

The background of the slide is a vibrant photograph of Miami Beach. In the foreground, a tall, cylindrical tower with alternating black, white, and colorful (orange, green) spiral bands stands prominently. Behind it, several modern high-rise buildings with glass facades and balconies rise against a clear blue sky with scattered white clouds. Palm trees are scattered throughout the scene, some in the foreground and others framing the buildings. The overall atmosphere is bright and sunny.

MIAMIBEACH
RISING
ABOVE

November 17, 2022

First Street & South Pointe Stormwater Improvements

Introductions

- City of Miami Beach:
 - **Mariana Evora, P.E.** – Project Manager
 - **Joe Gomez, P.E.** – Public Works Department Director

- Jacobs Team Presenters:
 - **Juan F. Aceituno, P.E.** ENV SP – Project Manager
 - **Sergio Williams, P.E.** – Drainage Engineer (CES Consultants)
 - **Alex Meitin, P.E.** – Roadway Engineer
 - **Christine Crespo, P.L.A.** – Landscape Architect

- Public Information Team:
 - **Jeanette Gorgas**, Public Information Liaison – Direct phone: 786.239.8862
 - **Lauren Firtel**, South Beach Neighborhood Affairs Coordinator
southbeachnad@miamibeachfl.gov

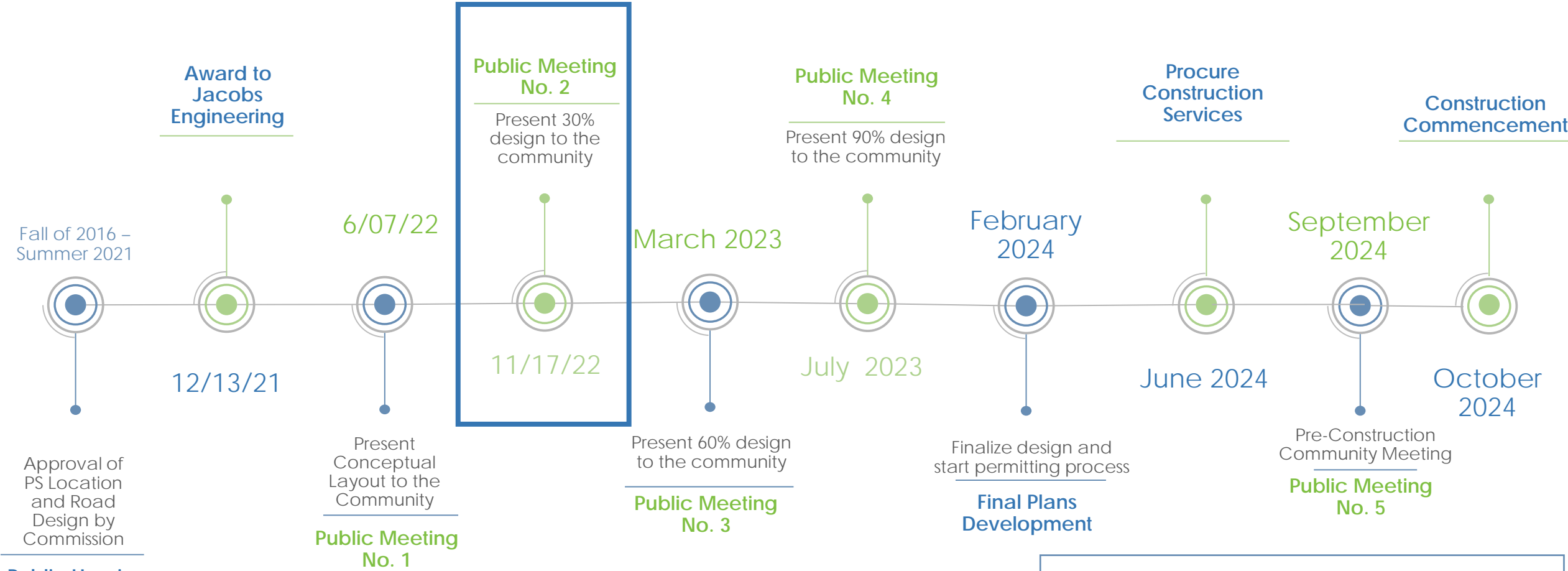
Project Purpose

- **Reduce flooding** associated with intense rainstorms
- **Minimize street flooding** associated with sea level rise and tidal surges
- Upgrade underground utility infrastructure for **potable water and wastewater**
- Install **water quality drainage** wells to reduce environmental impact
- **Beautify the neighborhood** with added trees and vegetation
- Improve **walkability and safety**



October 13, 2022 - Intersection of First and Alton

Projected Timeline



During the duration of the project updates will be provided to the community. Once construction commences, the community will be notified of any neighborhood impacts.

*This Schedule is subject to change.

Meeting Expectations

By the end of this meeting, you should understand:

- **Effectiveness of proposed stormwater** treatment and pumping system
- **Latest considerations** for **South Pointe Drive & Alton Road** based on engineering during conceptual phase
- **Updated 1st Street layout** based on community feedback
- **Updated Landscape recommendations and aesthetic screening** concept for the above-ground electrical components
- **Design Team Recommendations** for project scope and approach.

The team also seeks to receive **additional feedback** tonight that will continue to shape design activities.

Meeting Agenda

- 1 Stormwater Modeling and Infrastructure
- 2 Additional Recommendations for Alton Road and South Pointe Drive
- 3 Update to First Street Design
- 4 Landscape and Aesthetic Screening
- 5 Comments and Questions



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1 Stormwater Modeling and Infrastructure

Stormwater modeling during conceptual design is an iterative activity that informs siting and sizing for stormwater conveyance among other design questions.



Intersection of Jefferson and 1st street facing east, rain event of August 1, 2017

Stormwater Modeling – Current Conditions

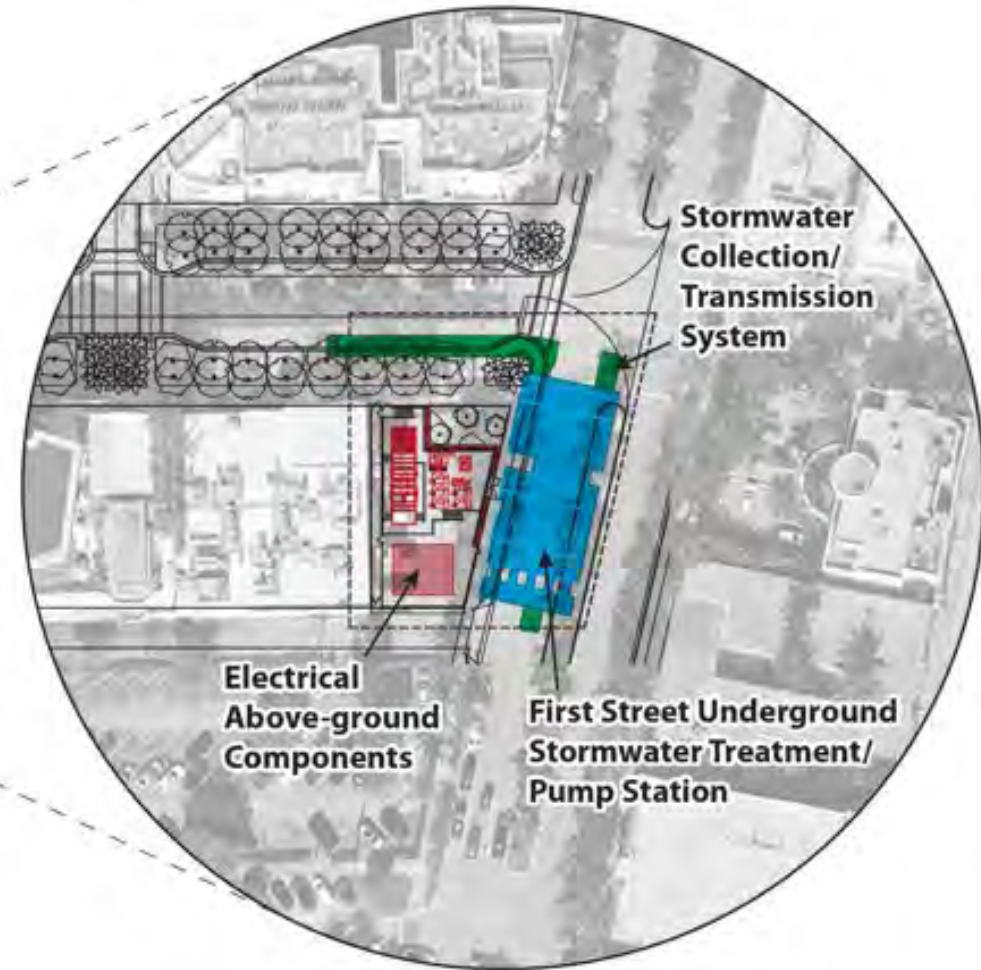


Rainfall Event:
August 1st, 2017
6.74 inches of rainfall
over the course
of 6 hours



Stormwater Treatment System

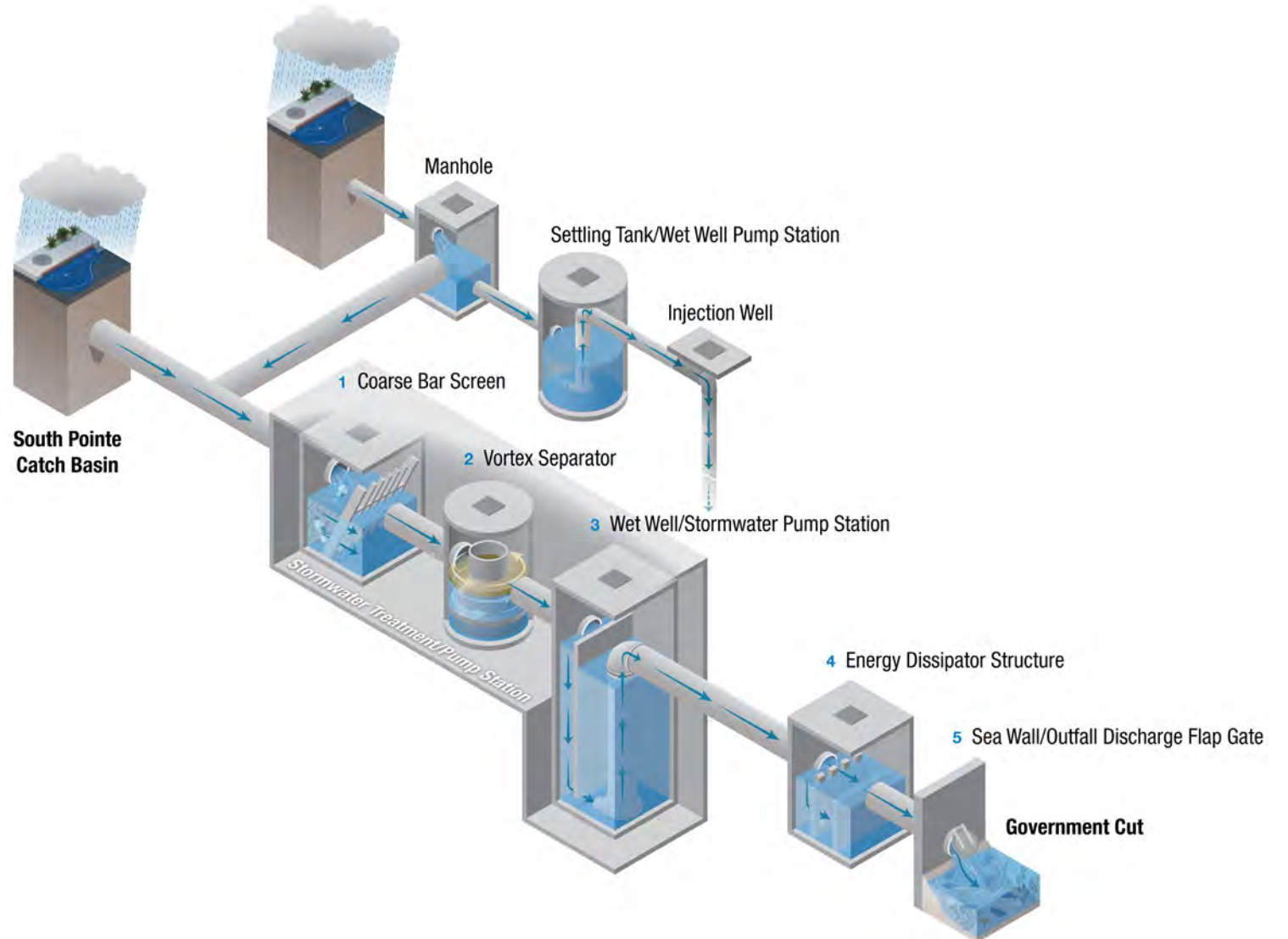
- Collection
- Treatment
- Discharge



Stormwater Treatment System Components

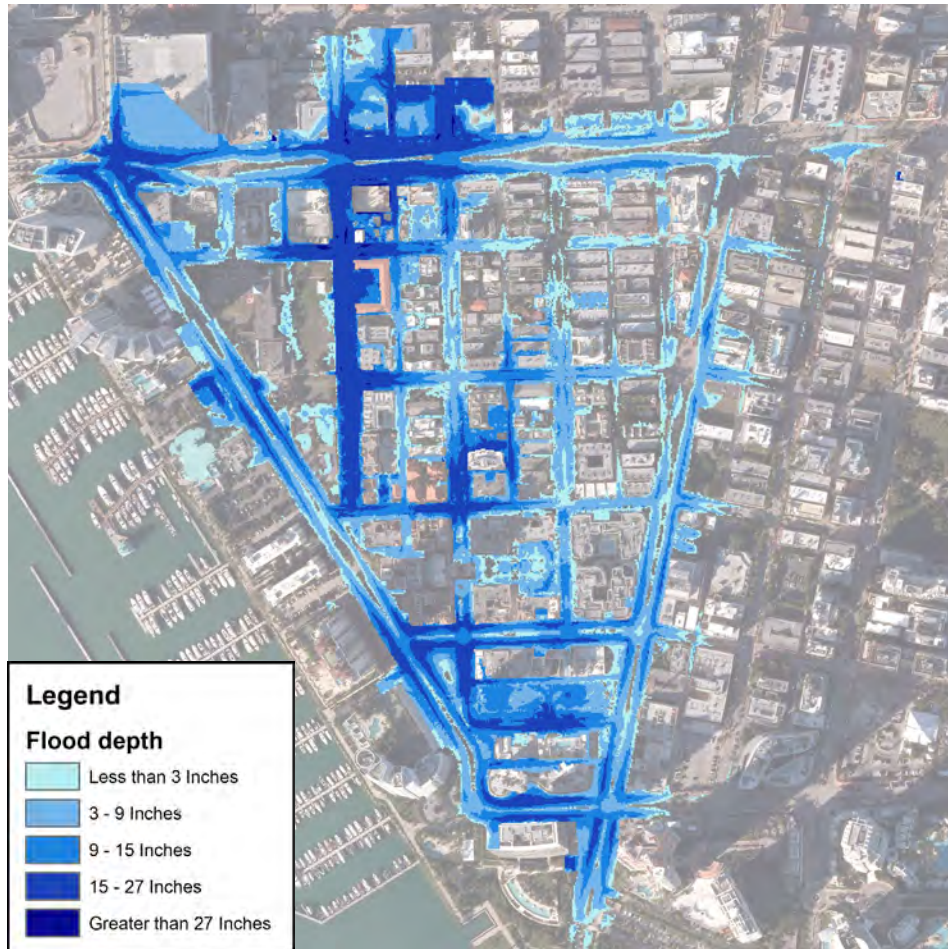
Water Quality Elements

- Water Quality Wells
- Bar Screen
- Vortex Separator
- Energy Dissipator



Stormwater Modeling – Current Project

Recommended Project Scope
(including South Pointe Drive)



Flooding post-project (Rainfall Event 8/1/17)

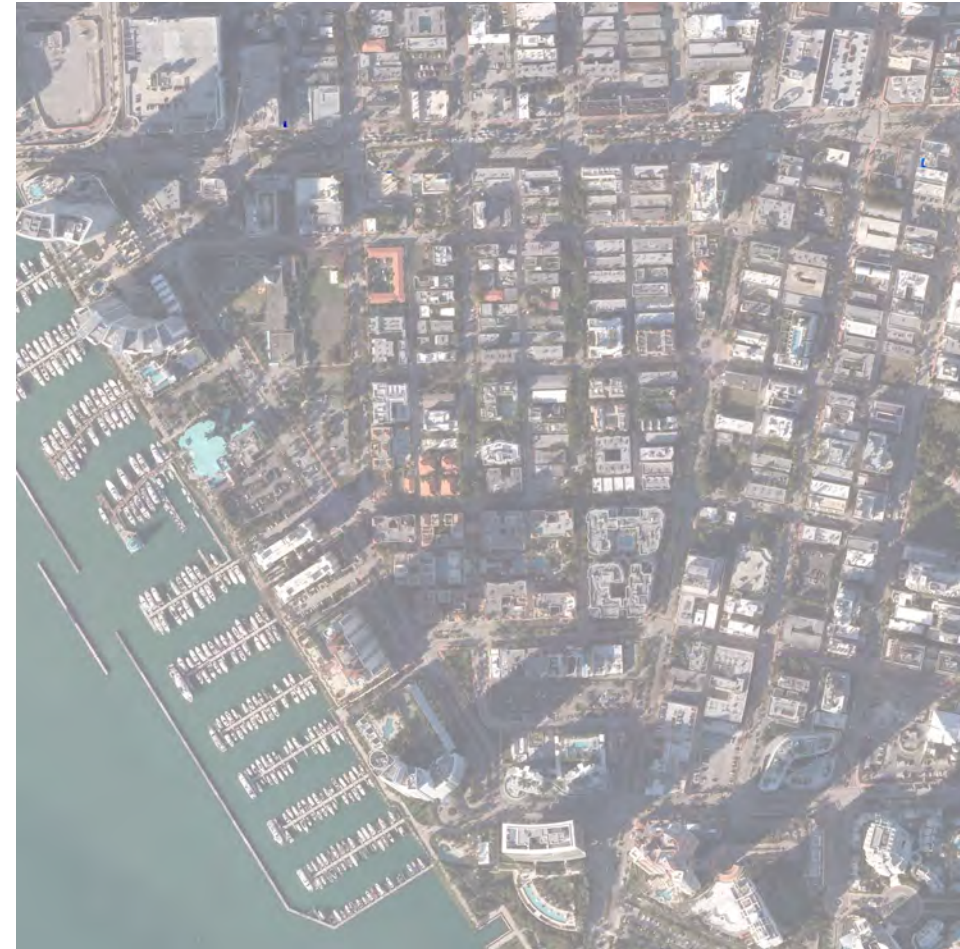


Stormwater Modeling – Future Project

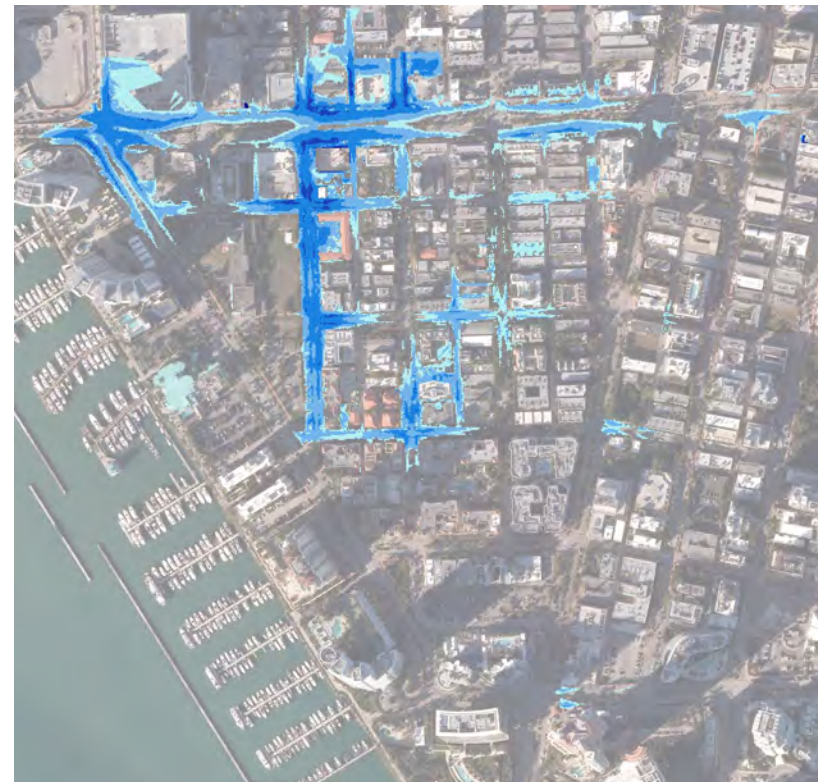
Future Project Scope



Flooding post-project (Rainfall Event 8/1/17)



Stormwater Management Improvements / Incremental Adaptation Approach



Existing Conditions
(Rainfall Event 8/1/17)

Flooding post Completion of
this project including South Pointe
Drive in the scope
(Rainfall Event 8/1/17)

Flooding post Completion of all
planned South of Fifth Neighborhood
Upgrades by future project
(Rainfall Event 8/1/17)

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1 Stormwater Modeling

2 Additional Recommendations
for Alton Road and South
Pointe Drive



Additional Recommendations - Road Raising

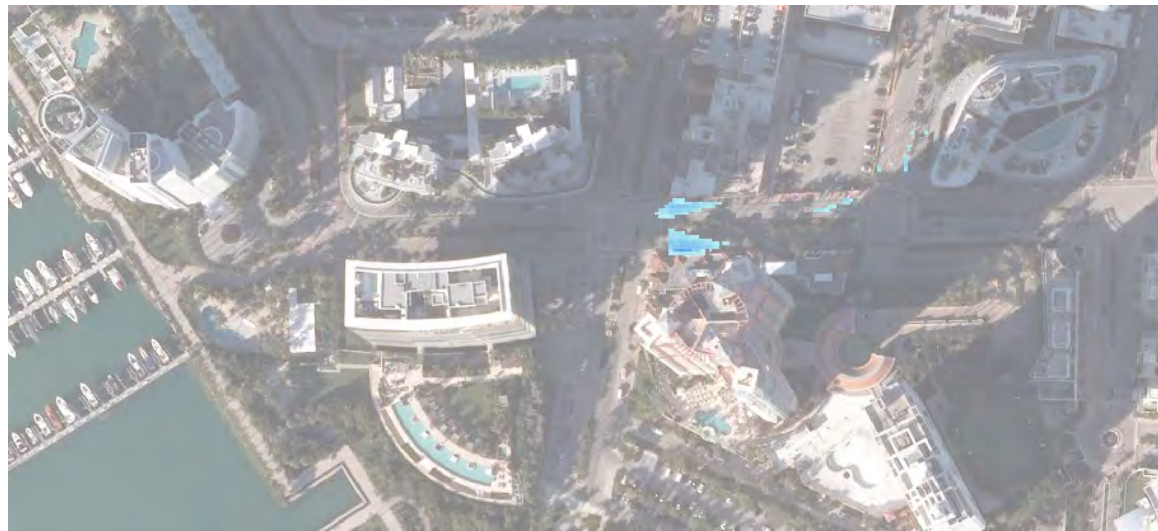
Extent of roadway affected by pipeline improvements is significant – entire ROW reconstruction



Planned Utility Locations: Alton Road

Additional Recommendations – South Point Drive

- Localized flooding & low elevation area
- Modeling shows that an upgrade of the conveyance system is required
- Significant construction impact along Alton Rd & Washington Avenue
- Recommend implementing conveyance upgrade



With upgrades on South Pointe Drive



Without upgrades on South Pointe Drive

Additional Recommendations - Road Elevation

JACOBS

Miami Beach Integrated Water Management

**Road Elevation Strategy and Recommended Sea Level Rise/
Tidal Flood Adaptation Projects**

Final
February 28, 2020
City of Miami Beach
RFQ 2018-312-KB



City Policy dictates that **when roadways are materially impacted by construction of new underground utility infrastructure, that road elevation is completed simultaneously**, consistent with the City's Road Elevation Strategy adopted in 2020.

The Design Team recommends elevation of Alton Road and South Pointe Drive due to the extent of construction that will be required on those roads.

Recommended Scope Changes

- Upgrade of conveyance on South Pointe Drive
- Elevation of Alton Rd and South Pointe Drive

Original Road Elevation Plan

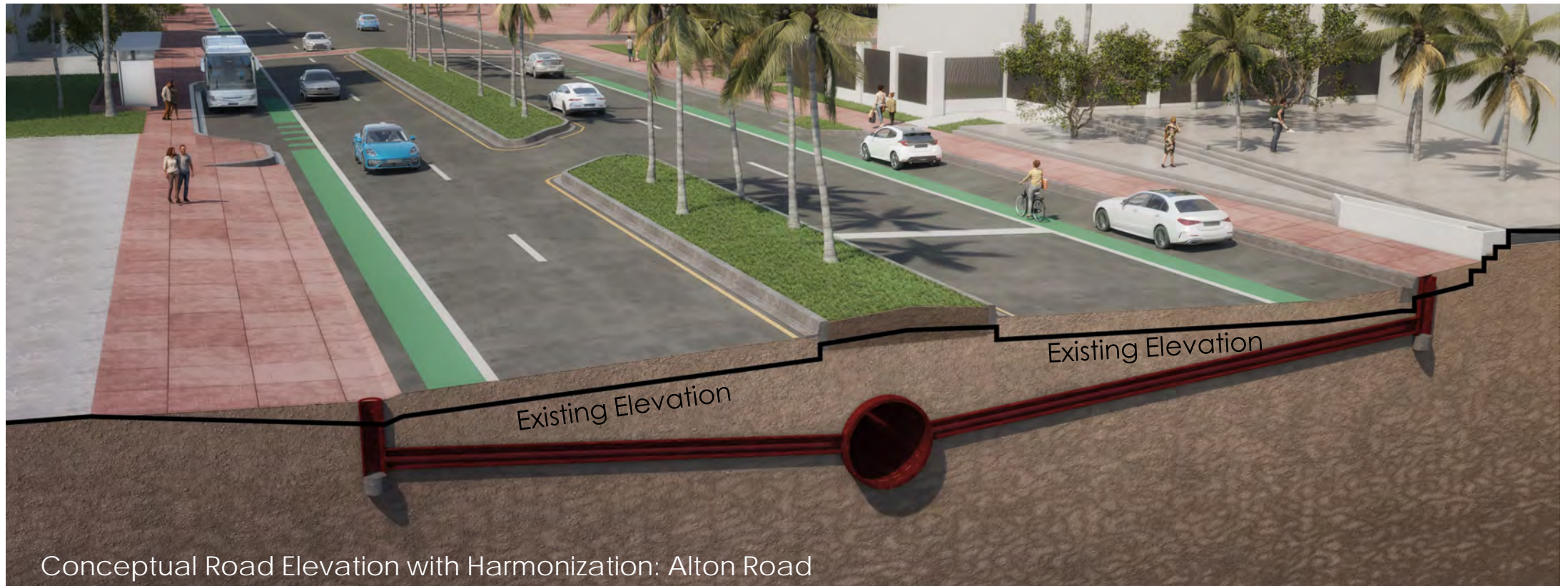


Recommended Road Elevation Plan



Harmonization: Alton Road and South Pointe Drive

- New road elevation will be adjusted based on adjacent private properties
- Elevation will be determined during design



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1 Stormwater Modeling

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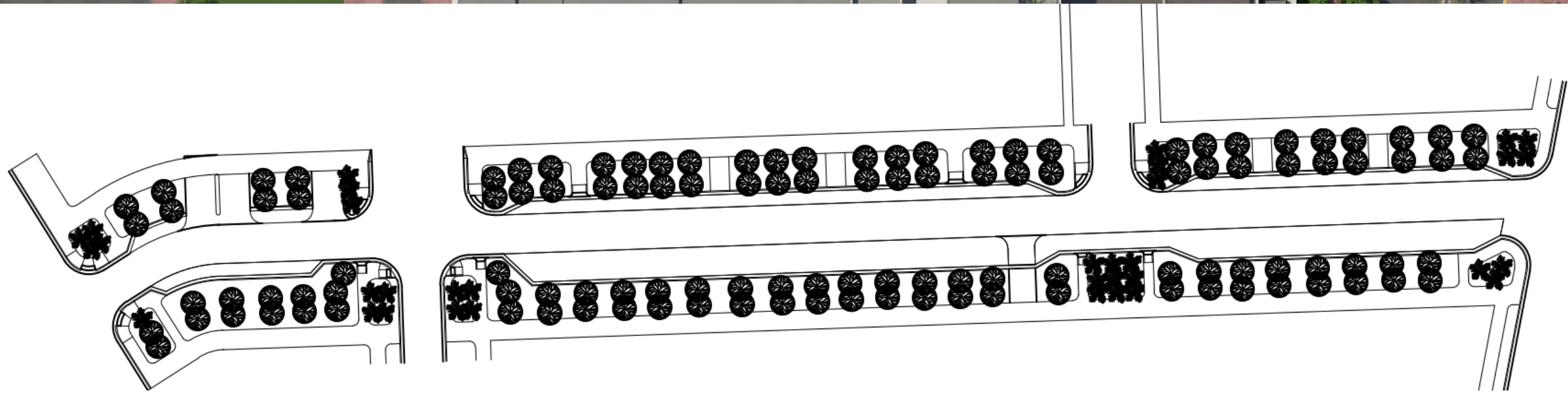
3 Update to First Street Design



First Street Cross Section



Final Proposed Design



Perspective 1 - From Alton looking toward Washington



Perspective 2 - South Sidewalk



Perspective 3 – North Sidewalk



Perspective 4 - Washington looking toward Alton



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1 Stormwater Modeling

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Screening



1st Street - Tree Improvements



Existing Street

Trees 64



Proposed Conditions

Proposed Trees - Palms 152

+117 Shade Trees

Blue/Green Stormwater Infrastructure (BGSi)



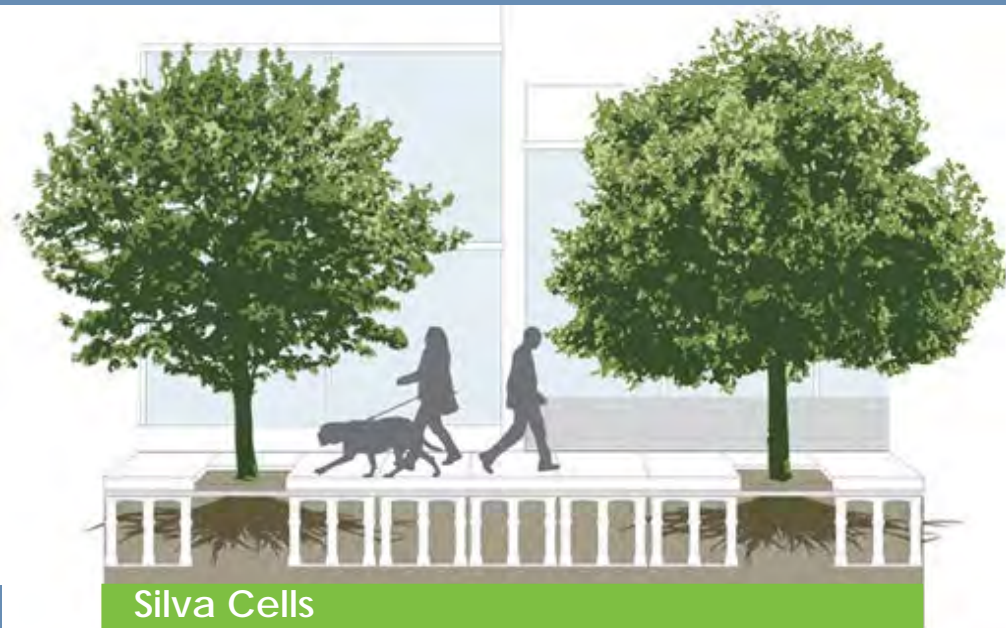
Bioswale



Permeable Pavers



Rain Garden



Silva Cells

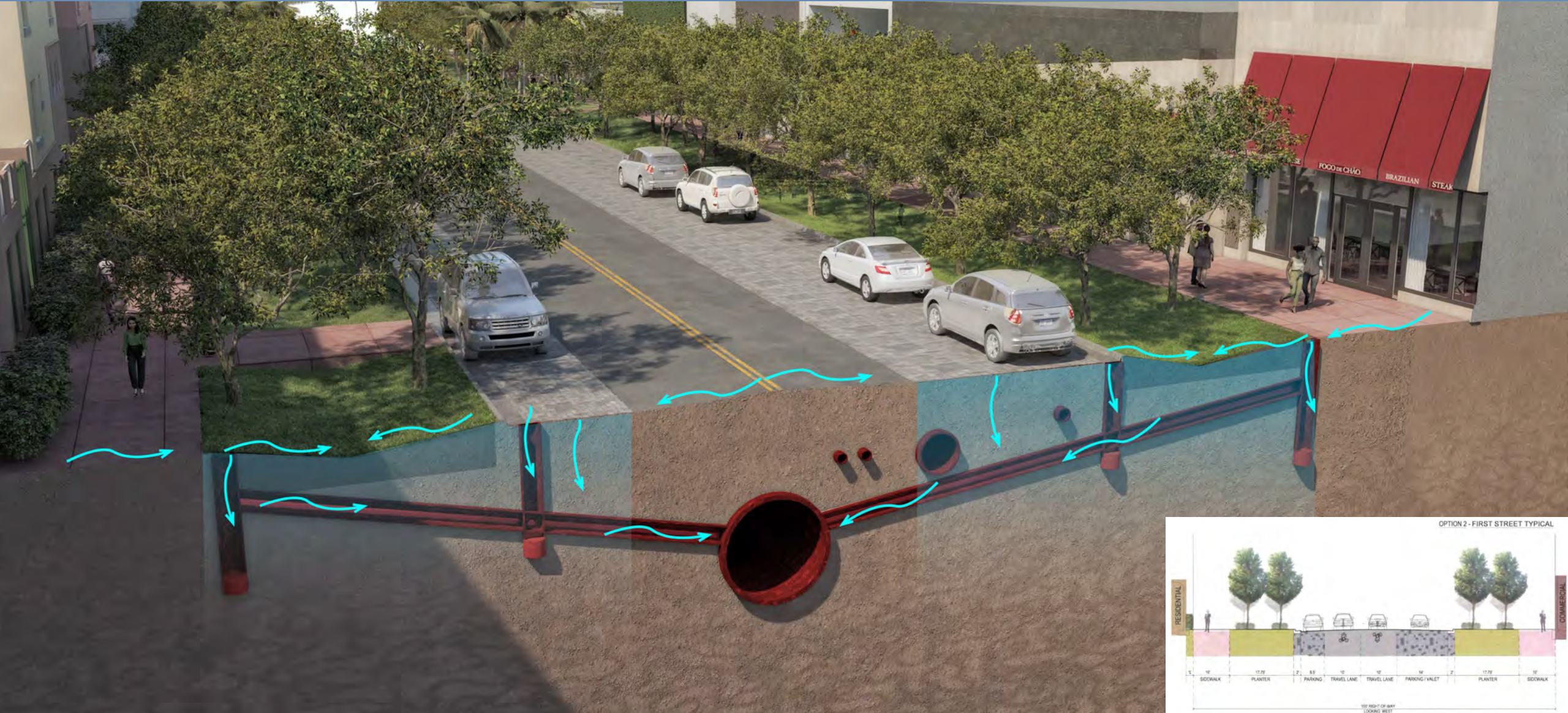
Benefits of BGSi

- Flood mitigation
- Reduced saltwater intrusion
- Improved water quality
- Groundwater recharge
- Urban heat island mitigation
- Climate resiliency
- Air quality improvement
- Aesthetic enhancement

Benefits of Silva Cells

- Increased absorption
- Increased soil volume for larger trees in urban areas
- Large tree growth
- Low-Impact development approach

Blue/Green Stormwater Infrastructure (BGSI)



Existing Tree Palette



Coconut Palm



Indian Beech



Live Oak



Royal Poinciana



Wild Tamarind



Alexander Palm

Additional Proposed Trees



Silver Buttonwood



Bridalveil



Green Buttonwood



White Tabebuia



Crape Myrtle



Jacaranda

Other Proposed Vegetation



Celosia Rosea



Sea Grape



Liriope



Star Jasmine



Trumpet Vine



Mandevilla

Screen Enclosure for Aboveground Electrical Components



Screen Enclosure for Aboveground Electrical Components



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www.miamibeachfl.gov/firststreetproject

Thank You!

