

**Joint Motion from Building & Grounds Committee and Budget & Finance Committee
July 1, 2018**

To replace the existing cooling system, which will require a special fundraising campaign of \$115,000.

Replacement of Cooling Tower and Chiller

During 2017, the Building & Grounds committee became aware that the cooling tower, which provides air conditioning for a large portion of our church building, was deteriorating. The Building & Grounds committee alerted the Budget & Finance Committee that repairs would be needed during 2018. Because the repairs would be extensive and the cost was unknown at the time, these expenses were not included in the 2018 budget.

Details regarding the needed repairs are available on the handout “Discussion of Sanctuary and Education Building Cooling Problems,” found on the reverse of this page.

Financial Plan for Replacement of Cooling Tower and Chiller

The Budget & Finance Committee recommends the following plan for replacing the cooling tower and chiller.

1. The church will use \$5,000 from our designated Building Fund towards the air conditioning repairs.
2. The church will set up a designated account called “AC Fund.”
3. The church will mail pledge cards requesting pledges to be made by September 1, 2018. Contributions will be received for a period of 18 months, beginning October 1, 2018.
4. As is our custom for such fund drives, 10 percent of funds received to the AC fund will go to Hands on Missions*. This is a way of practicing the discipline of tithing as a congregation.
5. To cover the cost of the needed repairs, including the 10 percent to go to Hands on Missions, the total amount we will need to raise is \$115,000.
6. Any donations exceeding the cost of the repairs will be used for other building repairs and maintenance needs.

Financial Figures:

Cost of project	\$109,000
Less: Designated funds currently available	-5,000
Net Funds Needed	104,000
10% for missions	10,400
Contributions Needed	\$114,400 (rounded up to \$115,000)

*Hands On Missions funds are dispersed by the mission committee. During the past year, this fund has enabled us to provide emergency food boxes, complete two local home repair projects, contribute to the Pack4 Backpack and Operation Magi programs, as well as assist with several other needs in our community. This is in addition to our budgeted mission funds, which have been used for additional projects, including donations for disaster response efforts following severe storms in the fall of 2017.

Discussion of Sanctuary and Education Building Cooling Problems June 2018

Initial Problem

September 2017 – cooling tower leaks and belt noises reported. Inspection revealed that the distribution piping and the structural supports were severely rusted. This results in leaks, poor distribution of water to the cooling surfaces, excessive use of make-up water and will soon lead to collapse of the tower. At the point of tower collapse, the air conditioning to the sanctuary and education buildings will no longer work. We decided that the cooling tower would probably be able to finish the 2017 cooling system.

Spring 2018 – B&G searched for replacements and was told that it would be necessary to replace the chiller system in addition to the cooling tower because the old (1959 and 1964) chillers could no longer be serviced after Jan 1, 2020. This is because the refrigerant (R 22) can no longer be obtained. We have been lucky that the old tower is still upright, but it could go any time.

The System

This system consists of a hot water boiler and three Carrier 15-ton chillers. These feed 5 air handling unit (AHU) rooms on 3 floors by piping hot or cold water through heat exchangers and circulating hot or cold air as required to local areas. This is not a ducted system and because of the building structure, cannot be converted to ducted. The chillers are served by a cooling tower on the roof of the education building. Two pumps circulate water to the cooling tower and AHUs. Failure of the system will cause both the sanctuary and the education buildings to be uninhabitable. This includes all restrooms except the nursery, all offices except the Pastor's and Children's Director's, the Youth room, all of the 3rd floor rooms, and the kitchen. This project replaces the cooling portion only. The boiler was replaced about 20 years ago and was inspected, cleaned and set up this winter. It should last for many more years.

The Project

This will replace the existing chillers with smaller chillers with a modern refrigerant. That will result in saving electricity. Removing one old pump and cooling tower and replacing them with a new closed system air cooler will save both water and electricity. It also will allow switching between cooling and heating without having to call a serviceperson out. The work will include replacing piping and insulating old piping on two floors. This will mean tearing out two small walls and replacing them. It will also involve electrical work. A crane will be needed to install the unit.

Timeframe

The project will take about 60 days from signing of the contract to completion.