MINUTES OF
SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY-EAST
OPERATIONS COMMITTEE MEETING
HELD ON DECEMBER 10, 2009

PRESENT: Louis Wittie, Chair
Timothy Doody, Committee Member
David Barnes, Committee Member
Stephen Estopinal, Committee Member

The Operations Committee met on December 10, 2009 in the Second Floor Hall of the Lake Vista Community Center, 6500 Spanish Fort Blvd., New Orleans, LA. Mr. Wittie called the meeting to order at 9:35 a.m.

Opening Comments: None.

Adoption of Agenda: The agenda was adopted as presented.

Approval of Minutes: The minutes of the November 5, 2009 Operations Committee meeting were approved.

Public Comments: None.

Old Business:

A. Discussion of use of uncoated steel sheetpile.

Mr. Wittie advised that this item concerns the uncoated sheetpiling that the U.S. Army Corps of Engineers (USACE) proposes to use for the 23 miles of floodwalls to be constructed in St. Bernard Parish. He stated that some of the Board members still had questions about this matter. He commented on the 50 year term mentioned in the USACE's white paper on the Evaluation of Corrosion Protection Alternatives for Steel Piles and Sheetpiles.

Mr. Estopinal clarified that the USACE has asserted that the elevation of the structure will be overbuilt so that 50 years of subsidence would bring it to the 100 year design storm level. He questioned the USACE connecting this condition concerning the elevation to the foundation of the structure and limiting the capability of the foundation of the T-wall based upon the projection of the subsidence of the crown of the T-wall. In addition, the USACE is talking about thickening the steel so that in 50 years it would corrode down to the thickness for a proper design.

Mr. Wittie pointed out that the white paper did not state how much life would be added to the sheetpile by using the coal tar epoxy coating.

John Greishaber with the USACE Hurricane Protection Office explained that the purpose of the white paper was to address a comparison between coal tar epoxy and a sacrificial layer of steel. The life span of the coal tar epoxy in the white paper was continuous and the USACE did not assume a degradation of the coal tar epoxy. The

basis for the white paper is a justification for using sacrificial metal on the piles. The USACE is designing towards a 2057 elevation. The USACE is looking at and designing for sea level rise and general subsidence 50 years from now. The calculations were done by the New Orleans District and are also being done by a group in Division. The calculations show that the types of excess sections that will be built will have at least 200 years. He commented that the USACE may not have explained well enough where it was going. He stated that this is not about cost savings. The USACE is looking at an alternative, which is to make the section bigger so that the metal will still have the required section should there be a loss of material.

Mr. Greishaber explained that the sheetpile is to stop the passing through of water; therefore, it does not need a lot of metal section. The H-piles see their maximum loads someplace down the shaft. The USACE has taken a very judicious look at where the loads are and how much of a section modulus is needed at the points of what could be considered aggressive corrosion and the USACE is very comfortable. He stated that the ERDEC labs and academia were used and that everyone's concerns were taken into consideration. A number of papers were submitted, digested and everything was made part of one big document. He stated that the logic that the USACE is using is sound logic. The section modulus over time will decrease; however, as it decreases it forms its own protective coating.

Mr. Greishaber pointed out that after Hurricane Katrina the USACE saw no excessive corrosion and no areas that had a significant loss of metal section on the sheetpile that was laid over on the IHNC and the sheetpile that was pulled at the 17th Street and London Avenue Canals. However, the USACE is going forward assuming a very aggressive loss of metal section and that is the overbuild that will be used. He stated that the USACE is being very cautious and conservative and that there has not been any issue brought to the USACE that was not rebutted or explained. He stated that the USACE is willing to entertain additional questions, papers or studies put forward.

Mr. Estopinal commented that he has seen some incredible corrosion rates for uncoated, unsealed metal in coastal marine environments. He stated that he did not see enough information in the white paper to convince him that the USACE can predict the corrosion rates that would be experienced on 23 miles of sheetpile. He pointed out that the sheetpile does have some structural aspects. He asked about potential exposures and fluctuations. He added that the reason there is so little information on the survivability of untreated sheetpile in a marine environment is because untreated sheetpile is not placed in a marine environment.

Mr. Greishaber responded that the sheetpile he previously mentioned on the IHNC was uncoated and had been in this environment for thirty years, and the USACE saw no degradation. He pointed out that the concept of coal tar epoxy is relatively new.

Mr. Doody asked about the acidity of the soil placed in the levee sections where the sheetpile will be located. Mr. Greishaber responded that a concern was expressed and addressed. He explained that the corrosion rate for traditional soils is oxygen driven. A concern was brought up about something happening to soil at a certain location and hydrochloric acid was formed. He stated that the USACE has not seen this happening

with any of the samples that it had taken. The St. Bernard area has CH4 clay, which is very conducive to its use.

Mr. Doody expressed a concern about the exposure of the upper sections of the sheetpile and H-piles to oxygen once the levee begins to subside. Mr. Greishaber replied that about 6 to 8 inches will be exposed. The steel reinforced stabilization (stab) slab (mud slab) will have down pieces placed on it. Therefore, the steel underneath the T-wall will always be sealed to the ground. If there is some settlement underneath the T-wall, there could be an exposure of the steel; however, the steel would be exposed in a closed environment. The stab slap will have a slight slope so that water hitting it would run down the slopes. There will be a drop of 18 inches of concrete vertically down into the soil. He pointed out that this is no different than the traditional T-walls that were built where the USACE had placed compacted fill after the piles were driven.

Mr. Doody asked how this would be inspected. Mr. Greishaber responded that the USACE has offered to drive piles at intervals and after a period of time the pile could be pulled to examine the corrosion rate. He stated, however, that all indications are that there should not be a problem.

Mr. Doody asked whether the USACE had made a decision. Mr. Greishaber replied that a letter is currently awaiting General Walsh's signature. The USACE is going forward on the procurement and giving everyone the option of procuring coated steel for the areas of concern or steel with a bigger section modulus. This will be a function of the availability of the materials and the costs to the contractor.

Robert Turner, Regional Director, asked that the SLFPA-E be informed about changes to Hurricane and Storm Damage Risk Reduction System guidelines early in the process so that input could be provided. This would help to eliminate problems on the back end after a decision is made on the local level.

Mr. Turner stated that he did not have a psychological problem with the actual use of sacrificial steel provided that caution is used, along with the proper method to determine the additional thickness of the sacrificial steel. He stated that he had been told that there is no real consensus within the industry as to how this can be done; therefore, a conservative approach is in order to determine the thickness. He stated that he spoke to MVD staff and they agreed that the worse possible exposure that could be anticipated should be taken into account. He stated that he had been provided with a copy of the revised white paper, and asked that the USACE provide the assumptions regarding the timeline, the equations being used to calculate the additional thickness, and any additional backup data.

Mr. Turner pointed out that the recommendations state that when site conditions are encountered where coal tar epoxy coat is a better choice, then the design will be revised accordingly. He asked what site condition would require this revision. Mr. Greishaber responded that the site condition would be an aggressive environment—something with salt water, wetting and drying or just a combination of wetting and drying, depending on whether or not this is a seepage-type condition or structural. He stated that the USACE will not take a one size fits all approach. The USACE is looking at the environment and the appropriate excess metal required for the environment.

Mr. Turner stated that the original white paper seemed to contain some conflicting information concerning soils parameters and factors. He asked would the USACE be doing soils tests as the project progresses to determine whether there are points where the soils may be of a nature that would require either additional section or coating. Mr. Greishaber replied that the USACE's evaluation of the embankment soils that were used was a consistent evaluation of a clay environment that did not have an aggressive characteristic towards the excess metal on the sheet. The USACE had conducted testing on the soils put in place.

Mr. Greishaber pointed out that drafts of the white paper were circulated and numerous comments were received. The intent of circulating the draft was to receive as many informed comments as possible. The white paper went through a number of iterations as the USACE interplayed with those who made comments. It was not until the final version of the white paper was prepared that the local office felt that it was ready to send it forward. The USACE determined it would take the most conservative approach to design the excess metal.

Mr. Turner commented that this issue hinges to some extent on the details for the keyway system and how the pile will be kept from being exposed to oxygen underneath the base slab. Mr. Greishaber explained that a structurally reinforced slab with a slight slope will be used so that water will not stand on the slab. The slab will go 18-inches into the embankment, which is twice the maximum settlement anticipated over time. Mr. Turner asked, would this detail be used regardless of whether the piles are coated or uncoated? Mr. Greishaber replied, no; this is what the USACE will use for uncoated piles. He pointed out that this is an early contractor involvement contract. The contractor is involved with the USACE in doing the design and some of the design was developed with the concurrence and help of the contractor. The contractor was pleased with the increased section modulus, as far as obtaining the material, and understood the need for the stab slab and made suggestions on its configuration. Mr. Greishaber stated this has been coordinated with both the LPV 145 and LPV 146 contractors. Mr. Turner asked whether there would be some type of an anchoring system to anchor the stab slab to the base of the T-wall slab as well as to the piling. Mr. Greishaber replied that the piles themselves will actually tie to the base slab.

Mr. Turner asked whether the USACE would consider a request by the SLFPA-E to construct the project in accordance with the original design guidelines as a betterment should it still disagree with the USACE's position after everything is reviewed. He also asked what would be the estimated cost. Mr. Greishaber replied that the response to Mr. Turner's question would be a programmatic issue. He stated that there is a cost savings that is not significant; however, there is a significant time savings. He explained that very few yards can blast 100 to 120-ft. pile to white metal and coat the pile with the required coating. The resulting scheduling problem could place the project completion date in jeopardy. Mr. Turner stated that scheduling is important; however, the SLFPA-E must be assured that it will receive a product that will work.

Mr. Wittie thanked Mr. Greishaber for providing the additional information. He asked that the USACE continue to work with Mr. Turner on this issue.

New Business:

A. Presentation by U.S. Army Corps of Engineers on soils testing.

Mr. Greishaber explained that he was requested to speak on the subject of quality controls and quality assurance for the embankment construction. He stated that he would be speaking for the Hurricane Protection Office (HPO). The HPO has two very large jobs (LPV 109 and LPV 111) which will require about five million cubic yards of material. The USACE's intent is to obtain the vast majority of this material from a borrow supply contract for which the apparent bidder is Chapel Hill. Chapel Hill will supply material to the job site and another contractor will construct the embankment. Chapel Hill will do tests on soil classification and moisture, organic and sand contents. One test will be performed every 3,500 tons at the borrow pit. The USACE will have a team that will follow the material from the borrow pit to the job site. Nothing will leave the borrow pit that does not pass through these tests. The quality assurance (QA) aspect is the USACE will be doing testing basically every 35,000 tons. The USACE will have a separate contract with a service contractor who will actually track the material. The material will be tested at the pit and the tests will be checked by the USACE. There will be a second round of testing that will include tests on soil classification and moisture, organic and sand contents, which will take place in the compaction testing process after the material is put into the embankment. This testing will be done about every 2,500 cubic yards. In addition, the USACE will have "eyes on" inspectors.

Mr. Greishaber explained that some embankments will require a small quantity of material and government provided pits may be utilized. Only materials meeting the requirements of the specifications will be allowed to be delivered to the job site. The USACE will test these materials prior to the installation in the embankment and will test the materials again in the embankment when the compaction test is done.

Mr. Greishaber advised that the USACE has coordinated with the LSU AgCenter and that the final surfacing material has been modified to enhance grass growth.

B. Discussion of award of contract for build out of O.L.D. safehouse.

Gerry Gillen, O.L.D. Executive Director, advised that eight bids were received for the Orleans Levee District (O.L.D.) Safehouse/IT/EOC build out in the Franklin Facility. A preliminary budget was developed of $1.3 million and the consultant developed a preliminary estimate of $1.8 million. Additional design requirements requested by the Committee and staff were included in the final plans. The eight bids range from approximately $2.4 million to $2.9 million. Mr. Gillen recommended that the contract be awarded so that the schedule can be met. He advised that sufficient funding can be reprogrammed in the O.L.D.'s Major Maintenance/Capital Improvement Budget from projects that have not commenced. The apparent low bidder is the J. C. Patin Group, LLC, in the amount of $2,373,000.

Mr. Wittie and Mr. Estopinal agreed that the closeness of the eight bids presents a good representation of the project's cost. The Committee concurred that the contract should be awarded to the lowest responsive bidder.

C. Discussion of award of contract for O.L.D. Floodgate Repair.

Mr. Gillen advised that the rubber seals and seal plates need to be replaced on 12 of the older floodgates along the IHNC and Mississippi River. Two bids were received. The lowest bidder was not properly classified, which is a requirement under the Louisiana Public Bid Law. The lowest bidder has filed a protest. The second lowest bidder is Industrial and Mechanical Contractors, Inc., in the amount of $108,960. Mr. Gillen stated that if the protest can be addressed before the Board meeting, a resolution would be brought to the Board for the award of the contract.

D. Discussion of relocations costs required by Orleans Levee District.

Mr. Gillen advised that the lakefront levee improvements were constructed and the utilities were cut that fed the street lights and shelterhouses, which are non-flood assets. The responsibility for the utilities that feed the non-flood assets has not been addressed. Major utility relocations will be required at the Orleans Marina, Lakefront Airport and Lincoln Beach for upcoming USACE construction contracts.

Jason Cade with the USACE discussed the utility impacts for projects located in New Orleans East (LPV 105.01 and 105.02 and LPV 107). The utility relocations for LPV 105 are estimated at $64,000. All contingencies were removed when the cost estimate was developed. The LPV 105 project is critical since construction may begin in January. The USACE has looked at possible no work areas to allow time for money to be transferred to the USACE for the construction contractor to perform the relocations work. If the money is not received in time, contracts such as the LPV 105.02 cannot be constructed because of the number of utility impacts. Only 10 to 15 percent of the LPV 105.02 project could theoretically be constructed without the utility relocations. The estimated cost of the utility impacts for LPV 105.02 is $621,590, with an additional $1.2 million for the relocation of the lift station and piping system. The USACE could move forward with the LPV 105.01 project because only four areas are impacted; however, the USACE's drawings would have to be revised, which would delay the project award about two weeks. The estimated cost for all of these projects is roughly $2 million.

Mr. Cade explained that the USACE has looked at several methods to try to reduce the O.L.D.'s cost. One method is the jack in place installation method, which would allow the sheetpile to be jacked around the existing utility. However, compensability and non-compensability issues would be involved. This method cannot be used for utilities that are parallel to the existing I-walls, T-walls or levees. The O.L.D. requested that the USACE have its contractors do the utility relocations, which is the most expeditious way to address the relocations.

Mr. Gillen explained that $500,000 was included in the FY 2010 Major Maintenance/ Capital Improvement Budget to address some of the relocations. An additional $500,000 could be reprogrammed in the budget for these relocations. One option that could be used in order to go forward with the project may be the transfer of one million dollars from the Special Levee Improvement Project (SLIP) Fund Budget for these relocation costs.

Mr. Gillen advised that the O.L.D. received a formal request from the USACE relative to construction of LPV 101.02 (17th Street Canal to Topaz Street), which includes utility relocations at the Orleans Marina estimated at $162,424.95. A check has been prepared by the O.L.D. based upon the Board's approval of the budget for relocations for this project (LPV 101.02). He stated that the budget contains sufficient funding for LPV 105.01. A further determination will be required for funding for LPV 105.02.

E. Levee Grass Test Results. (Orleans Levee District)

Mr. Gillen reported that testing has been done by the LSU AgCenter of soil samples from levee sections with grass growth problems.

F. Discussion of St. Bernard Parish Government's intent to construct a proposed Bike Path on Mississippi River Levee. (Lake Borgne Basin Levee District)

Tim Jarquin, LBBLD Executive Director, advised that a bike path is being proposed on the levee crown from Murphy Oil Refinery to Rodriguez Lane (approximately 1.6 miles). He pointed out that liability, operations and maintenance, and security issues need to be addressed. The final plans for the bike path have not been funded. He stated that he would like to be a part of the CEA process in order to provide input and protect the LBBLD's interests.

Mr. Turner added that the St. Bernard Parish government originally approached the LBBLD in about 2003 concerning this work. A law passed by the Louisiana Legislature allows the Mississippi River levee crown to be used for bike paths. The Parish will have to deal with the private landowners relative to access to the bike path. The Parish was informed that it would have to go through a permitting process with the LBBLD.

Levee District Reports: (Copy of the monthly status reports are appended to hereto.)

East Jefferson Levee District: The EJLD monthly status report was reviewed by Fran Campbell.

Orleans Levee District: The O.L.D. monthly status report was reviewed by Gerry Gillen.

Lake Borgne Basin Levee District: The LBBLD monthly status report was reviewed by Tim Jarquin.

There was no further business; therefore, the meeting was adjourned at 11:25 a.m.