Resolutions - R7 C

MIAMIBEACH

**COMMISSION MEMORANDUM**

TO: Honorable Mayor and Members of the City Commission

FROM: Jimmy L. Morales, City Manager

DATE: July 24, 2020

SUBJECT: **1. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE BLUE-GREEN STORMWATER INFRASTRUCTURE CONCEPT PLAN REPORT.**

**2. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE ROAD ELEVATION STRATEGY AND RECOMMENDED SEA LEVEL RISE/TIDAL FLOOD ADAPTATION PROJECTS REPORT.**

**3. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE NEIGHBORHOOD PROJECT PRIORITIZATION – METHODOLOGY AND RESULTS REPORT.**

## RECOMMENDATION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, and adopting the three reports, respectively: 1) Blue-Green Stormwater Infrastructure Concept Plan; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects; and 3) Neighborhood Project Prioritization – Methodology and Results; with such reports to be incorporated as an amendment to the City's Stormwater Master Plan.

## BACKGROUND/HISTORY

Jacobs Engineering has worked with City staff to develop an Integrated Water Management Plan, inclusive of three reports that further refine the City's existing Stormwater Management Strategy.

These reports are: 1) The Blue-Green Stormwater Infrastructure Concept Plan, dated February 28, 2020; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects, dated February 28, 2020; and 3) Neighborhood Project Prioritization – Methodology and Results, dated April 1, 2020. Throughout the development of these three reports, Jacobs Engineering has gathered feedback from the community, the Administration, and, most recently, the City Commission at its Resilience Retreat on January 27, 2020.

## ANALYSIS

The following summarizes the plans, guidelines, and results of the three Jacobs Engineering reports. These reports, if approved, will set the basis for the implementation of design criteria packages (DCP) for City projects. The three reports included:

1. A Blue-Green Stormwater Infrastructure Concept Plan

http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Blue-Green-Stormwater-Infrastructure-Concept-Plan.pdf

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

http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Road-Elevation-Strategy.pdf

3. Neighborhood Project Prioritization – Methodology and Results.

http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Neighborhood-Project-Prioritization.pdf

All three reports support the City's Resilience Strategy by reducing flood risks in ways that increase environmental protection and create social and economic value for the residents of, and visitors to, the City.

The City Commission's approval of the three reports will amend the City's Stormwater Master Plan and will allow the City to begin implementation of DCPs for the recommended 56 prioritized neighborhood projects.

**1. Blue-Green Stormwater Infrastructure (BGSI) Concept Plan**

This report will guide the City's integration of blue-green stormwater practices into existing planning and capital improvement projects. These practices, selected for application specifically in Miami Beach, include bioretention, rainwater harvesting, restored/constructed wetlands (including floating wetlands), stormwater planters and other practices that can be implemented on commercial property, residential property, public facilities/spaces and transportation corridors. The intent is to increase the scale of implementation to realize the following benefits:

- Improve the water quality of the stormwater being discharged to Biscayne Bay
- Support flood reduction efforts by improved management of stormwater runoff from smaller, more frequent storm events
- Enhance the landscape with aesthetically pleasing practices guided by landscape architecture and innovative urban designs that provide social and economic value in locally relevant and neighborhood-specific ways.

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

The new policy for Road Elevations in the City is based on updated Sea Level Rise (SLR) projections and provides flexibility to accommodate harmonization of elevated roads with adjacent private property. The policy is designed to reduce the likelihood of sunny day flooding of road surfaces, groundwater elevation causing poor pavement performance, and to provide harmonization with surrounding land uses (perhaps with green infrastructure). The final recommended policy is as follows:

- A flexible and tailored approach for varying City conditions and needs that is not "one size fits all"
- Emergency Roads: The edge of the road needs to be above 4.8 feet in elevation (NAVD88 is used for all elevations in the new policy).
- Major and Local Roads: The edge of road needs to be above 3.9 feet in elevation
- For all roads, the bottom of road base needs to be above 2.9 feet in elevation
- Flexibility is provided for situations where these minimum road elevation requirements cannot be harmonized with adjacent private property. When lower road elevations are allowed, they are accompanied by upgraded road-base materials to protect road reliability and service life from groundwater impacts.

The Commission's approval of the updated Road Elevation Strategy will cause the prior policy to be replaced by this updated and flexible policy to guide future road elevation projects. As part of this policy update, Jacobs Engineering identified 64

areas in the City that will require road elevation improvements; these are factored into the prioritization of neighborhood projects.

### 3. Neighborhood Project Prioritization – Methodology and Results.

A comprehensive portfolio of 56 neighborhood projects was developed and prioritized using a methodology that was vetted with community stakeholders, the READY Team and the City Commission. Neighborhood projects were prioritized based on following management objectives:

- Flood risk reduction
- Addressing critical water and sewer system needs and service supply reliability
- Population served by the project
- Minimization of community disruption by consolidation of construction activities

A total of 560 individual capital infrastructure projects from the City's water, sewer, stormwater and transportation master plans and other planning documents (i.e., Blueways, GO Bond and the current CIP program) were evaluated to determine the degree to which each supports the above management objectives. A total of 401 projects were included in the final prioritization, which includes 64 new road elevation projects developed by Jacobs Engineering based on the new Road Elevation Strategy.

The City Commission's approval of the Neighborhood Prioritization, including the 56 neighborhood projects, will empower the City to develop DCP's for each project and begin implementation.

### Community Engagement

Public meetings have been conducted to present the Blue-Green Stormwater Infrastructure Concept Plan, Road Elevation Strategy and Neighborhood Project Prioritization reports, and to collect and include public comments and concerns. These were conducted both to inform the community about the actions the City is taking to adapt to climate change, and to solicit public input. Additionally, in the case of green infrastructure, the community was made aware of actions they can take that help adapt to climate change and protect the environment

Results from the 2019 Resident Survey show that 50% of residents rated efforts to manage stormwater drainage and flooding as excellent or good. In order to continue maintaining excellent standards in this area, the City recommends accepting the three Jacobs Engineering reports.

## CONCLUSION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, and adopting the three reports, respectively: 1) Blue-Green Stormwater Infrastructure Concept Plan; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation

Projects; and 3) Neighborhood Project Prioritization – Methodology and Results; with such reports to be incorporated as an amendment to the City's Stormwater Master Plan.

**Applicable Area**
Citywide

**Is this a Resident Right to Know item?**
Yes

**Does this item utilize G.O. Bond Funds?**
No

**Legislative Tracking**
Public Works

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# Miami Beach Integrated Water Management

## Blue-Green Stormwater Infrastructure Concept Plan

Final

February 28, 2020

City of Miami Beach

RFQ 2018-312-KB

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# Miami Beach Integrated Water Management

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

Final

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# Miami Beach Integrated Water Management

## Neighborhood Project Prioritization – Methodology and Results

Final

April 1, 2020

City of Miami Beach

RFQ 2018-312-KB