Town of Surfside

SUSTAINABILITY & RESILIENCY COMMITTEE MEETING

AGENDA

March 11, 2020 – 6:30 p.m.
Chief Terrill Williamson Police Training Room
9293 Harding Ave, 2nd Floor, Surfside, FL 33154

1. **Call to Order/Roll Call**

2. **Approval of Meeting Minutes: February 19, 2020**

3. **Monthly Update from the Resiliency Officer.**

4. **Presentation & discussion of committee's rankings for education and engagement actions in the Climate Crisis Report & Action Plan. –** Resiliency Officer Kate Stein

5. **Presentation & discussion of DRAFT LU_Lab community resiliency workshop report and DRAFT first-edition Community Adaptation Toolkit -** Shawna Meyer, LU_Lab**.**

6. **New Meeting Date: April 15, 2020**

7. **Public Comments (*3-minute time limit per speaker*)**

8. **Adjournment**

THIS MEETING IS OPEN TO THE PUBLIC. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990, ALL PERSONS THAT ARE DISABLED; WHO NEED SPECIAL ACCOMMODATIONS TO PARTICIPATE IN THIS MEETING BECAUSE OF THAT DISABILITY SHOULD CONTACT THE OFFICE OF THE TOWN CLERK AT 305-861-4863 EXT. 226 NO LATER THAN FOUR DAYS PRIOR TO SUCH PROCEEDING.

AGENDA ITEMS MAY BE VIEWED AT THE OFFICE OF THE TOWN CLERK, TOWN OF SURFSIDE TOWN HALL, 9293 HARDING AVENUE. ANYONE WISHING TO OBTAIN A COPY OF ANY AGENDA ITEM SHOULD CONTACT THE TOWN CLERK AT 305-861-4863. A COMPLETE AGENDA PACKET IS ALSO AVAILABLE ON THE TOWN WEBSITE AT www.townofsurfsidefl.gov.

TWO OR MORE MEMBERS OF TOWN COMMISSION OR OTHER TOWN BOARDS MAY ATTEND AND PARTICIPATE AT THIS MEETING.

THESE MEETINGS MAY BE CONDUCTED BY MEANS OF OR IN CONJUNCTION WITH COMMUNICATIONS MEDIA TECHNOLOGY, SPECIFICALLY, A TELEPHONE CONFERENCE CALL. THE LOCATION 9293 HARDING AVENUE, SURFSIDE, FL 33154, WHICH IS OPEN TO THE PUBLIC, SHALL SERVE AS AN ACCESS POINT FOR SUCH COMMUNICATION.

Town of Surfside

SUSTAINABILITY & RESILIENCY COMMITTEE MEETING

MINUTES

February 19, 2020 – 6:30 p.m.
Chief Terrill Williamson Police Training Room
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1. Call to Order/Roll Call

The meeting was called to order at 6:34 p.m.

The following were present:	Chair Andrea Travani Committee Member Deborah Cimadevilla Committee Member Bertha Goldenberg Vice Chair Clara Diaz-Leal (arrived at 6:50 p.m.) Committee Member Paul Baldauf Mayor Daniel Dietch, Town Commission Liaison (arrived at 6:55 p.m.)
Also, present:	Duncan Tavares, Assistant Town Manager Lillian Arango, Town Attorney Kate Stein, Sustainability & Resiliency Officer James Hickey, Calvin Giordano & Associates Evelyn Herbello, Deputy Town Clerk

2. Approval of Meeting Minutes: January 15, 2020

Committee Member Goldenberg made a motion to approve the January 15, 2020 minutes. The motion received a second from Committee Member Baldauf. All voted in favor with Committee Member Diaz-Leal absent.

3. Monthly Update from the Resiliency Officer.

Resiliency Officer Stein provided an update on the work LULab is doing and the model they are building, which should be available in March. She spoke regarding Florida Resilience Officer, Dr. Nesheiwat's visit next week. She also provided an update from the County on the Resilience 305 meeting that took place and the focus is to work with partners in other neighboring municipalities and develop those partnerships.

Assistant Town Manager Tavares provided the Committee with an update on the meeting that they had with Senator Wasserman-Schultz and the appropriations the Town is requesting of federal funding for the issues of flooding in Town.

Committee member Cimadevilla asked what the process would be in obtaining federal funding for the flooding issue.

Assistant Town Manager Tavares explained to Committee member Cimadevilla what the process was and that Calvin Giordano and Associates are assisting the Town to see how they can apply for those funds and what the eligibility criteria would be.

Resiliency Officer Stein stated that once the report and community toolkit are ready from LULab, they will be posted online with a workshop to follow.

Assistant Town Manager Tavares updated the Committee on the beach renourishment project and he advised them that there will be no more beach sand hauled. He gave an update on the restoration of the dunes now that the beach renourishment is complete.

Discussion took place among the Committee members and staff on the issue of the dune restoration, beach sand renourishment, dune adoption and the ownership issue that may arise.

4. Discussion with Town Planner Sarah Sinatra of Calvin, Giordano & Associates, regarding which Climate Crisis Action Plan items to forward to the Planning & Zoning Board.

Resiliency Officer Stein spoke regarding the land management area prioritization and advised the Committee that Town Planner Sinatra stated that some of these priorities do not fall under the prevue of the Planning and Zoning Board.

James Hickey, Calvin Giordano and Associates, went through the Climate Crisis Action Plan items with the Committee members and advised them which ones fall under the Planning and Zoning Board prevue and which ones does not.

A lengthy discussion took place among the Committee members, staff and James Hickey, Calvin Giordano and Associates, on each item.

Chair Travani stated that LEED should be required because it is necessary.

Assistant Town Manager Tavares discussed the building permitting process for LEED certification and adding the requirement of LEED Certification in the Code.

A motion was made by Committee member Goldenberg to recommend and require that all residential buildings over 30 feet in height and all commercial buildings must be LEED certified. The motion received a second from Committee member Diaz-Leal. All voted in favor.

Discussion took place among staff and the Committee members regarding green roofs and conduits being put in place when a new building is being built in order to make it more accessible for parking spaces for electric vehicles.

Consensus was reached by all Committee Members to recommend staff to provide more information on green roofs for an upcoming meeting.

Consensus was reached by all Committee Members to make a recommendation that all new construction building to have conduits in place making parking spaces ready for electric vehicles.

Committee members requested staff and Calvin Giordano and Associates provide more information on shade trees and shade tree requirements used by other communities, toward identifying potential ways to increase shade trees on public rights-of-ways.

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5. Discussion regarding classification of items that received a "1" ranking in the Climate Crisis Report & Action Plan.

Committee members made comments on the ranking process, and those who had not submitted their rankings to Resiliency Officer Stein for tabulation agreed to do so by Monday, February 24, 2020.

The Committee members suggested handing out flyers on their priorities at the next Town Commission meeting in an effort to educate the public on the needs and priorities of this Committee.

The Committee as a whole agreed to create a new action related specifically to flooding on Abbott Avenue and to put that action as priority "1".

6. Discussion on prioritizing education and engagement actions in the Climate Crisis Report & Action Plan.

The Committee discussed this item in conjunction with Item 5 and requested Resiliency Officer Stein to bring back at the next meeting the tabulations.

7. Discussion of timeline and next steps for LuLab report and toolkit.

Resiliency Officer Stein gave an update and stated that they are waiting on LULab to finish their edits for the report and once the report is done, she will provide it to the Committee Members.

Committee member suggested that the workshop with LULab and the report be made public and televised.

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8. New Meeting Date: March 11, 2020

Discussion took place on the availability of the Committee members to hold their next meeting on March 11, 2020. All Committee members advised they were available to attend the meeting on March 11, 2020 at 6:30 p.m.

9. Public Comments (*3-minute time limit per speaker*)

There were no speakers signed up to speak.

10. Adjournment

A motion was made by Committee Member Goldenberg to adjourn the meeting at 8:25 p.m. The motion received a second from Committee member Cimadevilla. All voted in favor.

Respectfully submitted:

Accepted this _____ day of _____, 2020.

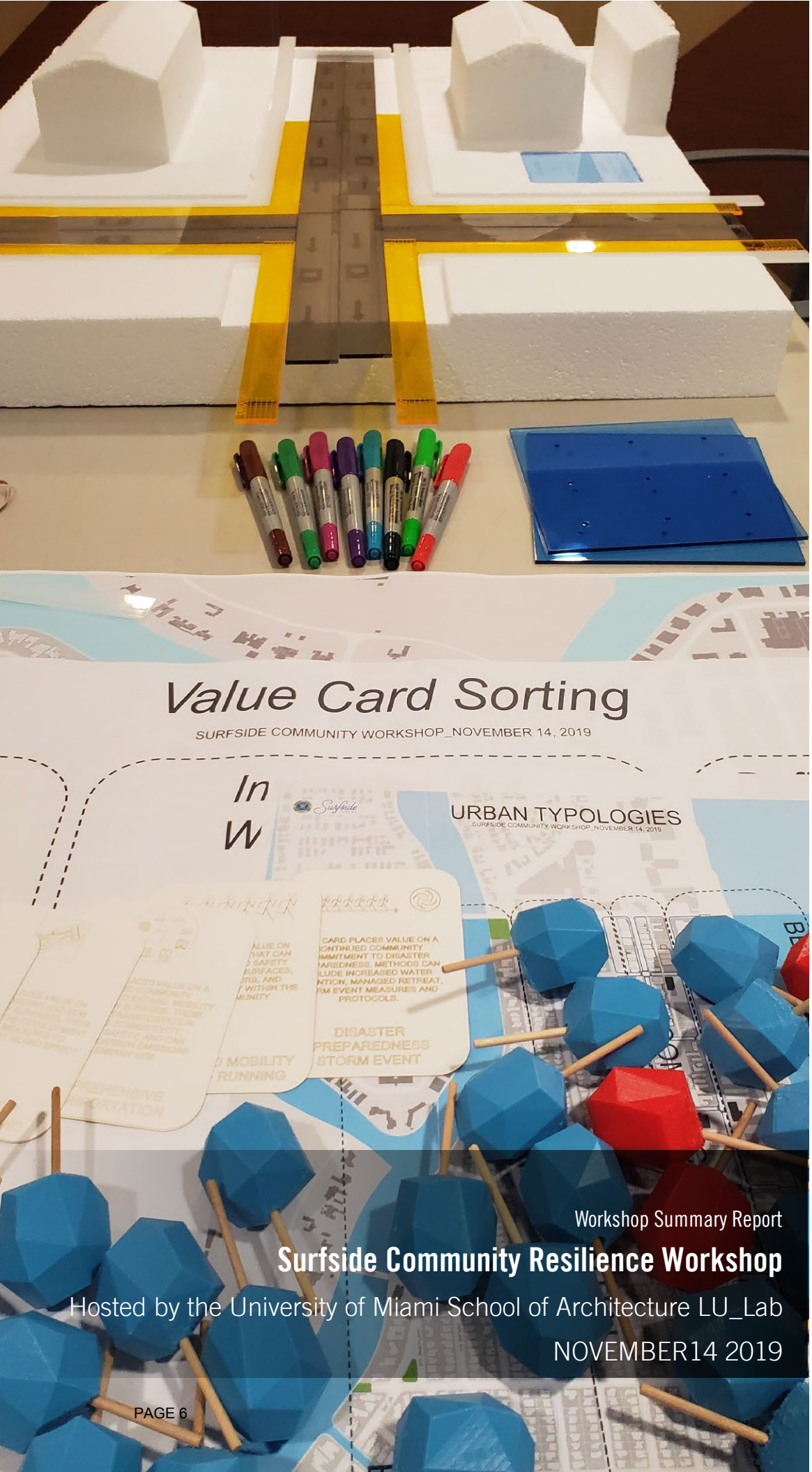
_____
Andrea Travani, Chair

Attest:

_____
Evelyn Herbello
Deputy Town Clerk

Surfside
FLORIDA

This document is a DRAFT for review and comment by the Sustainability & Resiliency Committee, as well as members of the public who attend the committee's meeting. These and other comments from future meetings on the report may be used to revise this document.



Workshop Summary Report

Surfside Community Resilience Workshop

Hosted by the University of Miami School of Architecture LU_Lab

NOVEMBER14 2019

LU LAB
UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE

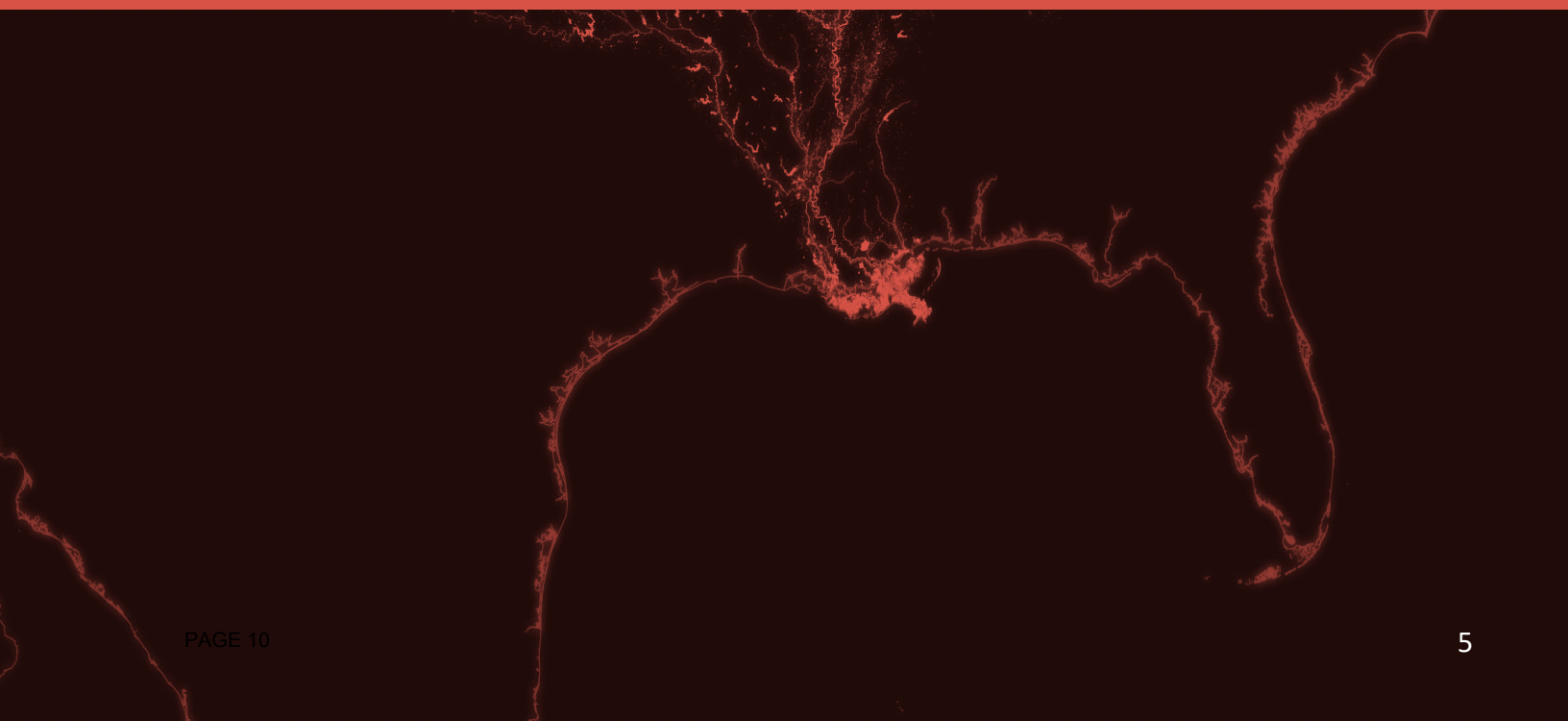
TABLE OF CONTENTS

LU LAB

1.a

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE

The LU_Lab is a research and design-based center housed at UlSoA offering resources and expertise on the sustained existence of coastal architecture and urbanisms. The emerging environmental fluctuations pressure our urbanisms and require an anticipatory architecture. The work of the lab strives to understand this evolving dialogue of architecture and environment by searching for symbiotic relationships between the built and natural conditions.Projects investigated under the LU_Lab embrace environmental uncertainty and speculate future projections for architecture and urbanism.



Right Image: Aerial View of Surfside, looking Northeast

1.b Climate Action Partnership

The Town of Surfside has engaged the University of Miami School of Architecture LU_Lab to analyze, strategize and envision what a comprehensive urban model is for the future of Surfside. The initial phases of this partnership include collaboration with the Mayor, the Town Manager, the Assistant Town Manager, and Calvin, Giordano & Associates to develop a comprehensive Climate Crisis document. Specifically, this document will include a Climate Crisis Action Plan and Community Adaptation Toolkit.

The LU_Lab's role is to investigate all aspects of Surfside's urban space including walkability, connectivity, resiliency, hydrology, energy, and carbon impacts. The lab is led by Christopher Meyer, Assistant Professor at the School of Architecture and supported by his partner, Shawna Meyer, AIA, and a group of undergraduate and graduate architecture students eager to study and apply their knowledge through local communities with tangible outcomes.

In partnering with the LU_Lab, the Town of Surfside looks forward to utilizing the University of Miami's resources to assist the Town in addressing not only environmental challenges, but also the physical infrastructure of Surfside. The long-term goal is to create actionable plans, resulting from the analysis provided by LU_Lab, to ensure the sustainability of Surfside for present and future generations.

2.a TEAM

UlSoA LU_Lab Workshop TEAM:

Christopher Meyer	LU_Lab Director, UlSoA Assistant Professor
Shawna Meyer	LU_Lab Lead Researcher, UlSoA Lecturer
Reid Yenor	LU_Lab Research Assistant
Peyton Smyth	LU_Lab Research Assistant
Shane Jezowski	LU_Lab Research Assistant

Surfside Town Collaborators:

Daniel Dietch	Mayor, Surfside
Guillermo Olmedillo	Town Manager, Surfside
Duncan Tavares	Assistant Town Manager, Surfside
Kate Stein	Sustainability + Resiliency Officer, Surfside

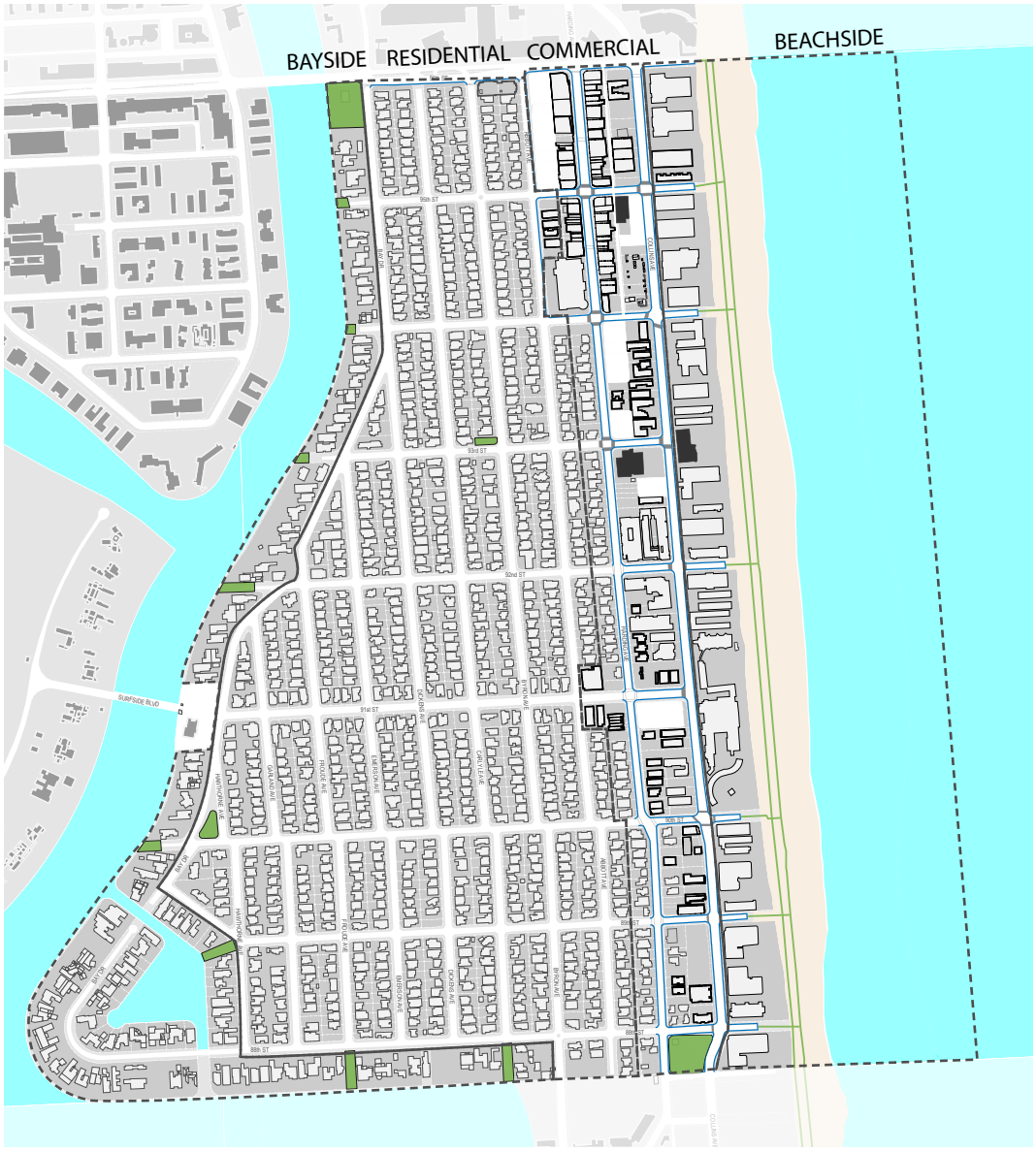
Guest Table Facilitators:

Katherine Hagemann	Miami Dade Resilience Program Manager
Karina Castillo	Miami Dade Resiliency Team Member
Christian Kamrath	Miami Dade Resiliency Team Member

2.b Community Resilience Workshop

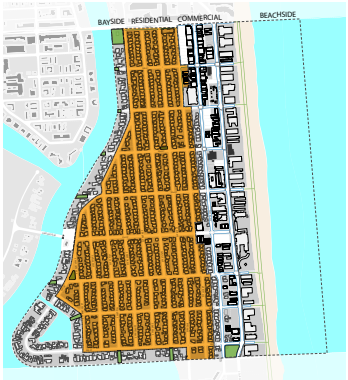
STRATEGIES + DESIGN SCENARIOS

- Participants will engage in the conversation and evaluation of a series of strategies, or tools, that can be implemented to build a resilient urban environment.
- The workshop will challenge community members to question the existing programs and scales of the Surfside urban environment and prioritize space through a lens of resiliency.
- Through a hands on 'design-build' exercise, participants will construct design scenarios that reflect a comprehensive community that addresses: cars, people, bikes, water, energy, trees, parks, and public spaces.
- Several design strategies will be developed and documented during the workshop that will directly influence the editing and adapting of Edition II of the Climate Crisis Action Plan and Community Adaptation Toolkit.
- A summary of the workshop will be presented by the LU_Lab to the Sustainability + Resiliency Committee, as well as the Town Commissioners.

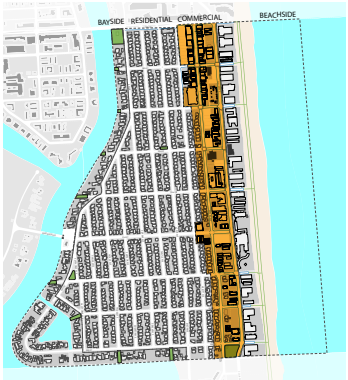


Below Diagram: Proposed boundary of Bayside Urban Typology

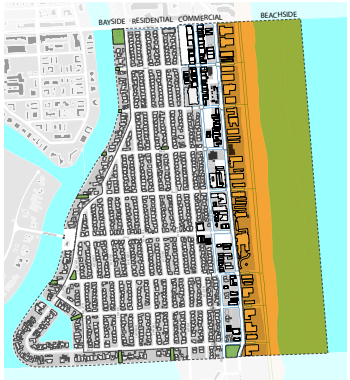
Below Diagram: Proposed boundary of Residential Urban Typology



Below Diagram: Proposed boundary of Commercial Urban Typology



Below Diagram: Proposed boundary of Beachside Urban Typology

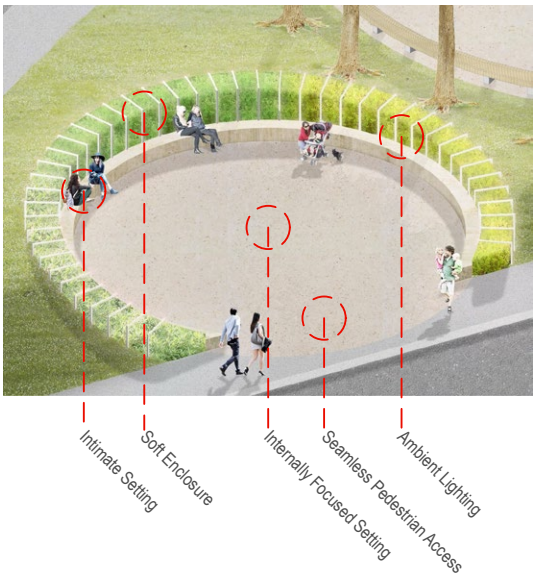


3.a Surfside: Urban Typologies

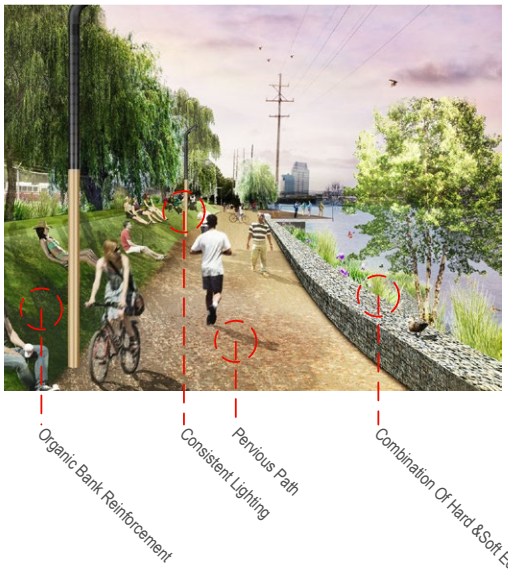
As a method to analyze Surfside's comprehensive community as well as unique characteristics of sites found in an east/west transect of Surfside's urbanism, the LU_Lab has defined conceptual classifications called *urban typologies*. These classifications have physical urban boundaries, as illustrated to the left, that define urban zones with similar physical characteristics. The classification of these four zones, or typologies, fosters a discussion specific to the needs of the specific place. The workshop used these typologies to engage with the community participants and help facilitate discussions of their specific interactions with each community typology.

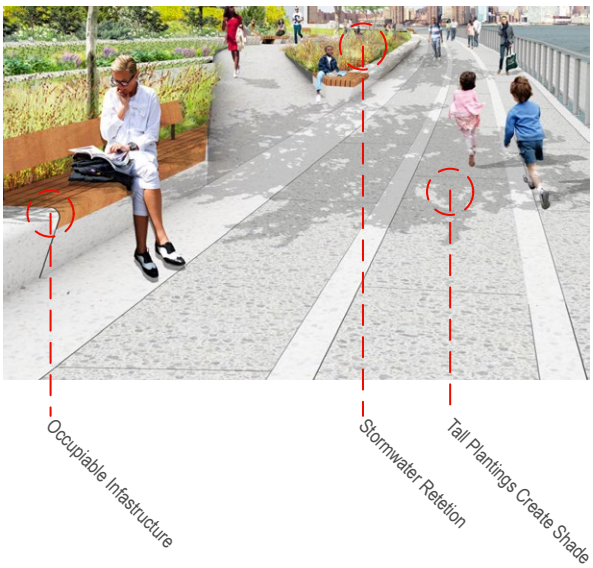
Below Image: Chris Meyer introducing workshop agenda and Surfside Typologies to community.

Public Gathering



Active Edge





3.b Urban Strategies Precedents

The workshop began with Chris and Shawna facilitating a larger group discussion on the components of a resilient community:

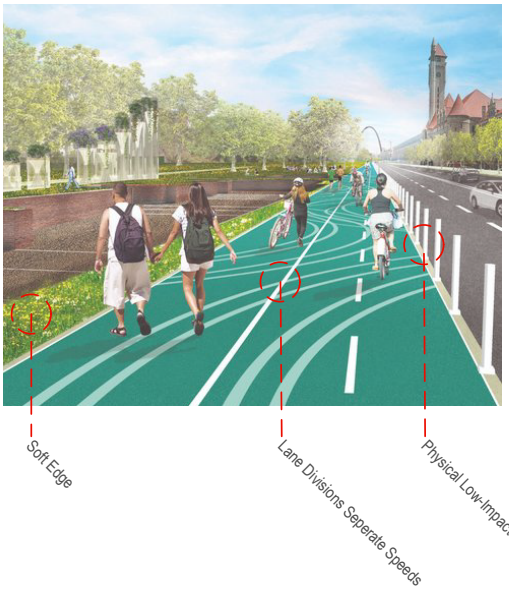
QUESTIONS + INQUIRIES

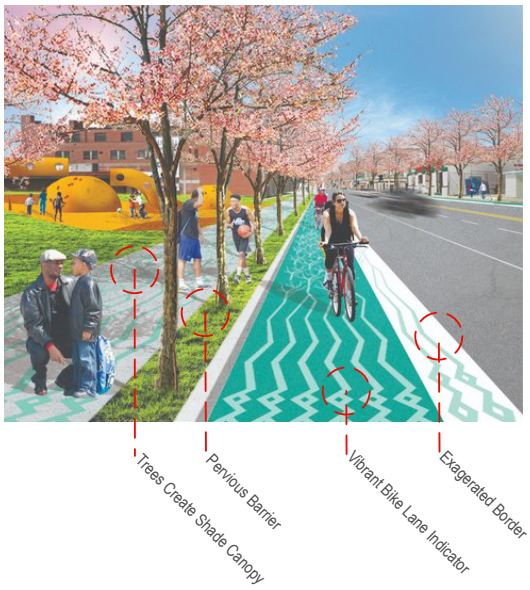
- What are the components of a resilient community? What is a resilient urban environment made of?
- Who are the members [stakeholders] in a healthy, resilient community?
- What are the steps to a resilient community? A resilient urbanism?
- What is walkability? Connectivity? Permeability? And how do these systems contribute to a Resilient Urbanism?
- How do we adapt Surfside into a resilient, healthy urban community?

As part of this conversation, a series of illustrative images depicting other urban examples of resilient, adaptive, and communities help the Surfside residents envision what their community could look like. These precedents were diagrammed and labeled to show specific examples of:

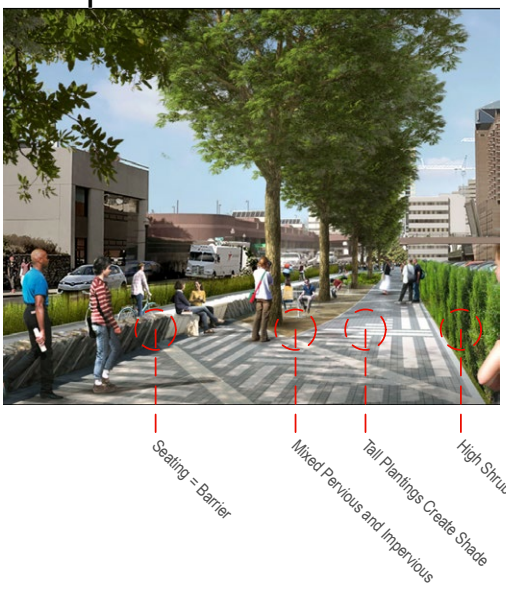
Hard/soft Water Edges
Flexible public spaces
Stormwater Retention
Permeable Surfaces/Material Variations
Occupiable Infrastructures
Safe Mobility + Connectivity [Designated Paths, Consistent Lighting]
Climate + Storm Water Strategies

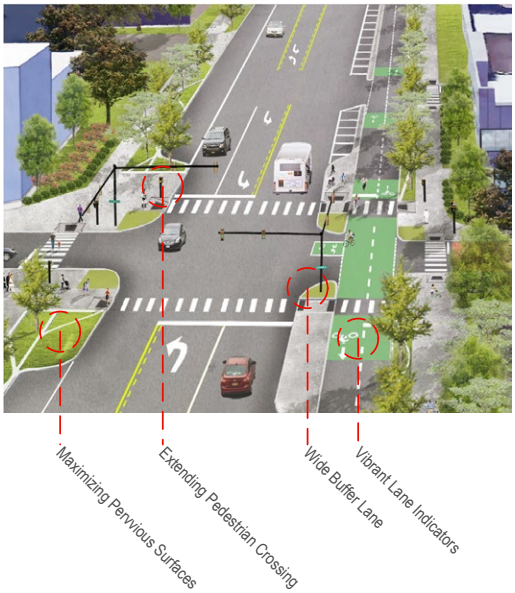
Safe Mobility



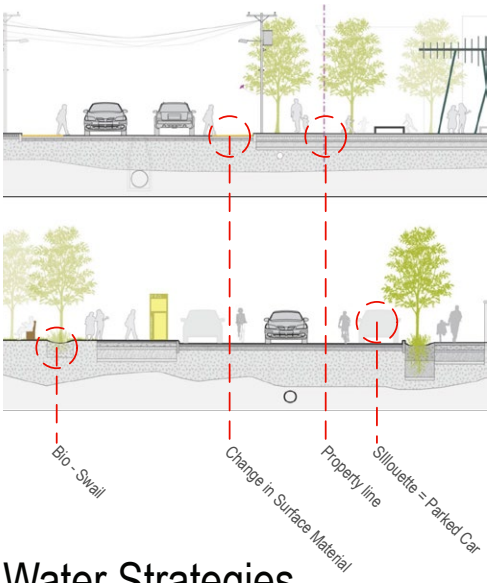


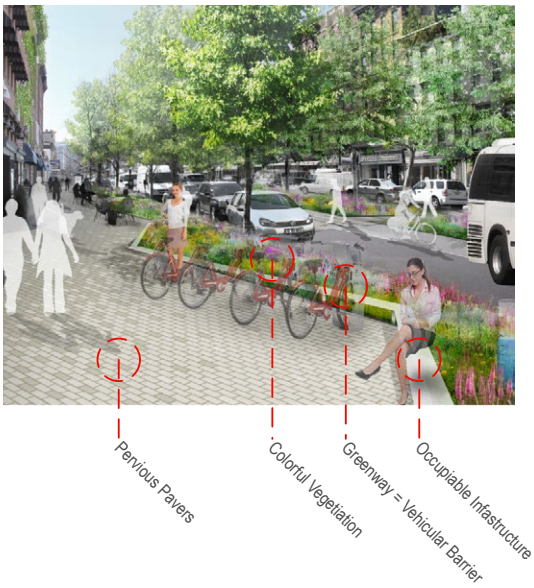
Complete Streets



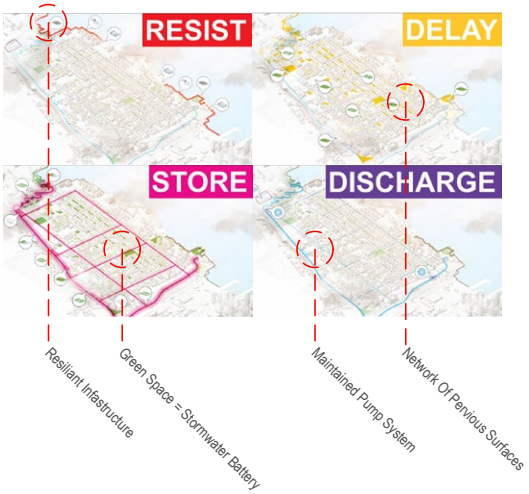


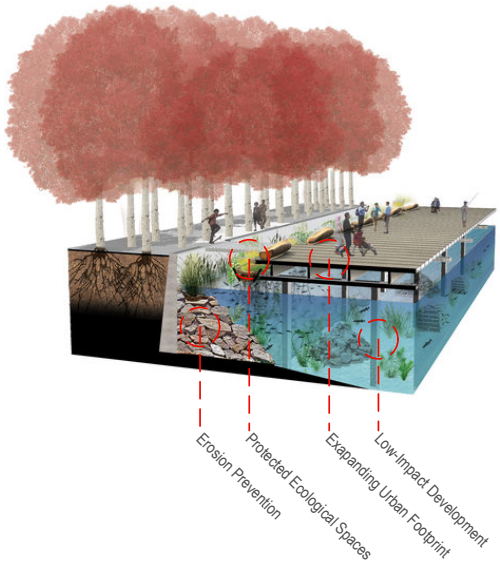
Active Interventions

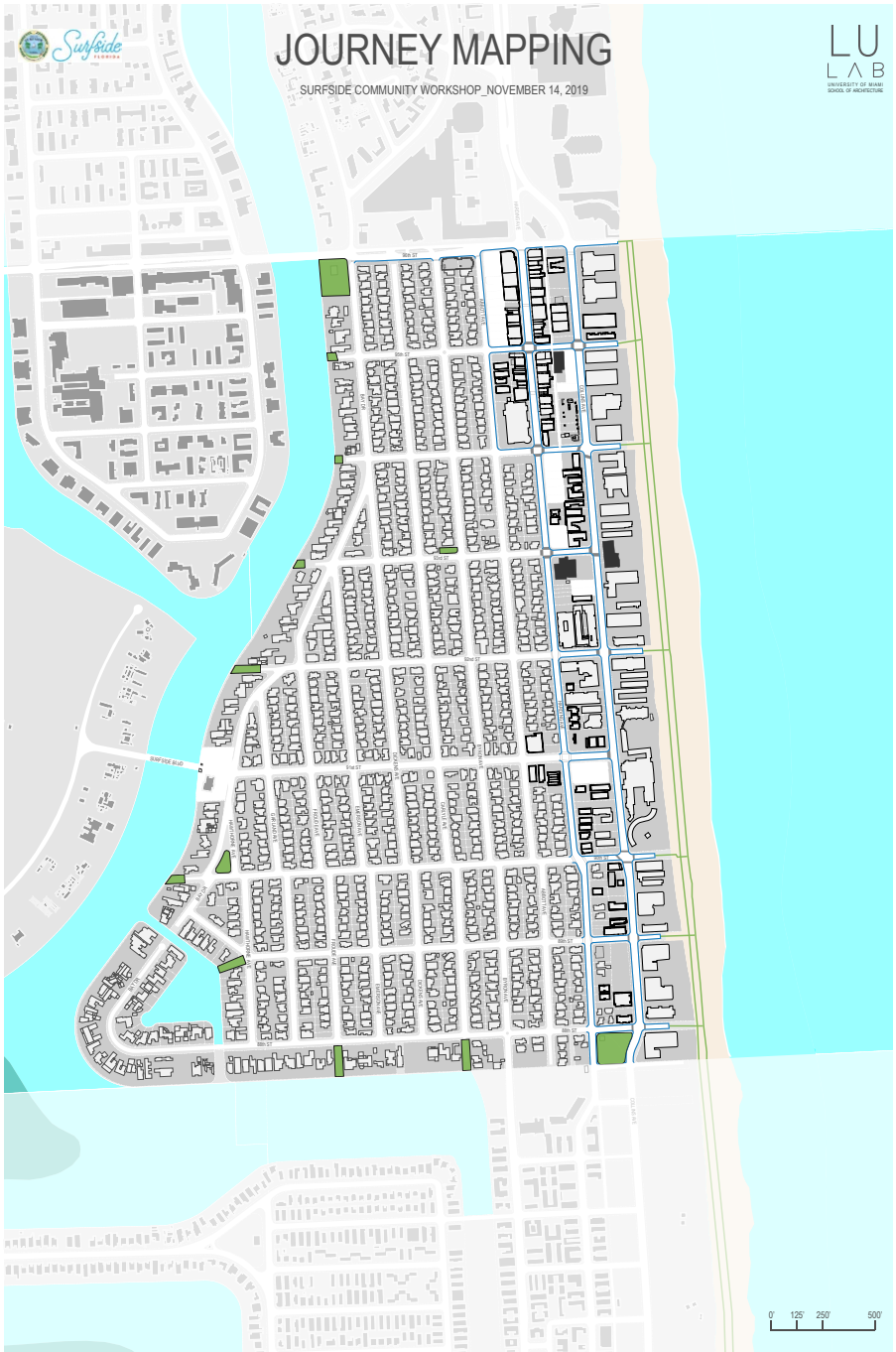




Water Strategies






JOURNEY MAPPING
SURFSIDE COMMUNITY WORKSHOP_NOVEMBER 14, 2019
LU
LAB
0' 125' 250' 500'

3.c Journey Mapping | Process

The first exercise focused the workshop participants at their individual tables led by a group facilitator. Journey Mapping, required each participant to share where they live within the community and asked them to draw on a map of Surfside some of their daily habits. As each community member began tracing their answers to the below prompts, the maps came to life illustrating daily habits, oft visited amenities, and popular public spaces.

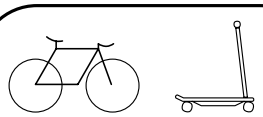
- Each table will have a large map of the Town of Surfside along with colored markers. Each participant should choose a marker color and draw/write the answers to the following questions:
- When leave your house/business on a typical day and go to a religious venue or grocery store or local business, how do you get there? What mode of transportation and what is your experience?
- How did you arrive to the Town Hall this evening? [drive? Where did you park? Walk? What was your experience?]
- How do you get to the beach?

Above Series: Journey Mapping diagrams with participant notes and experiences.

Journey Mapping | Reflections

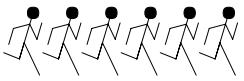
Reflecting on the conversations and the drawings that resulted from the Journey Mapping exercise, it became clear that residents live and experience their community similar to the conceptual Urban Typologies as studied by the LU_Lab. The residents living in the Beachside zone enjoy a series of amenities adjacent to their living or located within the same beach zone. One of the primary reasons for this is the existing connectivity provided by the continuous beach paths and accessible amenities along this pass. Similarly, the Beachside is adjacent to the the Commercial zone, again providing continuous paths with accessible amenities linking the Beachside and Commercial typologies. However, the Bayside zone, located as close as 1,800 FT [.3 miles] or a 7 minute walk, appears only once in the journey mapping from a Beachside Resident.

- The residents stated if the same mobility features: safety, lighting, designated paths, sidewalks, etc. and accessible public gathering spaces that exist within the Commercial zone existed along the Bayside zone, they would visit the other zones.
- Residents also stated that the bicycle path along the beach easily linked them to the neighboring communites, but that biking across Surfside to the west and experiencing the Bayside wasn't thought of as a safe option.
- At one table, 4 out of 5 participants drove to the workshop even though they lived less than a mile away.



THIS CARD PLACES VALUE ON DESIGNATED PATHS THAT CAN EXIST AS INCREASED SAFETY ZONES, PERMEABLE SURFACES, TRAFFIC DISRUPTORS, AND ENCOURAGE MOBILITY WITHIN THE SURFSIDE COMMUNITY.

DESIGNATED MOBILITY
BIKING + SCOOTER

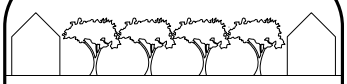


THIS CARD PLACES VALUE ON DESIGNATED PATHS THAT CAN EXIST AS INCREASED SAFETY ZONES, PERMEABLE SURFACES, TRAFFIC DISRUPTORS, AND ENCOURAGE MOBILITY WITHIN THE SURFSIDE COMMUNITY.

DESIGNATED MOBILITY
WALKING + RUNNING

THIS CARD PLACES VALUE ON CREATING A SAFE URBAN REALM FOR THE SURFSIDE COMMUNITY. EXAMPLES INCLUDE SHADE, WATER, DESIGNATED MOBILITY AREAS AND MANAGED TRAFFIC FLOWS.

SAFETY



THIS CARD PLACES VALUE ON CREATING INCREASED URBAN CANOPIES WITHIN THE SURFSIDE COMMUNITY. URBAN CANOPIES PROVIDE SHADE AS WELL AS WORK AS A 'SPONGE' TO ABSORB WATER RUNOFF.

URBAN CANOPY

THIS CARD PLACES VALUE ON CREATING AN URBAN ECOSYSTEM THAT COLLECTS, CLEANSES, AND STORES STORM WATER. METHODS ARE INCREASED GROUND PLANTING, SWALES, INCREASED TREE CANOPIES, GREEN ROOFS, AND NATURAL AND CONSTRUCTED WATER RETENTION BASINS.

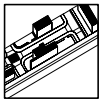
SPONGE CITY

THIS CARD PLACES VALUE ON A CONTINUED COMMUNITY COMMITMENT TO DISASTER PREPAREDNESS. METHODS CAN INCLUDE INCREASED WATER RETENTION, MANAGED RETREAT, STORM EVENT MEASURES AND PROTOCOLS.

DISASTER
PREPAREDNESS
STORM EVENT

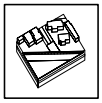
THIS CARD PLACES VALUE ON A CONTINUED COMMUNITY COMMITMENT TO EXPAND MOBILITY NETWORKS IN SURFSIDE. THESE MODES OF TRANSPORTATION INCREASE CONNECTIVITY, PROMOTE SAFETY, AND CAN DECREASE CARBON EMISSIONS AND ENERGY USE

COMPREHENSIVE
TRANSPORTATION



THIS CARD PLACES VALUE ON OBSERVING EXISTING AND NEW HIGH EMISSIVITY SURFACES, THEIR DANGERS, AND THE DEVELOPMENT OF PLANNED MEASURES TO COUNTERACT HEAT ISLAND EFFECT.

HIGH EMISSIVITY
URBAN HEAT ISLAND

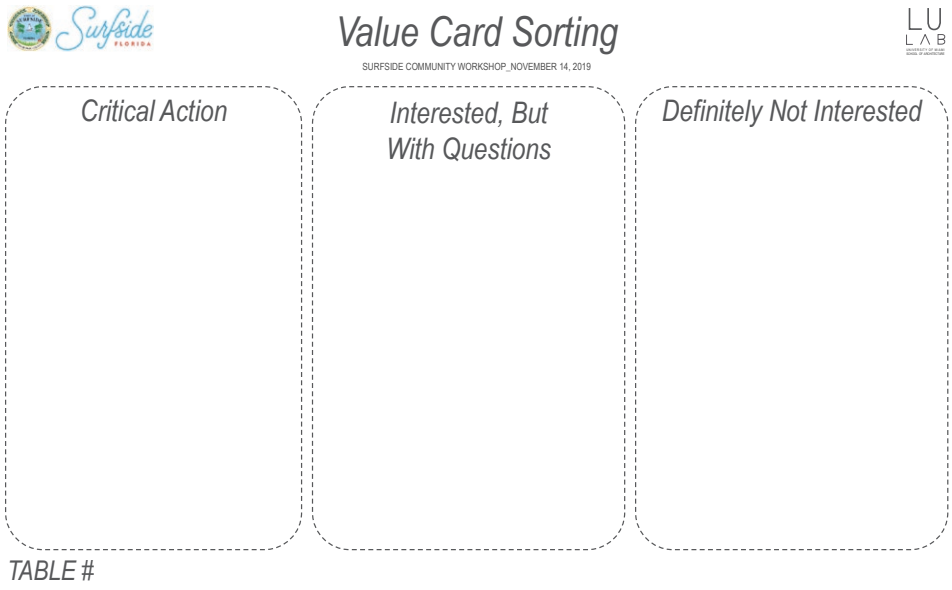


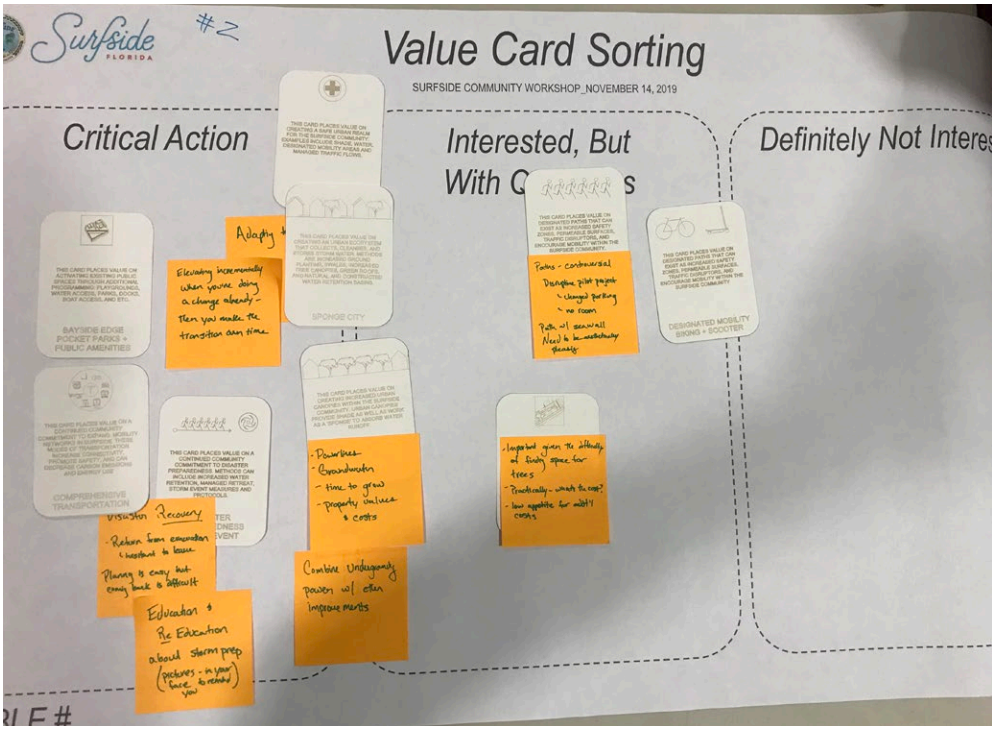
THIS CARD PLACES VALUE ON ACTIVATING EXISTING PUBLIC SPACES THROUGH ADDITIONAL PROGRAMMING: PLAYGROUNDS, WATER ACCESS, PARKS, DOCKS, BOAT ACCESS, AND ETC.

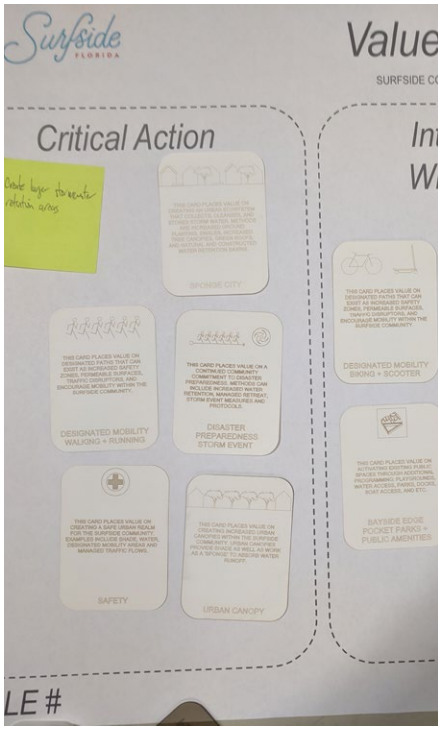
BAYSIDE EDGE
POCKET PARKS +
PUBLIC AMENITIES

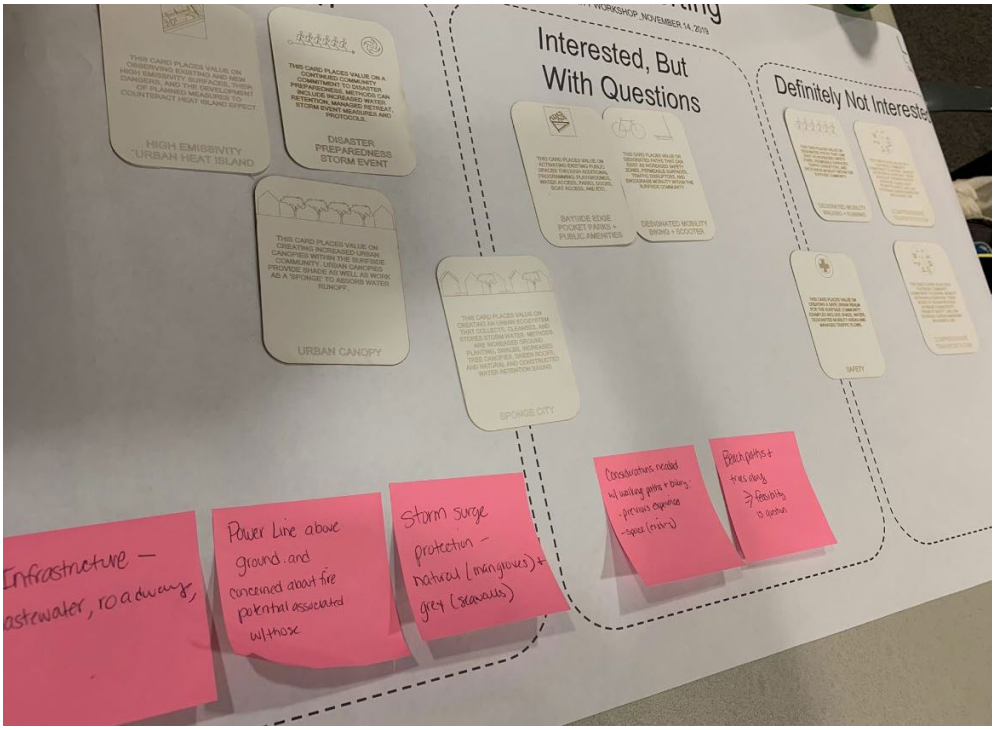
3.d Value Card Sorting | Prioritizing Action

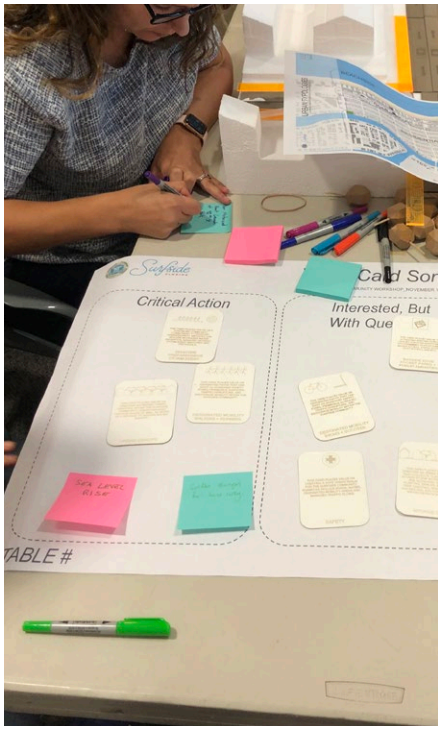
Each table facilitator shared a set of Value Cards along with a Pre-Printed Poster containing 3 columns: Critical Action, Interested but With Questions, and Definitely Not Interested. The table worked as a group to come to a consensus to sort the Value Cards. Additionally, post it notes were provided at each table where the participants were encouraged to add Values that are not present at the table.




Surfside
FLORIDA
#2
Value Card Sorting
SURFSIDE COMMUNITY WORKSHOP_NOVEMBER 14, 2019
Critical Action
Interested, But
With Q
s
Definitely Not Interes
Adapting
Elevating incrementally when you've doing a change already - then you make the transition over time
Parks - controversial
Disruptive pilot projects
- changed parking
- no room
Path of seawall
Need to be contextually thought
- Power lines
- Groundwater
- time to grow
- property values & costs
Combine Underground power w/ other improvements
- Suggested given the difficulty of finding space for trees
- Practically - watch the cost?
- low vegetation for mobility corridors
Disaster Recovery
- Return from evacuation & investment to lessen
Planning is easy but coming back is difficult
Education & Re Education about storm prep (pictures - in your face to remember you)
DESIGNATED MOBILITY BIKING + SCOOTER
SPONGE CITY
BAYSIDE EDGE POCKET PARKS + PUBLIC AMENITIES
COMPREHENSIVE TRANSPORTATION
LE #


Surfside
FLORIDA
Value
SURFSIDE C
Critical Action
Create layer for hurricane protection areas
DESIGNATED MOBILITY WALKING + RUNNING
DISASTER PREPAREDNESS STORM EVENT
SAFETY
URBAN CANOPY
DESIGNATED MOBILITY BIKING + SCOOTER
BAYSIDE EDGE POCKET PARKS + PUBLIC AMENITIES
LE #


Interested, But
With Questions
Definitely Not Interested
HIGH EMISSIVITY "URBAN HEAT ISLAND
DISASTER PREPAREDNESS STORM EVENT
URBAN CANOPY
SPONGE CITY
BAYSIDE EDGE POCKET PARKS + PUBLIC AMENITIES
DESIGNATED MOBILITY BIKING + SCOOTER
SAFETY
Infrastructure — wastewater, roadways,
Power Line above ground and concerned about fire potential associated with those
Storm surge protection — natural (mangroves) + grey (seawalls)
Conservation needed w/ walking paths + plaza - previous expense - space (trees)
Beach paths + trees along → proximity to ocean


Surfside
Critical Action
Interested, But
With Que
SEA LEVEL RISE
TABLE #

Value Card Sorting | Outcome

The second exercise was a very productive process of input gathering from the community on two scenarios. The first scenario required the community to question and prioritize values given to them; i.e., what is safe mobility? what are its physical characteristics? How does the community prepare for storm events through physical and infrastructural changes? The results on the provided value cards are clear with unanimous responses defining critical actions as:

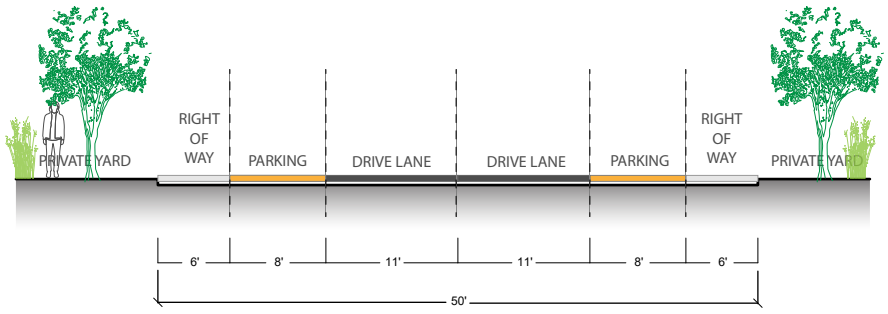
- Disaster Preparedness
- Increased Urban Canopy
- Increased Mobility
- Increased Public Safety

Other majority responses included:

- Sponge City
- Energy Use Reduction

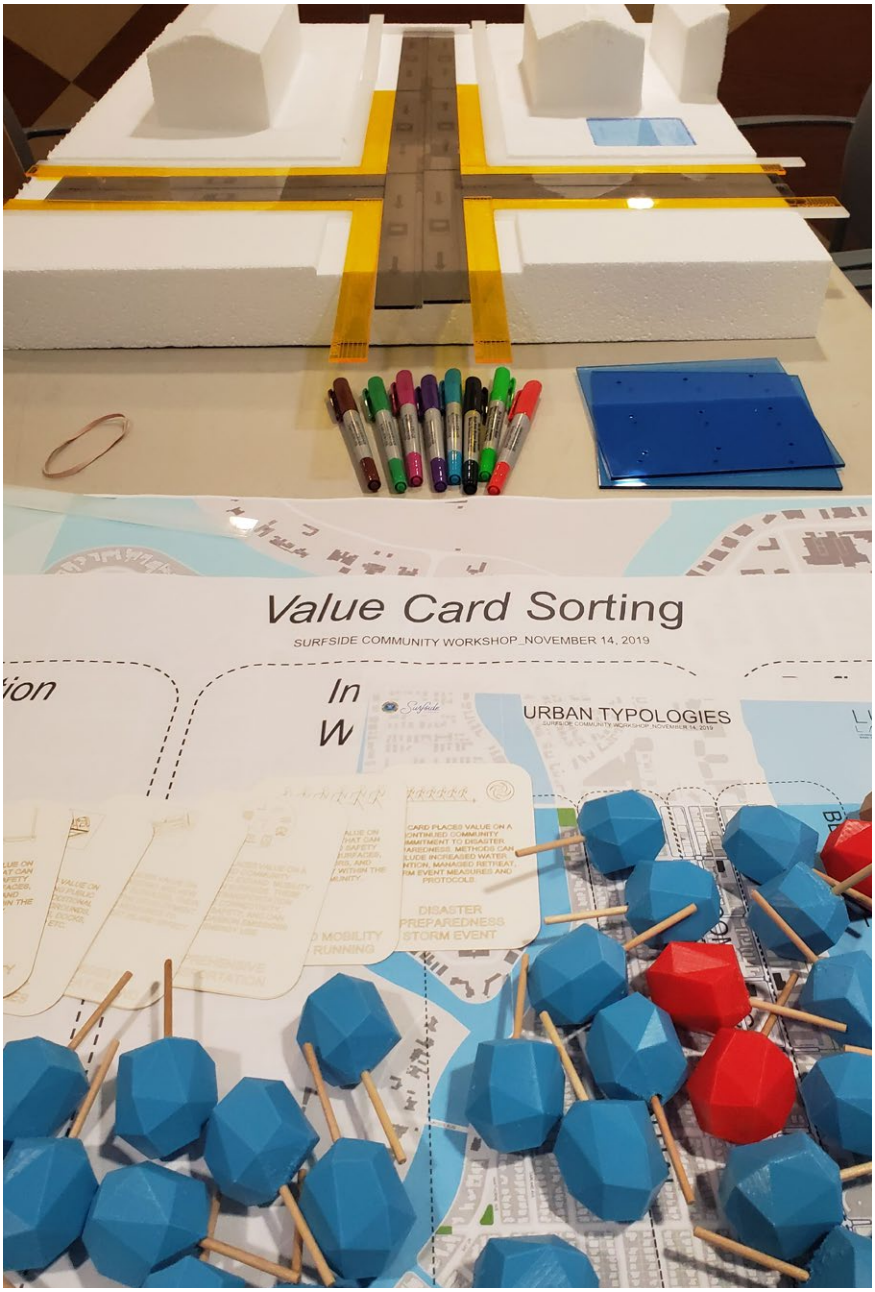
Once the given value cards were prioritized, community participants were able to add to their 'Critical' or 'Interested but Challenges' agenda. The primary feedback generated by the participants was a lack of Sea Level Rise focused interventions. Additional comments included:

- Augmented Infrastructure: Wastewater, Power Lines
- Storm Surge Protection: Natural and Constructed
- Disaster Recovery Preparedness
- Education + **Re-Education** on Storm Preparedness
- Elevating Roads, Paths, Buildings Incrementally



Top Right: A scaled cross-section illustrating the existing conditions off the Residential Typology.

Bottom Right: The models were set up for the groups illustrating the existing conditions of the cross-section in the Residential and Bayside Typologies. The models are 1/8" scale models simulating true dimensions of the urban environment and the accurate dimensional needs of the programmatic elements proposed to adapt and intervene within the existing conditions.

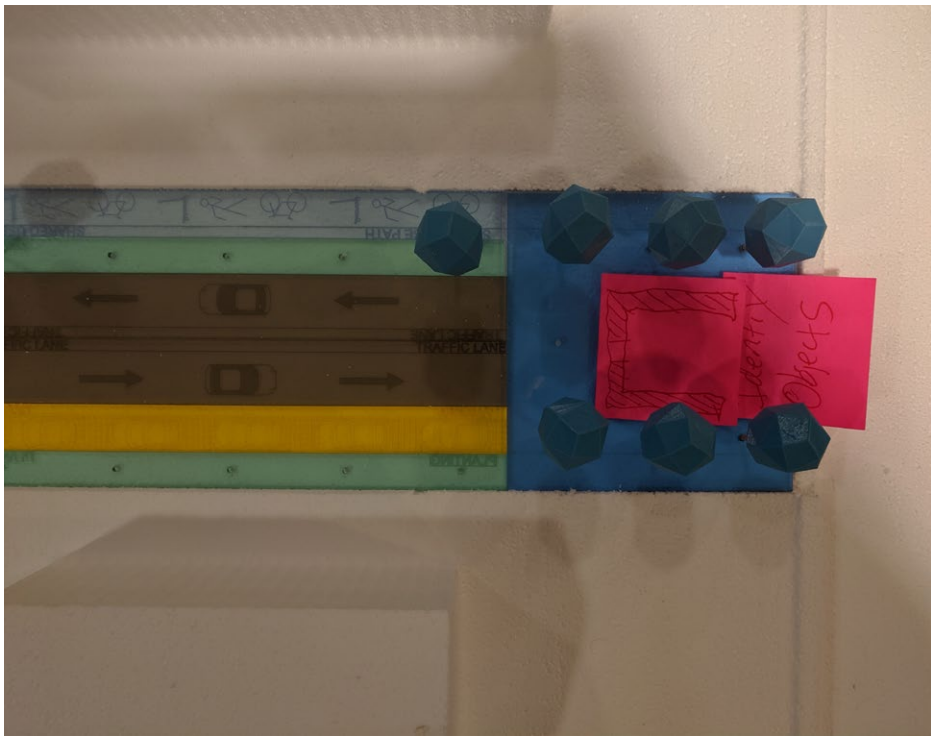


3.e Urban Strategies Simulation

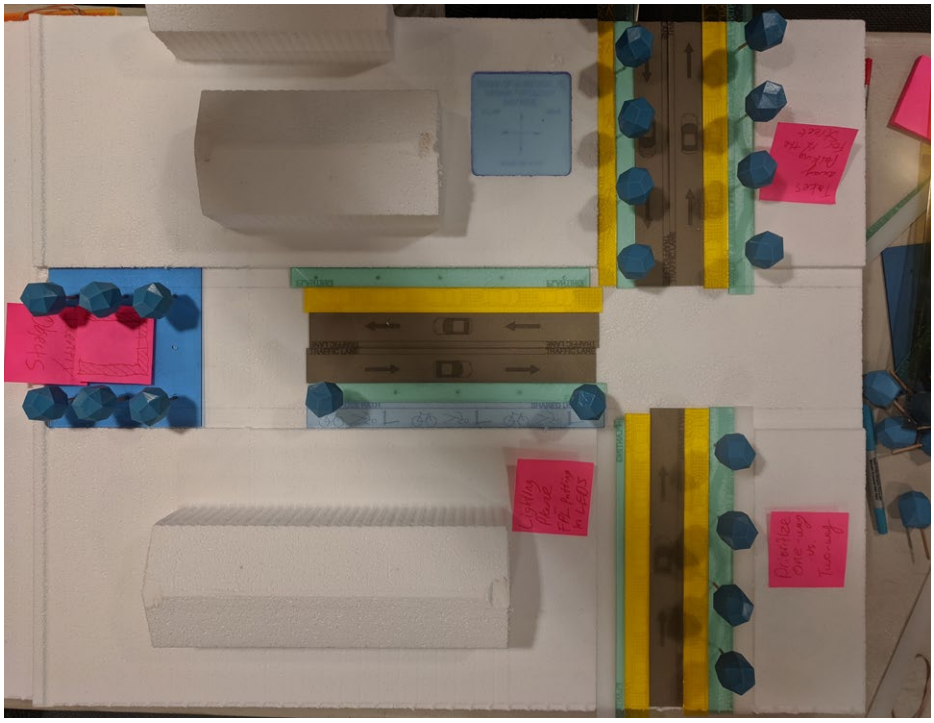
The final exercise is a modularized physical model that allowed the participants to assemble, dis-assemble, and re-assemble the physical elements that define their public realms. The urban strategies simulation served as a platform to bring together the community through a team building exercise.

Working within the Residential and Bayside typologies, the participants evaluated all the programs that work together to define a typical cross-section of those typologies. Each model included components that defined the existing physical conditions and their respective measurements. The modularity of the simulation model allowed the community participants to remove select portions of the cross-section's program and replace them with new programmatic elements. In addition to being interchangeable, the model pieces were constructed to allow overlaps of programs. For example, a 'share-way' or shared bike-lane placed on top of a drive lane.

In addition to the ground plane, the simulation model addressed issues of increased urban canopy, dedicated mobility pathways, and additional green space able to serve as drainage, protective green buffers, and soft edges.



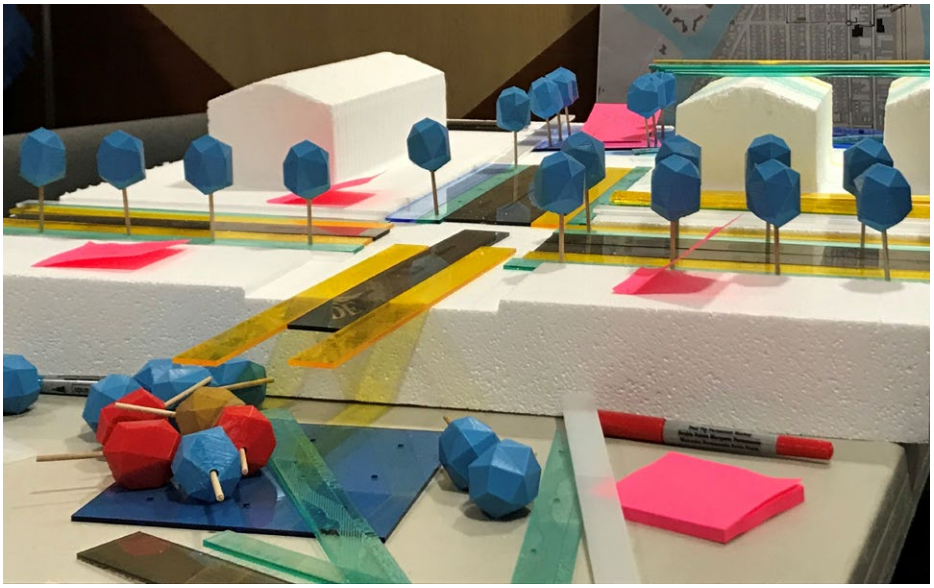
Top Right: This model illustrates one of the groups addressing a Bayside cross-section that terminates in one of the several public zones along the Bayside edge. This group proposed catalyzing the Bayside public realm through active programming and connective biking and walking paths that safely link the community from place to place.

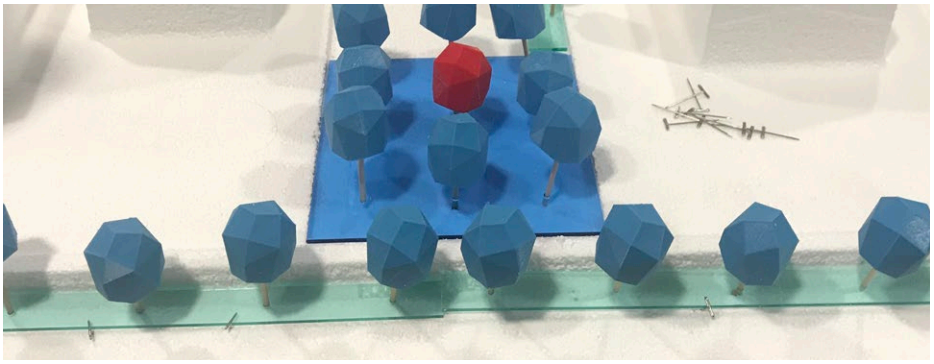


Bottom Right:Expanding on the streetscape running East/West; this group also studied 2 additional North/ South Scenarios.

Scenario 1: Illustrated at the bottom right of the photo, the group modeled a scheme that leaves the public 'right of ways' as they are, as well as parking on both sides of the street- but adds Urban Canopies and Safe Mobility through the removal of one of the driving lanes. The direction of the traffic would need to be studied at a broader scale.

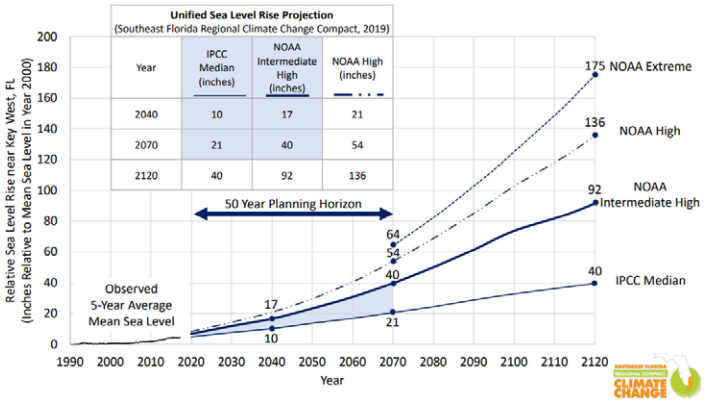
Scenario 2:At the top right of the model, the group illustrates a cross-section providing the increased Urban Canopy and the Safe Mobility walking paths, but keeps the two drive lanes, allowing a two-way street. To achieve this , the existing public right-of-ways must be adapted.





Top Right: This model illustrates one of the typical intersections in the Residential community. The group explore the notion of 2-way streets meeting 1-way streets, and prioritizing specific East/Wes streets for Pedestrian traffic flow.

Middle + Bottom Right:This group focused on the unique public spaces found in the Bayside Typology through the exploration of a ‘soft edge’ . The group proposed creating a ‘sponge’ for maximum water absorption in the existing public spaces as well as the addition of mangroves and other natural elements at the Bayside edge.



The above map reflects the updated 2019 predictions of Sea Level Rise as provided by the Southeast Florida Regional Climate Change Compact in December, 2019. Note: This data does not match the below predictions.

PROJECTED SEA LEVEL RISE

Below are maps of Surfside shown under the high NOAA, sea level projection curve for the years 2040, 2060 and 2080. Very limited impacts are projected for 2040, but the impacts increase for 2060 and significantly more for 2080, providing long range guidance under the high projection curve scenario.

2040

Estimated flood inundation by 2040. Data based on: https://sls.geoplan.ufl.edu/#about. Scenario NOAA, high projection curve.

2060

Estimated flood inundation by 2060. Data based on: https://sls.geoplan.ufl.edu/#about. Scenario NOAA, high projection curve.

2080

Estimated flood inundation by 2080. Data based on: https://sls.geoplan.ufl.edu/#about. Scenario NOAA, high projection curve.

4.a Next Step Recommendations

While the Community Resilience Workshop was the first public event hosted by the UlSoA LU_Lab, we have spent over 7 months analyzing the Surfside physical context, engaging with town officials and planners, and understanding the habits and culture of the Surfside residents. We feel with the knowledge gathered during this period combined with the knowledge shared from the community residents at the workshop we have arrived at a moment when we need to reflect one what we have learned and project what the future could be.

As reference, to the left we have provided a summary of the Project Sea Level Rise that is an excerpt from the Climate Assessment section of the Surfside Climate Action Plan.

In this section you will find a series of analysis and projections that are meant to both inspire the community to think big, and think long about their place while simultaneously work to focus and prioritize what first steps could and should be.

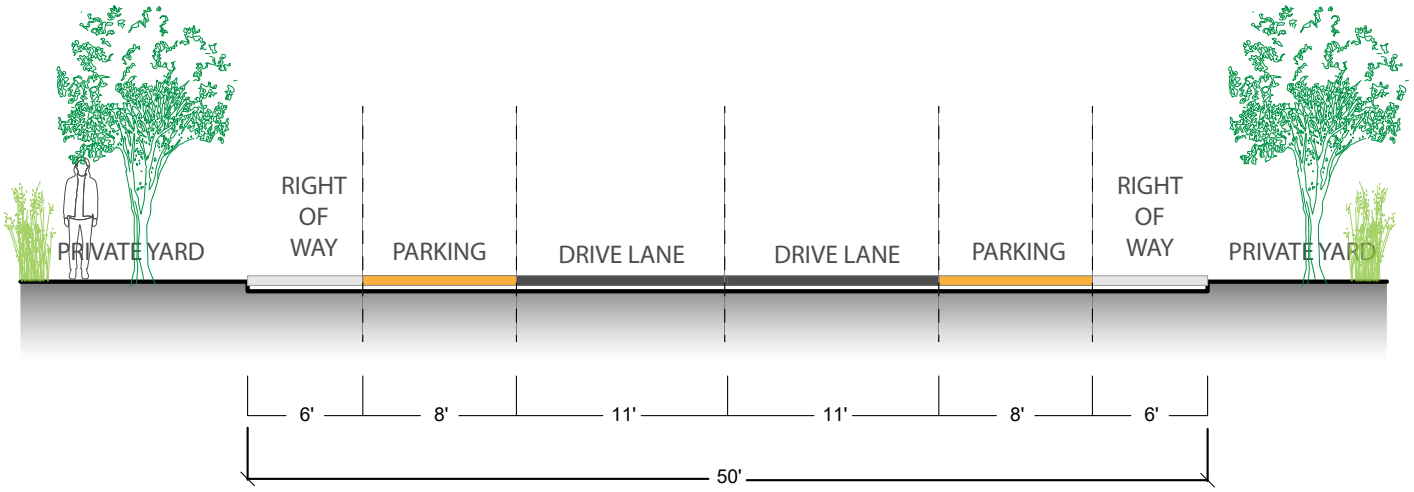
Comprehensive Urban Resiliency
The first set of drawings are a series of maps that propose phases and areas of interventions within the 4 Urban Typologies. These interventions are proposed along a timeline and would occur over a series of decades as required by Surfside's evolving environmental context.

Urban Cross Section Studies
The second drawing type is a series of cross-sections that propose changes to the existing Residential street typologies to build a more resilient and comprehensive urban community.

Below: The map below illustrates the recommended **Phase 01 Urban Interventions** as a focused first step towards a Comprehensive Resiliency. Prioritizing physical adaptations on 2 east/west streets, 90th and 93rd street will, the northwest portion of Bay Drive, and augmenting select existing public spaces; Surfside can smartly position itself to develop an urban environment that provides the comprehensive needs as outlined in the previous research In addition to the interventions providing connectivity, safe mobility, and increased storm water retention-the interventions are planned as part of a multi-phase urban adaptation.

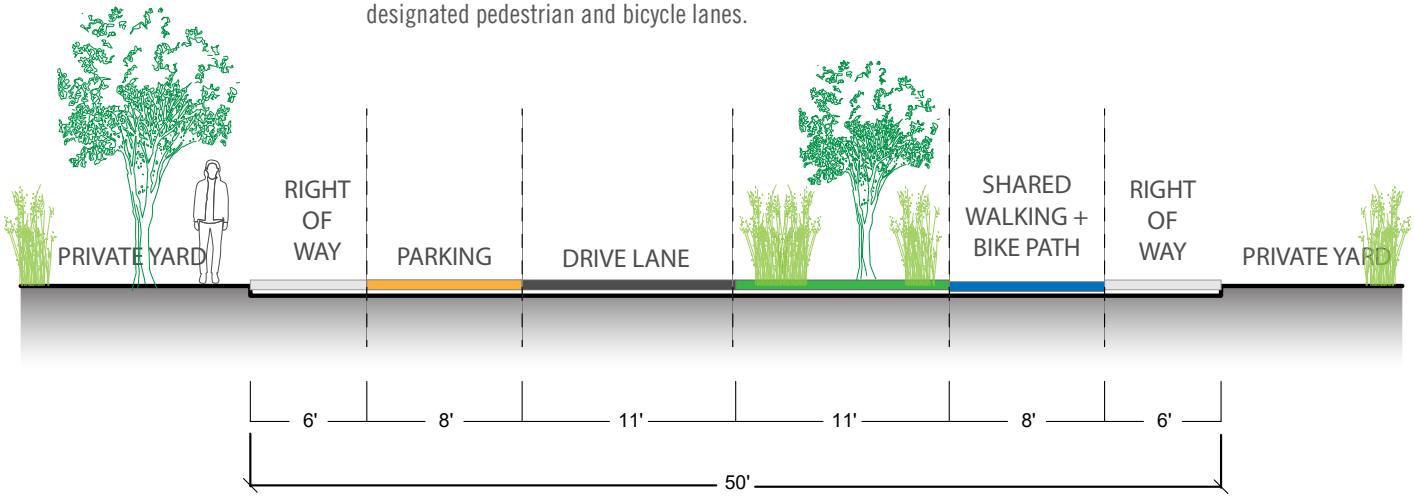
In the proposed 3 phase scenario, each phase of intervention anticipates the future of the evolving environment addressing increased needs in water storage, water movement, and focused pedestrian circulation.

Phase 01 Urban Interventions_0-5 Year Time-line



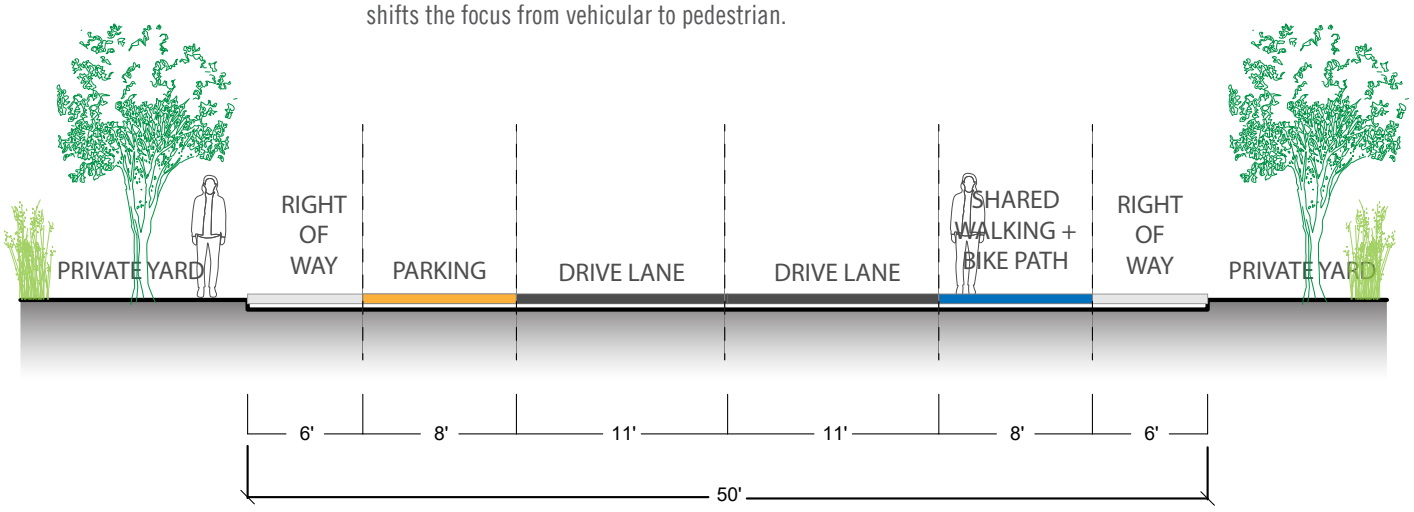
Existing Condition

Above: Cross Section of existing conditions in Residential Typology. The edge areas, Right of Way, are zones that are part of the public realm, but in existing conditions scenarios, the adjacent private properties have 'claimed' the space. Claiming in this context describes planted zones, extended lawns or extended driveways and parking zones by adjacent private properties into the public right of way. These encroachments limit the 'clear space' for the public to be provided safe mobility through designated pedestrian and bicycle lanes.



Corresponds with Section A

Above: Cross Section that preserves the existing Right of Way space in their respective conditions, but to provide additional needed program a drive lane is eliminated. This is one of the first steps that shifts the focus from vehicular to pedestrian.



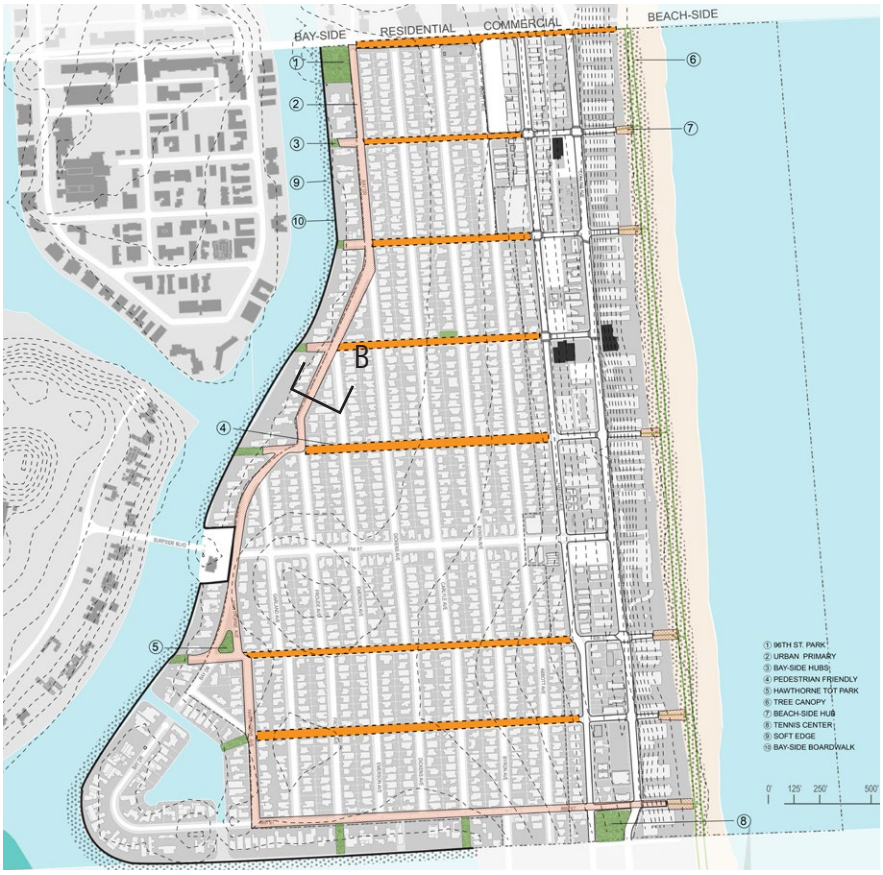
Corresponds with Section A

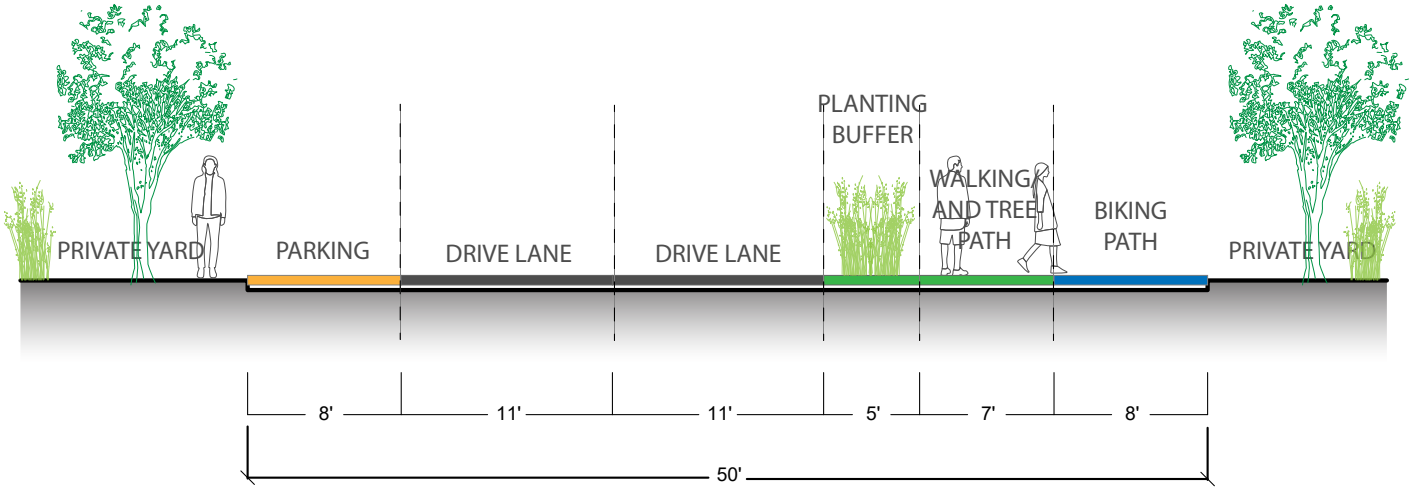
Above: Cross Section that preserves the existing Right of Way space in their respective conditions, but to provide additional needed program a parking lane is eliminated.

Right: **Phase 02** proposes further interventions at the Bayside edge; suggesting soft infrastructure combined with an elevated pedestrian pathway. Additionally, there are further interventions at more east/ west connectors that shift the urban characteristic from a car-centric environment to a pedestrian and green infrastructure environment. This shift further anticipates the evolving environmental conditions and Sea Level Rise projections.

NOTE: Phase 01 and Phase 02 depict specific interventions for the community based on Surfside's specific needs and community ambitions. One of the primary goals is to provide a safe and resilient public realm that serves as a connective tissue through linking each of the 4 community typologies. Specific east/ west streets, 90th and 93rd, serve to connect prominent amenities in the Commercial Typology to the Bayside Typology, specifically through linking Bay Drive. Bay Drive serves as a vital link in the system's continuous network, provide access to the Bayside public street ends connecting east to the beach.

Phase 02 Urban Interventions_20 Year Time-line



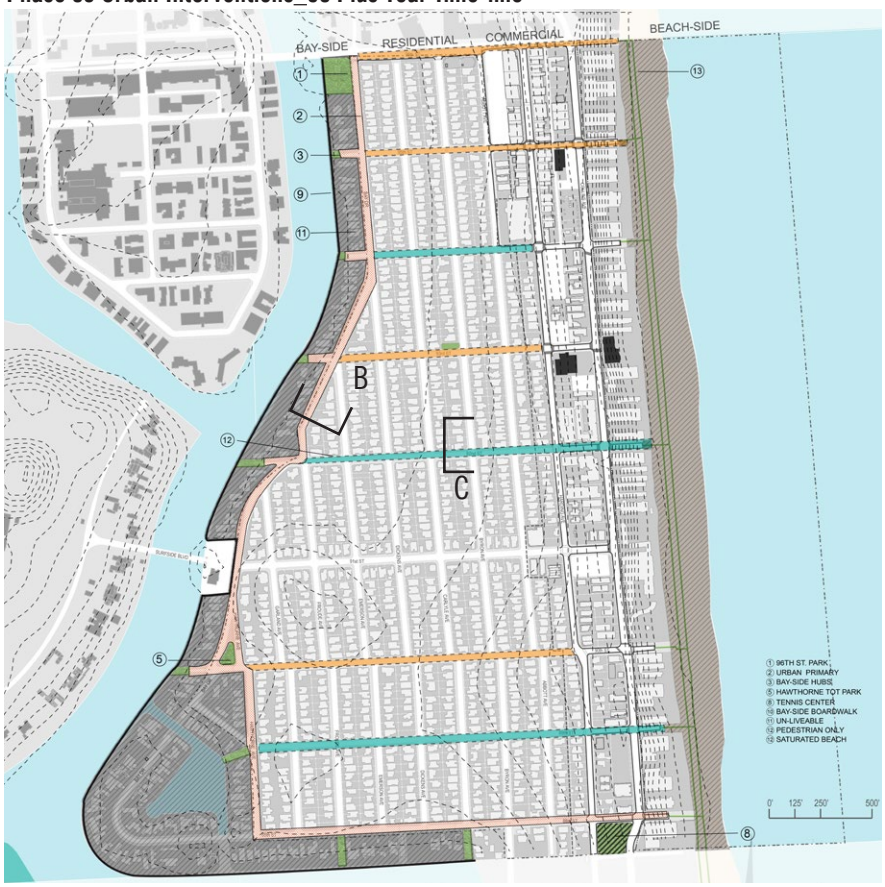


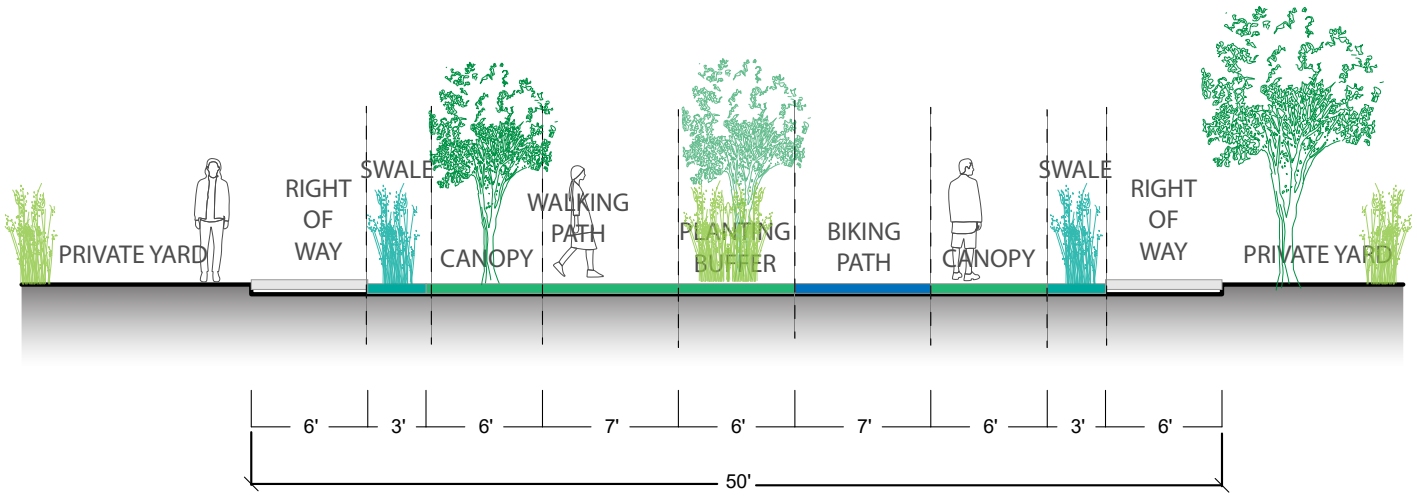
Corresponds with Section B Urban Primary.

Above: Cross Section that represents Bay Drive. Here, the Right of Way has been adapted to an active part of the public realm. 2 drive lanes are preserved, a single parking lane is preserved to allow the additional programmatic elements as designated pedestrian lanes, planting buffers, additional urban tree canopies, biking paths, permeable surfaces, and retention swales. Section B is proposed for the Phase 01 and then is extended along Bay Drive in Phase 02, as depicted above

Right: The final phase, **Phase 03**, begins at 50+ years in the future and questions the hard and soft edges of Surfside's Urban environment. Using the NOAA predictions, areas of the Bayside and Beachside edges have contracted and some east/west corridors have become primarily green infrastructure and water swales and all vehicular flow from these corridors has been removed.

Phase 03 Urban Interventions_50 Plus Year Time-line

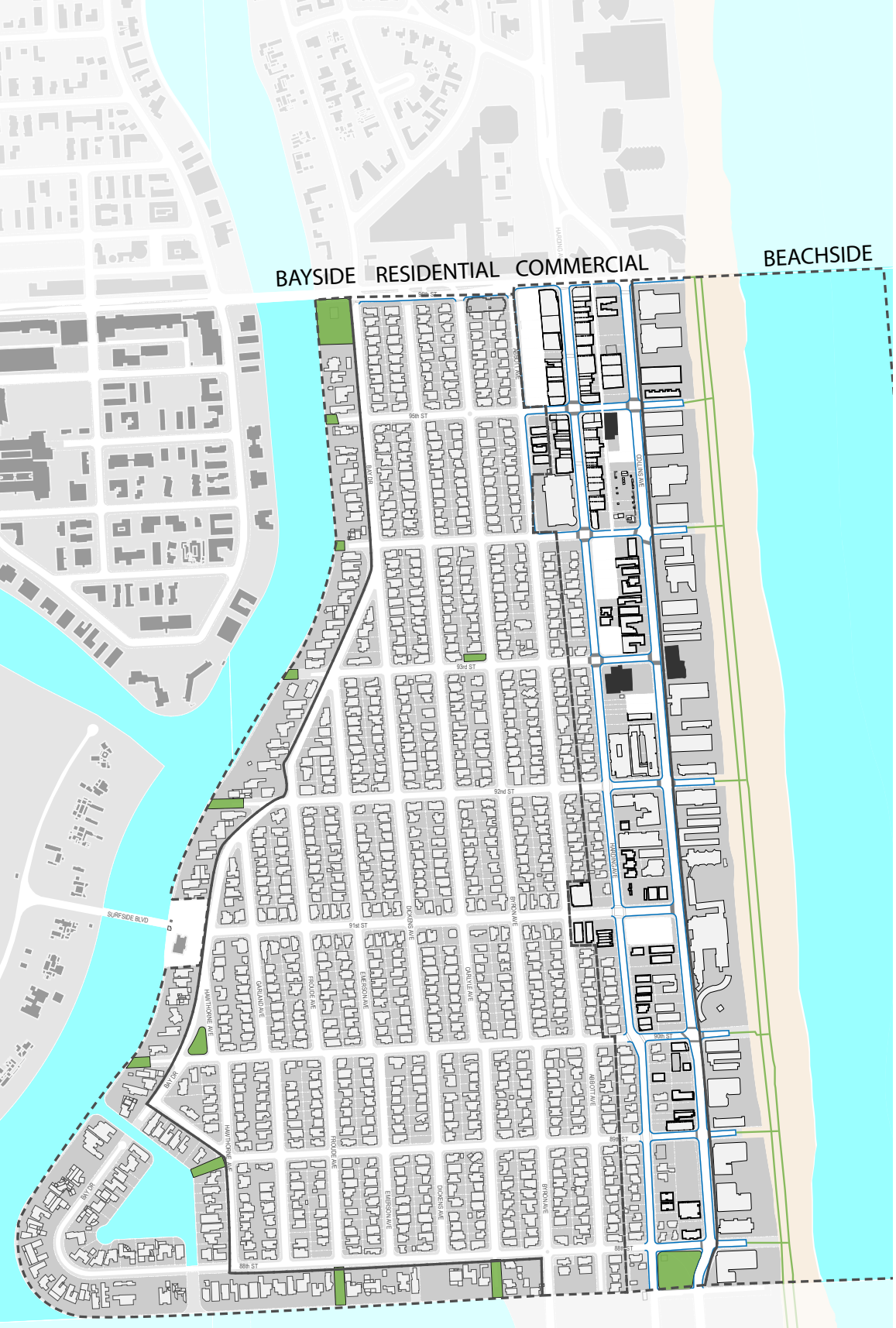




Corresponds with Section C Pedestrian Primary [Future]

Above: Cross Section that corresponds to a future strategy of pedestrian and water focused East/West corridors.

DRAFT



This document is a DRAFT for review and comment by the Sustainability & Resiliency Committee, as well as members of the public who attend the committee's meeting. These and other comments from future meetings on the toolkit may be used to revise this document.

VERSION 1.0

Surfside Community Adaptation Toolkit

Prepared by University of Miami School of Architecture Littoral Urbanism_Lab

JANUARY 16 2020

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE

TABLE OF CONTENTS

Statement of Intent

The Surfside of the future will look different than the Surfside of today. Land use and transportation decisions already shape what it's like to live and work here. Sea-level rise, heavier rainfall, stronger storms and other climate change impacts pose increasing challenges.

This toolkit offers a mechanism for residents, businesses, officials and other community members to think collaboratively about Surfside's future. The "Urban Typologies" diagrams illustrate different residential, commercial and public zones within the Town, and the "Strategy Overview" section identifies design elements and infrastructure upgrades that could be used to enhance mobility, livability and resiliency. These tools establish a common ground for talking about public spaces, streets and residential and commercial areas. They will continue to evolve in subsequent editions of the toolkit, based on community feedback. Ultimately, the toolkit supports community-driven decision-making on what projects and needs are prioritized and funded.

Creation Process + Collaborators

The toolkit was created by the Littoral Urbanism Lab (LU_Lab) at the University of Miami School of Architecture. It was shaped by Surfside residents and businesses who participated in a community resiliency workshop in November 2019, and pop-up events in January, February and March 2020. Concurrent with the toolkit's development, the non-profit American Flood Coalition and the engineering firm Atkins provided a grant for modeling some of the many possible measures for adaptation to sea-level rise and intensifying storm surge. The AFC/Atkins modeling exists alongside the Community Adaptation Toolkit to support data-driven, community-centered decisions on land use, transportation, water management and other factors influencing Surfside's future urban fabric.

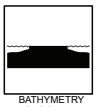
1.a LEXICON: CONDITIONS + STRATEGIES


AGING INFRASTRUCTURE

Aging Infrastructures_ The degradation of infrastructures is a common and an expected condition. Infrastructures must have scheduled inspections and planned maintenance if they are expected to perform their intended tasks consistently.


BAYSIDE EDGE

Bayside Seawalls_ Structural strategies focused on controlling a static edge between Biscayne Bay and the city.


BATHYMETRY TOPOGRAPHY

Bathymetry/ Topography_ Specifically the description of the undulations and formal characteristics of the ground plane above the waterline– Topography– and below the waterline–Bathymetry. These land-form characteristics are informative to how rising waters, storm surges and general inundation of flood events will occur.

Civic Domain_ The land or areas lawfully belonging to the municipality.


COMPREHENSIVE TRANSPORTATION

Comprehensive Transportation_ The distribution of mobility– personal, services and goods– through a comprehensive transportation approach reduces pressure on roadway networks. A comprehensive transportation approach includes small-scale short distance services through shared bike and scooter services, public mass transit methods and adaptability to new or developing services.

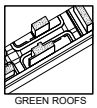

DATA, TOOLS + STRATEGIES

Data, Tools and Strategies_ Comprehensive approaches to policy, planning and interventions regarding urban resilience and walkability.


ELECTRICAL VEHICLE INFRASTRUCTURE

Electric Vehicle Infrastructure_ Implementation of public EV charging stations and dedicated parking spaces for a diverse group of mobility vehicles.

Ecological Presence_ The quantity and quality of vegetation, or flora, existing within a specific scope of an area, or areas.

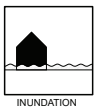

GREEN ROOFS

Green Roofs_

The implementation of flat or low sloped roof conditions for planting native grasses and small-scale vegetation. Green roof systems can reduce Urban Heat Island effect, buffer solar heat gain of buildings and mitigate surface run off pertaining to water management strategies.

Individual Impact_

The capacity for the individuals of the community to impact a larger operating network of resilient strategies.


INUNDATION

Inundation_

Recognizing the potential for the surrounding waters of the Atlantic Ocean the Biscayne Bay to infiltrate and inundate the buildings and public spaces.


HIGH EMISSIVITY SURFACES

Low Absorption High Emissivity Surface_

The implementation of white or light colored surfaces for building roofs, road surfaces, pedestrian walkways and parking surfaces can reduce Urban Heat Island effect and reduce localized urban temperatures.


MANAGED RETREAT

Managed Retreat_

As increasing environmental pressures become overwhelming to urbanism forcing inhabitants to retreat to higher ground, exploring the range of options and subsequent impacts will be important for a safe and productive exit. Managed retreat requires exploring many possibilities to understand what the best option will be for the specific circumstance.

Natural Infrastructure Intervention[s]_

The elements of ecology that naturally occur as fortification or protection from reoccurring natural forces such as storms or a rising sea level. Examples include, sand dunes, mangroves, planted water edges, etc.

Pedestrian Transportation Network[s]_

A system of physical paths or means through which any pedestrian may navigate through, or to, a particular area of the city; taking into account safety, efficiency, and dependability.


PERVIOUS PAVING

Pervious Paving_ A method of paving vehicular and pedestrian pathways to enable infiltration of stormwater runoff

Public Connectivity_ The Network, or series, of civic services and amenities integrated into the city for the use of the residents. Specifically aimed to help residents move, and engage in, the larger community.


POLICY ADAPTATION

Policy Adaptation_ Urbanism, ecological and human needs are in a constant state of change requiring policies to be flexible. The changing state must also recognize shorter needs and longer term trajectories to provide a balanced and resilient future.


URBAN TREE CANOPY

Urban Tree Canopy_ An urban tree canopy is a distributed network of trees within an urban setting with enough density to create a continuous canopy above the ground plane. Extending the urban tree canopy provides urbanism the opportunity to mitigate surface water management, Urban Heat Island effect, and resiliency to erosion and storm systems.


URBAN HEAT ISLANDS

Urban Heat Islands_ Urban Heat Islands [UHI] are described as urban settings which are hotter than the nearby rural areas. UHIs are caused by the exposure to insolation and the subsequent storage of large quantities of heat energy.

Sustainable Transport_ Modes of transportation that take advantage of energy efficient technologies. Such as, but not limited to: electric vehicles, electric bicycles, electric public transport.

Public Amenities_ The components of a daily life offered, and maintained, by the city for the use of the residents. Examples include: seating, lighting, access to water, waste receptacles, etc.

Storm Water Retention_ The process of absorbing, holding, and then the dispersing of storm water in the form of rainfall, sea-surge, or ground-water.

1.b LEXICON: DEPLOYMENT METHODS

Accessible Public Transportation_ A comprehensive network of accessible stops that accommodate shade and shelter for the extreme conditions of south Florida's environment.

Pedestrian Path_ A designated lane with a painted surface or material change signaling a boundary to vehicular flow and public right of way.

Coexisting Transportation Networks_ Vehicular lanes, shared running and riding paths, and walking paths sharing the width of the public right of way; each with their own clear and distinct demarcation.

Continuous Pedestrian Network_ A continuous system of clearly marked and protected paths that interconnect public amenities and activities throughout the city.

Exaggerated Personal Vehicle Network_ Prioritized lane to be used specifically by pedestrians and non-motorized personal vehicles; separated from vehicular traffic by two or more dimensional barriers Such as: painted surfaces, vegetation, bollards, etc.

Fortified Natural Edge_ A natural edge between saturated and dry conditions planted with vegetation. Whose root system helps reinforce the solidity of the edge and protects against the erosion of sediment or soil.

Green Sponge_ Vegetation within an urban environment, specifically implemented for the absorption or treatment of storm water.

Identity Objects_ Community features provided by the municipality that can be found throughout the city aimed to improve quality of life, pedestrian safety, or the efficiency of maintenance programs. Objects can include: seating, lighting, water fountains, restrooms, waste receptacles, shade, etc.

Electric Vehicle Charging Stations_ Prioritized parking and charging stations for electric vehicles, including automotive and personal vehicles.

Soft Water Retention_ Surface water management through the means of infrastructure or ecology. Intended to hold accumulated water for a period of time allowing for a controlled dissipation after the accumulation has plateaued.

Land Infill_ The process of actively adding to the current condition of a landscape with a similar material intended to delay the effects of erosion.

Pavement Indicators_ A change in material pavement indicating a change or interruption of normal use of an area.

Perforated Drainage Pipe Network_ A network of pipes designed to allow water to enter or exit through small holes or slots along the pipe. These pipes augment underground drainage systems.

Prioritized Lane_ Using blockages or signage to direct traffic, of vehicles or persons, to specific areas to keep heavy traffic concentrated to a specific area.

Program Public Space_ Assigning a use to dormant, municipally owned, space with the intent to activate targeted spaces within the urban fabric of a city.

Public Access to Water_ Facilities or features to be found throughout the city that provide clean drinking water. Intended to promote reusable containers and reduce the necessity for single use plastics.

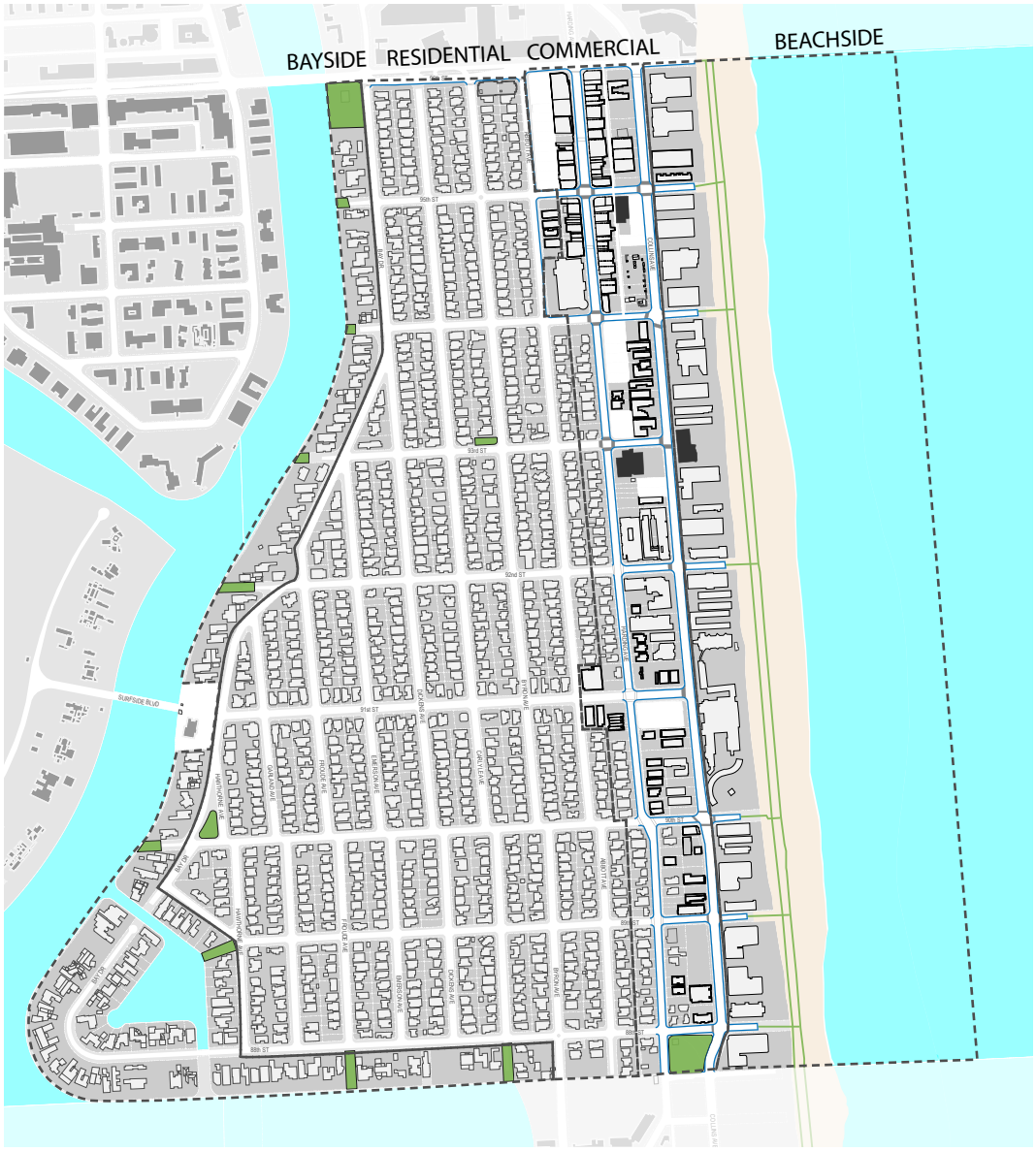
Ride Sharing Hot Spots Designated pick up and drop off locations in public spaces to reduce confusion and traffic interruption.

Solar Roof_ Panels that work by absorbing sunlight with photo-voltaic cells, generating direct current energy and then converting it to usable alternating current energy with the help of inverter technology.

Speed Disruptor_ Concave or convex physical elements integrated in a drive lane to interrupt a sustained velocity.

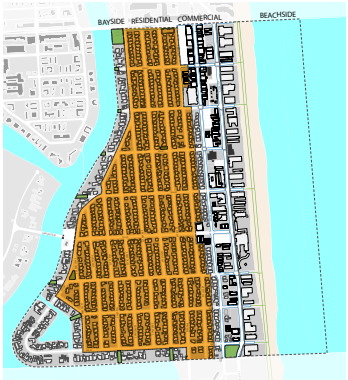
Storm Water Access_ Drainage intakes, man made or ecological, intended to redirect storm water away from sensitive areas such as properties or heavily used public areas.

Trolley Transit_ A shared, public, transportation system that uses low-volume transport to help reduce the necessity of individual vehicles for local travel.

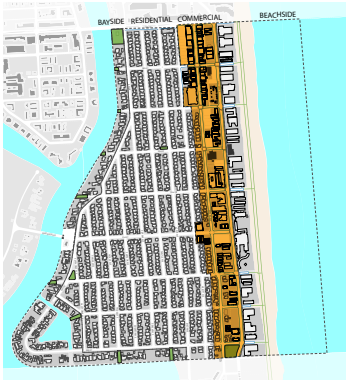


Below Diagram:
Bayside Urban Typology context zone

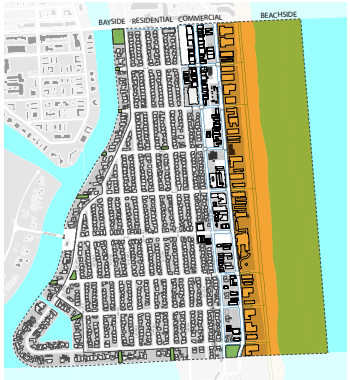
Below Diagram:
Residential Urban Typology context zone



Below Diagram:
Commercial Urban Typology context zone



Below Diagram:
Beachside Urban Typology context zone



2.a Surfside Urban Typologies

As a method to analyze Surfside's comprehensive community as well as unique characteristics of sites found in an east/west transect of Surfside's urbanism, the LU_Lab has defined conceptual classifications called *urban typologies*. These classifications have physical urban boundaries, as illustrated to the left, that define urban zones with similar physical characteristics. The classification of these four zones, or typologies, fosters a discussion specific to the needs of the specific place. The workshop used these typologies to engage with the community participants and help facilitate discussions of their specific interactions with each community typology.

COMMUNITY ADAPTATION TOOLKIT

A COMPREHENSIVE APROACH TO URBAN RESILIENCY

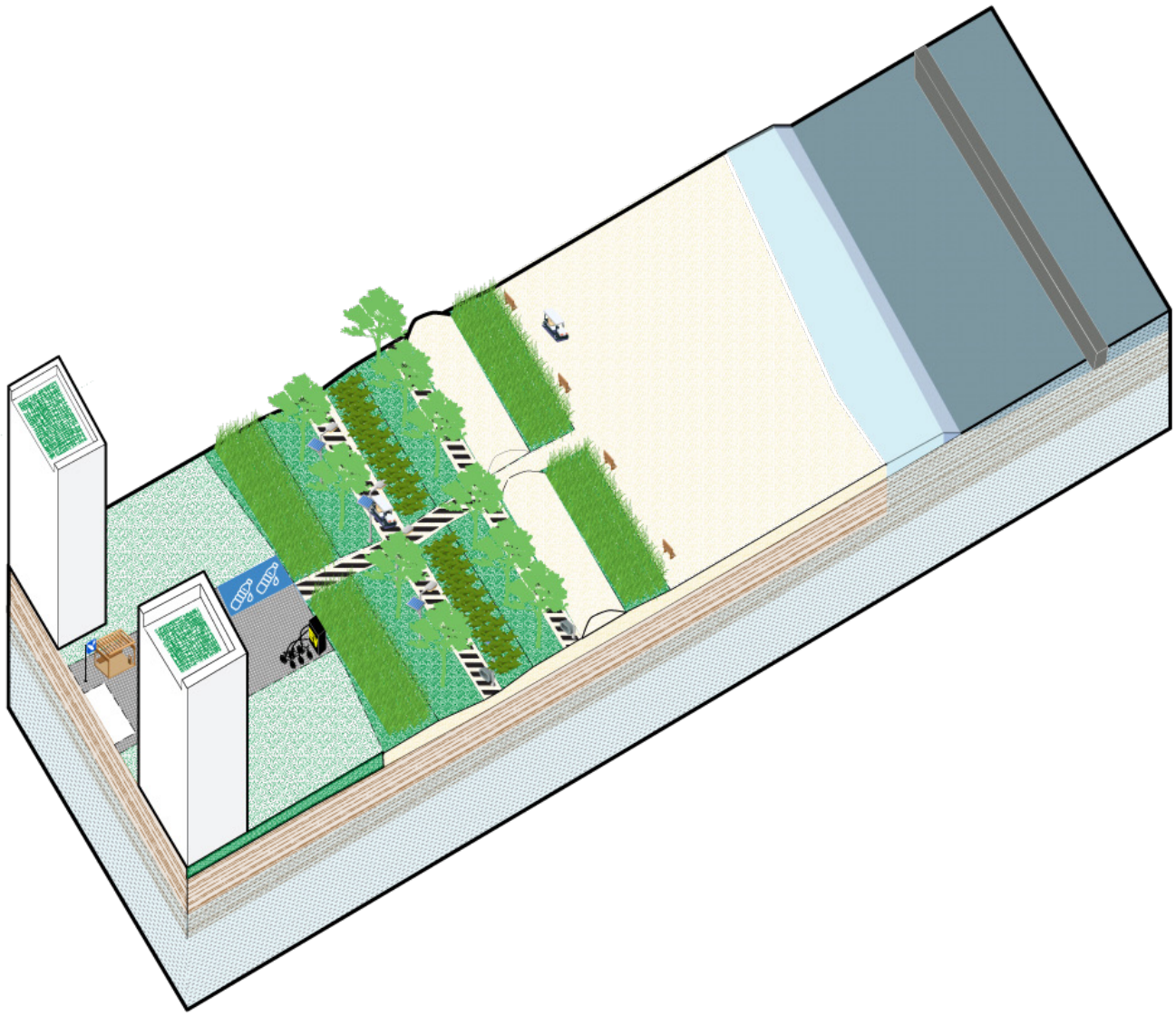
	ENERGY	CLIMATE
BEACH-SIDE	Augment Infrastructural Interventions	Leverage Ecological Presence
COMMERCIAL	Boost Public Connectivity	Embrace Storm Water Retention Strategies
RESIDENTIAL	Incentivize Individual Involvement	Leverage Ecological Presence
BAY-SDIE	Leverage Ecological Presence	Embrace Storm Water Retention Strategies

STRATEGY OVERVIEW

COMMUNITY	TECHNOLOGY
Increase Public Amenities	Boost Public Connectivity
Liberate Mobility	Promote Sustainable Transportation Networks
Emphasize Pedestrian Transportation Network	Increase Public Amenities
Activate Public Assets	Increase Public Amenities

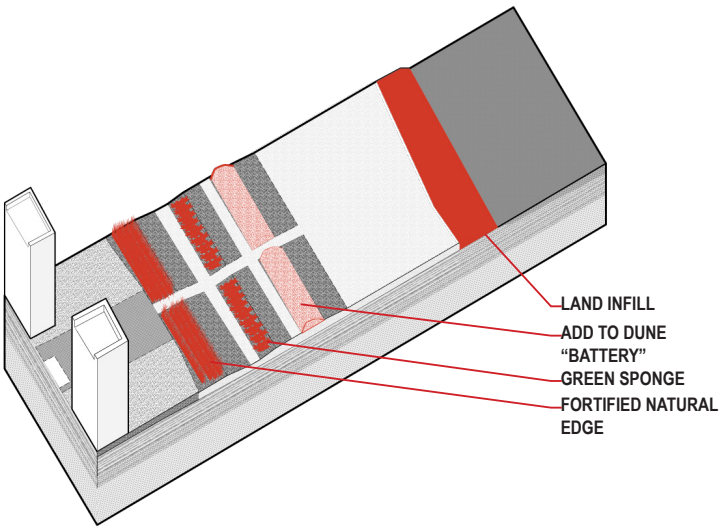
COMMUNITY ADAPTATION TOOLKIT

A COMPREHENSIVE APROACH TO URBAN RESILIENCY

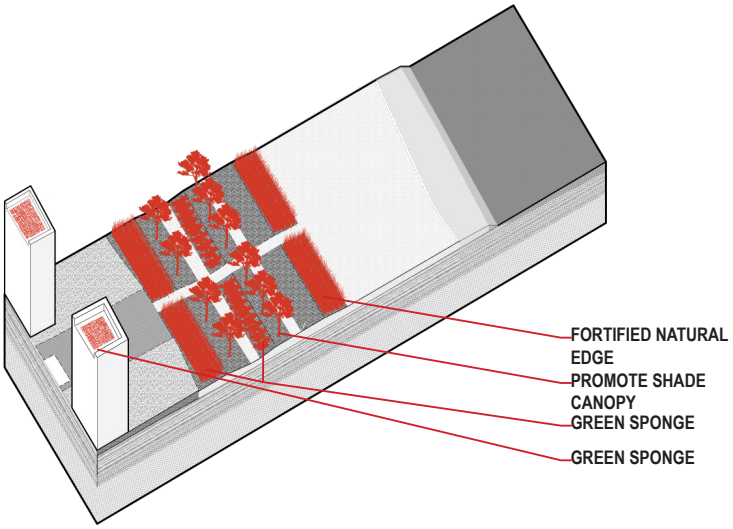


BEACHSIDE

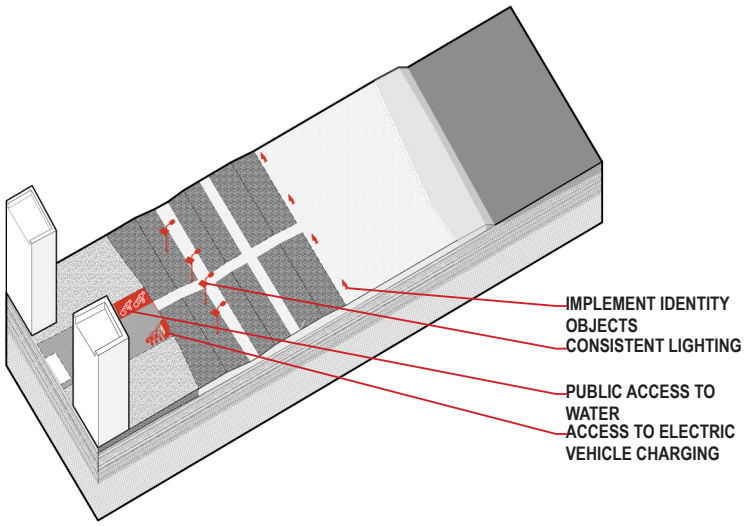
ENERGY – PRIORITIZE NATURAL INFRASTRUCTURE INTERVENTION



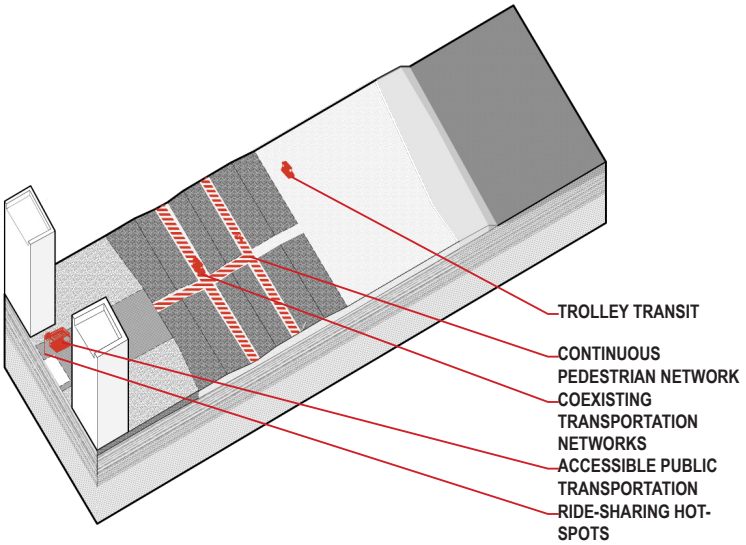
CLIMATE – LEVERAGE ECOLOGICAL PRESENCE



COMMUNITY – INCREASE PUBLIC AMENITIES

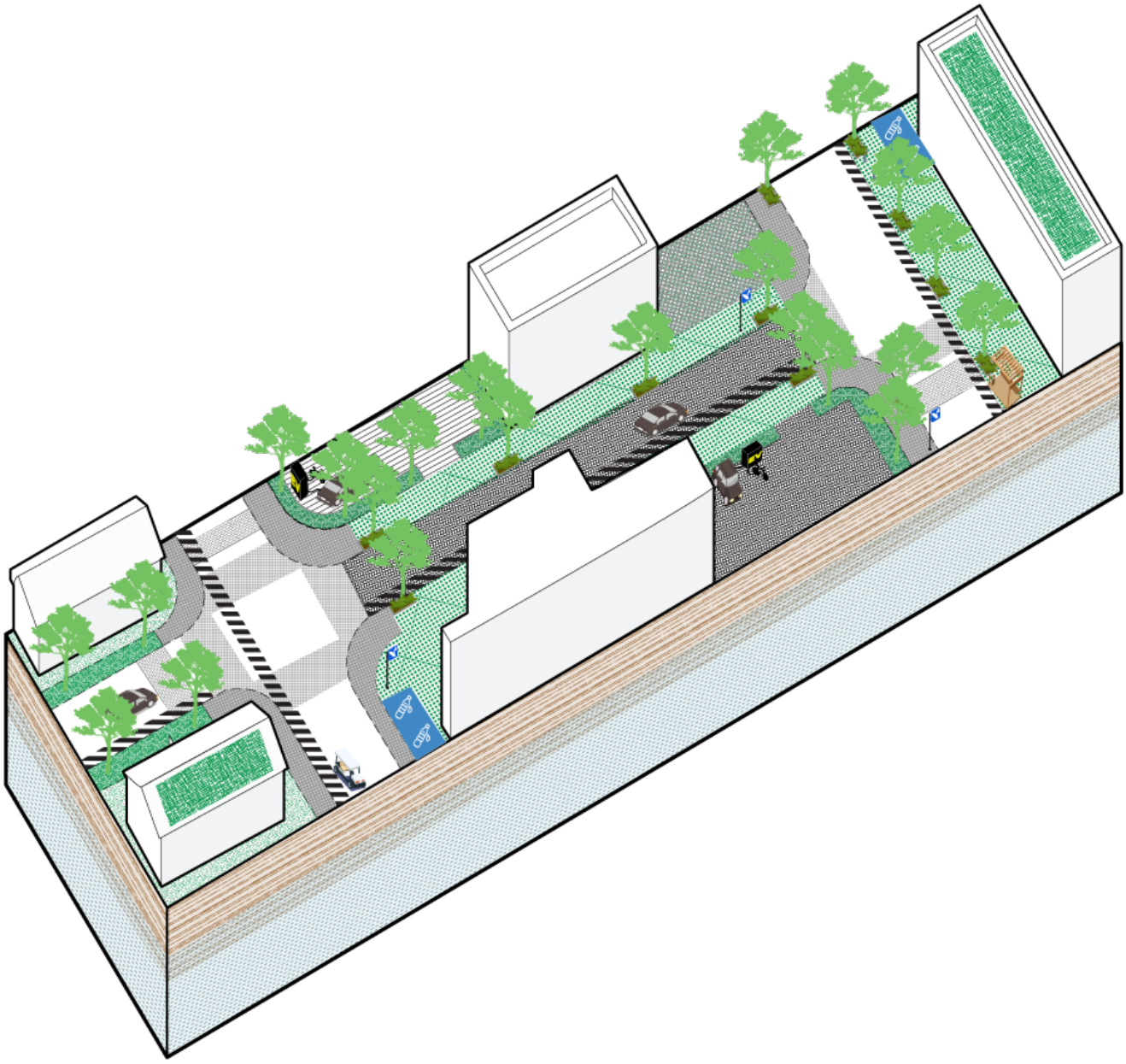


TECHNOLOGY – BOOST PUBLIC CONNECTIVITY



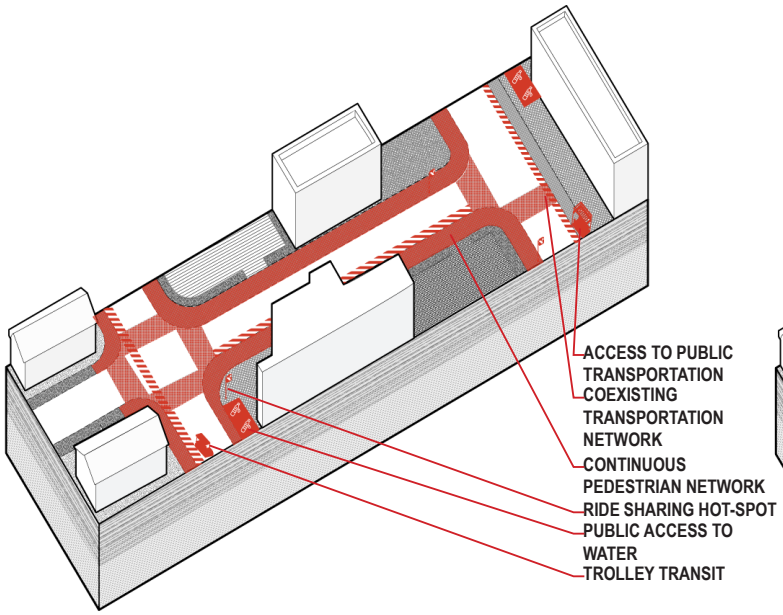
COMMUNITY ADAPTATION TOOLKIT

A COMPREHENSIVE APROACH TO URBAN RESILIENCY

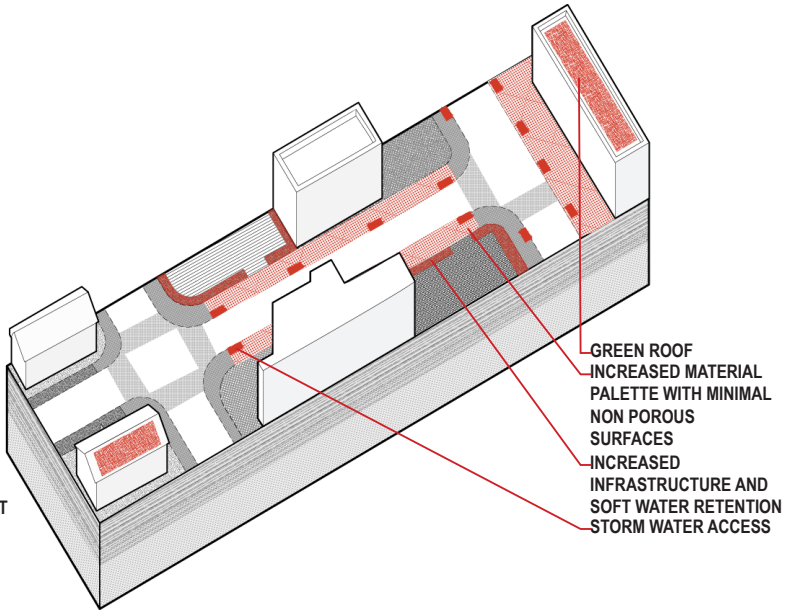


COMMERCIAL

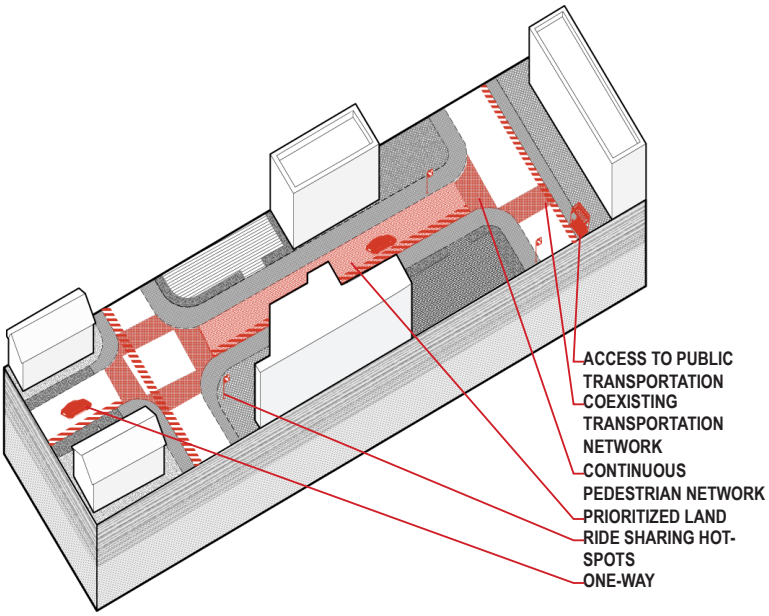
ENERGY – BOOST PUBLIC CONNECTIVITY



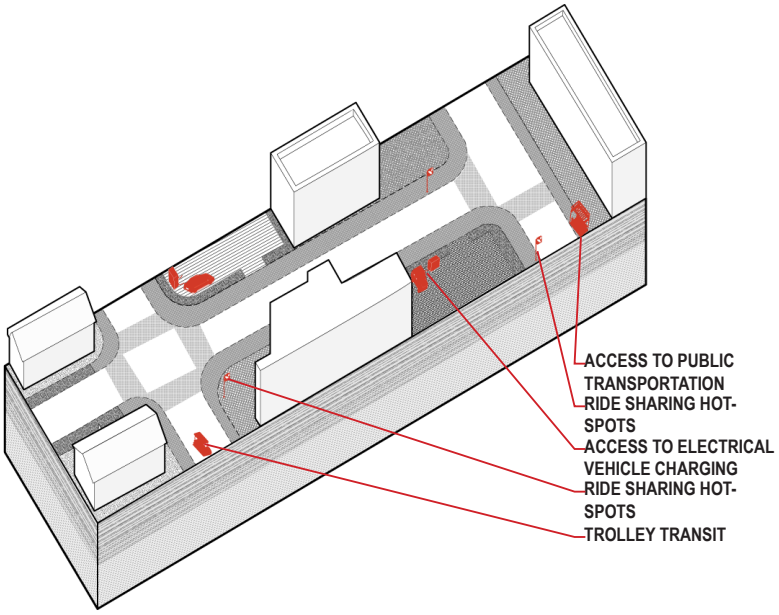
CLIMATE – EMBRACE STORM WATER COOPERATION



COMMUNITY – LIBERATE MOBILITY

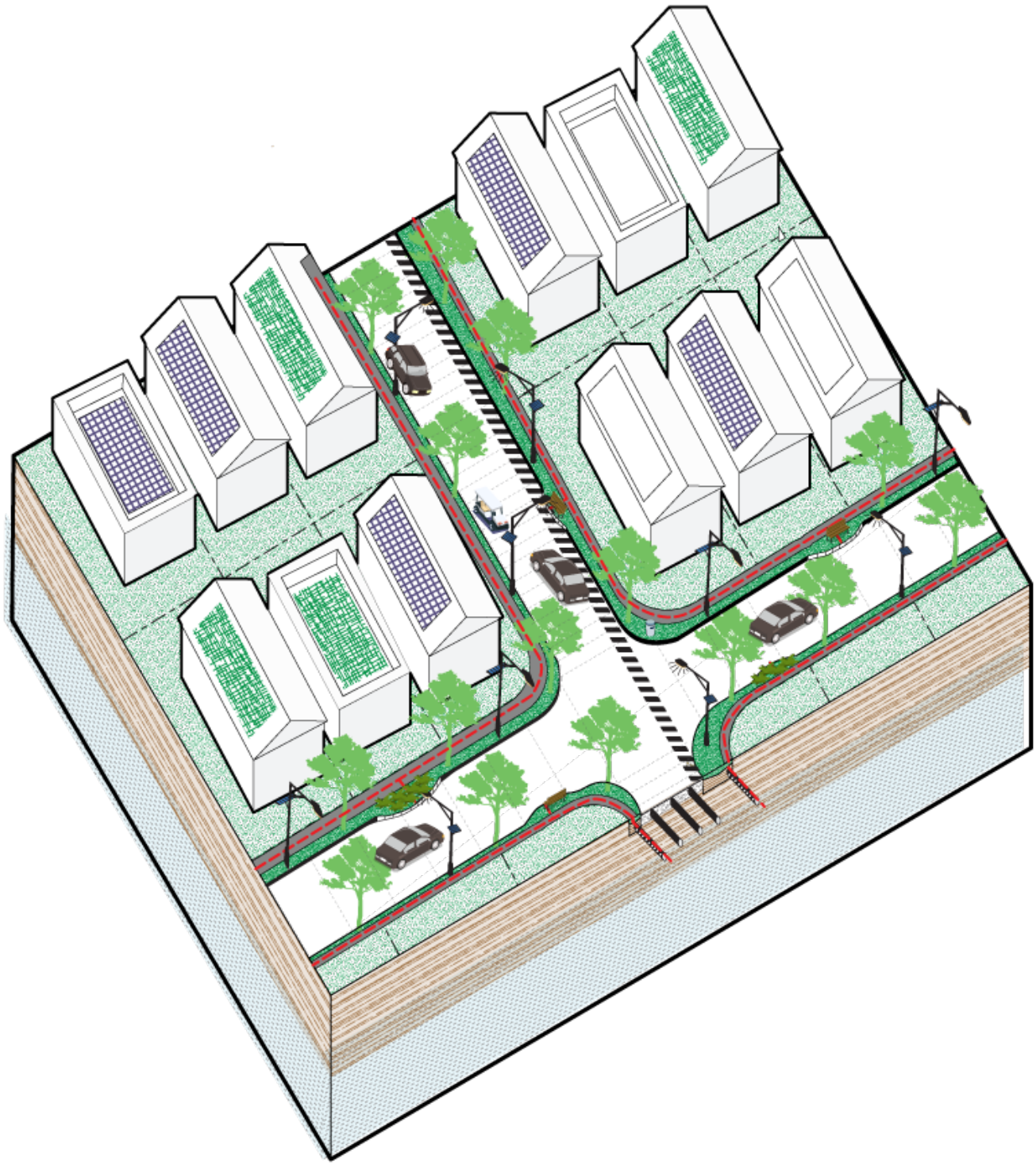


TECHNOLOGY – PROMOTE SUSTAINABLE TRANSPORT



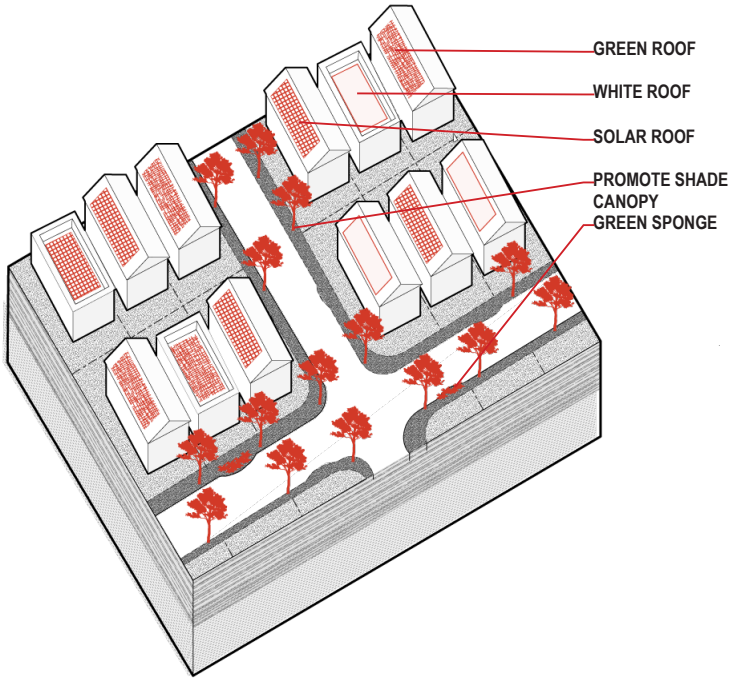
COMMUNITY ADAPTATION TOOLKIT

A COMPREHENSIVE APROACH TO URBAN RESILIENCY

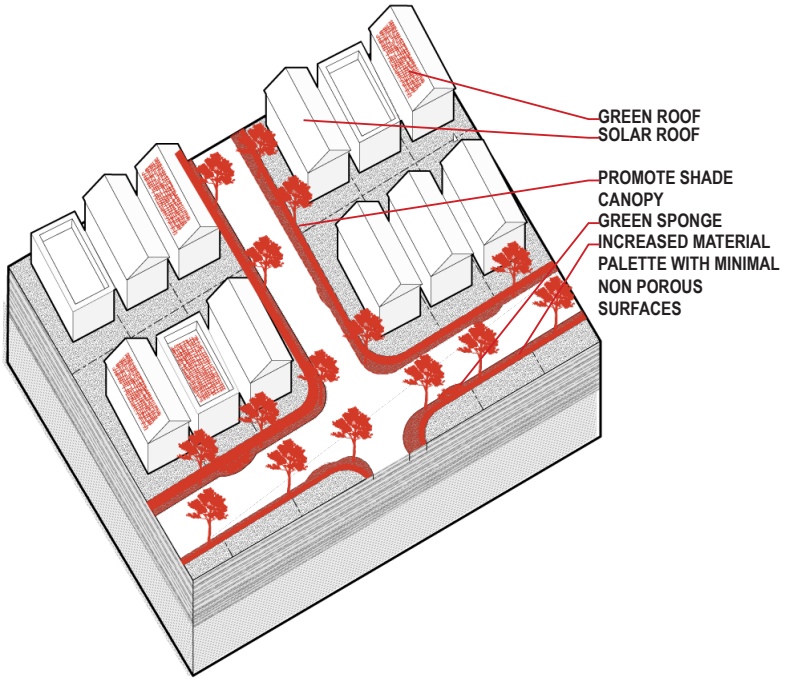


RESIDENTIAL

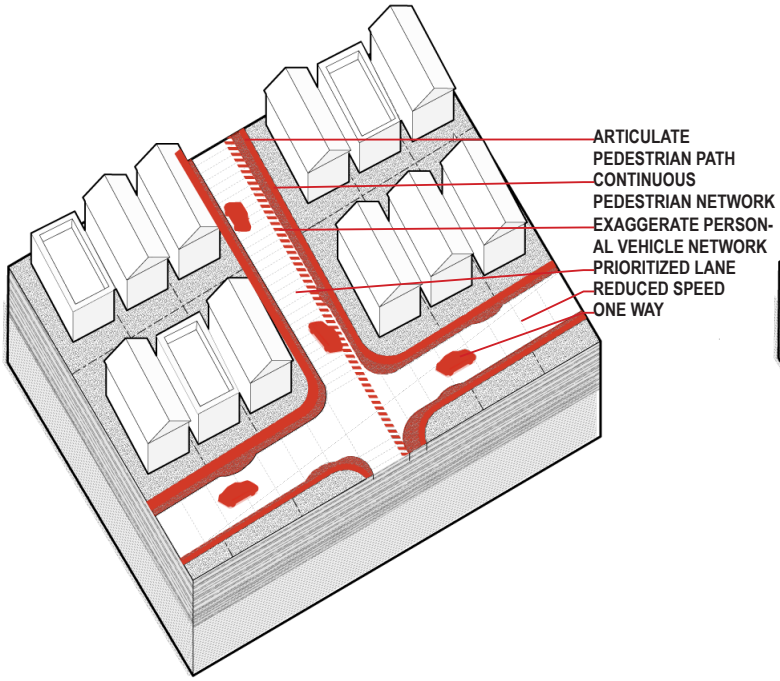
ENERGY – INCENTIVIZE INDIVIDUAL INVOLVEMENT



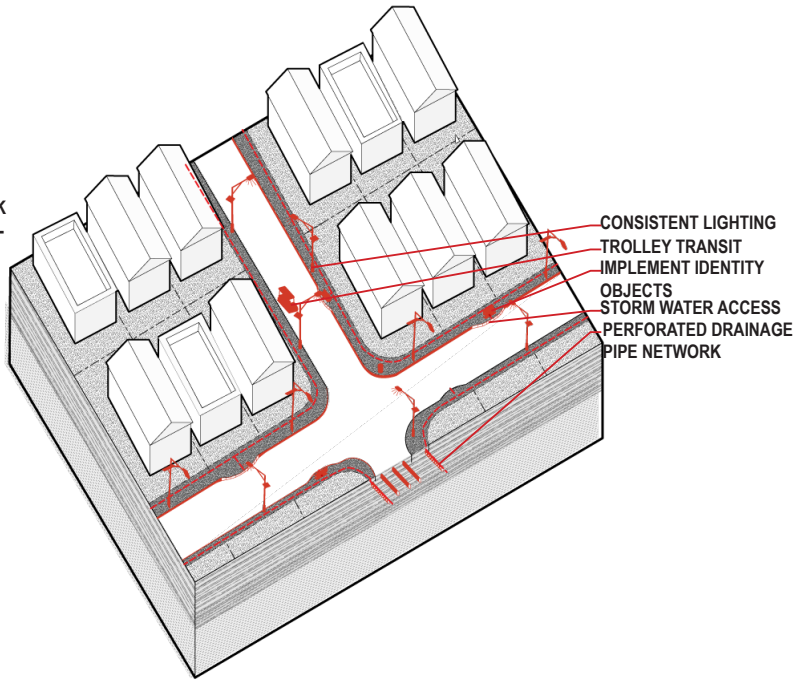
CLIMATE – LEVERAGE ECOLOGICAL PRESENCE



COMMUNITY – EMPHASIZE PEDESTRIAN TRANSPORTATION NETWORK

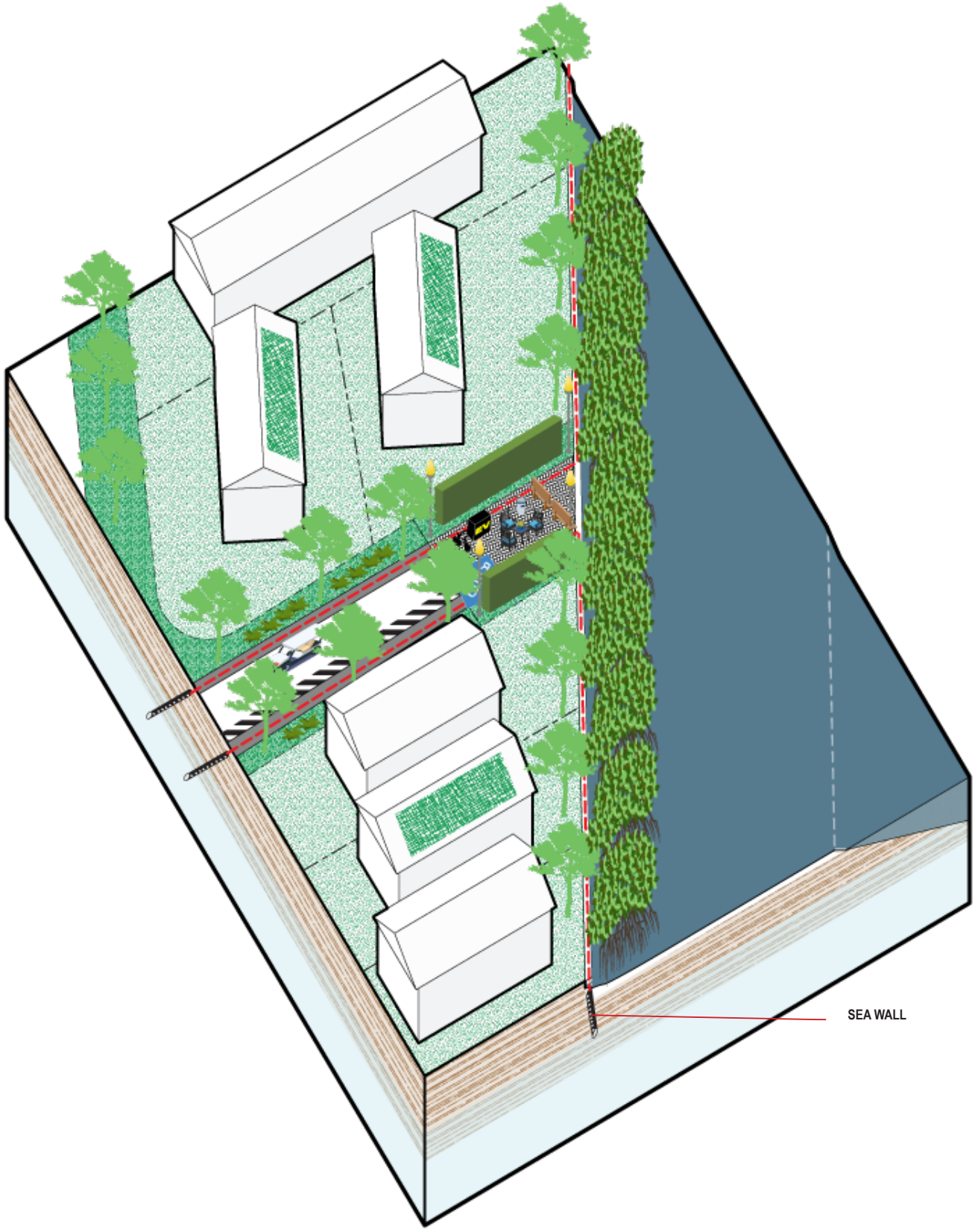


TECHNOLOGY – INCREASE PUBLIC AMENITIES



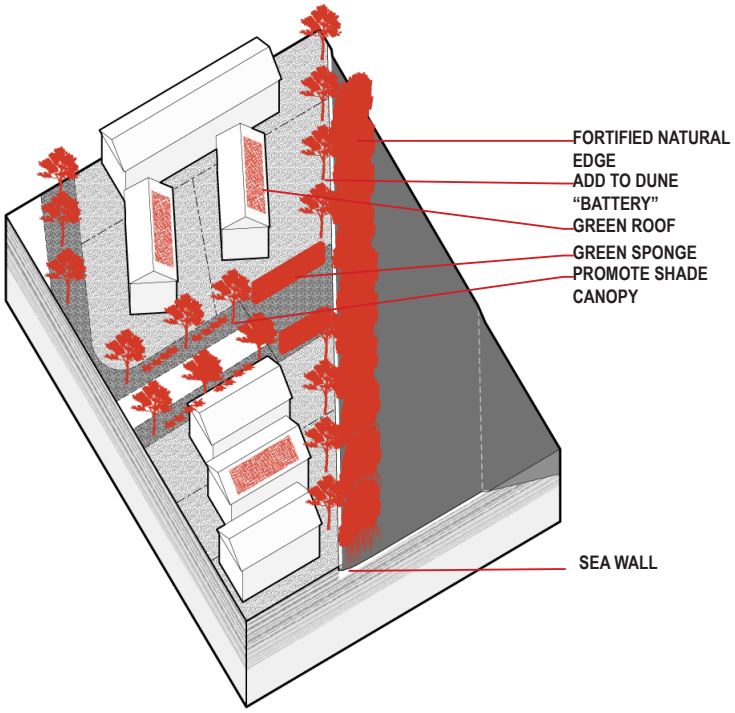
COMMUNITY ADAPTATION TOOLKIT

A COMPREHENSIVE APROACH TO URBAN RESILIENCY

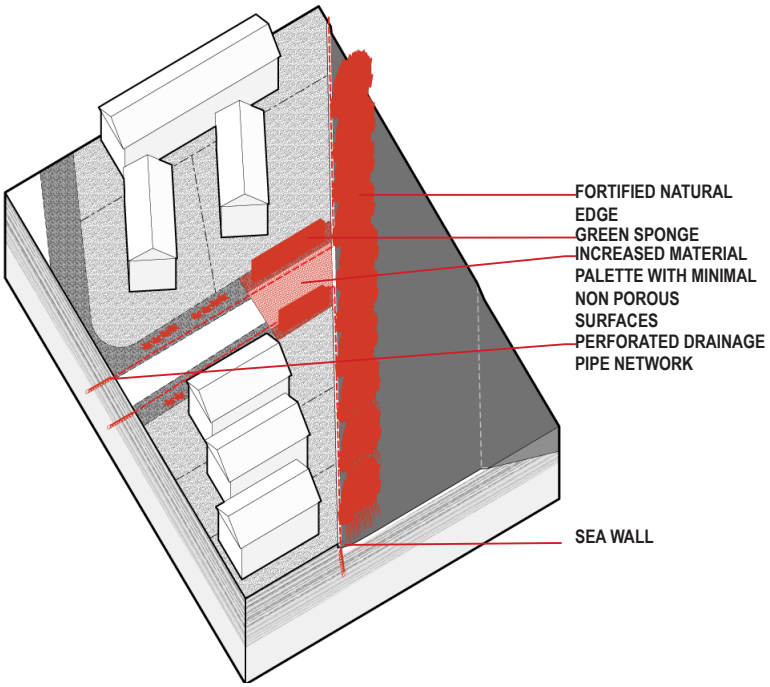


BAYSIDE

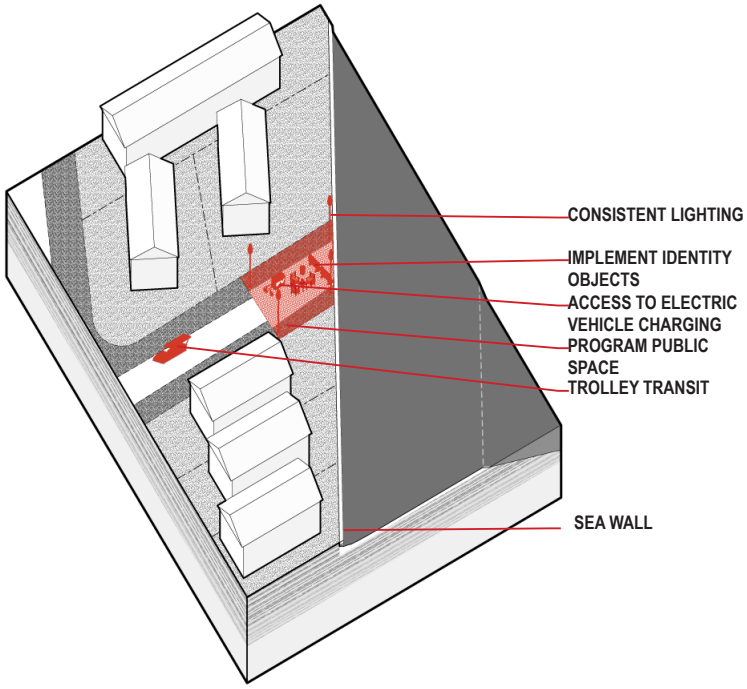
ENERGY – LEVERAGE ECOLOGICAL PRESENCE



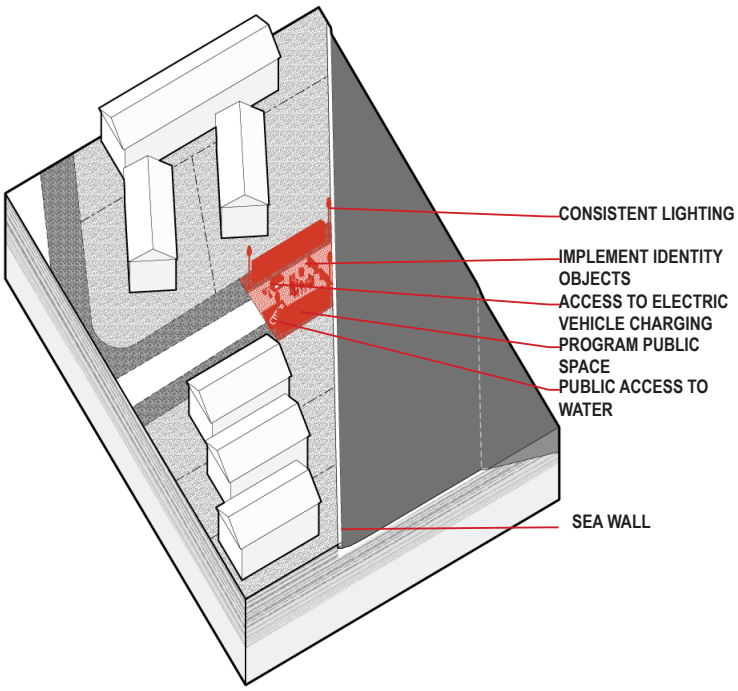
CLIMATE – EMBRACE STORM WATER COOPERATION



COMMUNITY – ACTIVATING PUBLIC ASSETS



TECHNOLOGY – INCREASE PUBLIC AMENITIES



4.0 Next Steps + Actionable Items

In accordance with the Next Step recommendations from the Surfside Community Workshop, our team emphasizes the establishment of a clear agenda with clearly defined objectives and goals. While each initiative within this agenda will have a focus varying in specificity of scale and approach, each initiative needs to align and support a clear framework.

The below list of recommendations reiterates the vision developed through the community outreach and workshop at the Urban Scale, while the additional initiative addresses the specific role of resilience for private properties within the Surfside Community:

- **Grow Community Resilience**
  The most important action item here is building a consistent dialogue between the community and the town officials through public forums, workshops, and transparency focused on Surfside's future. The Sustainability and Resiliency should establish 3-5 clear *smart growth* goals within a 5 year, 10 year, and 30 year time-line and build consensus with the commissioners and the community around these goals. Goals should include policy strategies as well as physical adaptation strategies.

- **Urban Connectivity + Safe Mobility**
  The LU_Lab's study and process to date reveals a need to build resiliency through connectivity. The urban environment establishes resiliency through complete networks and systems. As depicted by the map above, the urban network should be enhanced by East/West links that address pedestrian and water flows. Additionally, a 'loop' that serves as a connective ring at the perimeter of the community should address pedestrian flow, increased community access, and water flow.

Specific first steps are recommended as follows:

- Identify and Establish Complete System Network [as illustrated on Phase 01 map]
- Anticipate 96th Street Park as 'node' in complete system, what is its role?
- Adapt Bayside Drive from 90th to 96th Street to address pedestrian and water flows
- Adapt 90th and 93rd to address pedestrian and water flows

- **Anticipate Future Urban Phases**
  This initiative requires the Sustainability and Resiliency committee to add physical parameters to the future goals and time-lines as suggested above. For example, establishing values for a series of Surfside parameters along a 5, 10, 30 timeline: Population, Sea Level, Storm Frequency, Implemented Resilient Strategies [regulations and physical], Tax Base, Property Insurance Contexts, Demographics [these projections should be based on current trends and adjust for increases.]

  [Community Adaptation Toolkit specific]
- **Shared Initiatives for a Singular Comprehensive Community**
  Surfside's community, like all others, has always been and will always be composed of a network of public and private spaces. These public | private relationships create a comprehensive urban community for the Surfside residence, however, as the physical context of Surfside evolves and both the public and private domains will become increasingly inundated with the presence of water. Water does not act within a public | private boundary, so while strategies proposed need to respect the domain of the owner, both public and private parties need to function under a sole objective.