



CITY OF FORT LAUDERDALE
City Commission Agenda Memo
CONFERENCE MEETING

#20-0058

1-7-20
BUS-1
REVISED
CAM

TO: Honorable Mayor & Members of the
Fort Lauderdale City Commission

FROM: Chris Lagerbloom, ICMA-CM, City Manager 

DATE: January 7, 2020

TITLE: **BUS 1** - Sewer Force Main Failures during December 2019 –
(Commission District 2 and 4)

Background

This memorandum advises the City Commission of multiple sewer force main failures that occurred from December 10th through December 30th. The City responded to six sewer force main failures:

- December 10, 2019: Rio Vista/Hector Park (1000 block Ponce de Leon Dr.)
- December 20, 2019: Rio Vista/Young Park (900 block SE 10th St.)
- December 21, 2019: Himmarshee Canal (SE 2nd St. and SE 9th Ave.)
- December 27, 2019: Victoria Park (1600 block NE 5th St.)
- December 30, 2019: Victoria Park (1600 block NE 5th St.)
- December 30, 2019: Coral Ridge Country Club Estates (~~1600~~ 2800 block NE 36th St.)

The City managed and responded to these incidents with an all “hands on deck” effort involving multiple City agencies by implementing the National Incident Management System (NIMS) approach to emergency events. An Incident Command (IC) was established in the field, operating 24 hours daily during these incidents. The Incident Command was staffed around the clock by a high-level Incident Commander augmented by logistics and support from Public Works, Fire Rescue, Police and Strategic Communications.

In alignment with NIMS guidelines, all public information and public outreach was disseminated centrally by the Office of Strategic Communications. This included two updates to the public daily, one in the morning and one in the evening, and posting through all available digital and social media platforms. Disseminated information included work progress, updated maps, advisories, sampling data and test reports.

Due to the large size of the damaged pipe sections, affected areas, depth of the force main, proximity to waterways, and the need to maintain services, the City immediately engaged several regional and national contractors, subcontractors, and consultants to

address these breaks.

Rio Vista/Hector Park

On December 10th, a 46-year old, 54-inch diameter ductile iron sewer force main broke near 1030 Ponce De Leon Drive, affecting Hector Park and adjacent properties along north and south sides of Ponce de Leon Drive, from SE 9th Avenue to SE 12th Way in the Rio Vista neighborhood. The City immediately mobilized DMSI to perform emergency repairs by bypassing the damaged section, discontinuing sewer discharge into the Tarpon River, replacing the damaged section, and placing the repaired force main back in service. The emergency bypass was activated at 3:04 a.m. on December 18th and discharging into the Tarpon River ceased at the same time. DMSI completed final repairs and reactivation of the force main on December 20th.

Rio Vista/Virginia Young Park

The same 54-inch diameter pipe broke near 909 SE 10th Street on December 20th, affecting Virginia Young Park and adjacent properties along SE 10th Street and South Rio Vista Boulevard down to SE 9th Street in the Rio Vista neighborhood.

The City quickly shifted DMSI and mobilized Southern Underground Industries, Inc. to perform the repairs at this location. Repairs encompassed setting a new longer bypass from this site to Hector Park. The new bypass was activated on December 25th at 12:56 a.m. and discharging into the Tarpon River ceased at the same time. Final repairs of damaged sections on SE 10th Street were concluded on December 30th.

Himmarshee Canal

On December 21st at 8:19 a.m., a 1982-era 48-inch diameter subaqueous ductile iron canal crossing sewer force main broke affecting the Himmarshee Canal. This was the same location where a similar break occurred in 2016. The City immediately mobilized Industrial Divers to fix this break since they had performed the previous repair. Due to low underwater visibility and constant high-pressure flow from the break in the pipe, another diving team working for DMSI was brought in to assist with the repairs. Using specially-fabricated clamping seal and fittings as a temporary repair, the flow was substantially stopped on December 26th at 6:00 a.m. A permanent repair was completed on January 6th.

Victoria Park

On December 27th a 16-inch diameter cast iron sewer pipe broke near 1630 NE 5th Street affecting the properties along the 1600 block of NE 5th Street. This pipe was installed in 1973 and had been repaired previously due to deterioration. City crews immediately mobilized to the area and isolated the sewage flow. The City also mobilized its annual utility contractor, Southern Underground Industries, Inc., to complete the repair, several pumping contractors, and Cliff Berry, Inc. for cleaning and

decontamination. The repair was completed in the evening of December 29th and the pipe was placed in service that night.

A second rupture occurred on December 30th adjacent to the original rupture near 1631 NE 5th Street. This rupture was also due to a hole resulting from deterioration of the metal pipe. This location was quickly repaired, and the pipe was placed back in service.

Due to the high potential for additional immediate failures in this pipe, staff authorized a larger emergency pipe replacement project utilizing an existing continuing service contract. This project will encompass the replacement of approximately 4,800 linear feet of cast iron pipe with new 16-inch diameter ductile iron pipe along North Victoria Terrace and NE 5th Street, extending from 625 NE 19th Avenue and ending at 1011 NE 5th Street. This emergency project will be constructed by Southern Underground Industries, Inc., and will begin Monday, January 6, 2020 with an estimated completion date of February 14, 2020. The estimated project cost is \$2.4 million.

Coral Ridge Country Club Estates

On December 30th, a 10-inch diameter cast iron sewer pipe broke on NE 36th Street affecting the cul-de-sac on the street. The existing pipe was installed in 1982 (38-years old) and had failed previously due to deterioration. City crews immediately mobilized to the area and isolated the sewage flow. The City also mobilized its annual utility contractor Southern Underground Industries, Inc. for the immediate repairs. There was minimal impact to adjacent properties. The pipe was repaired on December 31st and placed back in service.

As with the Victoria Park pipe breaks, this pipe segment presented a high potential for immediate breaks. Consequently, staff authorized a larger emergency pipe replacement project using an existing continuing service contract. This project will encompass the replacement of approximately 1,700 linear feet of cast iron pipe with a new 12-inch diameter ductile iron pipe along NE 36th Street from Bayview Drive to the end of the cul-de-sac. This emergency project will be constructed by the Hinterland Group, using a continuing services contract, and will begin in early January 2020 with an estimated completion date in February 2020. The estimated cost of this project is \$850,000.

Redundant Force Main Design-Build Project

The extent of the deterioration of the 54-inch force main presented an urgent need to proceed with the immediate design and construction of a redundant transmission line from the Coral Ridge Country Club Wastewater Pump Station ("Station B Re-pump") to the G.T. Lohmeyer Regional Wastewater Treatment Plant.

This project will be accomplished in two segments through three separate design/build contracts:

1. Rio Vista Emergency Force Main Replacement

2. Station B Re-pump to George English Park ("North Project")
3. George English Park to the G.T. Lohmeyer Regional Wastewater Treatment Plant ("South Project")

Rio Vista Force Emergency Force Main Replacement

This immediate project will replace the current above ground, high-density polyethylene (HDPE) bypass pipe, extending from Virginia Young Park to Hector Park, and will deactivate the existing pipe that runs near Virginia Young and Hector parks until it is rehabilitated in the future. It includes design and construction of a new underground 48-inch diameter pipe extending from Pump Station A-15 located at the corner of SE 9th Avenue and SE 7th Street to the corner of SE 12th Street and SE 10th Avenue near Evergreen Cemetery. Once completed, the above ground pipe will be removed, thus allowing for the re-opening of all blocked driveways and streets. DMSI was awarded an emergency contract in the estimated amount of \$ \$3.5 million. Project completion is expected in approximately 12 weeks.

North and South Projects

On December 23rd, the City published a competitive solicitation titled "*Emergency Procurement Proposal No. 12367-496 Design/Build Installation of New Redundant Bypass Line*" for the project from the Station B-Repump to the G.T. Lohmeyer Regional Wastewater Treatment Plant. Responders were asked to submit responses and cost estimates for the full project and/or specific segments. These responses were received on December 30th and reviewed by an evaluation committee on December 31st. The evaluation committee recommended the city manager award emergency contracts for the North Project to Murphy Pipeline Contractors, Inc. and to DMSI for the South Project. The estimated total project cost both segments is \$61.5 million,

The duration of this fast-tracked project is approximately 14-18 months and will provide the City a new, redundant 48-inch sewer main with interconnects to the existing 54-inch force main. Once this project is completed, another project is planned for the near future using the normal procurement process to rehabilitate the existing 54-inch line. This will result in the City having two wastewater transmission lines for full redundancy and reliability.

These construction projects will include coordinated public outreach and information efforts.

Resource Impact

Section 2-181(f)(4) ("Emergency Purchases") of the Code of Ordinances requires staff to report to the City Commission emergency purchases that exceed \$100,000 at the earliest available Commission meeting. Emergency response, repairs and remediation activities were on-going at the time this update was prepared and not available. Staff is compiling all costs associated with these incidents and will provide the final costs to the City Commission at an upcoming Conference Meeting.

The estimated costs of the force main replacements and redundant line are:

- Victoria Park Force Main Replacement - \$2.4 million
- Coral Ridge Country Club Estates Force Main Replacement - \$850,000
- Rio Vista Emergency Force Main Replacement - \$3.5 million
- Redundant Force Main Design-Build Project - \$61.5 million

Funds are available in the Water and Sewer Central Regional Wastewater System fund balance for the Rio Vista Emergency Force Main Replacement and Redundant Force Main Design-Build projects. A request to transfer funds from two capital projects, SE 10th Avenue 48-inch Force Main Replacement and 36-inch Bypass project (P12385) and Redundant Force Main from B-Repump to GTL (P12406) in the amount of \$65 million is on the City Commission's January 7, 2020 Regular Meeting Agenda (CAM #19-1222).

Strategic Connections

This item is a *Fiscal Year 2020 Commission Annual Action Plan* Top-Priority, included within the Critical City Infrastructure priority.

This item supports the *Press Play Fort Lauderdale 2024 Strategic Plan*, specifically advancing:

- The Infrastructure Focus Area
- Goal 1: Build a sustainable and resilient community.
- Objective 1: Proactively maintain our water, wastewater, road and bridge infrastructure.

This item advances the *Fast Forward Fort Lauderdale 2035 Vision Plan: We are Ready*.

Related Item

CAM 19-1222

Prepared by: Talal Abi-Karam, Assistant Public Works Director - Utilities

Department Director: Aneisha Daniel, Deputy Director – Public Works