

CLCC Energy Plan by Energy Task Force January 4, 2017

The energy task force (Phil Slemmons, Chair, Tom Mitchell, Teresa Snow, and Sharon Meek) met in December to discuss next steps. During the meeting we invited Jason Casale to participate in determining a solution for access to the attic. The following are the results of that meeting.

PRIORITY 1: ACCESS TO ATTIC

Problem: Inadequate access to attic by vendors for repair work and does not meet OSHA requirements: Hatch openings are 1) small (most are 24" x 24"); 2) requires 2 ladders to access attic (10 ft ladder to remove drop ceiling tiles and unscrew hatch to open and 12 foot ladder to get up into attic – must stand on top of 12 foot ladder and hoist self up.) Hatch in storage room is largest and uses an extension ladder.)

Current Situation: Hatches in 1) Hallway before fellowship hall (24" X 24"); 2) Seekers classroom (24" X 24"); 3) Conference room (24" X 24"); and 4) in storage closet outside choir room (28" X 48")

Solutions explored:

1. Exploration of ladder systems to be used: Invited ladder vendors to review hatches to investigate possible type of ladder system that could be used. Results: hatches need to be reconfigured and enlarged to utilize dropdown stairs. Further complication is a reconfiguring of electrical, ductwork, ceiling joists, and sprinkler system.
2. Exploration of converting one hatch and creating walk around to other areas of attic. Ceiling joists going opposite directions, firewalls, and roof line changes prevents building of walkway.
3. Exploration of using telescoping ladders for hatches. Only one that it might work is in the storage closet near choir – would require building a box to accommodate length of ladder. Also may require some changes in attic floor to accommodate ladder dropdown system.
4. Exploration of an A-frame Trestle Extension ladder for use with small hatches. Ladder would still require a shorter ladder to remove the ceiling tiles and unlock the hatches but would allow vendor to get into attic in compliance with OSHA regulations. See figure 1:



Recommendation:

1. Purchase a single Trestle Extension Ladder to try with small hatches from Home Depot using our account. Jason Casale to work with church to come up with best ladder.
2. Move shelving in conference room to make access easier to use ladder.
3. Provide a non-slip mat for the extension ladder used in the storage room by the choir.

Proposed costs: approximately \$700 for one ladder.

PRIORITY 2: HVAC NEEDS AND REPAIRS

Problem: The church HVAC systems require an extensive number of repairs and fixes:

Repairs needed by HVAC expert:

1. Replace supply air diffusers in the fellowship hall, classroom wing and conference room with supply air diffusers with greater throw.
2. Seal all HVAC ductwork joints and connections to equipment with ductwork mastic sealant.
3. Insulate ductwork (insulation to be installed per Georgia State Energy Code).
4. Fix relay switch to insure outside systems do not come on until inside systems are on to keep motors from being burned out.
5. Replace electrical box cover over exposed electric heating element connections at sanctuary units.
6. Inspect and repair if necessary the air relief dampers that are inoperable and ensure that they have direct openings to the outdoors.
7. Reconnect all economizer actuator wiring that is currently disconnected.
8. Ensure that all condensate drain pans are working properly including ensuring that all drain pans and air handlers are tilted properly to drain. All unused drain ports should be properly capped.
9. Be sure pressure actuated fan speed controls are provided for all outdoor units.
10. Investigate the use of remote sensors from thermostats to ensure better temperature control in the sanctuary.
11. Determine where the building exhaust fans are and if they are discharging to the outside of the soffit. (Note: Get Joey to inspect when coming to replace filters in HVAC units.)
12. Use CLCC's Current As-built drawings and correct mistakes and locations of where HVAC units are.
13. Provide a written recommendation for a plan to rebuild or replace HVAC systems when they become inoperable given that access to the attic is limited.

Solutions:

Present list above the HVAC vendor and get quote and timeline for making repairs and fixes within the next 60 days. If current HVAC vendor cannot perform above repairs in a timely fashion, investigate other vendors that may do the job faster.

Create signs in the sanctuary and education wing to encourage members and visitors to not tamper with the thermostats. Also, education is needed with the Deacons to be sure to turn down the sanctuary units after Sunday services.

PRIORITY 3: INSULATION

Problem: Building insulation and air barrier systems need to be closed and fixed to ensure the envelope has a continuous insulation and air barrier system.

Needs:

1. Insulation is down and needs to be put back up and a structure to keep it up.
2. Add insulation in locations where no insulation exists.
3. Provide an estimate and timeline for completion within the next 60 days.

Solution:

Investigate vendors that can fix and add insulation in the attic of the church as well as the walls around the office and conference room area.

NOTE: Possible vendor might be able to do both HVAC list and fix insulation as well.