BEECHER ROAD SCHOOL FACILITIES ASSESSMENT

Conducted by Jim Saisa

Overview

I was hired to provide a comprehensive assessment of the facilities at Beecher Road School in Woodbridge, CT. In addition, I am to mentor Vito Esparo in his new position as the Facilities Manager at Beecher Road School. I spent many hours touring the building and grounds with Vito, speaking with building personnel as to any concerns they may have, coordinating contractors to view conditions and provide cost estimates, and working with Vito to solve current issues. Below are issues that were uncovered during my assessment along with any pertinent information and cost estimates where appropriate. These items may be added to a Facilities Capital Replacement plan or bond issue, however the District deems it best to fund.

Roof

There are various vintages of roofs and material types throughout the school. There are many areas where ponding of water occurs and several parapets that are in need of repair. Other areas exist where the roof drains do not appear to be functioning due to the large amount of standing water over the roof drains. I asked a roofing consultant to come out and view the roof and associated building envelope as well as recommended a vendor to clear the roof drains. The roof drains were cleared and tree branches were removed from the area. At this point, the District has contracted with the recommended roof vendor, Tremco, to develop and execute a preventive maintenance plan and to develop a capital roof replacement plan for the older, failing roofs areas.

Flooring

Flooring is a building asset that needs to be reviewed annually for repairs and replacement. After reviewing the flooring types and conditions building wide, I recommend priorities be assigned to address the following areas.

- The “D” Wing corridor flooring is coming loose in places and should be replaced. The cost will be $16,375.
- Room A8 has loose tiles and should be replaced. The cost will be $4,825.
- The South Art Room has loose tiles and should be replaced. The cost will be $4,043.

- The Band Ramp has carpet that is past its useful life and should be replaced. The cost will be $5,263.
- The Band Room carpet is past its useful life and should be replaced. The cost will be $18,084.
- The South entry carpet is past its useful life and should be replaced. The cost will be $3,131.

Please note -- any needed furniture moving not done in-house or any asbestos related expenses would be in addition to the above quotes.

Asphalt

There are many areas of the exterior asphalt that are failing due to age or tree root damage. There are areas where the trip hazards presented by the failing or heaved asphalt may provide liability concerns for trips and falls.

The cost estimate to replace the remaining, North and Library parking lot areas not done during the recent construction project is $500,000 for approximately 171,000 square feet.

The cost estimate to replace the damaged asphalt sidewalks and playground areas is $93,500

Building envelope

Areas of the building envelope, including classroom doors and windows, flashing areas, and walls were investigated. There are several wall areas, outside of the 2014 BRS Building Upgrade project, that need repainting and mortar repair. These areas are predominantly in the S-Wing, lower end of building.

I recommend hiring your current painter on a time and materials basis to make these repairs to keep moisture out.

The exterior classroom doors should be budgeted for to replace in the older section of the building. There are 34 doors and the cost would be $1,991 **per door** for metal or $2,811 for fiberglass.

There is a pair of doors to the pool that should be replaced. The cost would be $5,628 for metal or $7,384 for fiberglass.

The cafeteria exterior aluminum doors should be replaced at a cost of $8,428. Options for the older exterior classroom windows are still being explored and will be reported at a later date.

The exterior windows on the older part of the building are in need of attention. I believe the most prudent method of proceeding would be to hire Window Repair Systems, Inc, to do an AIP (architectural inspection program) where all windows will be checked to ensure that all

hardware is in place and that there are no broken or missing parts. Any missing hardware, insulation, or glazing would be documented and an evaluation report would be provided stating findings and recommendations. This would be accompanied with repair estimates. The estimated cost of the AIP is $2,000

HVAC/BUILDING SYSTEMS

This investigation was multi-faceted. The first thing we looked at was the Building Management System. The current system is a Honeywell system. The system does not have a current license or the capability of reprogramming and adding/subtracting devices, schedules, etc. The cost to upgrade the license so that any certified vendor the District desires to work with can fully operate and maximize building controls is $5,335.

The next step was to look at the age of various systems. There are 16 unit ventilators that supply heat or heating/cooling in various corridors, vestibules, entryways, and the BOE offices. In addition to those, there are five water fountains that either don't work or are falling apart. There are two old return air fans in the pool mezzanine as well. The budget proposal from Emcor to replace all of the fore-mentioned ventilators, fans and drinking fountains is $257,000.

There have been numerous complaints concerning humidity and space temperature comfort. The unit ventilators that are installed in the classrooms are generally ineffective at controlling humidity when only controlling to space temperature. In addition, the classroom areas that are served by 4 ERV units and fan coil units in the classrooms have experienced similar problems. Initial investigations indicate the units are not functioning properly to dehumidify. The cooling loop also has larger than desired temperature differentials.

I brought in a vendor and an engineer to evaluate the systems and recommend changes to the entire system operation. The Administration recently initiated a PO to perform a thorough engineering study of the initial design, how the system is currently operating as compared to original design, and what changes are necessary to improve comfort and humidity control. vanZelm Engineering is performing the study. Cost estimates for the upgrades and improvements will be forthcoming at the conclusion of the engineering work.

Energy Efficiency

Outside of the energy upgrades, i.e. solar & micro-turbine, as I toured the building, I noticed the light fixtures in almost all interior spaces were either high performance T8 fluorescent or T5 fluorescent bulbs. The majority of the bulbs are 28 watts. An energy efficiency initiative should be explored to change out all fluorescent bulbs to 12-13 watt LED bulbs.

In addition, depending on the recommendation of the engineers, the upgrades to the classroom unit ventilators and the fan coil units may qualify for energy saving rebates as well. If coupled together, the two initiatives could qualify for a comprehensive project, possibly getting more

money back than just a stand-alone project. I recently completed such a project in my current District.

Custodial Operations

The initial review of the custodial program revealed older and substandard cleaning equipment for a building that large. Reports of the building not being consistently clean also surfaced from administration and teachers. The chemicals and methods being used were not up to standard with current technologies available. Rovic was brought in to provide good quality chemicals and paper products at a price less expensive than previously. They are also providing a good formal Green Cleaning Program for the staff. This includes all training as needed and access to good quality support as needed. It also included a through custodial study of the building which identified better ways to break up the building into manageable cleaning schedules and equipment needed to accomplish the job. New equipment was ordered and with the new chemicals, training and support, the moral of the staff seems to have improved and the administration and teachers report much better results. Vito is doing a great job turning that department around and utilizing the new support resources to better train his staff.

Building Security

A review of the security infrastructure was completed. Since building security initiatives should be of a confidential nature, a report of the observations noted during the analysis was submitted to senior administration at Beecher Road School.

Mentoring Tools

One aspect of the mentoring was to provide some templates and tools that Vito can use to bolster his facilities programs without re-inventing the wheel. Below are items provided to Vito for his use:

- Code compliance calendar
- Annual facilities report template
- Comprehensive custodial manual
- Comprehensive preventive maintenance manual
- Template for a five-year capital plan
- Recommendations for vendors to improve service over current vendors
- Custodial equipment recommendations and demonstrations
- Employee performance review
- Facilities contingency plan template
- Required inspection spreadsheet
- Monthly facilities report
- Comprehensive job descriptions