

**MINUTES OF
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST
OPERATIONS COMMITTEE MEETING
HELD ON JUNE 18, 2020**

PRESENT: Mark L. Morgan, Chair
Herbert T. Weysham, III, Committee Member

The Operations Committee of the Southeast Louisiana Flood Protection Authority-East (Authority or FPA) met on June 18, 2020.

In accordance with Section 2 of the Governor's Proclamation Number 59 JBE 2020: Renewal of State of Emergency for COVID-19 Extension of Emergency Provisions, the Southeast Louisiana Flood Protection Authority – East held its June Operations Committee meeting, scheduled for Thursday, June 18, 2020, both physically and virtually, with limited capacity for attendance and observation at the physical meeting location. Commissioners, FPA leadership, essential staff, media and the public were allowed to participate, space permitting, in the physical meeting held at 6920 Franklin Avenue, New Orleans, La., or virtually, via video conference. The video conference was livestreamed for observation by the public, accessible from the following link:
<https://stream.lifesizecloud.com/extension/2000076559/d7307d29-07a1-4d48-8d55-9318165661e6>

Consistent with La. R.S. 42:14(D), public comments could be submitted via email to comments@floodauthority.org beginning 30 minutes prior to commencement of the meeting and continuing during the conduct of the meeting until the Public Comment item on the published agenda was reached, at which point comments received were read into the record.

Mr. Morgan called the meeting to order at 10:00 a.m.

Opening Comments:

Mr. Morgan requested that Chris Humphreys, Director of Engineering, report to the Committee concerning the impacts of Tropical Storm Cristobal on the East Jefferson foreshore protection erosion mitigation pilot project.

Mr. Humphreys explained that over a number of years, significant erosion had taken place behind the rock dike located alongside the East Jefferson Lakefront Levee and that the rock dike had settled. The FPA is exploring methods through the pilot project to mitigate the erosion and settlement and has placed five test sections along the foreshore protection.

1. The first two test sections utilize articulated concrete blocks (ACB) sprayed with organics, fertilized and hydro-seeded with Bermuda grass using two different products. The first ACB product was anchored with an anchor trench. It performed well and stayed in place.

2. About one-quarter of the second ACB product failed when the lake elevation rose about 4-1/2 feet over a three-day period. The clay backfill under the product was saturated and the shallow pins anchoring the product pulled out allowing it to come apart and roll up. The manufacturer has reinstalled the product.
3. The R45 Turf Armoring System failed and rolled up because the anchor pins were too short. The product has been reinstalled with three foot anchors similar to the anchors used for High Performance Turf Reinforcement Matting.
4. The Vetiver grass, which is very robust and has a deep root system, did not have sufficient time for establishment and eroded. The FPA hopes to revisit this method.
5. Grass Guard, a polyethylene mesh with a fiber geotextile backing, was also anchored with pins. The shallow pins did not work and the product failed.

An additional product, HydroTurf, an artificial fibrous mat that is cemented in place and forms a liner, will be installed and is expected to do well.

Mr. Humphreys explained that the FPA learned a number of things from Cristobal, including the need for deeper anchors and sufficient time for vegetation establishment. The pilot project is ongoing and monitoring will continue.

Mr. Morgan pointed out that the purpose of the pilot project is to determine the best methods for use along the five miles of foreshore protection. Mr. Humphreys noted that the fixes would probably include a combination of the tested products.

Adoption of Agenda: The agenda was adopted by the Committee.

Approval of Minutes: The minutes of the May 21, 2020, Operations Committee meeting were approved.

Public Comments: Mr. Morgan called for public comments. No public comments were submitted.

New Business:

- A. **Discussion of the proposed award of a contract to Rotolo Consultants for Furnishing Labor, Equipment, Materials and Supplies for Grass Cutting Services for approximately 894 acres within the Orleans Levee District with ten maximum cuts per annum at a total annual estimated cost of \$147,813.00, and the award of a contract to Holliday Construction for Furnishing Labor, Equipment, Materials and Supplies for Grass Cutting Services for approximately 949 acres within the Lake Borgne Basin Levee District with six maximum cuts per annum at a total annual estimated cost of \$111,492.00.**

Kelli Chandler, Regional Finance Director, explained that the grass cutting services were advertised for bid. Five bids were received to provide services for the Lake Borgne Basin Levee District (LBBLD) and three bids were received to provide services for the Orleans Levee District (O.L.D.). The lowest bid submitted for the LBBLD was from Holliday Construction with a total estimated annual cost of \$111,492 (approximately 949 acres with a maximum of six cuts annually), and the lowest bid submitted for the O.L.D. was from Rotolo Consultants with a total estimated annual cost of \$147,813 (approximately 894 acres with a maximum of ten cuts annually). The overall number of cuts will be based on actual need. The current provider of this service, Mike Munna, did not submit a bid.

The Committee will recommend that the Board approve the award of the contract for the O.L.D. to Rotolo Consultants and the award of the contract for the LBBLD to Holiday Construction.

B. Discussion of the proposed Change Order No. 2, which provides for the removal of unforeseen obstructions and unsuitable fill encountered within the levee footprint increasing the amount of excavation and replacement embankment required, in the amount of \$161,130.06 to the Contract with Cycle Construction for the Violet Canal North Realignment – Phase I Project (LBBLD Project No. 4081222), thereby increasing the total contract amount to \$981,894.06.

Mr. Humphreys explained that while excavating for the inspection trench, the contractor encountered a significant amount of unsuitable material that included concrete, shell, several large concrete pile caps and piles, which were found throughout the footprint of the levee section. The FPA's inspectors monitored the materials that were pulled out. The estimated quantities of removed materials and replacement embankment materials were reviewed. The unit prices included in the original bid were used for Change Order No. 2. FPA staff visited the project site to ensure it was not over excavated. Engineering staff supported the issuance of Change Order No. 2.

Mr. Humphreys advised that Change Order No. 1, which was a deductive change order in the amount of \$50,000, had been issued after the contract was executed.

The Committee will recommend that the Board approve Change Order No. 2.

C Presentation by Arcadis on the Airport flood protection feasibility report.

Mr. Morgan explained that the FPA issued a Request for Qualifications for the New Orleans Lakefront Airport Flood Protection Feasibility Study/Assessment and selected Arcadis for the study. The presentation by Arcadis is on the preliminary feasibility portion of the study.

Walter Baumy, Arcadis' Technical Lead, proceeded with the presentation:

The proposed project is for the purpose of protecting the assets located at the New Orleans Lakefront Airport and keeping the airfields operational for aviation purposes. The overall criteria are aligned with the Hurricane and Storm Damage Risk Reduction System (HSDRRS) and considers FEMA aspects to ensure flood insurance requirements are satisfied. The 11 alternatives initially developed in conjunction with FPA and LMA staffs were narrowed to five potentially viable alternatives. A presentation that included the five alternatives was provided to the Lakefront Management Authority (LMA) Board. The alternatives were narrowed to three for proceeding with the development of the feasibility design level.

Information used in developing the analysis included:

- The Coastal Protection and Restoration Authority Master Plan and U.S. Army Corps of Engineers General Reevaluation Study, which provided understanding on the hydraulics and wave environment and how they differed from the design of the original hurricane protection system in 2008. The elevations are higher than expected; i.e., 16.2-ft. for the majority of the layout and 17.7-ft. for the area closest to Seabrook where deep holes are located and there is a more violent wave environment.
- Aviation requirements relative to airspace and objects within particular zones, which caused some alternative components to be moved into the lake.
- Positioning of gates to preserve the Airport's flow.
- The system layout was coordinated with the Draft 2020 Airport Master Plan and 2019 Drainage Plan.

The constructability and airfield operational impacts of each of the alternatives recommended for moving forward will be more fully developed.

The three alternatives recommended for proceeding to the next level are:

Alternative 1 – This is the only alternative that encompasses the entire Airport property. The western side of the alignment ties into the HSDRRS at the fuel farm, follows along the bulkhead and continues into the lake at the northwest quadrant. The alignment in the north continues over 900 feet into the lake due to airspace requirements. The eastern side of the alignment follows alongside of the damaged bulkhead and continues to the HSDRRS levee by crossing the roadway. The alternative consists of about four miles of perimeter protection and 11 floodgates.

The conceptual components include: a concrete interior floodwall (inverted T, 12-ft. height with concrete piles); a concrete floodwall/bulkhead along the damaged bulkhead at the northeast corner (inverted T, 24-ft height with concrete

piles); and a concrete braced pile floodwall for the in-water portion (“Combi Wall” with King Pile System, 33-ft. height and steel pipe piles). The gates are the typical gates found throughout the HSDRRS (e.g., swing gates or roller gates).

Alternatives 3 and 3A include gates at the airfield crossings/taxiways where openings range from 150 to 250-ft. wide. The gates are recessed even with the pavement and can be deployed in minutes by using three different operational methods: self-rising (not recommended), lifting with a beam (shorter gates) or hydraulic units (recommended).

Alternative 3 – The alignment protects the Airport’s current assets and includes a total of 22 gates with seven of the gates crossing taxiways. The northeast boundary line encompasses a future pump station. The primary airfield operational impacts are to the taxiways and the construction of the taxiway gates would have to be coordinated with the FAA.

Alternative 3A – The alignment proceeds to the end of the property on the north side of the Airport adding approximately three-fourths of a mile of additional flood protection components. It encompasses all of the Airport’s assets and allows for future development. This alternative does not affect the airfield; however, the airfield is not protected from storm surge. No in-water construction is included.

The two viable alternatives that were eliminated are:

Alternative 5: The alignment, which was shorter in linear feet and crossed the runway with a 1,500-ft. wide gate, was eliminated due to inconveniences in crossing the runway and safety issues.

Alternative 5A: The alignment continued to the northeast corner, reclaimed the damaged area, and provided a new bulkhead as well as a wall.

Class 4 estimates, which are basically used for screening and feasibility levels, were developed with a wide range of contingency from -30% to +50% based on the amount of information available and the judgment of the collective team regarding accuracy. Alternatives were eliminated across the spectrum of costs. The eliminations were based on what the team thought was best for the Airport. The cost ranges will be refined and narrowed as the design progresses and are anticipated to use a contingency of -15% to +30-35%.

The current construction cost ranges for the recommended alternatives (costs in the current Drainage Study are not included) are:

Alternative 3 - \$100 - \$200 million – Protects current assets, but not the airfield. Replaces a portion of the current bulkhead.

Alternative 3A - \$175 - \$275 million – Adds 3/4-mile to protect the undeveloped area and replaces a portion of the current bulkhead.

Alternative 1 - \$275 - \$500 million – Approximately four miles of perimeter protection and replaces the bulkhead in its entirety.

Mr. Morgan inquired, from a cost standpoint, about the potential risk of damages to the Airport runway and structures due to various storm/surge events versus the cost of flood protection. Mr. Baumy responded that Arcadis can do a cost analysis; however, he was unsure about the projection of damages.

Mr. Baumy advised that the next steps include additional engineering, updating costs, and communications with the FAA. Land considerations must be taken into account relative to the property line in order to provide maximum development area.

Mr. Humphreys explained that the FPA Engineering Department has been working closely with Arcadis and LMA staff. This collaboration will continue through the remainder of the study. He anticipated that Arcadis will have the additional engineering and refined cost estimates finalized in one to two months.

There was no further business; therefore, the meeting was adjourned at 10:40 a.m.