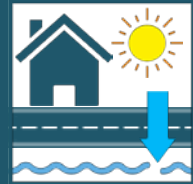
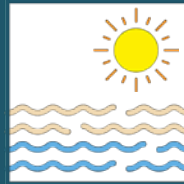


# RESIDENT BENEFITS

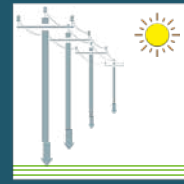
Inaction is not an option. By making informed decisions, we will build a stronger, more resilient, and sustainable Key Biscayne. Our residents will experience real benefits from our infrastructure investment.



Reduced Chronic Flooding



Protected Shoreline and Boundaries



Increased Service Reliability, Safety, and Aesthetics



Strengthened Readiness for Storms and Emergencies

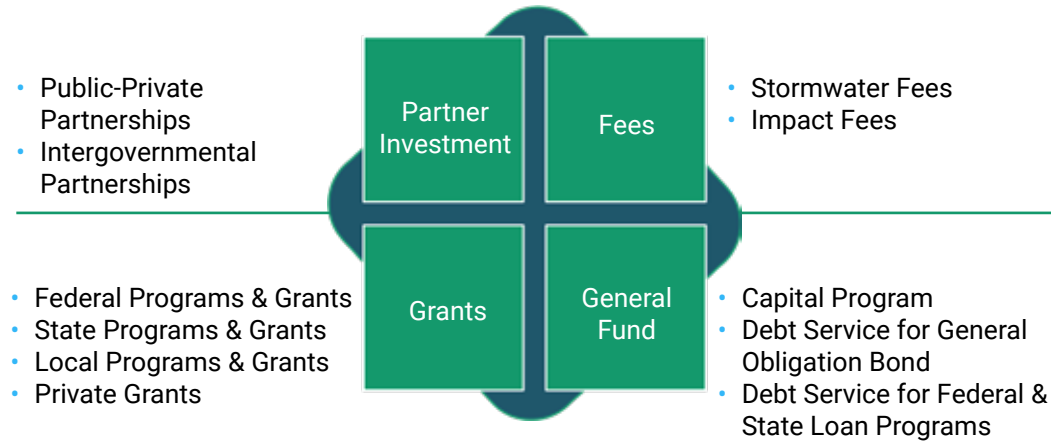


Enhanced Quality of Life

# PROJECT PHASING

IMMEDIATE		INITIAL				ADVANCING				
2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Resilient Florida Vulnerability Assessment										
Beach Replacement				Off-Shore Reef/Barrier System						
Immediate Flood Control & Mitigation			Garden District Flood Mitigation							
Zone 1 (KBK8 Basin) Integrated Project			Zone 2 Integrated Project							
Village-wide Modeling			Zone 3 Integrated Project							
		Zone 4 - 8 Integrated Projects								
		Streetscape Design Standards								
USACE Beach & Back-Bay Feasibility Study				USACE Pre-construction, Engineering & Design						
									USACE Back Bay Shoreline Protection	
									USACE Beach Shoreline Protection	

# FUNDING SOURCES



# ELEVATING OUR ISLAND PARADISE



Volume I Issue 1

# OVERVIEW

The Village of Key Biscayne recently launched a multi-year comprehensive Resilient Infrastructure and Adaptation Program (RIAP) with the goal of protecting the village from the effects of flooding, sea level rise, and environmental changes.

Key Biscayne is no stranger to flooding. Water surrounds our barrier island community, which rests on limestone bedrock saturated with groundwater. The combined threats of rising sea levels, more frequent and intense rainstorms, and higher temperatures require village infrastructure upgrades and increased investment to protect our quality of life.

## Resilience Program Goals: A Fully Protected Village

1. Beach shoreline protection
2. Bayside shoreline and north/south boundaries aligned with beach shoreline protection
3. Tidal flood barriers to protect bayside properties
4. Off-shore reef/barrier to protect the beach
5. Improved catch basins and roadways to alleviate flooding
6. Pumped stormwater systems
7. Upgraded stormwater outfalls
8. Improved stormwater quality discharge
9. Improved and streetscaped roadways to complement stormwater systems
10. Undergrounded electric and telecommunications utilities to reduce storm threats and increase reliability
11. Renovated water and sewer systems



We cannot change our threats of flooding, storm surge, coastal erosion, wind, and extreme heat. However, with forward thinking policies, smart investment, and decisive action, we can address our vulnerabilities and reduce the risks to **OUR ISLAND PARADISE**.

# LINES OF EFFORT

The Lines of Effort are the foundation of our resilience program and directly address the threats we face as an island community. They guide how we will implement infrastructure projects and change policies and regulations to achieve our resilience goals.



Shoreline Protection

**Shoreline Protection:** The Village, in partnership with the U.S. Army Corps of Engineers (USACE) and Miami-Dade County, is developing solutions to protect both our beach and bayside shorelines.



Stormwater System Upgrades

**Stormwater System Upgrades:** The Village is working with internationally recognized engineering firms to redesign and rebuild our aged and disconnected stormwater drainage system.



Roadway Improvements

**Roadway Improvements:** The Village is redesigning and rebuilding roadways to maximize the effectiveness of the stormwater drainage system to reduce flooding while building a streetscape that improves traffic flow, safety, and water quality.



Utility Hardening

**Utility Hardening:** The Village is working with Florida Power & Light (FPL), telecommunications utilities, and the Miami-Dade Water and Sewer



Regulatory Modernization

Department (WASD) to underground the electrical power system and replace aged water and sewer lines.

**Regulatory Modernization:** The Village is updating its policies, building standards, zoning regulations, and ordinances to weave adaptation for resilience into everything we build for the future.



Contact us at: [VKBResiliency@keybiscayne.fl.gov](mailto:VKBResiliency@keybiscayne.fl.gov)

[keybiscayne.fl.gov/elevating](http://keybiscayne.fl.gov/elevating)

@VillageofKeyBiscayne

VKB 311 app

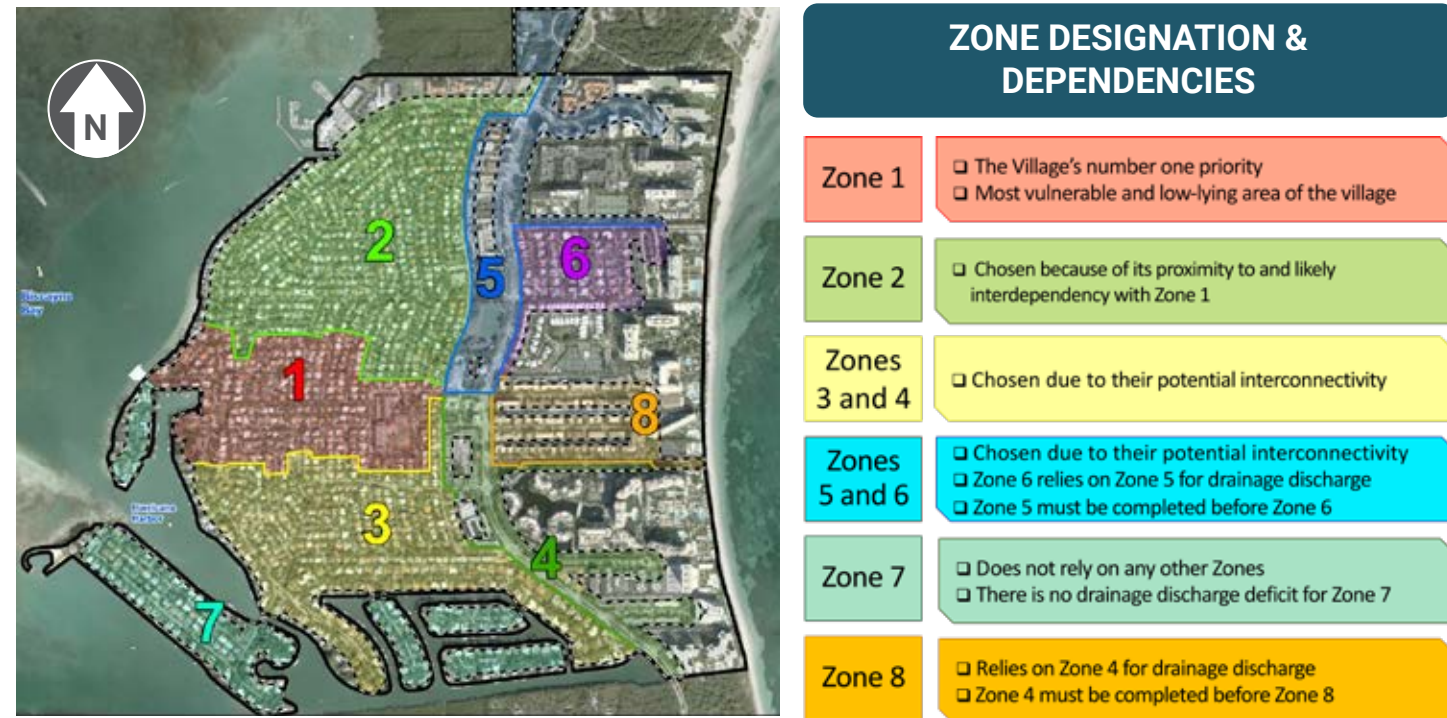
Scan the QR code to view the full resilience program strategy

## THE BIG PICTURE

The Resilient Infrastructure and Adaptation Program (RIAP) is a deliberate approach to fortifying our Village against natural threats to protect our way of life. The following actions have been completed or are underway as part of the resilience program.

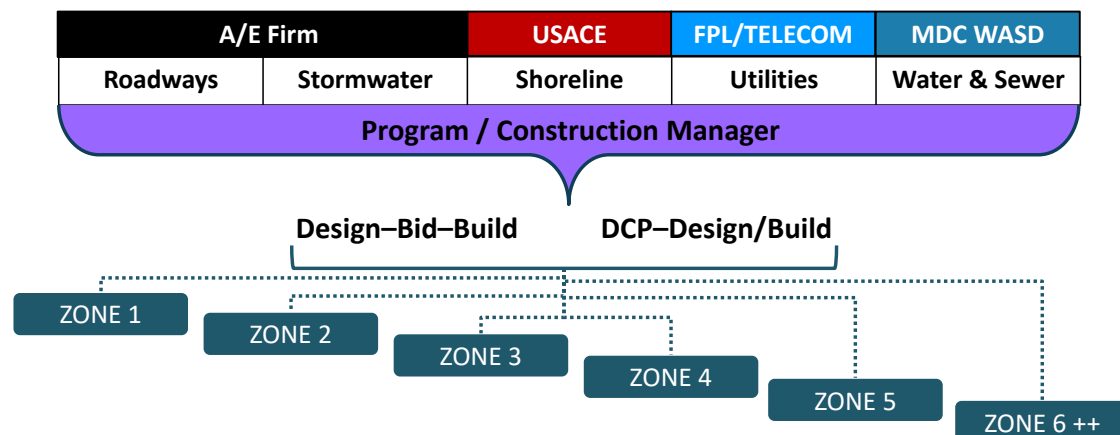
- Analyzing existing conditions to prioritize improvements
- Finalizing a village-wide topographic survey to measure elevations
- Conducting village-wide drainage and roadway modeling
- Designing the Zone 1 project in the Key Biscayne K-8 Basin
- Collaborating with USACE on Beach and Back Bay Feasibility Study
- Coordinating with FPL on their electrical undergrounding design
- Finalizing agreements with WASD to improve water and sewer lines as needed
- Creating seawall/tidal barrier guidelines
- Executing immediate flood control and mitigation projects

Based on the findings of these efforts, we are currently performing comprehensive modeling and analysis to update the zone priorities based on need and logical order of planning, design, and construction. The infrastructure improvements across the village have been organized into eight zones and will have a phased approach, starting in Zone 1.



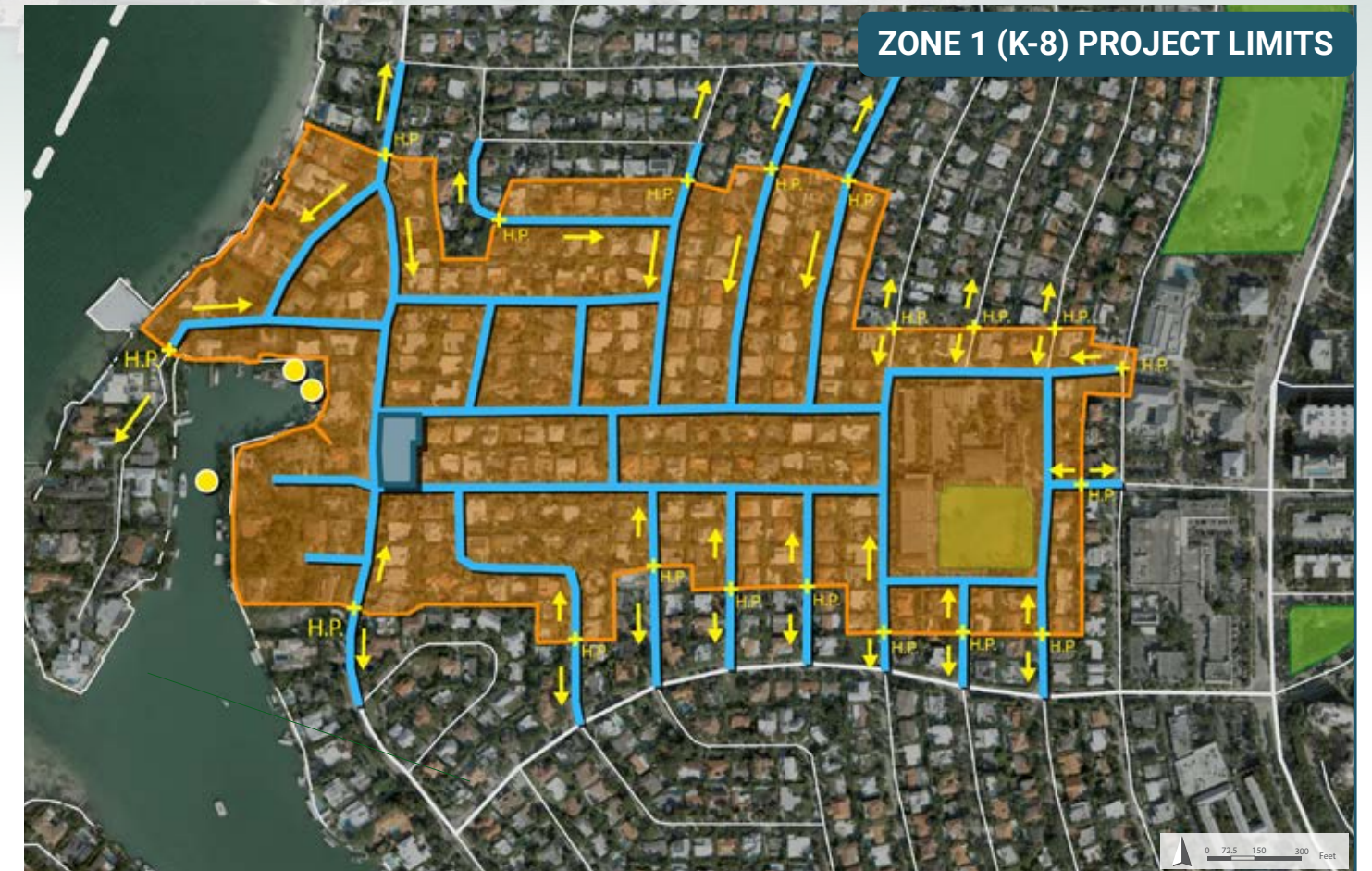
The Village is collaborating with other agencies such as the USACE, FPL, telecommunications utilities, and WASD to integrate as much of the work as possible. This approach:

- Creates complete integrated projects
- Reduces procurement timelines
- Focuses on uniformity of design and construction
- Minimizes traffic and access disruptions



## THE NEXT STEP: ZONE 1 PROJECT

The project's purpose is to alleviate localized flooding and enhance safety throughout the Key Biscayne K-8 Center Basin. The upgraded stormwater system will significantly reduce the street flooding currently experienced in the area and improve stormwater quality discharge to Biscayne Bay. The Zone 1 (K-8) project is the Village's number one priority because it is the most vulnerable, low-lying area of the village and extremely prone to flooding.



### Zone 1 Stormwater Drainage and Utility Scope

- Enhances capacity of the stormwater infrastructure using a pumped system with larger pipes and a pump station at Harbor Park
- Upgrades aging water and sewer infrastructure
- Harmonizes with private property
- Increases water storage
- Includes swales
- Improves outfalls and enhance water quality
- Develops program for operations and maintenance

### Zone 1 Roadway Scope

- Elevates and slopes the roadway to complement the stormwater and water quality initiatives
- Constructs curbs and gutters
- Reconfigures roadway to increase stormwater capture and safety
- Undergrounds electrical and telecommunication lines
- Installs landscaping material for shade and natural benefits

Construction is scheduled to start in 2025 and is anticipated to take two years.

