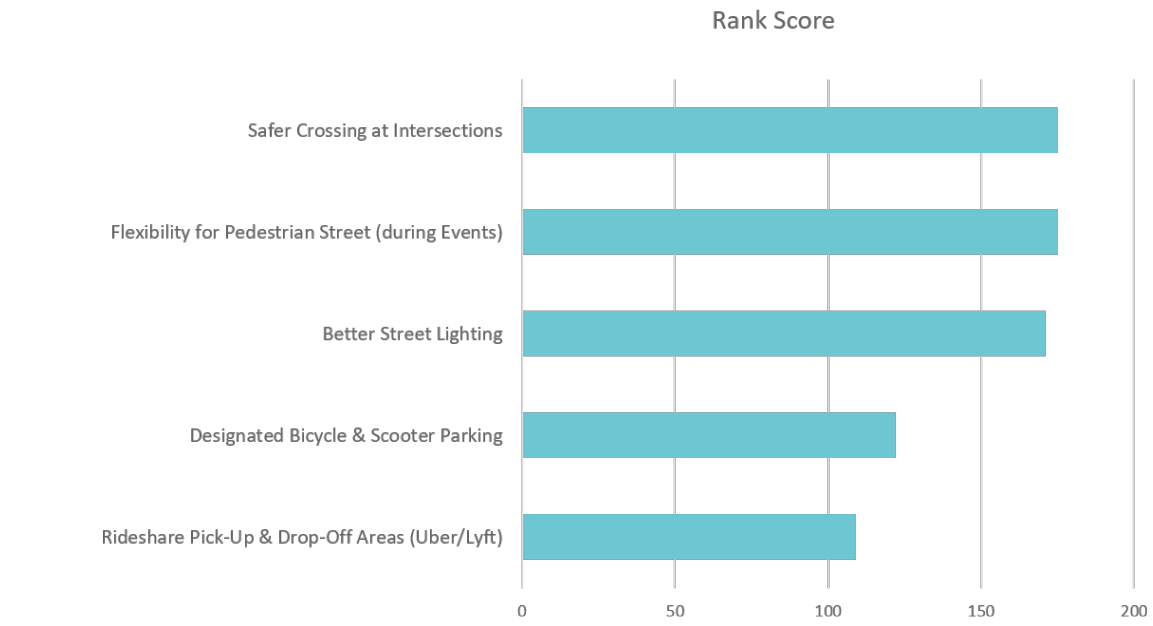
Rank Score



Goal 2: Health & Sustainability



Goal 3: Safety & Access



Meeting Minutes

Breakers Avenue Streetscape

Open House #1, Meeting Summary

Location: 600 Breaker Avenue, Fort Lauderdale, FL
Date and Time: 03/20/2019, 5:00 pm – 6:30 pm

Lightning Round:

- We need to better manage the traffic from East/West streets
- What about a movable barrier to screen the E/W wind tunnel effect?
- Would prefer to see all the parking moved off of Breakers Avenue – it could potentially go to Birch Road, instead.
- Concern that this is just another vacant exercise. Is this really going to happen?
- Intersections are uncomfortable to cross because you never know if the E/W traffic is going to stop.
- There a new free transportation service (FreeBee) that could help alleviate any car congestion, but no one knows about it. They can bring people from hotels, parking garages or other nearby areas.
- E-W cross street traffic is a problem
- How many blocks of Breakers Avenue are being considered?
- There are too many design options for the neighbors to provide their opinion. Wouldn't it just be better for the experts to do something that works?
    - Victor Dover, Consultant. Response: We are the experts and yes, we know what will technically work but the citizens know the culture of the neighborhood and how things need to be done together.
- Bury the electrical lines
- Can we keep at least some of the palm trees?
- The neighbor lives in the Isles. They walk a lot but rarely come down Breakers because it's not comfortable to walk down. They do like the breezes.
- Hopeful that it will become a real destination
- We should close the whole street
    - Victor Dover, Consultant. Response: We need to grow the street so that it is worth closing. It is a process of growth not switching a switch.
- The neighbor likes the center median 'Rambla' idea
- Would like it to be like Las Olas (lush) with the center walkway
- The neighbor likes the center walkway one but concerned that it may not be used enough
- The neighbor likes slowing the traffic because when you are in the City at a café the cars are a part of the experience.
    - Victor Dover Response: you can include cars without letting them dominate. Use the Disney example, even Main Street has cars
- Likes option 1B with wide sidewalks and shade trees

Meeting Minutes

- The neighbor agrees that keeping car access helps to activate the street
- Can't eliminate parking totally
- Pavers help move water
- What are the plans for the lot near the Bonnet House?
    - Christine Fanchi, City. Response: The City has no long term plans for the City-owned, empty lot S-E corner of Bonnet house. During the construction of the fire station on Sunrise Boulevard the empty lot will be used to park firetrucks.
- Is there enough of a market to sustain all these new restaurants & retail?
- How does the economics of this work?
    - The neighbor mentioned that the City did an economic study a few years ago. She will send the Consultants a copy.
- What about the Tractor Trailers?
- Need to have the appropriate Retail, no more tattoo parlors. Who will do the retail mix?
- Landscaping needs to incorporate Palm Trees with Shade trees

Attendees: List of attendees is available upon request.

Meeting Minutes

Breakers Avenue Streetscape

Open House #2, Meeting Summary

Location: 600 Breaker Avenue, Fort Lauderdale, FL
Date and Time: 05/08/2019, 5:00 pm – 6:30 pm

Attendees: See Sign-in Sheets

Presentation by Victor Dover & Luiza Leite

Lightening Round Notes:

- Questions regarding the funding. City Staff and Commissioner Glassman explained the current funds available and briefly outlined the plans for funding the gap.
- Questions regarding the type of trees and plantings to be used. Open discussion regarding the final selection of trees.
- Concern with choosing plants that are not toxic to the dogs in the neighborhood.
- Request for a dog park, or a general park where people can gather.
- Suggestions to incorporate a water feature or fountain, perhaps in the plaza facing the Bonnet House.
- Interest in Art in Public Places and the ability to do Murals on the large empty walls.
- There was a general consent and enthusiasm for the overall design and the reduction of parking.
- There were some concerns about the project being implemented. These we addressed by the city staff and Commissioner Cunningham with the fact that there is already funding in place.
- There was conversation regarding phasing and the sequence of phasing.
- Question about parking formula used to reduce parking on Breakers Ave and suggested using same concept for parking reductions in other abutting streets.
- Question about parking quantities in parking garages and whether they are fully being utilized.
- Question about outdoor seating whether they will be owned by tenants or public.

Meeting Minutes

Breakers Avenue Streetscape

Walkthrough with Property Owners, Meeting Notes

Location: 600 Breaker Avenue, Fort Lauderdale, FL
Date and Time: 03/20/2019, 3:00 pm – 4:00 pm

The walk-through was not possible due to weather conditions. In lieu of the walk-through, City staff and City's Consultants discussed the following

- Breakers Avenue was a very seedy and dangerous area just 5-8 years ago. The neighbors have been committed to incrementally improving the street – inspired by tactical urbanism and creative place making.
- The tactical improvements are not just about the aesthetics but also the amenities and destinations provided along the street.
- The neighbors have been measuring the effects of their interventions – cars coming through and visitors.
- A1A is dark at night for a portion of the year because of the turtle ordinances. This presents an opportunity for Breakers Avenue to be street of the neighborhood with bright lights.
- The Bonnet House is disconnected with the rest of Breakers Avenue.
- Bonnet House would love to do more to engage Breakers Avenue – they can envision doing events at the end of Breakers outside of their entrance, like small concerts. Also, Covenant House will likely be moving.
  Neighbors do not see much truck traffic or deliveries along Breakers Avenue because the loading/unloading areas for the big hotels happen along the side streets
- The City received funds from Art of Community Grant, Community Foundation of Broward to paint the intersections with the residents.
- The owners have considered artwork for the blank walls along Breakers – though they would prefer that it be very carefully curated and easily updated – perhaps a canvas installation as opposed to a wall mural
- Birch Tower recently completed a concrete restoration project. Birch Tower could potentially relocate the head-in parking spaces along Breakers and they have met with the City to see if it would be possible down the road to add a small retail component in place of those spaces

Attendees: List of attendees is available upon request.

Meeting Minutes

PROJECT #12435 Breakers Avenue Streetscape Improvements

600 Breakers Avenue, Fort Lauderdale.
1:30 p.m., Thursday, May 30, 2019

Meeting Summary

GOAL: Review the draft concept plan and identify project priorities within allocated funding to define project's phase-2 (Engineering Design).

1. Attendees: See Sign-in Sheets

2. REVIEW OF THE PROJECT, ON-LINE SURVEY RESULTS:

- Initial Cost Estimate: The recent addition of the Kimley-Horn team brought in the expertise of recent project at Clematis Street and additional information on cost of construction. The two expensive line items are- 1) Undergrounding of the overhead utilities; 2) cost of custom pavers, custom sidewalk colors and patterns. Cost estimate was verified by two engineering teams.
- Value-engineer design to bring the overall costs down.
- Work with FP&L for estimated cost of utility undergrounding. Consider designing the undergrounding in-house to expedite

3. DESIGN SCOPE, PROJECT PRIORITIES:

- Undergrounding the utilities is a high priority. The pattern is important to set the mood but is there a way to adjust is, keep the feel & lower the cost. Consider keeping the intersection design only to reduce cost

- Phasing the project

  Bonnet House to Vistamar St- Consider construction after the temporary fire station and the Covenent house are redeveloped.

  Vistamar to Belmar Streets - Phase 2

  Belmar to Auramar Streets - Phase 2 / Phase 1

  Auramar to Terramar Streets – Phase 1

  Terramar to Windmar Streets- Phase 1

  Windmar to Viramar Streets – Phase 3 Consider working with the Four Seasons to extend the streetscape.

  Viramar to Riomar Streets - Phase 3

Meeting Minutes

- Consider clustering the construction vs. fanning the construction. Clustering would be less obstructive and more cost efficient.
- Design and construction within the City's right-of-way and not into the property line.
    - Owners want the autonomy of doing what is best for the current & changing market and for their particular use goals.
    - They are committed to the improvement in the area.
- Alternate sources or funding: Beach Improvement District (BID), County BID Tax, County Transportation Surtax
- Vested Parking ordinance to accommodate change of use in a blanket format, to make it easier for the permitting process.

4. OPPORTUNITIES FOR LONG-TERM SUCCESS:

- Maintenance – can BID maintain? Or a neighborhood association?

5. NEXT STEPS:

- Procure project phase 2 services (Engineering Design) by Mid-July. Scope to include sections within the right-of-way and between Vistamar to Riomar Streets.
- Value Engineer the paving pattern to reduce the cost (substantially)
- Update the City Commission on project progress
- Consider alternate project delivery method to value engineer during the design process, secure best costs of unconventional roadway materials, details, reduce construction delays and associated costs. Procure the services of Construction Manager at Risk.

ACTION ITEMS:

- **Dev Motwani**- Introduce the Four Season's point of contact. Consider construction of the block, section in front of their property.
- **Friends of N.B. Village**- Request the BID Board to expand boundaries, explore BOND with BID District
- **Commissioner Glassman** - Meet with B.C. Commissioner Lamar to discuss funding opportunities- BID Tax, County Transportation Surtax.


NORTH BEACH HOTEL
551
Bowers Av
Terramar St