

RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE RECOMMENDATIONS OF THE LAND USE AND SUSTAINABILITY COMMITTEE AT ITS SEPTEMBER 14, 2021 MEETING, AND THE FINANCE AND ECONOMIC RESILIENCY COMMITTEE AT ITS SEPTEMBER 24, 2021 MEETING, TO PROCEED WITH A TEN-YEAR PUBLIC SEAWALL RECONSTRUCTION PROGRAM.

WHEREAS, the City of Miami Beach (the "City") is investing in infrastructure to reduce flood risk and adapt to climate change. As part of its resilience efforts, the City has updated its land development regulations to address stormwater retention, setbacks, and to increase base flood and freeboard requirements. Most recently, the City adopted an Ordinance titled "Resiliency Standards for Tidal and Flood Protection," requiring all new seawalls, and seawalls proposed to be reconstructed, to have a minimum elevation of 5.7 ft. NAVD; and

WHEREAS, the City has approximately 55 miles of seawalls of which approximately 50 miles are privately owned, and 5 miles are City-owned; and

WHEREAS, the City has reconstructed approximately 1 mile of seawalls, 0.2 miles of seawalls are currently in the design phase, and an additional 1 mile of seawalls are either under construction or under procurement to be constructed. The remaining 2.8 miles of City-owned seawalls require reconstruction; and

WHEREAS, the Public Works Department has developed a ten-year prioritization list for the reconstruction of the remaining 2.8 miles of City-owned seawalls. Factors such as elevation, location, and condition of each seawall were used to develop the initial ranking of each seawall; and

WHEREAS, the initial rankings were then adjusted to capture the benefits derived from contiguous private seawall segments. By optimizing the elevation of public seawalls adjacent to extended private seawall segments, the City can mitigate additional flooding and encourage residents to reconstruct their own seawalls; and

WHEREAS, prioritization of public seawalls is the first step to establish a continuous storm surge and overland flooding barrier throughout the City. Utilizing the elevation data that was collected for all public and private seawalls, staff will work with private property owners to communicate future flood risk and vulnerability. Staff will also be revisiting discussions with financial institutions that could potentially assist private property owners with financing; and

WHEREAS, additional details on each of the ranking factors are as follows:

Elevation:

Public Works performed a topographical survey of all seawalls within the City. The survey was performed using an Unmanned Aerial System (UAS), colloquially known as a drone, equipped with state-of-the-art Light Detection and Ranging (LiDaR) technology to determine the ground elevations. This data was analyzed to distill the mean seawall elevations and lengths for all public and private seawalls.

Location:

Adjustments were made to the initial rankings to consider the location of each seawall. Seawalls located parallel to emergency evacuation routes, such as Indian Creek or Dade Boulevard, were ranked higher than those located at street ends or residential neighborhoods.

Condition:

In 2011, a comprehensive seawall assessment was completed which evaluated all public seawalls for structural integrity, likelihood of failure, and its criticality. This assessment was validated in 2015 by a visual structural inspection. Based on these findings, the City reconstructed about 1 mile of seawalls that were considered critical and in poor structural condition.

The initial rankings for the seawall prioritization were also adjusted to account for critical seawalls determined to be in poor structural condition. The seawall prioritization should be adjusted accordingly following periodic future structural assessments.

Contiguous Seawalls:

The benefit of elevating public seawalls must account for contiguous private seawall segments adjacent to the public seawall being elevated. This is especially true for those areas where the public seawall is at a relatively low elevation compared to the private seawalls. Thus, the prioritization exhibited included higher rankings for those seawalls where additional benefits can be realized from extended private seawall segments; and

WHEREAS, based on planning level estimates, the proposed ten-year Public Seawall Reconstruction Program requires a total budget in the amount of \$48.5M, \$21M of which has been fully funded. An additional \$5M is expected in FY 22 from the budget cycle and another \$5M in FY 23 from G.O. Bond. This results in a funding gap of \$17.5M. Below is the anticipated expenditure schedule for the total \$48.5M:

- FY21 \$1.5M
- FY22 \$16.3M
- FY24 \$7.1M
- FY26 \$9.9M
- FY28 \$6.8M
- FY30 \$6.9M; and

WHEREAS, the \$48.5M includes \$38.5M for the 2.8 miles of seawalls as depicted on the seawall priority map. It also includes the following: \$1.5M for the 0.2 miles of seawalls in design, \$5M for the remainder Indian Creek Drive seawall and \$3.5M for two seawall projects currently in the procurement phase; and

WHEREAS, these estimates remain planning level estimates (AACE 56R-08 Class 5) until verified by the engineer of record during the design process; and

WHEREAS, the proposed ten-year Public Seawall Reconstruction Program was presented to the Land Use and Sustainability Committee and Finance and Economic Resiliency Committee on September 14, 2021, and September 24, 2021, respectively; and

WHEREAS, both Committees endorsed the Public Seawall Reconstruction Program and transmitted a favorable recommendation to the City Commission.

NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, that the Mayor and City Commission hereby accept the recommendations of the Land Use and Sustainability Committee at its September 14, 2021 meeting and the Finance and Economic Resiliency Committee at its September 24, 2021 meeting, and approve and direct the City Administration to proceed with a ten-year Public Seawall Reconstruction Program, subject to future budgetary appropriations and required approvals by the City Commission.

PASSED and ADOPTED THIS ____ day of _____, 2021

ATTEST:

Rafael E. Granado
City Clerk

Dan Gelber
Mayor

APPROVED AS TO FORM AND
LANGUAGE AND FOR EXECUTION



City Attorney NK 10-11-21
Date