

**MINUTES OF
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST
ENGINEERING ADVISORY COMMITTEE MEETING
HELD ON MAY 4, 2011**

PRESENT: Thomas Jackson, Chair
Stephen Estopinal Vice Chair
Louis Wittie, Commissioner
Ricky Brouillette, Office of Coastal Protection and Restoration (OCPR)
Robert Turner, SLFPA-E Regional Director

The Engineering Advisory Committee of the Southeast Louisiana Flood Protection Authority-East (SLFPA-E or Authority) met on May 4, 2011, in the Second Floor Hall of the Lake Vista Community Center, 6500 Spanish Fort Blvd., New Orleans, Louisiana. Chairman Jackson called the meeting to order at 11:05 a.m.

Opening Comments: Mr. Jackson commented that the agenda consists of updates on items that are being carried forward under Old Business and an item under New Business relative to a concern expressed by Mr. Goins, who is still officially a member of the Board, but has not been active as a Board member since the end of his term, relative to the design of two structure gates being delivered for set up in the New Orleans East and St. Bernard areas. He advised that another Board member has set up a meeting on this issue. However, he cautioned, as a professional engineer, that the Authority does not have errors and omissions and professional liability insurance coverage and recommended that the Authority's engineers, including staff, not attend the meeting since it is being called a review of the plans at the construction office and a review of the structure. Mr. Jackson stated that he would introduce a proposed resolution to retain a consulting engineering firm for a review of the design, shop drawings and as-constructed drawings. He added that his comments are not meant to reflect on the USACE's designs. However, since the issue was raised by a Board member, the Authority has no choice, but to approve the resolution proposed.

Adoption of Agenda: The agenda was approved as presented.

Approval of Minutes: The minutes of the April 7, 2011 Engineering Advisory Committee meeting were approved.

Public Comments: None.

Old Business:

A. Status of issue of corrosion protection of St. Bernard T-Walls.

Mr. Brouillette reported that OCPR is expecting the first draft of the experts' reports by next week. The experts will meet as a group to hear each other's perspective. The Coastal Protection and Restoration Authority (CPRA) will need to see what evolves out of the evaluation by the experts on the seriousness of the issue.

B. Status of Orleans Avenue, London Avenue and 17th Street Outfall Canal issues.

Mr. Jackson advised that a meeting is scheduled with the U.S. Army Corps of Engineers (USACE) on May 20th to address several issues relative to the outfall canals. The New Orleans Sewerage & Water Board (S&WB) has stated that its responsibility is from the water's edge on each side of the canal and the control of the maximum water level in the canal so that the safe water elevation (SWE) established by the USACE is not exceeded. The SLFPA-E is responsible for containing the water in the canals. The USACE is currently retrofitting the levees/floodwalls along the outfall canals to maintain a SWE of 8-ft. However, the containment levees/floodwalls along the canals range in height from +12 to +12.5-ft. The SLFPA-E expressed a concern about the elevation at which the factor of safety reaches 1.0 (imminent failure). This concern was verified by the SLFPA-E's consultant, Halcrow. Halcrow found that based on random samples along the canals that the factor of safety reaches 1.0 (imminent failure) at an elevation of about +10-ft. A full evaluation was not done by Halcrow. The elevation of +10-ft. differs for each of the canals and at each location sampled. The SLFPA-E's concern is how this issue should be evaluated and what should be done in terms of exposure. The USACE has stated that the water in the canals cannot exceed the SWE; however, the SLFPA-E wants to be assured that the proper analysis of the existing pumps was done.

Mr. Jackson explained that another issue is the future excavation or cleanout of the canals by the S&WB. The USACE unofficially informed the SLFPA-E that it could not provide the requested template due to the cost. The only alternative is to adopt the existing cross sections taken by the USACE as the maximum excavation depth and width. If the S&WB in the future wants to exceed the existing cross sections, it will have to provide sufficient calculations to prove that the stability of the levees will not be impacted. He pointed out that agreements should be established with the S&WB relative to the future clean out of the canals and the operation of the gates at the permanent structures at the lakefront. He added that currently the S&WB is operating two pump stations in series; however, it will be operating three pump stations in series. Mr. Estopinal commented that he would like to see the S&WB's proposed hydraulic grade line.

C. Presentation by Taylor Engineering, Inc. on St. Charles/East Jefferson Internal Levee (Compartmentalization Study) scope of work (Task Order No. 5).

Mr. Jackson advised that he met with Robert Jacobsen with Taylor Engineering earlier in the day and that he received a copy of the task order and discussed its details.

Mr. Jacobsen stated that a presentation was made to the Engineering Advisory Committee last month on this study, which includes a 2-D model of the three polders. The work under the current task order involves the main polder from the IHNC to the Bonnet Carre Spillway. The first task, which is being funded by a Community Development Block Grant (CDBG) received by the SLFPA-E, will look at a proposed structure along the East Jefferson/St. Charles Parish line. Subsequent parts of the CDBG for which Taylor has not yet been tasked will look at other potential structures. The review will provide an initial look at the potential value and benefits of the proposed structures versus flood protection benefits and costs from a catastrophic flooding perspective. Other details would be considered under a feasibility study. No additional work has been undertaken on this task order since last month's presentation because a stakeholder meeting is required in order

to continue. He stated that he wanted to offer the Authority an opportunity to discuss the information to be presented to the stakeholders before holding the stakeholders meeting.

Mr. Jacobsen explained that a 500-year (.02 percent) overtopping rate will occur at a free board of at least one foot for most of the Authority's jurisdiction. This equates to less than one cubic feet per second (cfs) per linear foot or less than tens of thousands of acre feet of water. This amount of water could accumulate in a low portion of the polder and create a flooding problem; however, it would not be characterized polder-wide as a catastrophic event. The intent is to talk to stakeholders about catastrophic scenarios or breaches; i.e., events that would introduce hundreds of thousands of acre feet of water. A catastrophic breach should be used in order to look at the possible benefit of a potential structure. Scenarios were not included in the scope of work and are to be selected. The current recommendation for the first project along the East Jefferson/St. Charles Parish line is for a breach scenario in at least three locations (one in Jefferson Parish and two in St. Charles Parish), and to allow for suggestions from stakeholders for other potential breach locations. The East Jefferson polder is substantially lower due to the history of force drainage and subsidence than the St. Charles polder. A breach in East Jefferson would result in an accumulation of water in the East Jefferson polder with some of the water, depending upon the length and duration of the breach, moving into the St. Charles polder. The more significant effect of the potential structure would be a breach in the St. Charles polder since that water would tend to route into the East Jefferson polder. There is a disparate impact to different areas when an internal structure is introduced; therefore, it is important to receive comment from various individuals. The model and its assumptions and limitations were described in the prior presentation and will be covered in the stakeholder meeting. A list of stakeholders was provided in the presentation and suggestions for additional stakeholders were requested.

Mr. Jacobsen explained that the USACE is doing a risk and reliability report on the Hurricane and Storm Damage Risk Reduction System (HSDRRS) final design as built, which will identify the potential probability of various breaches. If the USACE report comes out as anticipated, the breach scenario used in the study should fall in line with a probability event outlined by the USACE. The SLFPA-E will be looking at scenarios that are less than a .2 percent probability event, but more extreme than a 500-year overtopping event upon which the USACE is basing its resiliency.

Mr. Turner added that the stakeholder meeting is envisioned as a working meeting for input from the official agencies of the various parishes. The agencies are anticipated to have their technical people at the stakeholder meeting so that they will understand the intent of the study. He also suggested a scenario using a 500-year overtopping event.

Mr. Jacobsen advised that a meeting is being scheduled in May for further discussion of this matter and he offered to meet individually with Commissioners. He explained that there is a need to proceed with the scheduling of the stakeholder meeting and requested confirmation from the Committee to proceed with setting a date for the stakeholder meeting. The Committee concurred.

New Business:

A. Status of new gates for openings in eastern New Orleans and St. Bernard closure structures.

Mr. Jackson advised that a meeting is tentatively scheduled for May 9th for the review of the gates as discussed earlier under Opening Comments. The comments made by Mr. Goins at the last Board meeting were based on pictures sent out by the USACE of the two gates. Mr. Turner explained that his understanding is that Mr. Goins' concerns relate to the eccentric joints and the stiffening arrangement of the joints. This may apply to all of the gates since a similar design is used as far as the tubular trusses. The gates were designed by Arcadis and the design went through a USACE Agency Technical Review. He pointed out that SLFPA-E staff does not review the details of designs. Mr. Jackson stated that when a question arises it is the responsibility of the Board to have a review done. The scope of work for the review should include the structures named by Mr. Goins.

Mr. Estopinal offered a motion, which was seconded by Mr. Wittie, to propose that the Board authorize the issuance of a task order under an ID-IQ contract to verify the design and construction of the structure gates. Mr. Wittie questioned the cost and depth of detail of the proposed work. Mr. Jackson responded that the scope would include an evaluation of the design. The issue of the stiffeners and unsymmetric joint connections cannot be resolved by simply looking at the job site plans and the structures. He added that the USACE's consultant could provide the loads and other information needed for the evaluation and that the review of the design, shop drawing detail and as built plan should not be an expensive proposition per gate. Mr. Turner commented that there were challenges to the 150-ft. wide GIWW sector gate and how the vertical loads were carried into the foundation. Ultimately a buoyancy system was settled upon. A very complicated, complex analysis was done on the gates in order to come up with the design. He added that the SLFPA-E staff was not responsible for and did not verify the numbers and designs. He suggested that the consultant retained by the SLFPA-E for the review could assume that the structural analysis program yielded the proper results and that with the cooperation of the engineer of record the Authority's consultant could look at the model that generated the forces to determine if the eccentricities were accounted for properly. The SLFPA-E's consultant would interface with the engineering designer of record to make sure that all of the requirements were accounted for in the design and would report the results to the Board. Mr. Jackson stated that since the question was raised by Mr. Goins that whatever steps that are needed to evaluate and confirm the design should be taken. The Committee voted unanimously in favor of the motion on the floor.

Mr. Turner advised that the cost of the review would be borne by the Orleans Levee District and the Lake Borgne Basin Levee District. He added that it will be incumbent upon the SLFPA-E to specifically impress upon the consultant that the scope of work will include a review of what has been done and to provide their professional opinion as to whether or not a problem exists. If it is determined that something was not taken into account, then the SLFPA-E may wish the consultant to delve deeper into the issue. He clarified that a good thorough examination of what was done is what should be looked at first. The review should not include a sweep of everything that was done on the gate, but should concentrate only on the problems discussed at the meeting by Mr. Goins.

There was no further business; therefore, the meeting was adjourned at 12:00 p.m.