

Building Dialogue

Chick African Centered Elementary School

11/9/2006

Year Open: 1931 Additions: 1954/1968
Square Footage: 45760 Acreage: 392**FACILITY MANAGEMENT SYSTEM****Date Dialogue****10/5/2006 Mechanical : Recommendations for renovation of HVAC System:**

In most of the areas in the building, except library, kitchen, administration/office area and computer room the steam fin tube convectors provide perimeter heat. The steam and steam condensate piping can be reused for circulating heating hot water and another two pipe system shall be added to make it four pipe system all over the building. Then these convectors shall be removed and unit ventilators shall be installed in these areas. These Unit ventilator will then be able to provide heating with hot water and cooling with chilled water to these areas.

A new chilled water system of 275 Ton capacity, including chiller(s) and chilled water pumps can be installed in the fan room or in the boiler room in basement. The remote air cooled condenser(s) for the chiller(s) shall be installed on the roof. DX cooling for the existing two air handling units shall then be changed over to chilled water. The existing fan unit and the AHU shall be removed and

New heating hot water system shall replace the existing steam system. The existing steam boilers shall be replaced with heating hot water type boilers. The hot water produced by the new boilers shall then be circulated throughout the building in all unit ventilators for heating. the steam coils of the existing two air handling units for administration and library shall be replaced by hot water coils.

10/5/2006 Mechanical : Cost Estimate for Proposed HVAC Improvements

The cost estimates are based on rules of thumb for the building size, age, condition and types of usage. Any requirements of asbestos removal are not included in the following costs:

1. Install two 4000 MBH hot water boilers - \$225,000.
2. Install 275 Ton chilled water systems with chiller, remote condenser, pumps and accessories - \$275,000.
3. Replace the existing steam coils with new hot water coil in AHUs for administration/office and library - \$10,000.
4. New 15 Ton AHU for Cafeteria and ductwork - \$40,000.
5. New 10 Ton AHU for Gymnasium and ductwork - \$30,000.
6. New Make-up Air unit and exhaust fan for kitchen - \$10,000.
6. Install new 4-pipe unit ventilators for other areas including piping - \$400,000.
7. New DDC controls with WEB based Lonworks protocol - \$180,000.

9/15/2006 Asphalt/Concrete : Asphalt

Parking lot generally in good condition but has some cracks that need to be filled and resealed. Pavement markings are faint and need to be re-painted.

9/15/2006 Asphalt/Concrete : Concrete

Concrete is generally in satisfactory condition.

9/15/2006 Asphalt/Concrete : Play Equipment

No playground equipment. Sink hole at upper playground at asphalt play area needs immediate repair.

9/15/2006 Doors: Exterior Entrances

Hollow metal doors and frames are generally in fair condition except for the south elevation at west end. There are a pair of doors that are damaged and need to be replaced. Hardware and weather stripping needs to be repaired or replaced at several locations.

9/15/2006 Windows: Windows

Windows are single pane (non-insulated) glazing with aluminum frames- color: white. The original single glazing windows at gym, kitchen and cafeteria are not functioning well and need to be replaced.

9/15/2006 Walls : Exterior Walls

Brick walls in fair condition- some bricks are broken and need to be replaced and a portion of brick mortar needs to be repointed. Decorative caststone elements need to have joints repointed. Parge coating at two locations on top floor elevations need repair. Parge coating is cracked and falling off the building.

9/12/2006 Electrical :

The school has been largely retrofitted with T8 lamps and electronic ballasts. There are a few areas remaining with T12 lamps such as the Boiler Room. The Auditorium/Gym has 2x2 HID recessed fixtures along with some wall washers. Where Incandescent can lights are used, replacement with compact fluorescent can lights will reduce maintenance requirements.

9/12/2006 Electrical :

For a general air conditioning system, assuming roof top units to be added, or for a central chiller plant, a new electrical service at 480Y/277V would be required. The school can be given a single 1200A, 480Y/277V service with step down transformer to pick up existing loads, or the 480Y/277V can be a second service at about 600A for about \$60,000.00. Either is Code compliant and either would come without Utility Co equipment charge. For this report, we will advise the lower cost solution. It is reported that the Utility Company needed to replace one of their pole mound transformers. They reported that there was an 870A load. This might indicate that the existing service is overloaded, or that loads are not balanced. This should be confirmed.

9/12/2006 Fire Prot:

The fire alarm panel is in the Boiler Room--Edwards LSS4/36. There are fire alarm pulls at points of egress, Smoke detectors and horn/strobes in the corridors, also smoke detectors in the auditorium (gym). The building has an outside FA Bell.

8/31/2006 Electrical :

Classrooms at Chick Elementary are air conditioned through the use of 208V window units. The existing service is 800A 208Y/120V. This is apparently suitable for air conditioning using the window units, but would be inadequate for a whole school air conditioning plan.

8/28/2006 Mechanical : Existing HVAC System

Two Burnham boilers provide low pressure steam for heating throughout the building. A big fan unit in the fan room of ground floor level provides ventilation air to all the classrooms and other areas. Most of the building, including all the classrooms are setup for perimeter heat and heated by steam type fin tube wall convectors. Kitchen is served by an air handling unit, AHU-3, which has heating capability also. Gymnasium is provided with ventilation air by a fan unit, located in the ceiling space of stage.

Partial air conditioning was also provided in 1996 by DX split units and one rooftop unit. Two separate split systems serve library and administration/office area. The AHUs are located in the ceiling space and the condensing units are located on the roof. The AHUs also have steam coils and provide heat in winter. The computer room is presently served by a cooling only rooftop unit. All the classroom are presently cooled by individual window type air conditioning units.

8/28/2006 Plumbing: Existing Plumbing System

Domestic hot water to all the toilets are provided by two gas-fired domestic water heaters, installed in the boiler room.