



REQUEST FOR BOARD ACTION

ITEM NO. 11

DATE OF MEETING: June 22, 2015

REQUESTED BY: Michael G. Mack, Utilities Director

SHORT TITLE: Approval and Adoption of a Capital Project Budget Ordinance for the Replacement of the Existing Boiler/Chiller HVAC System that Serves Three Buildings at the County Administrative Complex.

BACKGROUND: Due to increasing humidity and mold problems occurring in the County's Administration, Health, and Farm/Agriculture buildings located at the South Walker Street Campus, the mechanical engineering firm of Cheatham and Associates, P.A. was hired in October 2014 to conduct an evaluation of the existing boiler/chiller HVAC system and presented three alternatives and cost estimates to upgrade or replace the system.

The three alternatives and their estimated construction/engineering costs are described below:

Alternative #1: Reuse the existing boiler, chiller, cooling tower, pumps, and air handling unit as is making minor improvements to the duct work and control systems at an estimated construction/engineering cost of \$143,000.00.

Alternative #2: Replace the existing boiler, chiller, and cooling tower with two air cooled chillers and two boilers for redundancy, replace the existing air handling units, replace underground heated/cooled water piping, and replace the entire control system at an estimated construction/engineering cost of \$1,175,000.00.

Alternative #3: Abandon the existing boiler, chiller, cooling tower, and water pipe distribution system and replace with individual and independent air handling units with split system heat pumps including new controls with electronic reheat humidity control at an estimated construction/engineering cost of \$1,120,000.00.

The three alternatives were then evaluated for their pros and cons as described below:

Alternative #1: This alternative addresses the humidity problems with the new controls and minor ductwork changes but it does not address future problems which are imminent by virtue of the aging equipment.

Alternative #2: This alternative replaces all of the aging equipment and will provide a system that will last many years, but it remains dependent on the central boiler/chiller and does not allow for individual office temperature control.

Alternative #3: This alternative will work for both temperature and humidity control and utilizes VRF (Variable Refrigerant Flow) and energy recovery ventilation technology that allows each room to run independently with its own air handler system and programmable thermostat control.

In conclusion it was jointly agreed upon by the County Manager and Public Works that Alternative #3 would best serve the county.

It should be noted that the **estimated** construction/engineering costs were estimates provided by Cheatham and Associates, P.A. from their Administrative Complex HVAC Study dated November 13, 2014. Formal bids have not been received for the actual engineering design fees or the actual construction costs.

SPECIFIC ACTION REQUESTED: To adopt the Capital Project Budget Ordinance to implement Alternative #3 for the replacement of the existing boiler/chiller HVAC System that serves three buildings at the County Administrative Complex to document the proposed project expenditures and funding proceeds in the amount of \$1,215,110.00.

**CAPITAL PROJECT BUDGET ORDINANCE
FOR THE REPLACEMENT OF THE EXISTING
BOILER/CHILLER HVAC SYSTEM THAT SERVES
THREE BUILDINGS AT THE COUNTY ADMINISTRATIVE COMPLEX**

WHEREAS, the Pender County Board of Commissioners desires to adopt a capital project budget ordinance pursuant to and as provided by NCGS 159- 13.2; and

WHEREAS, due to increasing humidity and mold problems occurring in the County's Administration, Health, and Farm/Agriculture buildings located at the South Walker Street Campus, the mechanical engineering firm of Cheatham and Associates, Inc. was hired in October 2014 to conduct an evaluation of the existing boiler/chiller HVAC system and presented three alternatives and cost estimates in a report dated November 13, 2014 to upgrade or replace the system and Alternative #3 was selected at an estimated cost of \$1,200,000 as it would best serve the county at a reasonable cost. Funds for this Capital Project were secured by the June 2015 LOBs financing.

NOW, THEREFORE, BE IT ORDAINED, by the Pender County Board of Commissioners, as follows:

SECTION 1: The amounts herein set forth are hereby appropriated for the expenses related to the project:

Estimated Engineering Design	\$ 100,000.00
Estimated Construction Costs	\$ 1,000,000.00
Contingency	\$ 100,000.00
Bond Closing Cost	\$ <u>15,110.00</u>
	\$ 1,215,110.00

SECTION 2: The amounts herein set forth are hereby designated as the revenues to be made available for the project to meet the foregoing appropriations:

General Fund Loan Proceeds (LOBs)	\$ 1,200,000.00
Premium on Debt Issued	\$ <u>15,110.00</u>
	\$ 1,215,110.00

SECTION 3: Authorized activities for the Replacement of the Existing Boiler/Chiller HVAC System that serves three buildings at the Pender County Administrative Complex includes the expenditure of local funds and loan proceeds for the system improvements identified in the November 13, 2014 Cheatham & Associates HVAC study report. The officials of Pender County including the Project Manager are hereby directed to proceed with the project within the terms of the contract documents and the budget contained herein,

SECTION 4: The Finance Director is hereby directed to maintain within the Capital Project Fund sufficient detailed accounting records to provide for the accounting of the project as required by federal, state and local regulations.

SECTION 5: Funds may be advanced from the General Fund for the purpose of making payments as due until the project is complete.

SECTION 6: Copies of this ordinance shall be filed with the Finance Director and the Clerk to the Board of Commissioners to be kept by them for their direction in carrying out this project.

This ordinance was introduced and passed at this meeting of the Pender County Board of Commissioners, and was adopted this the 22nd day of June, 2015.

J. David Williams, Jr., Chairman

ATTEST:

Randell Woodruff, Clerk to the Board