

September 30, 1985

Engineering Division
Projects Engineering Section

Mr. Earl J. Magner, Jr.
Chief Engineer
The Board of Levee Commissioners
Orleans Levee District
Suite 202 - Administration Building
New Orleans Lakefront Airport
New Orleans, Louisiana 70126

Dear Mr. Magner:

Reference is made to your June 20, 1985, letter concerning The Lake Pontchartrain and Vicinity Hurricane Protection Orleans Avenue Outfall Canal, London Avenue Outfall Canal and the 17th Street Outfall Canal which transmitted for our review a report entitled, "A Study of High Level Flood Protection 17th Street Outfall Canal OLB Project No. 2043-0222" and to our September 17, 1985 phone conversation about same.

We have reviewed the referenced report and offer the following technical and general comments:

a. Section I, Introduction.

The first paragraph on page 1 states that credits for subject work would be granted to the Orleans Levee District (OLD) under any project funded jointly by the Corps and OLD. This paragraph should be corrected to state that, if approved, the subject work would be creditable towards the OLD's contribution for the Lake Pontchartrain, LA & Vicinity Hurricane Protection project. Preparation and higher authority approval of a General Design Memorandum, GDM, for the 17th Street Canal will be necessary to determine the recommended plan. If your plan proves to be the recommended plan, which appears likely at this time, then the GDM will detail the creditable items of work and their associated costs. If the recommended plan proves to be a less costly plan than your plan, then that plan would establish the basis for maximum federal participation for cost-sharing purposes.

b. Section III, Design Parameters.

(1) The design elevations used in this study represent "net grades" and do not include additional height to account for settlement. The report does not indicate whether or not the effects of settlement were considered in the design and cost estimates.

(2) Page 6, paragraph B, should read "The coefficient of lateral pressure, K , for piles in tension in sand is .75 for displacement piles and .5 for nondisplacement piles unless values are obtained from pile tests."

c. Section IV, Levees - Canal Dredged.

(1) In paragraph A and B, the report recommends, for economic reasons, leaving the steel sheetpiling uncapped. Uncapped sheet piling is subject to corrosion, the effects of which may, with time, weaken the structure. There is also the aesthetic consideration that one should consider when floodwall work is accomplished in a high visibility area. It is generally accepted that capped sheetpiling is more aesthetically pleasing than uncapped. Because of these reasons, we do not recommend using uncapped sheetpiling.

(2) This report states that a pile supported T-wall for Alternatives 1, 2, and 4 is required between the Lake and Hammond Highway. The wall stickup could be decreased from 8 to 5 feet by adding 3 feet of fill on the protected side crown. The resulting section with an "I" type floodwall would be stable and the decrease in stickup should satisfy deflection criteria. It is recommended that the consultant for the OLD reanalyze this floodwall reach utilizing an I-wall (a more economical floodwall). A preliminary reanalysis performed by this office indicates that an I-wall would satisfy the project's criteria if the levee cross-section shown on Appendix C, enclosure 1, is modified by raising the levee crown on the protected side of the wall by 3 feet.

(3) The cross sections for alternative 2 (Crown Setback with Vertical Canal - Side Levee Slope) was informally reviewed by this office. Stability analysis plates similar to Enclosure 1 in Appendix C for alternative 2 should be submitted for formal review along with the detailed final analyses for the floodgates, bridge work, and other improvements by the

Orleans Levee Board if the high level protection plan for the 17th St. Outfall Canal is to be adopted.

d. Section VI, Bridges.

(1) Sealing of Bridges. The study provides general details of the sealing of the bridge decks and the anchoring of the substructures, however, the report does not address how the bridge decks would be anchored. The detailed design for this proposal must be submitted for our review to insure this work satisfies the project's criteria.

(2) The Highway Department (LADOTD) has not officially submitted their proposal for sealing and anchoring the Hammond Hwy. bridge. Our previous review of the proposed widening of this bridge was limited to evaluating the impact of the bridge work on the existing flood protection on the west bank of the canal. During a meeting held on July 12, 1985 with LADOTD, we were informed that the new bridge work provides waterproofing of the deck expansion and the existing deck would remain unsealed. This proposal does not satisfy the project's criteria.

(3) It is unclear as to whether or not the LADOTD in the sealing and anchoring design for the Hammond Hwy. bridge considered wave loading which the bridge would be subjected to during the Design Storm. This additional loading is a primary concern for design of this feature.

e. The subject report addresses only the cost of protection for the Orleans Parish side of the 17th Street Canal. In order to compare this plan's cost to the cost of other plans i.e., fronting protection at the lake, it will be necessary to develop the comprehensive cost of your plan. The comprehensive cost must include all costs for the plan i.e., west bank portion and the closure in front of the pumping station.

As we discussed in our phone conversation, since the Orleans Levee Board is most anxious to have a ruling on credit for your work, we will initiate our GDM studies for the 17th Street Canal. Preparation of the GDM is expected to take about 24 months. As soon as we are in a definitive position to recommend a tentatively selected plan, we will notify you. In the meantime, we will keep you informed about the progress in this area.

Your office has previously furnished the soils data taken for your designs on the 17th Street Canal. To aid us in preparing the GDM, it is requested that you furnish all the field data taken in connection with your designs. In particular, we would like to have your plotted cross-section data and copies of the field notes so that we can avoid duplication of effort and minimize the cost in report preparation.

Should you have any questions concerning our review comments, please contact Mr. Vann Stutts at 862-2614.

Sincerely,

Frederic M. Chatry
Chief, Engineering Division

MS
STUTTS
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JS
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The Board of Levee Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

PROTECTING YOU
AND YOUR FAMILY

June 20, 1985



Mr. Frederic Chatry
Chief, Engineering Division
Department of the Army
New Orleans District
Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Re: Lake Pontchartrain and Vicinity
Hurricane Protection
Orleans Avenue Outfall Canal
London Avenue Outfall Canal
17th Street Outfall Canal

Dear Mr. Chatry:

Reference is made to a meeting held in my office on June 19, 1985, to review and discuss the engineering scope of services required to accomplish a design memorandum for the above captioned projects.

The attached list of personnel were in attendance.

We provided your personnel with two copies of the following information:

London Avenue: (Burk and Associates - Consultant)

1. Design Memorandum engineering scope of services.
2. Topographic Survey Scope of Services.

Orleans Avenue: (Design Engineering, Inc. - Consultant)

1. Design Memorandum engineering scope of services.
2. Topographic Survey Scope of Services.
3. Geotechnical Scope of Services.

It is requested that you review this information so that we can further discuss the need for any possible additional information.

Board of Levee Commissioners
Orleans Levee District

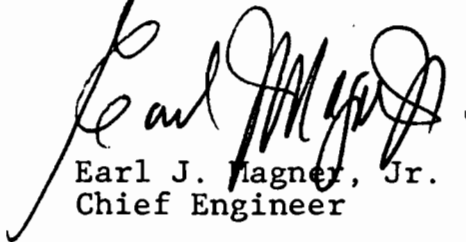
June 20, 1985

Page 2

A speedy review of this information is requested so that these projects can proceed as soon as possible.

We are also enclosing for your review and information two copies of our completed Design Memorandum for the 17th Street Outfall Canal which was prepared by Modjeski & Masters, Consultant.

Yours very truly,



Earl J. Wagner, Jr.
Chief Engineer

EJM:gmb

Enclosure

xc: Mr. Emile W. Schneider
Mr. H. B. Lansden
Mr. Ed Bailey
Design Engineering, Inc.

Meeting at Orleans Levee Board - June 19, 1985

Re: Orleans and London Flood Protection

Jim Richardson	Corps of Engineers
Philip Napolitano	Corps of Engineers
D. Vann Stutts	Corps of Engineers
Ed Bailey	Orleans Levee Board
Jorge A. Romero	Corps of Engineers
Frank Vojkovich	Corps of Engineers
Ronald P. Lee	Corps of Engineers, Levees
John Holtgreve	Design Engineering, Inc.
Walter Baudier	Design Engineering, Inc.
Earl J. Magner, Jr.	Orleans Levee Board