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27 January 1978

Honorable Robert L. Livingston
House of Representatives
Washington, DC 20515

Dear Mr. Livingston:

At the 5 January 1978 hearing conducted by the House Subcommittee on Water Resources relative to the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection project, you raised a question as to whether we had not favored in construction uninhabited areas as opposed to construction in more critical inhabited areas. In particular, the work in New Orleans East was singled out as indicative of a construction sequence which sought to advance work on levees surrounding uninhabited areas at the expense of old developed areas. Since the implications inherent in that question are on the one hand so invidious, and on the other hand so unwarranted, I feel that a detailed response must be made. In this response it will be well to deal with the project on the basis of its two independent elements, namely, the Chalmette Area Plan and the Lake Pontchartrain Barrier Plan.

The plan of protection for Chalmette consists of a continuous protection loop which is self contained and independent of the barrier plan. The protection loop encircles populated areas as well as uninhabited marshland, and though in some cases the levees are located a considerable distance from the population centers, the levees do constitute the project protection for those areas. Basically, the desirable construction sequence in Chalmette would be to raise all the levees uniformly. However, in light of severe flooding experienced with Hurricane Betsy in the area east of the Inner Harbor Navigation Channel (IHNC) and south of Florida Avenue, the first two construction contracts in the Chalmette loop were awarded in 1966 by the Orleans Levee Board for floodwall construction from the IHNC lock to the back levee at Florida Avenue. The third contract was awarded in 1966 by the Louisiana Department of Public Works for a first stage levee from Caernarvon to Verret, tieing in with the back levee at Verret. This

contract was likewise inspired by the flooding in that area from Hurricane Betsy. Subsequent construction by both the US Army Corps of Engineers and local interests has been directed specifically at the areas of greatest need, limited only by certain constraints such as required time intervals between levee lifts, availability of rights-of-way and borrow areas, and design complexities.

With specific reference to New Orleans East, project construction done around uninhabited areas must be considered in the context of the total barrier plan. As you know, the barrier plan portion of the project consists of all project works exclusive of the Chalmette Area Plan. In general, at the time of project authorization (1965), the inhabited portions of the metropolitan area were located west of a line running along the Maxent Canal levee and Paris Road as shown on the attached map (inclosure 1). Inclosure 2 summarizes construction history, both as to funds and numbers of contracts, for the areas east and west of that line. It will be observed that through 1970, 35 contracts with an aggregate value of $30.5 million (all contract costs quoted herein and in table 1 have been escalated to January 1978 price levels so as to have a common base for comparison) had been awarded west of the line, while 2 contracts with an aggregate value of $0.5 million had been awarded east of the line. So effective was this almost preemptive preoccupation with areas in the greatest need, that in 1969, when Hurricane Camille produced stages in the IHNC within 6 inches of those that resulted in massive flooding (inclosure 3) and substantial loss of life in your Congressional district, virtually no flooding occurred.

Since 1970, the focus of activity with respect to funds has tended to shift eastward, reflecting the following: the high degree of success achieved by 1970 in protecting critical areas; the need to observe the restrictions of lift construction; greater design complexities in difficult areas such as the Florida Avenue Complex; difficulties of rights-of-way acquisition; and very importantly, the fact that the New Orleans East lakefront levee could be constructed in a single lift. (Inclosure 4 provides a detailed chronological summary of construction and inclosure 5 shows the location of each contract listed on inclosure 4.)

To some extent, the isolation of levee work in the New Orleans East area as protecting only uninhabited areas is misleading. The fact is that these levees reduce the threat to the so called "inhabited" areas to the west very substantially. As an example, let us consider what happened in 1964 with the passage of Hurricane Hilda. At that time, the only lakefront protection in Orleans Parish east of the IHNC was afforded by the Southern Railway embankment. In a freakish turn of events, Hilda joined with an advancing cold front to produce northwesterly winds of

70 to 80 miles per hour the day after it had moved inland. These winds generated massive waves which seriously damaged the railroad embankment, and, but for effective flood fighting by the Orleans Levee Board, the embankment would have failed and vast areas west of Paris Road would have flooded. The Orleans Levee Board moved promptly, before authorization of the Federal project, to construct the existing levee south of the railroad embankment from the New Orleans Lakefront Airport to Paris Road. In this context the New Orleans East lakefront levee is seen to provide assurance against flood waters caused by a failure of the railroad embankment between Paris Road and South Point from overwhelming what minor protection partial embankments along Paris Road might offer to inhabited areas to the west.

Submitted as part of the information package associated with my presentation at the hearing was a project map marked with the "Estimated Percentages of Completion Through August 1977." Unfortunately the percentages shown on the map have apparently created a false impression regarding construction priorities on the project. The percentages shown represent a judgmental blend of project monies expended and level of protection achieved in the various project reaches. For instance, on the Orleans lakefront from the Jefferson Parish line to the IHNC, the map shows 10 to 20 percent complete. The low percentage is a reflection of the expensive floodwall construction yet to be accomplished in the areas of the Orleans Marina, Pontchartrain Beach Amusement Park, and Seabrook. It is also reflective of project construction needed on the three drainage outfall canals. However, it does not reflect that the floodwall areas are not critically deficient and that extensive interim protection has been installed on the outfall canals by the levee board. Likewise, the 40 to 50 percent shown (in the "note") for the Citrus lakefront reflects a floodwall reach required at the New Orleans Airport, but does not reflect that this area has been successfully sandbagged in the past. In summary, my point is that the percentages do not illustrate the full picture if used to analyze and evaluate past construction priorities.

I hope the foregoing will prove useful to you. If I can be of further help in this or any other matter, please let me know.

Sincerely yours,

EARLY J. RUSH III
Colonel, CE
District Engineer

5 Incl
1. Map showing line of demarcation in NO East
2. Brief summary of barrier plan construction
3. Photograph of 1965 flooding
4. Chronological listing of project construction
5. Map locating construction contracts

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