LMNED-DD

SUBJECT: Appl by N. O. S&WB to Improve Drainage in the 17th St. Canal, Metairie, Jefferson Parish, LA

TO C/Ops Div FROM C/Engr Div DATE 11 Jan 83 CMT 4

Mr. Kearns/Mr. Guggenheimer/cmr/2718/~~2645~~

1. Relative to the subject permit, the Corps has project jurisdiction (not necessary) on the 17th St. Canal only to the extent that the proposed construction affects the grade and integrity of the existing Federal levee on the west bank. Therefore, the following comments must be implemented only as they affect the integrity of the existing 1950 project. However, local interests may wish to consider providing protection which exceeds the existing 1950 Federal project. The 17th St. Canal is in the alinment of the Federally authorized Lake Pontchartrain Hurricane Protection project, which is presently under design and construction, and the canal levees may be incorporated into that project. If this does occur, the proposed work will be creditable toward the local interests required 30% contributions only if the work complies with Corps design criteria and is incorporated into an approved design memorandum.

2. The following comments should be resolved and the permit request again resubmitted for our further review:

a. The gap in the levee at Veterans Hwy. is shown on the plan and profile to be below the required grade for the 1950 project. Some positive means should be provided for closing the gap. Should local interests decide to provide protection above that of the existing 1950 project, some means for closing the gaps at Hammond Hwy., Veterans Hwy. and I-10 will have to be provided.

b. A 3-bulb waterstop is required at all monolith joints in order to meet Corps' design criteria. This allows for a greater degree of movement of the floodwall without damaging the waterstop.

c. The steel sheet pile interlocks must be placed at the monolith joints to allow for differential movement between floodwall monoliths.

d. An L-type waterstop similar to that shown on incl 18 should be provided at any location where a new wall ties into an existing structure. The floodwall should be supported by a steel sheet piling and not tied to the existing structure. Differential settlement could cause cracks to develop in the floodwall.

e. A coal tar epoxy should be painted on the sheet piling situated in the new fill material between Sta. 642+00± and Sta. 663+00 in order to prevent severe corrosion. New embankment material contains voids. Steel sheet piling driven in new embankment tends to corrode in that region, thus requiring additional protection.

f. Timber piles in tension must be provided with tension connectors to assure a complete transfer of the tension loading into the piles.

g. Preliminary specifications for this project do not include a section on concrete. This portion of the specifications should be provided for our review.

h. The sheetpile cutoff wall is not entirely effective for reducing the uplift pressures required between Sta. 617+50 and Sta. 663+00. A more positive means of reducing

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uplift pressure should be used within this reach. Preventive measures should also be taken between Sta. 614+00 to Sta. 617+50 and Sta. 663+00 to 670+00 since the acceptable factor of safety figure of 1.2 is not maintained in this area.

i. This office requests a final set of plans and specifications for their files.

3. All the above comments are based on the contract drawings provided with the subject permit request. The levee and floodwall elevations shown are consistent with the project authorized in May of 1950 for, among other items, enlargement of the return levee along the Orleans Parish line. However, the New Orleans Sewerage and Water Board (S&WB) by their letter of 27 Oct 82, had requested levee elevations along the 17th St. Canal for a high level plan under the Lake Pontchartrain, La. and Vicinity Hurricane Protection project. A letter was sent by this office on 20 Dec 82, providing those preliminary levee and floodwall elevations. Those elevations are dependent on the plan of protection for raising paralleling levees and floodwalls along the Outfall Canals being ultimately incorporated into the Lake Pontchartrain project. The elevations shown on the permit drawings are below the 34.0 (at lake) and 35.0 (at existing pumping station) Cairo Datum elevations given in our 20 December letter. If the S&WB intends to construct the subject floodwall to the high level plan elevations, this permit along with new design analyses, must be resubmitted for review.

FREDERIC M. CHATRY
Chief, Engineering Division

15 Incl
Added 2 incl
17. Design Sketch Painting Detail
18. Design Sketch - "L" Type Waterstop

CF: w/o incl
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