



## Memorandum

**Memorandum No: 22-088**

**Date:** July 28, 2022

**To:** Honorable Mayor, Vice Mayor, and Commissioners

**From:** Greg Chavarria, City Manager   
Greg Chavarria (Aug 1, 2022 06:51 EDT)

**Re:** City Commission Top Priority Infrastructure and Resilience Update - July

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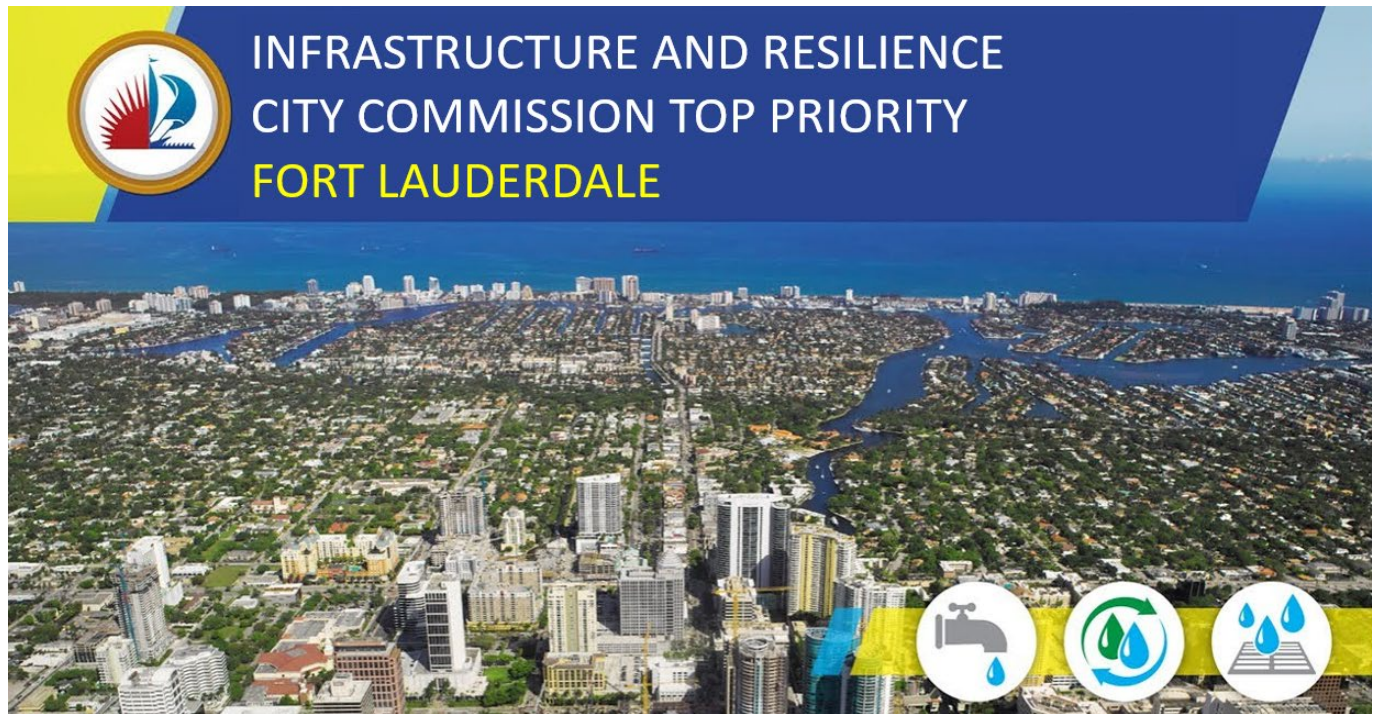
Attached is a copy of the City Commission Top Priority Infrastructure and Resilience Update for the month of July. This document provides insight into the current status and progress of critical and high-profile infrastructure and resilience projects being managed by the Public Works Department.

For further information, please contact Jason Snifeld, Senior Assistant to the Director, at [jsnifeld@fortlauderdale.gov](mailto:jsnifeld@fortlauderdale.gov).

Attachment:

- City Commission Top Priority Infrastructure and Resilience – July 2022

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## OVERVIEW

The City Commission identified Infrastructure and Resilience as top priorities in 2021 and 2022, recognizing the need to identify and implement improvements that will address infrastructure needs relating to water, wastewater, stormwater, and Public Right of Way (RoW) in addition to resilience needs relating to extreme weather events, greenhouse gas reduction, and sea level rise. To address the Commission priority on Infrastructure and Resilience, the following improvements were taken to address infrastructure in seven (7) major categories: Water Treatment and Distribution; Wastewater Collection and Treatment; Roadway, Sidewalk, and Bridge Maintenance and Replacement; Asset Management; Beach Resilience; Stormwater Management; and Sea Level Rise Adaptation.

## STRATEGIC PLAN ALIGNMENT

Focus Area: Infrastructure

Goal 1: Build a sustainable and resilient community

Focus Area: Internal Support

Goal 8: Build a leading government organization that manages all resources wisely and sustainably

## WATER TREATMENT AND DISTRIBUTION INFRASTRUCTURE

The City provides treatment and distribution of potable water to approximately 186,076 Neighbors, 300,000 visitors, and six (6) neighboring municipalities. Treatment facilities consist of the Fiveash Regional Water Treatment Plant [design capacity of 70 million gallons per day (MGD)] and the Peele Dixie Water Treatment Plant (design capacity of 12 MGD). The distribution system consists of approximately 784 miles of watermains, 37 raw water wells, 6,897 fire hydrants, 64,558 water meters, and 12,197 water valves.

**P11080 Port Condo Large Watermain Improvements(\$1.15M):** Final restoration is complete and the final walkthrough took place on July 14, 2022. The construction phase of the project is complete, and the project has entered the closeout phase.

**Water Consent Order Distribution System Mapping (\$6.2M):** Florida Department of Environmental Protection (FDEP) has granted the City the time extension requested, which will save the City \$2-4 million in potential penalties due to project delays. On July 12, 2022, the City selected Craven Thompson and

Associates to perform the mapping activities and staff is currently negotiating fees.

**P12716 Advanced Metering Infrastructure (\$30M):** During the June 7, 2022, Commission meeting, a service agreement was awarded to the Black & Veatch Corporation to develop a Request for Proposal (RFP) and act as the Owner's Representative for the Advanced Metering Infrastructure (AMI) implementation project. The City issued Notice to Proceed (NTP) to the consultant on July 1, 2022, and the project kicked off on July 25, 2022. Staff anticipates the RFP will be completed by September 30, 2022.

### WASTEWATER COLLECTION AND TREATMENT INFRASTRUCTURE

The City is responsible for collecting and treating an average of 38.5 MGD of wastewater at the George T. Lohmeyer (GTL) Regional Wastewater Treatment facility. Through Large User Agreements, the City provides treatment services for Fort Lauderdale, Oakland Park, Wilton Manors, Port Everglades, and parts of Davie and Tamarac.

**P12415 Pump Station A-7 (\$2.6M):** Contractor is currently performing restoration work on the curbs and sidewalk. Final electrical inspection passed on July 13, 2022. Staff is awaiting Florida Power & Light (FPL) to energize the station the week of August 1, 2022, so that system start-up can take place.

**P12605 Pump Station A-24 (\$1.9M):** The Design-Build solicitation closed on June 3, 2022, with two (2) proposals being received. Staff interviewed the two (2) firms on June 21, 2022 and are expecting the contract award to take place during the September 6, 2022 Commission Meeting. Estimated completion date is December 2024.

**P11566 Rio Vista Sewer Basin Rehab (I&I) and Pump Station D43 (\$7.8M):** I&I work within Basin D43 is 90% complete. The contractors have completed all punch list items on existing task orders and staff is working with the contractors to process the closeout documents. Estimated completion date for remaining work is December 2022.

**P11781 GTL WWTP Cryogenic Plant Upgrades (\$19.3M):** Construction is approximately 40% complete. The contractor has completed formwork for the building's stairs, backfilling and compacting inside the building for the floor slab and installing

**Prospect Lake Clean Water Center:** On March 1, 2022, the City Commission approved Resolution 22-57 providing notice of the decision to proceed with the unsolicited proposal submitted by RIDGEWOOD and IDE with Kiewit Water Facilities Florida Co. (KIEWIT) as its design-build partner. During the May 3, 2022, City Commission meeting, the Interim Agreement was approved, and the Comprehensive Agreement is tentatively scheduled for completion in October 2022. Staff has been holding weekly meetings with KIEWIT and Hazen and Sawyer to review deliverables of the P3 agreement.

rebar for the building columns. Contractor is currently constructing the building columns and electrical duct banks and has begun work on the sound wall and oxygen receiver foundation. Estimated completion date is November 2023.

**P12529 Effluent Pumps Standby Generator & Admin Bldg. Improvements (\$28.3M):** The consultant submitted the finalized scope of work the week of July 18, 2022 and staff provided comments. The consultant is currently making the requested revisions to finalize the task order for development of the Design Criteria Package. Estimated completion date is February 2024.

**Wastewater Consent Order:** As of July 20, 2022, 58 of the 78 Amended Consent Order milestones have been achieved. To date, all requirements of the Amended Wastewater Consent Order have been completed and submitted to FDEP on time or ahead of imposed deadlines. The Asset Management, Capacity Management, Operations and Maintenance (AM\_CMOM) Program, consisting of an additional 45 milestones, is proceeding as scheduled; 14 activities have been completed to date and an additional 19 have been initiated. The remaining 12 are in the planning phase.

## ROADWAY, SIDEWALK, AND BRIDGE INFRASTRUCTURE

The City is responsible for maintaining, repairing, and replacing the City's roadways, sidewalks, and bridge infrastructure. This infrastructure consists of 53 bridges, of which one (1) is a pedestrian only bridge, 536 miles of roadways, and 465 miles of sidewalks.

**P12641 Castle Harbor Isle Bridge Design and Replacement (\$2M):** Staff provided comments on the task order proposal submitted by the Consultant for the design of the bridge replacement on July 8, 2022. Staff is awaiting a revised task order proposal to route for approval.

**P12299 West Lake Drive Bridge Restoration (\$1.5M):** Emergency repairs of the West Lake Drive Bridge started on April 4, 2022. Repairs on the NW and SW segments of the bridge have been completed and the contractor has begun repairs on the NE segment. While the emergency repairs were originally expected to take five (5) months, with tentative completion by the end of August 2022, supply chain issues and unforeseen foundation issues have resulted in a two-month delay. As a result, the emergency repairs are now expected to be completed in October 2022.

**P12087 South Ocean Drive Bridge Replacement (\$3.2M):** The bid opening was held on July 7, 2022 and two (2) bids were received. However, the lowest bid submitted is more than \$1 million over the original engineering estimate. Staff is currently working to identify a method to move the project forward.

**Sidewalk Repairs:** In June 2022, the City replaced 12,644 square feet of damaged sidewalk and eleven ADA ramps and 17 new water meter boxes were installed.

**Utility Undergrounding:** A groundbreaking ceremony for the Las Olas Isles Undergrounding of Overhead Utilities was celebrated on June 14, 2022, marking the start of the long-awaited undergrounding project construction. Since construction began, crews have completed underground directional drilling for the installation of FPL conduit on all isles west of Lido Drive. Upcoming activities include completing this work on Lido Drive and the eastern isles and performing similar operations for the installation of AT&T and Comcast conduit later this summer.

Other communities have expressed interest in participating in the undergrounding program and on May 11, 2022, staff met with the Seven Isles Community Association to discuss the utility undergrounding process.

## ASSET MANAGEMENT

The City is heavily reliant on utility assets to function effectively as a community. Managing assets so they can provide the expected level of service now and into the future, is a core part of the discipline known as asset management. This includes understanding what the City owns, their locations and physical characteristics (composition, length, diameter, age), condition, and level of service to achieve during their life cycle to get the best of the assets for the benefit of the community.

**CITYWORKS:** The Public Works Wastewater Operations Section is in full use of the Cityworks application, performing work order activities for sewer basin preventive maintenance. The Cityworks administration and IT teams are continuing to work on improving system performance and data integrity issues so the system will be capable of handling increased network traffic caused by additional users

coming online and using the Cityworks system. The Cityworks administration team is currently training the Public Works Stormwater Operations Section to prepare for their go-live date of August 1, 2022. Additional user workflows and use cases continue to be identified, and additional processes are being developed, to increase use of the Cityworks software as the City's primary system for managing all assets.

## BEACH RESILIENCE

The City of Fort Lauderdale has more than seven (7) miles of beaches that offer residents and visitors premier opportunities for recreation, relaxation, and enjoyment. The beach is a critical tourist attraction and economic driver. In addition, our sandy shores are designated by the Clean Beaches Council as Blue Wave Beaches, meeting 22 specific criteria, including passing a monthly water quality test, having emergency care nearby, and environment preservation. The beach itself acts as a protective barrier to tropical storm impacts from storm surge and wave action. Beach nourishment and dune management are two (2) activities which provide for greater resiliency of our beaches.

**Beach Restoration (\$7.3M):** A portion of the beach was lost to Hurricane Irma in 2017 and faces ongoing erosion. To provide storm protection for the coastal population, habitat for endangered animals such as sea turtles, and quality recreation for visitors and neighbors, a Beach Renourishment project was

recently completed along Fort Lauderdale Beach. The project began in 2021 in partnership with Broward County and the US Army Corps of Engineers to replace approximately 150,000 cubic yards of sand between Terramar Street and the City's northern border.

## STORMWATER INFRASTRUCTURE

In January 2018, the City finalized the Stormwater Master Plan to install drainage improvements in seven (7) flood vulnerable neighborhoods. \$70 million has already been allocated to initiate comprehensive drainage improvements in two (2) of these neighborhoods, the Edgewood, and River Oaks neighborhoods. In 2019, the City added the Melrose Manors neighborhood for prioritization of stormwater infrastructure within the Stormwater Master Plan.

**Stormwater Bond:** To support the City's stormwater management program, on May 3, 2022, the City Commission adopted a resolution declaring the official intent of the City of Fort Lauderdale to reimburse itself from bond proceeds of not to exceed \$200 million for funds advanced by the City for certain capital expenditures for stormwater improvement expenses incurred with respect to the acquisition, construction, development, extension, enlargement, improvement, renovation, equipping and furnishing of stormwater improvements.

**P11868 River Oaks Neighborhood Stormwater Improvements (\$34.5M):** The River Oaks Neighborhood Stormwater Improvements project began construction at the start of January 2022. Phase I and Phase II of the project continues with over 4,600 feet of reinforced concrete storm drainage pipe and 53 drainage related structures installed. Phase IV of the project continues with over 9,300 square yards of swale reconstructed. The contractor is continuing work within River Oaks Preserve near Interstate 95, SW 18th Street, SW 20th Street and SW 15 Avenue. This project is on time and on budget, with a completion date projected for January 2025.

**P11842 Edgewood Neighborhood Stormwater Improvements (\$18.8M):** Construction activities for the stormwater improvements project commenced on January 3, 2022. The project is progressing well and is currently ahead of schedule. To date, over 160 structures and more than 13,000 linear feet of drainage pipe have been installed as a part of Phase I, Phase II, and Phase V. Ten (10) of the structures and 2,000 linear feet of the drainage pipe were completed over the last month. Phases II and V are on-going. Final restoration will take place at the end of the project. This project is expected to be completed ahead of schedule by September of 2024.

**P12719 Melrose Manors Neighborhood Stormwater Improvements (\$3M):** The contract to design stormwater improvements for the Melrose Manors neighborhood was awarded during the July 5, 2022, City Commission meeting. The contract is currently being routed for execution.

## SEA LEVEL RISE ADAPTATION

In May 2020, the City Commission adopted Southeast Regional Climate Change Compact 2019 unified sea level rise projection for the region. From the 2000 baseline, 10-17 inches of sea level rise is possible by the year 2040 and 21-64 inches are possible by 2070, the 50-year planning horizon for most infrastructure installed today. Adaptation measures to address the impact of rising seas and related climate impacts are ongoing. We are planning to update the City's vulnerability study to better understand the impacts of sea level rise on our community. Seawall improvements identified in the City's Seawall Master Plan are discussed here and will reduce the impacts of tidal flooding on adjacent City roadways. The City is also exploring the issue of road elevation to understand which street segments are vulnerable to future flooding and policy implications of City investments in this adaptation strategy.

**Vulnerability Study:** In early May, the Governor announced the City of Fort Lauderdale would be the recipient of a \$135,000 grant as part of the Resilient Florida Program. The City is working to enter into a funding agreement between the City and State for the vulnerability assessment grant. The City plans to use this grant to perform a vulnerability assessment related to sea level rise. This assessment will look at sea level rise scenarios and identify critical assets impacted.

**P12330 Seawall Replacement Program:** Contingent upon funding, the City plans to replace seawalls at the following locations in Fiscal Year 2022: four (4) Las Olas seawalls, two (2) Hendricks Isle seawalls, and the SE 10<sup>th</sup> Street seawall. The contract award for the Hendricks Isle Seawall Replacement project was awarded by the Commission on April 19, 2022 and has a cost share from the State.

**Adopting a Tidal Barrier Ordinance:** Fort Lauderdale was among the first municipalities to adopt a minimum elevation for seawalls. Broward County

built upon that ordinance in the creation of a template Tidal Barrier Ordinance which sets the minimum elevation for new seawalls at five (5) feet NAVD88. The City has drafted an ordinance which has been transmitted to Broward County to determine if it is in compliance with the template Tidal Barrier Ordinance.

**Road Elevation Policy:** As sea level rises and seasonal tidal flooding increases, low lying roads are becoming inundated at an increasing frequency. Some property owners are looking to the City to elevate the roadways to alleviate tidal flooding and improve access to their homes. Conversations will be initiated with the City Commission to begin laying the groundwork on roadway elevation policies that provide criteria for prioritizing roadways to be elevated, determining the appropriate final elevation of the road surface, assigning responsibilities for harmonizing the roadway with private property, and exploring financial responsibility and cost. Staff presented the road elevation options during the May 3, 2022 Commission Conference Meeting.

## RECENTLY COMPLETED PROJECTS

### WATER TREATMENT AND DISTRIBUTION INFRASTRUCTURE

**P11080 Port Condo Large Watermain Improvements** (\$1,116,358) Replaced 1,300 linear feet of existing 6" small watermains with new 12" large watermains. Completed July 14, 2022.

**P10850 Victoria Park A – North Small Watermain Improvements** (\$6,012,774) Replaced 26,500 linear feet of existing undersized and deteriorated small watermains with new 6" and 8" polyvinyl chloride pipe watermains with improved fire hydrant coverage. Completed April 1, 2022.

**P11901 Victoria Park B – South Small Watermain Improvements** (\$7,988,537) Replaced 29,000 linear feet of existing undersized and deteriorated small watermains with new 6" and 8" polyvinyl chloride pipe watermains with improved fire hydrant coverage. Completed April 1, 2022.

**P12463 Coral Shores Small Watermain Improvements** (\$1,471,051) Replaced 6,200 linear feet of existing undersized and deteriorated small watermains with new 6" watermains. Completed February 4, 2022.

**P12527 Conversion of Back Wash Pump**  
(\$240,855) Converted the existing Back Wash Pump #2 at the Fiveash Water Treatment Plant from 4160V

to 480 to improve facility safety and reliability. Completed June 1, 2022.

### WASTEWATER COLLECTION AND TREATMENT INFRASTRUCTURE

**P12567 Pump Station B-4 (South Redundant Sewer Force Main)** (\$2,628,197) Replaced Pump Station B-4 and associated pipe as part of the South Redundant Sewer Force Main Project. Completed June 3, 2022.

the station's wet well electrical panels and increasing pump sizes. Completed August 19, 2021.

**P12572 Rio Vista Tarpon River Subaqueous Redundant Force Main** (\$4,933,768) Installed 2,400 linear feet of 48" sewer force main with required 48", 36", and 6" interconnections. Completed November 16, 2021.

**P12389 18 Inch Force Main Replacement Across the New River from NE 9<sup>th</sup> St to Birch Road** (\$2,232,074) Replaced 1,000 linear feet of deteriorated 18" diameter sewer force main that crosses the North New River from NE 9<sup>th</sup> Street to N Birch Road. Completed November 8, 2021.

**P12390 16 Inch Force Main Along Las Olas Blvd Phase 2** (\$3,048,520) Installed 3,100 linear feet of 16" force main under Las Olas Boulevard to connect Pump Station D-38 to the new HDPE line with upgrading of

**P12348 GTL Effluent Pumps Replacement** (\$2,812,868) Replaced the George T. Lohmeyer (GTL) Treatment Plant's effluent pumps. Completed April 1, 2022.

### ROADWAY, SIDEWALK, AND BRIDGE INFRASTRUCTURE

**P12089 Bridge Replacement at Coconut Isle** (\$2,211,295) Demolished the existing Coconut Isle bridge and constructed a new bridge. Completed November 8, 2021.

### STORMWATER INFRASTRUCTURE

**P12524 South Gordon Road Stormwater Improvements** (\$266,638) Replaced existing and installed new stormwater infrastructure at 32-101 S Gordon Road. Completed October 21, 2021.

Cross Roads Shopping Center. Completed August 1, 2021.

**P11419 River Oaks Stormwater Park** (\$7,631,234) Constructed a 9.1-acre stormwater park with new berm, water control basins, and underground conveyance system. Completed October 12, 2021.

**P12034 1416 SE 11 Court Stormwater Improvements** (\$871,974) Installed new stormwater infrastructure to address documented flooding issues at 1416 SE 11<sup>th</sup> Court. Completed August 31, 2021.

**P12523 1716 SE 7<sup>th</sup> Street Stormwater Improvements** (\$142,318) Installed stormwater infrastructure to alleviate stormwater flooding at 1716 SE 7<sup>th</sup> Street. Completed January 7, 2022

**P12616 NE 16<sup>th</sup> Street Stormwater Improvements** (\$212,593) Installed stormwater infrastructure to alleviate flooding on NE 16<sup>th</sup> Street between NE 4<sup>th</sup> & 5<sup>th</sup> Avenues adjacent to Fort Lauderdale High School. Completed January 18, 2022

**P12638 Cross Roads Shopping Center Stormwater Improvements Project** (\$154,188) Installed a catch basin, manhole, and 240 linear feet of pipe with a new outfall connection in a City owned parking lot at the

**P12613 Downtown Tidal Valves - #1-10** (\$322,184) Installed 10 tidal valves and other stormwater infrastructure to alleviate tidal flooding between SW 12<sup>th</sup> Avenue and SW 7<sup>th</sup> Avenue in downtown Fort Lauderdale. Completed November 16, 2021.