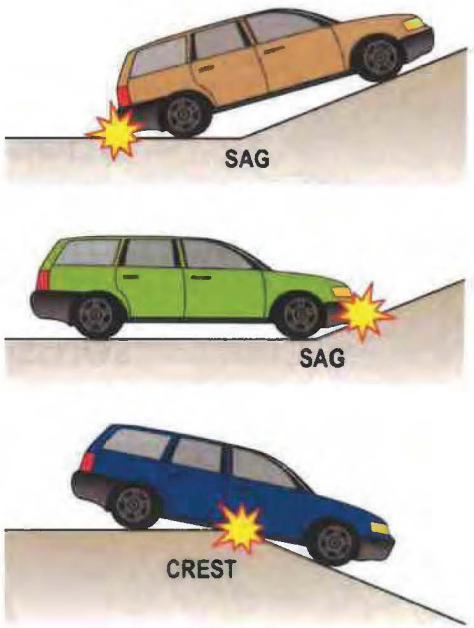
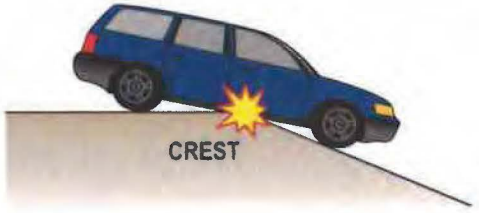
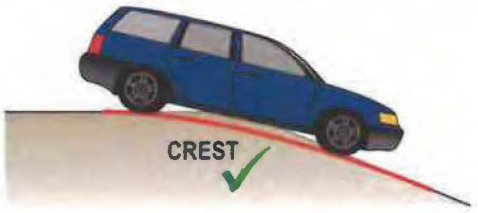
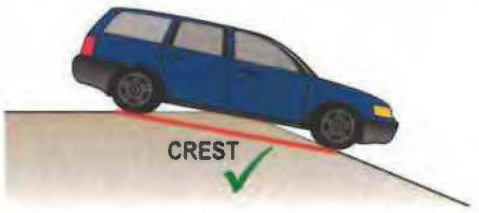
Proposed Criteria for Harmonization

- Driveway slopes within FDOT standards to avoid adverse conditions.
- Recommended maximum driveway slopes
  - **Residential: 12.5%** (1V:8H)
  - **Commercial: 10.0%** (1V:10H)
- Recommended max. sidewalk cross-slope = 1.5%



Proposed Criteria for Harmonization

If driveway slope changes more than 14.0% at a crest or sag, a vertical transition will be provided.

Adverse Driveway Conditions	Rounded Vertical Transitions	Straight Vertical Transitions
		
		
		

Proposed Harmonization Solutions (Examples)

- Alternative road treatments (retaining walls, steps, ADA ramps, etc.)
- Temporary construction easement to reduce slope of driveways.
- Lower sidewalk at driveway to improve driveway grades.
- Collect stormwater from behind sidewalk, into storm drainage system.
- Don't raise roadway as high as minimum standard.

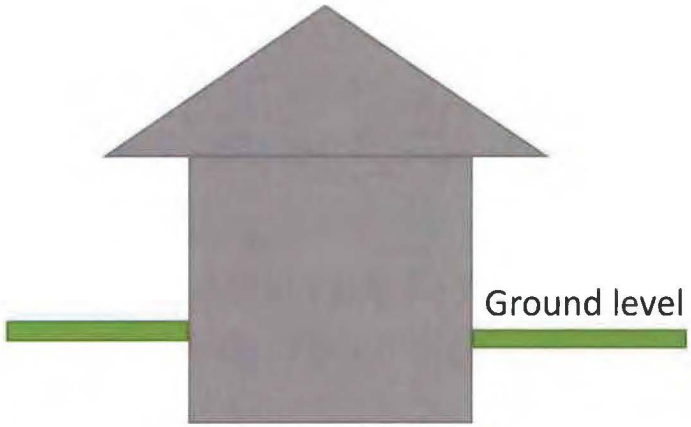
(solutions vary between residential and commercial property)

Basements Defined

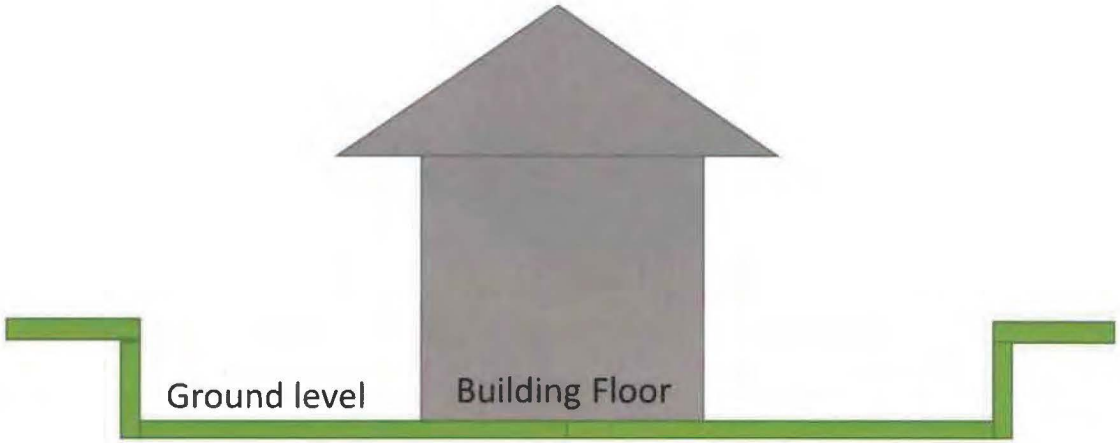
FEMA Definition:

Any area of a building having its floor subgrade (below ground level) on all sides.

(Definition adopted and codified by City of Miami Beach, Ordinance Section 54-35)



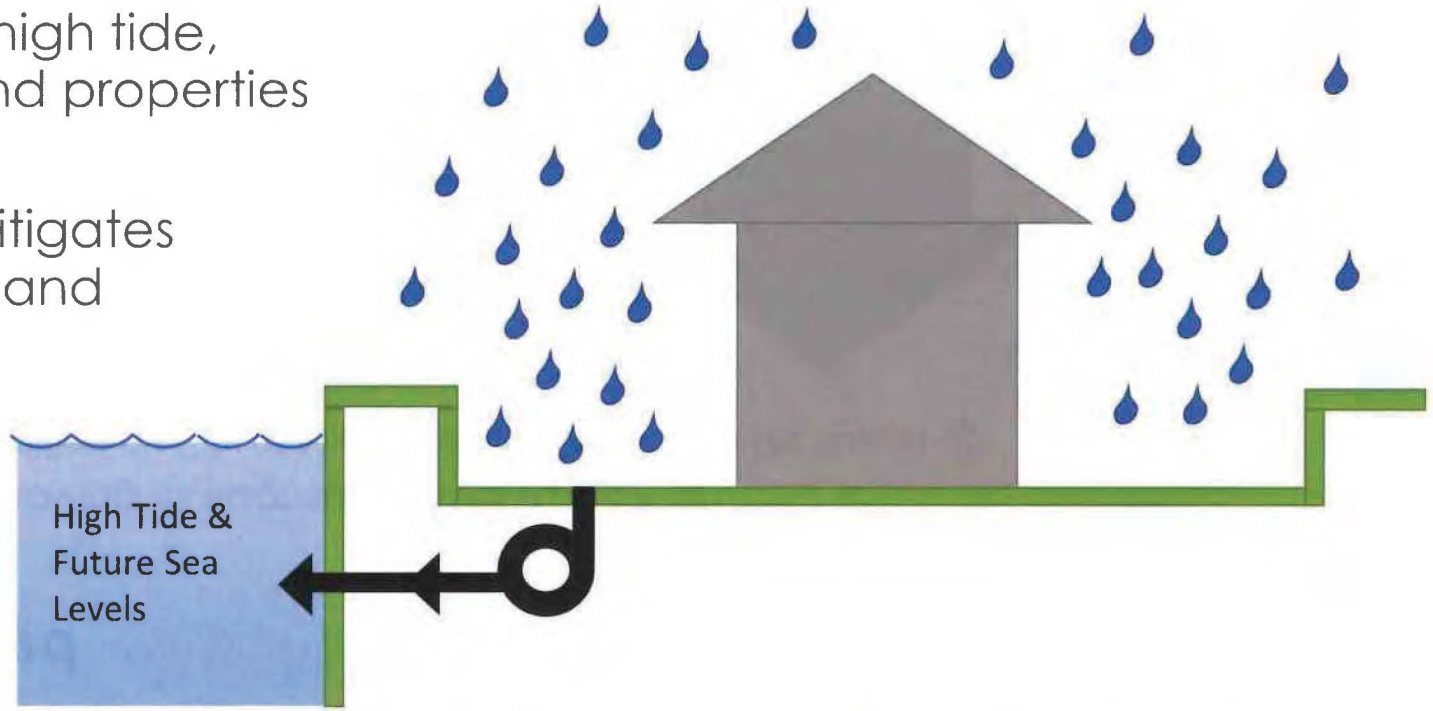
Basement Condition



Not a Basement

Purpose of Pumps, for Stormwater Management

- Maintain stormwater discharge during high tide, allowing streets and properties to drain.
- Elevating roads mitigates against high tides and groundwater.



Task 3
Neighborhood Project Prioritization

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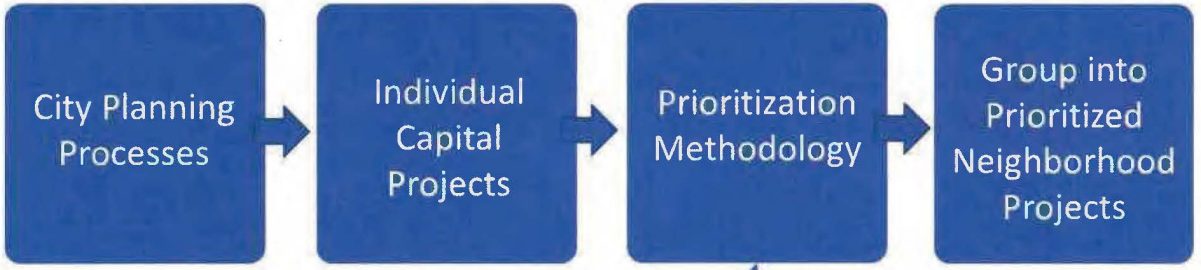
MIAMIBEACH RISING ABOVE

Neighborhood Project Group Prioritization Objectives

- Strategically guide prioritization of City Neighborhood Projects
- Maximize benefits, minimize impacts
- Objective, transparent, and repeatable methodology

NEIGHBORHOOD PROJECT:
A project involving multiple City Services; for example:
- Road improvements
- Water/sewer maintenance
- Stormwater upgrades

Overall Process for Neighborhood Project Prioritization



Guiding Principles

- Public safety is top priority
- Water and wastewater service delivery and environmental protection support multiple objectives
  - Public health, local economy, regulatory compliance
- Economic development is supported by City services
  - Service delivery/capacity, risk management
- Routine maintenance supports long-term service supply reliability
- Aesthetics not a stand-alone objective (but important)

Neighborhood Project Prioritization

- **Development of Methodology**
  - Established 11 project categories
  - Developed criteria for each category corresponding to level of importance (scores correspond to level of importance)
  - Developed weight factors for each category
- **Notes About Methodology**
  - Projects can have attributes that span multiple categories
  - Projects with multiple benefits produce higher scores

Neighborhood Project Prioritization: Eleven Categories of Projects

Project Categories Objectives and Benefits of City Projects	Brief Description
Aesthetics	Business visibility, landscaping, historical integrity, green streets
Coastal Flood Risk Management	Exposure and sensitivity to king tides, sea level rise, storm surge, extreme weather
Economic Development	Type of development
Emergency (Critical) Facilities and Roads	Emergency response effectiveness
Environmental Benefits (Ecological)	Type of environmental benefits
Pedestrian and Bicycle Mobility	Infrastructure that enables more and safer pedestrian and bicycle movement
Potable Water/Fire Suppression System	Public safety, public health, and infrastructure condition
Rain Driven Storm Water Management	Flood management, environmental protection, and regulatory compliance
Road Classification	Type and capacity of road
Sanitary Sewer Service Delivery	Provision of service, capacity and condition of system
Transportation – Road Condition/Remaining Service Life	Condition and service life of road

Neighborhood Project Prioritization

Rating Projects Across Multiple Categories of Objectives and Benefits

Category: Coastal Flooding Risk Management	
Attribute	***Value***
Storm Surge Defense: People	10
Storm Surge Defense: City Services & Infrastructure	7
King Tide Defense: Residential & Commercial	6
Storm Surge Defense: Property	5
King Tide Defense: City Services & Infrastructure	4
Not applicable	0

Category: Environmental Benefits	
Attribute	***Value***
Opportunity to improve quality of stormwater discharge to Bay	10
Opportunity to address heat island effects	9
Opportunity to enhance natural habitat	7
Opportunity for natural system educational and interpretation	5
Opportunity to sequester carbon	4
Not applicable	0

Category: Potable Water Distribution / Fire Suppression	
Attribute	***Value***
Fire Suppression: Pressure and Capacity	10
Domestic Water Supply: Quality	9
Domestic Water Supply: Capacity	8
Reliability & Performance Improvements: Breaks & Leaks	6
Reliability & Performance Improvements: Materials	4
Not applicable	0

Category: Rain Driven Stormwater Management	
Attribute	***Value***
Stormwater Quantity and Quality issues	10
Stormwater Quantity issues	8
Stormwater Quality issues	8
Non-Point Source Pollution Prevention	6
Non-Stormwater Discharge Elimination	6
Not applicable	0

Neighborhood Project Prioritization

Rating Projects Across Multiple Categories of Objectives and Benefits

Rank	Project Category	Project Category Weight Factor (%)
1	Coastal Flood Risk Management	100
2	Potable Water Distribution / Fire Suppression System	100
3	Emergency (Critical) Facilities & Roads	90
4	Sanitary Sewer Service Delivery	85
5	Rain Driven Storm Water Management	85
6	Environmental Benefits	70
7	Economic Development	60
8	Pedestrian and Bicycle Mobility	50
9	Road Classification	40
10	Road Condition Maintenance	40
11	Aesthetics	35

Example Application

1. Identify all projects in the Neighborhood Project Group
2. Develop score for each project:
    1. Can involve multiple categories
    2. Select single attribute that best represents the project
    3. Apply category weight factor to each attribute value
    4. Add up scores for project to get total project score
3. Add total project scores for all projects in Neighborhood Group for overall score for that group
4. Use overall Neighborhood Project Group score to compare and prioritize multiple Neighborhood Project Groups

Neighborhood Project Group 1 (Hypothetical)

Neighborhood Project Groups			Project Category		Project Attribute		Score
Group Number	Description	Project	Categories Addressed	Category Weight	Description	Value	
Neighborhood Project Group 1	Water System Upgrade for Fire Suppression. Include retrofit bioretention swales along roads while in neighborhood.	Upgrade Water Line for Fire Suppression	Potable Water Distribution/Fire Suppression	100%	Fire Suppression: Pressure and Capacity	10	10.0
		Retrofit Bioretention Swale Along Roads While in Neighborhood	Rain Driven Stormwater Management	85%	Stormwater Quality issues	8	6.8
			Aesthetics	35%	Green Streets	9	3.2
			Environmental Benefits	70%	Protect the Bay	10	7.0
						Total Score Neighborhood Group 1	27.0

Neighborhood Project Group 2 (Hypothetical)

Neighborhood Project Group 2	Blue-Green Infrastructure Retrofit on green space with aesthetic enhancements and public education. Include adding pedestian walkways and bike paths.	Green Infrastructure: Constructed Wetland System	Rain Driven Stormwater Management	85%	Stormwater Quantity and Quality issues	10	8.5
			Environmental Benefits	70%	Enhance Natural Habitat	7	4.9
			Aesthetics	35%	Public Open Space/Parks	10	3.5
		Pedestrian & Bicycle Paths	Pedestrian and Bicycle Mobility	50%	Pedestrian Pathways and Bicycle Lanes	9	4.5
					Total Score Neighborhood Group 2		**21.4**

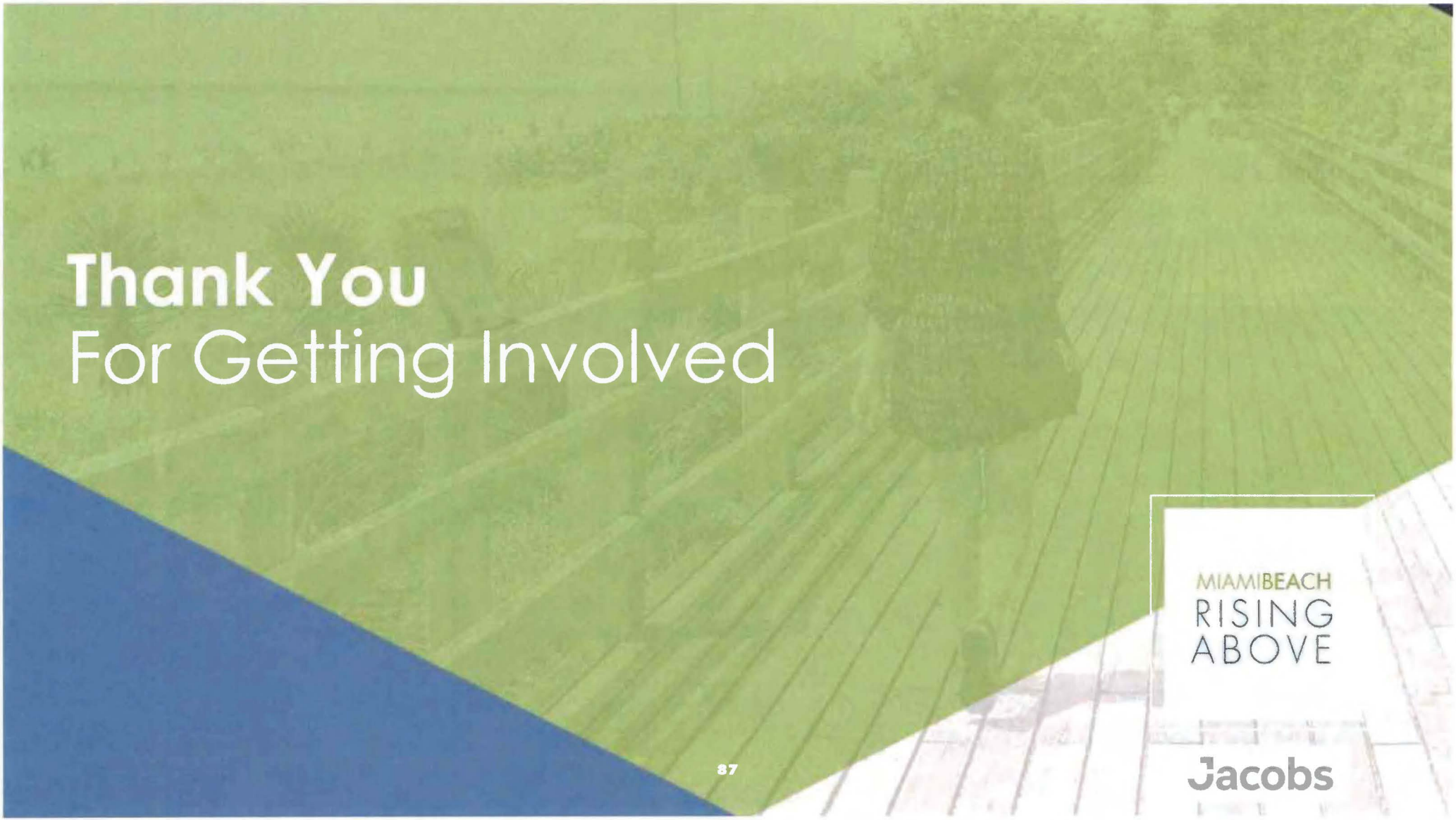
Neighborhood Project Group 3 (Hypothetical)

Neighborhood Project Group 3	Routine Road Replacement (Condition). Include blue-green infrastructure along roadway.	Road Replacement / Resurfacing	Road Condition Maintenance	40%	Local Commercial	8	3.2
		Green Infrastructure: Bioswale	Rain Driven Storm Water Management	85%	Stormwater Quality issues	8	6.8
			Aesthetics	35%	Green Streets	9	3.2
			Total Score Neighborhood Group 3				**13.2**

Example: Ranking and Prioritizing Multiple Projects Groups

Neighborhood Projects		Neighborhood Project Highlights	Overall Score
Neighborhood Project Group 1	Water System Upgrade for Fire Suppression and Bioretention Swale Along Road	Multiple Projects Addressing Multiple Issues 1. Public Safety: Fire Suppression 2. Environmental Protection 3. Aesthetic Improvements	27.0
Neighborhood Project Group 2	Wetland Added to Park Space for Improved Water Quality, Green Space and Aesthetics	Multiple Projects Addressing Multiple Issues 1. Flood Management 2. Environmental Protection 3. Increased Mobility / Sustainability 4. Aesthetic Improvements	21.4
Neighborhood Project Group 3	Routine Road Replacement (Condition). Include blue-green infrastructure along roadway.	Single Project Addressing Multiple Issues 1. Required / Routine Maintenance 2. Environmental Protection 3. Aesthetic Improvements	13.2

Highest Priority Project


Thank You
For Getting Involved
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Comments
From The Public

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DEVELOPING A NEIGHBORHOOD PROJECT PRIORITIZATION TOOL

The Neighborhood Project Prioritization Tool is a new decision support tool that will help the Public Works Department prioritize Neighborhood Projects to maximize benefits and address priorities.

RANKING INDIVIDUAL NEIGHBORHOOD PROJECTS

The tool creates a formal, transparent, and repeatable process for ranking Neighborhood Projects. It will not apply to other project types.

GROUPING PROJECTS FOR IMPLEMENTATION

Staff will then review the list in light of neighborhood context. Projects may be bundled according to location and known community priorities, as needed.

"Neighborhood Projects" combine multiple, smaller projects like road work, utilities, sidewalks, or street trees into one larger project to increase efficiencies and minimize disruption.

WHAT DOES PUBLIC WORKS DO?

The Public Works Department finds solutions to our community's most pressing infrastructure and environmental needs. It is responsible for the design, maintenance, functionality, delivery, and cleanliness of the City's water services and resources, roadways, and greenways. It has four divisions:

- **Infrastructure**
- **Engineering**
- **Sanitation**
- **Greenspace Management**

Its projects offer multiple benefits to the community, including safety, health, mobility, recreation, economic development, and beauty.

HOW DO WE PRIORITIZE?

BENEFIT CATEGORIES

Neighborhood Projects offer multiple benefits that fall into 11 different categories, each with different degrees of priority reflected by their weight factors.

LOWEST PRIORITY
- LIMITED HEALTH & SAFETY IMPACTS
- LIMITED RISK EXPOSURE
- NOT AN IMMEDIATE NEED

LOWEST WEIGHT FACTOR **35%**

BENEFIT CATEGORIES

HIGHEST PRIORITY
- HEALTH & SAFETY
- HIGH RISK EXPOSURE
- CRITICAL INFRASTRUCTURE & CITY SERVICES

HIGHEST WEIGHT FACTOR **100%**

GUIDING PRINCIPLES FOR SETTING WEIGHT FACTORS

1. Public safety is the top priority
2. Water & wastewater service delivery and environmental protection projects support multiple objectives like public health, the local economy, and regulatory compliance
3. City services support economic development through service delivery, infrastructure capacity, and risk management
4. Routine maintenance supports long-term service supply reliability
5. Aesthetics are valuable, but not a standalone objective

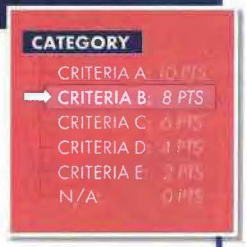
WEIGHT FACTORS

Each benefit category was **assigned a weight to quantify its relative importance.** These factors will be multiplied by the raw score for each category to get a weighted score that favors the highest priority benefits.

100% **COASTAL FLOOD RISK** (SEA LEVEL RISE & SURGE)	100% **POTABLE WATER DISTRIBUTION/ FIRE SUPPRESSION SYSTEM**	90% **EMERGENCY (CRITICAL) FACILITIES & ROADS**	
85% **SANITARY SEWER SERVICE DELIVERY**	85% **RAIN DRIVEN STORMWATER MANAGEMENT** (QUALITY & QUANTITY)	70% **ENVIRONMENTAL BENEFITS** (ECOLOGICAL)	60% **ECONOMIC DEVELOPMENT PROJECT**
50% **PEDESTRIAN & BICYCLE MOBILITY**	40% **ROAD CAPACITY** (ARTERIAL, COLLECTOR, RESIDENTIAL/LOCAL)	40% **TRANSPORTATION** (ROAD CONDITION/ REMAINING SERVICE LIFE)	35% **AESTHETICS**

HOW ARE PROJECTS SCORED?

CRITERIA & PRIORITY RATINGS



1. For each category, choose the criteria that best describes the project.
2. Criteria point values range from 2 to 10, depending on priority.
3. If there are no applicable criteria, the point value for that category is 0.

Category	Weight Factor
Coastal Flood Risk	100%
Potable Water Distribution/ Fire Suppression System	100%
Emergency (Critical) Facilities & Roads	90%
Sanitary Sewer Service Delivery	85%
Rain Driven Stormwater Management	85%
Environmental Benefits	70%
Economic Development Project	60%
Pedestrian & Bicycle Mobility	50%
Road Capacity	40%
Transportation	40%
Aesthetics	35%

EXAMPLE CRITERIA

CATEGORY:
Environmental Benefits

CRITERIA:

Rating

- Opportunity to improve quality of stormwater discharge to bay
- Opportunity to address heat island effects
- Opportunity to enhance natural habitat
- Opportunity for natural system education and interpretation
- Opportunity to sequester carbon

CATEGORY:
Rain Driven Stormwater Management

CRITERIA:

Rating

- Stormwater Quantity and Quality Issues
- Stormwater Quantity Issues
- Stormwater Quality Issues
- Non-Point Source Pollution Prevention
- Non-Stormwater Discharge Elimination

CATEGORY:
Potable Water/Fire Suppression System

CRITERIA:

Rating

- Fire Suppression: Pressure and Capacity
- Domestic Water Supply: Quality
- Domestic Water Supply: Capacity
- Reliability and Performance Improvements: Breaks and Leaks
- Reliability and Performance Improvements: Materials

HOW WILL THIS PLAY OUT?

PROJECT PRIORITIZATION EXAMPLE

WHAT IF... ...**three neighborhood projects** have been proposed and the Public Works Department needs to identify which one offers the **greatest benefits** to prioritize available resources?

APPLY THE TOOL!

1. **Rate** each project
   Give all applicable points across all 11 categories
2. **Multiply** each category's raw score by its **weight factor**
3. **Sum** all category totals to get the **project total**
4. Compare and **prioritize** total scores for all projects

EXAMPLE PROJECTS

A Public Safety Project

Description: Water system upgrade for **fire suppression**, including retrofit **bioretention swales** along roads while already doing construction in the neighborhood.

Points

Categories Addressed by Project	Criterion	Rating	X Category Weight	= Category Score
Potable Water/Fire Suppression	Fire Suppression Pressure and Capacity	10	100%	10.0
Rain Driven Stormwater Management	Stormwater Quality Issues	8	84%	6.7

Total Score: **16.7**

B Stormwater Project

Description: **Blue-green infrastructure** retrofit on green space with aesthetic enhancements and public education.

Points

Categories Addressed by Project	Criterion	Rating	X Category Weight	= Category Score
Rain Driven Stormwater Management	Stormwater Quantity and Quality Issues	10	84%	8.4
Aesthetics	Public open space/ parks	10	36%	3.6
Environmental Benefits	Opportunity for natural system education and interpretation	5	68%	3.4

Total Score: **15.4**

C Road Replacement

Description: **Routine road replacement** (condition) along with retrofit **blue-green infrastructure** along the roadway.

Points

Categories Addressed by Project	Criterion	Raw Rating	X Category Weight	= Category Score
Road Condition Maintenance	Local Commercial	8	41%	3.3
Rain Driven Stormwater Management	Stormwater Quality Issues	8	84%	6.7

Total Score: **10.0**

Project A got the **highest total score** because it addresses critical needs and offers multiple benefits,including benefits in high-priority categories

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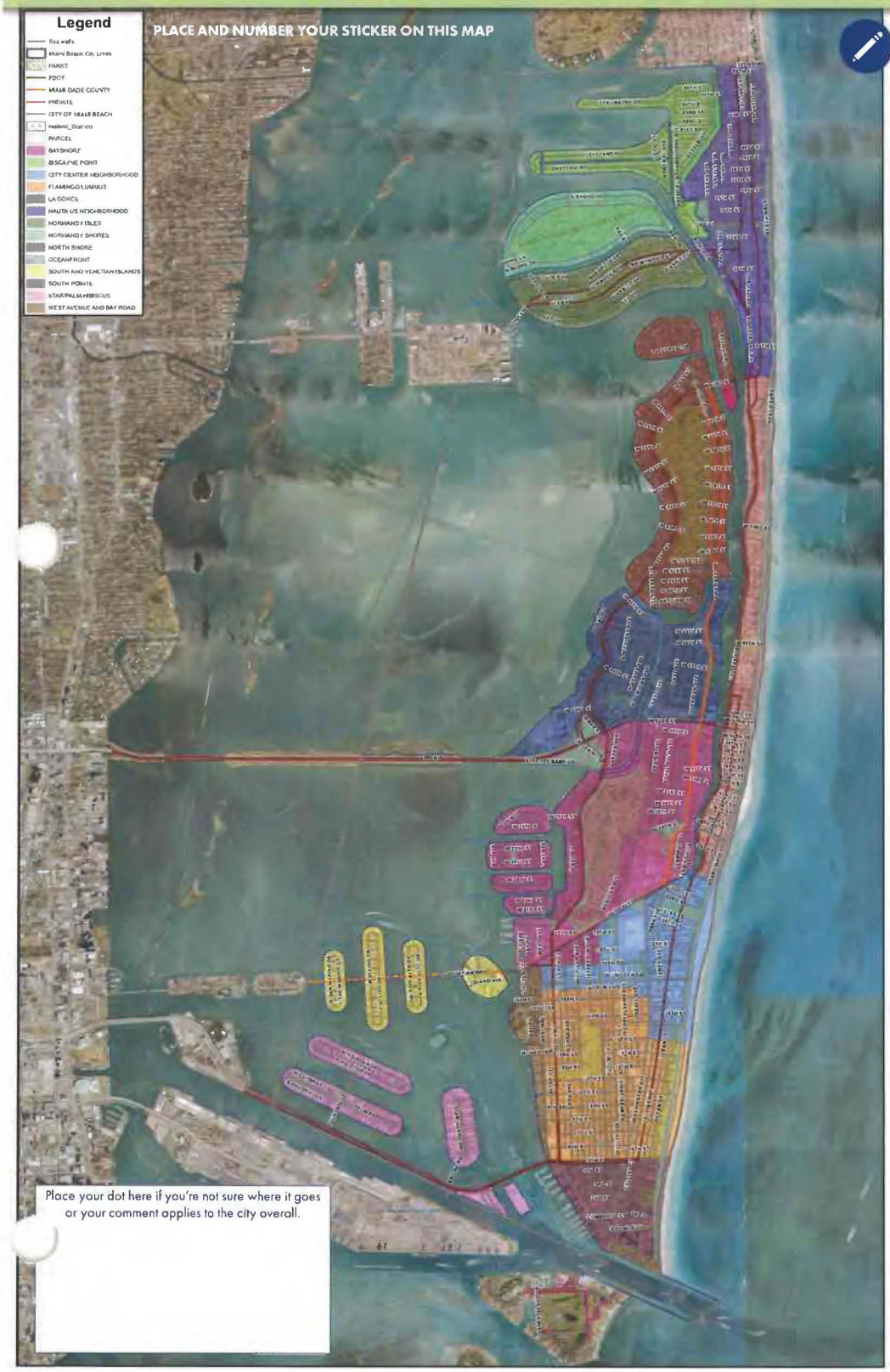
WHAT'S HAPPENING IN YOUR NEIGHBORHOOD?

IDEA ISSUE

Is there a certain spot in your neighborhood where you know there's an issue? A place you think would be perfect for a project? We want to know! Place a sticker on that spot, write your thought on the next available line, and write the corresponding number from that line on your sticker.



WRITE YOUR COMMENT HERE

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Exhibit 6


225


244

Exhibit 7

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Project Management

Presented by: Eric Carpenter

Commission Workshop on Resilience

January 27, 2020

Looking Back

Palm & Hibiscus Islands Experience

Mistakes were made by City and Design/Build Contractor on this project regarding scope, permitting and coordination

After project was under construction, several changes occurred

- City issued new drainage policy directives (twice)
- Addition of Generators at request of HOA
- Change in roadway design to accommodate undergrounding at request of HOA
- Lighting modifications at request of HOA
- Modified Landscaping at request of HOA

Harmonization Efforts

Lessons Learned

- Design and Agree on individual property harmonization details before Construction begins
- Limit changes of construction scope once construction begins
- Emphasize responsibilities of Contractor with regards to permits prior and throughout the project
- Construction of projects on behalf of other governmental entities will be avoided
- HOA/Community direction may differ

THANK YOU!

Exhibit 8

FL LC Reg. No. C000121

Wade Trim, Inc.
2100 Ponce de Leon Boulevard, Suite 940 • Coral Gables, FL 33134
786.361.1645 • www.wadetrim.com

May 10, 2018

Department of Regulatory and Economic Resources
701 NW 1st Court, 5th Floor Miami, FL 33136-3912

Attention: Mayra de Torres, Engineer

Re: City of Miami Beach Neighborhood 13A Infrastructure Improvements
Palm and Hibiscus Islands
Class II Permit Renewal

Dear Ms. De Torres:

We are submitting the attached application for the above-referenced project, in lieu of a Time Extension Request. In order to assist in your review of this, as it relates to the original Class II Permit Application for this project (Permit No. 20150058), we are providing the following narrative:

1. Has the above-referenced permit previously extended? If so, list the permit extension date(s).

   No.

2. Describe the work, as authorized by the above-referenced permit that has not been completed up to date.

   Swale area grading, pump stations, private-side yard drains, lighting, final lift of asphalt, pavement and marking.

3. Has the work performed to date as authorized by the above-referenced permit, been conducted in accordance with the permit description, approved plans and restrictions, limitations or conditions of the permit? If not, describe in detail work that has been conducted that is not in accordance with the permit.

   City provided a change in directive requiring installation of private-side yard drains for properties that have finished floor elevations below the adjacent crown of road. The original stormwater design criteria required that the drainage area be sized to account for and reflect the actual contributory area at a minimum all road rights-of-way, 100% of interior (landlocked) lots and 50% of waterfront lots. Thusly there is enough capacity in the system to account for this additional stormwater load, particularly in light of the fact that few of the properties fall within this new City criteria.

   Additional City-directed changes will be submitted via revised plans for Palm Island and Hibiscus Islands during permit certification submittals; these mainly relate to change of pipe alignments to reduce impact to existing vegetation, addition of a secondary drainage system to reduce potential flooding in isolated areas, and lowering of proposed elevation of roads to reduce harmonization impacts to private properties.

4. Describe any substantial changes in the environment that have occurred at or adjacent to the subject location since the date of issuance of the above-referenced permit or prior extension time.

   None.

5. Describe any adverse environmental impact(s) or cumulative environmental impact(s) that may occur if a permit extension is granted.

   None.

For all required documentation as outlined in Section 2 and Attachment B, please refer to original permit application for Permit No. 20150058, as a reference. Please do not hesitate in contacting me should require additional information or have any additional questions.

Very truly yours,

Wade Trim, Inc.

Daniel Garcia, PE
Project Manager

LNZ2003.02S

cc: Olga Sanchez (City of Miami Beach)
Pablo Riano (Lanzo Construction)
Holly Kremers, PE (Wade Trim)

Exhibit 9