March 20, 2013

Highlights

Of the Report to the Chairman, Board of Directors of the Elizabeth C-1 School District

Why This Study?

The Board of Directors of the Elizabeth C-1 School District initiated this effort in order to evaluate the condition of district's physical assets, evaluate their adequacy in meeting district needs and make recommendations regarding priorities for expenditures associated with these assets.

What the IAC Found:

1) District infrastructure is generally adequate to meet current needs.

2) District schools range in condition from very good to poor. The district should consider retirement & replacement of the two oldest.

3) District information technology support for administration and education is relatively poor. Shortfalls exist from the network architecture level to the adequacy of user workstations. The district must address these issues.

4) District Transportation operations are efficient and well managed. Several buses are near the end of their useful life and the district should plan for their replacement.

The IAC Recommends:

The district must develop long-range infrastructure plans to ensure the efficiency and effectiveness of future investments.

INFRASTRUCTURE ASSESSMENT

Final Report by the Committee on the Physical Conditions and Adequacy of Facilities, Information/Technology and Transportation within the District

Executive Summary

In 2012, the Elizabeth School District solicited volunteers from the community to participate in the Infrastructure Assessment Committee (IAC), whose primary purpose was to evaluate the District's physical assets and make recommendations regarding priority for capital expenditure associated with the assets. Twelve members of the community with diverse technical backgrounds were selected to participate in this committee. This report is the result of the six months of committee investigation and review of the District's building assets.

This report describes the current state of infrastructure, highlights shortfalls and provides recommended actions to correct the noted deficiencies. Where applicable, easy to implement low or no cost short-term corrective actions are provided. Several longer term options are also outlined - repairs or improvements that can be implemented within current budget levels, larger-scale projects requiring increases in current funding levels and carefully integrated long-range plans.

The Committee found the district infrastructure to be generally adequate to meet current needs. However, this will not remain true without wise planning and increased investment in our facilities, information technology and transportation capabilities.

The physical conditions of our district schools ranges from very good to poor based largely on their age which varies from thirteen to ninety-three years. Day-to-day upkeep by the custodial staffs and minor repairs by district maintenance staff is generally excellent. In distinct contrast to this, is a lack of long range planning, management oversight, and funding for the preventative maintenance tasks required to prevent premature deterioration. The district's two oldest schools require such extensive repair and system replacement that it may be wiser to retire them from service and invest in replacement facilities. The remaining three schools could easily fall into unrecoverable disrepair if the shortfalls noted above are not addressed.

Information technology support for education and district administration is relatively poor. The IAC has identified multiple core challenges for each of the schools in the district but these individual school challenges are small in comparison to the challenges found at the district level. Network capacity and design, security, and platform age and condition fall well below the norm for districts similar to ours. This is largely a result of limited expertise, lack of long-range planning, inefficient use of resources, and low funding levels.

Transportation operations within the district are efficient and well managed. Students are delivered to and from the schools in a safe and timely manner. Though the district buses are older and of very high mileage, they are well maintained and operational availability is excellent. Though some improvements should be considered to the operations and maintenance facility in the long-term, the fleet itself requires near term funding in order to replace several buses which are rapidly nearing the end of their useful service life.

The committee's key and overarching recommendation is that the district pursues a strategic planning effort to produce detailed, publically supportable and mutually supporting master plans for facilities, transportation, and information technology. These plans should articulate the capabilities required to meet what the district identifies as its long-range educational goals. Prior to production of such plans, large investments in district infrastructure is likely unwise.

Infrastructure Assessment Committee

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CDE School Assessment Report – *Elizabeth C-1, Elizabeth HS*

CDE School Assessment Report – *Elizabeth C-1, Frontier HS*

CDE School Assessment Report – *Elizabeth C-1, Elizabeth MS*

CDE School Assessment Report – *Elizabeth C-1, Running Creek ES*

CDE School Assessment Report – *Elizabeth C-1, Singing Hills ES*

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Rubicon Team – *Threat Assessment (CIAC)* - FOUO

FEMA Publication 428: *Primer for Design Safe Schools Projects in Case of Terrorist Attacks*

California Dept of Ed – *Guide for Development of Long Range Facilities Plan*

IAC Presentations

Progress Report and Azimuth Check – November 12, 2012

Preliminary Out-Brief and Recommendations (FOUO) – February 11, 2013

Background

In October of 2012, the Board of Education for the Elizabeth C-1 School District established the Infrastructure Assessment Committee (IAC) to assess the condition of current district infrastructure; identify issues; and recommend priorities for improvements. In order to provide a comprehensive assessment, the Board selected a committee comprised of twelve residents (See Appendix VII) of the district with backgrounds in building design, engineering and construction; maintenance and transportation; information technology; safety and security; and education*.

The goal of the committee is to support improvements in the District's ability to educate the children in its care by increasing the safety, security and usability of the facilities and supporting infrastructure in a way that serves the best interests of the students and the community as a whole.

In order to complete the assessment and provide input to the board in time to support budget planning for school year 2013/2014 and beyond and based on the expertise and experience available, the following aspects of the district infrastructure was assessed: The five schools (Elizabeth High School, Frontier High School, Elizabeth Middle School, Signing Hills Elementary School and Running Creek Elementary School), the Vehicle Maintenance Facility and Transportation Operations, and Information Technology.

During the initial organization of the IAC, the following guiding principles were adopted:

- Provide a holistic view of current infrastructure status
- Use all available data – eliminate redundant inspections
- Engage all stakeholders
- Operate with complete transparency

The first phase of the committee's work consisted primarily of data collection and addressed the first three of the four principles above. The IAC has gathered available data (District, County, and State reports and assessments); surveyed district staff, parent members of accountability committees; and conducted comprehensive on-site building inspections. Additionally, interviews with key district staff directors and first responders were conducted. This phase was completed in mid-January 2013.

Once data collection was completed, the committee categorized and prioritized all findings in terms of immediate hazards, security, public/student health, facility upkeep, functionality and system/structure life expectancy. Based on these priorities, the IAC developed the recommendations for action by the Board of Education found in this report. These recommendations include items that require immediate attention, planning required for future projects, and areas for the conduct of follow-on studies. Additionally, overall recommendations regarding infrastructure management practices are provided.

Results of Assessments & Recommendations

Key Recommendations:

1. Address all urgent maintenance needs in current budget year
2. Designate or hire a facilities Master Planner / Infrastructure Manager
3. Develop a long-term (10 yr+) facilities master plan
4. Implement a system of periodic internal facility condition assessment and reporting / prioritize and correct deficiencies
5. Request annual joint threat assessment be conducted by Fire Prevention and Law Enforcement personnel
6. Plan and budget for bus fleet modernization

Throughout the district, the committee found that employees are generally making very efficient and wise use of the limited resources available to them. Additionally, it is clear that the students, on the whole, take very good care of their schools. This speaks highly of cultures developed by the school leaders across the district. The condition of the existing facilities and equipment, even with heavy use and, in some instances, extreme age, is surprisingly good and largely adequate to serve the over 2,600 students enrolled in the district. Additionally, it is obvious that lack of funding has hampered modernization and district-wide efforts are focused on maintaining current capabilities at the expense of planning for future needs. The physical conditions found during this assessment are not likely to change dramatically over the next twelve to twenty-four months at current resource levels. However, there are issues highlighted in this report that will need immediate attention to prevent rapid deterioration of the district's infrastructure in the following years. The committee's key recommendations are summarized to the left. Additional detail regarding these recommendations is provided at the end of this section of the report.

Facilities

The committee conducted an assessment of each of the five schools within the district. During this assessment it was clear that though, as noted above, upkeep by the custodial staffs is excellent, the schools vary widely in condition and remaining service life. The schools range in age from thirteen to ninety-three years old and several have had multiple additions added to accommodate a growing student population over the decades.

In conjunction with our own on-site facility and grounds inspections, the committee reviewed survey input from school staff and parent members of the accountability committees (See Appendix VII), interviewed facility maintenance personnel and custodial staff, and reviewed *School Assessment Reports* prepared by the Colorado Department of Education (CDE) and published in April 2012. Though detailed cost estimates of recommended repairs and improvements were not made, the committee found the CDE assessments of building conditions to closely mirror the findings of this report. The committee does not dispute the cost estimates made by the state.

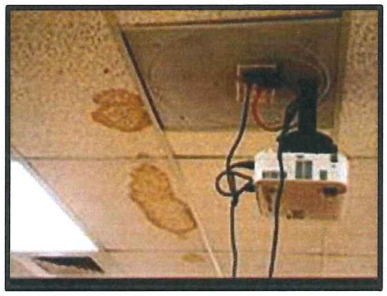

Figure 1: Water Damage - EHS

The detailed results of the committee's on-site facility inspections are found in Appendix II of this report. Assessments are organized in accordance with the 16 construction divisions found in the 1995 Construction Specifications Institute (CSI)'s Master Format. This standard is the most widely used standard for organizing specifications and other written information for commercial and institutional building projects and was used in order to ease planning of required repairs.

Figure 2: Power Cords - EMS

The committee has identified moisture infiltration as the greatest issue impacting the condition of the schools (fig 1). The specific conditions found include: failure of roofs, window seals, drainage, internal condensation, and failure of exterior water repellent coatings on masonry walls. Moisture penetration of building envelopes can lead to mold, damage to interior finishes and fixtures, and freeze/thaw cycles can ultimately be destructive to structural integrity. The committee recommends that the district address these issues soon in order to preserve and extend the useful life of the schools.

Facilities Assessments (Appendix II) are organized in accordance with:

CSI Divisions (1995)

Division 01	General Requirements
Division 02	Site Construction
Division 03	Concrete
Division 04	Masonry
Division 05	Metals
Division 06	Wood and Plastics
Division 07	Thermal and Moisture Protection
Division 08	Doors and Windows
Division 09	Finishes
Division 10	Specialties
Division 11	Equipment
Division 12	Furnishings
Division 13	Special Construction
Division 14	Conveying Systems
Division 15	Mechanical
Division 16	Electrical

Table 1: CSI Master Format Divisions

Though largely minor, the committee did find some hazards impacting student safety within the schools. Where practical, these hazards were corrected on the spot or reported to the Director of Maintenance to correct. Primarily, the issues are related to overuse/misuse of electrical extension cords and power-strips (fig 2), trip/fall hazards on sidewalks and parking lots, and exterior lighting. The committee recommends these hazards be reviewed, corrected immediately where possible, or budget for correction and where larger projects are required.

As is to be expected; only the newest school, Elizabeth High School was found to largely meet the requirements of the Americans with Disabilities Act (ADA). Non-compliance was found primarily in restrooms and door hardware in the older schools.

The mass-shooting incident at Sandy Hook Elementary School in Newtown, Connecticut occurred during the conduct of this assessment. The committee and those surveyed and interviewed all noted that our schools, by and large, do not offer much in the way of protection from unauthorized access nor does their design restrict movement of intruders if they were to enter the schools. This is not a design flaw but, rather a function of the times and security environment in which they were constructed. The committee is aware that our schools were designed as places of learning and not as fortresses but, recommends that long-range plans include improving access control in buildings that will be retained for the long term and that secured entrances be part of the design of any future schools. Additionally, first responders at the county and local level noted that radio reception within several building was extremely poor. As this can hamper fire and law enforcement personnel responding to incidents, the committee recommends installation of Bi-directional Amplification (BDA) systems within select buildings. This system is likely to become a retroactive requirement upon state adoption of the 2009 International Fire Code.

Specific findings and additional recommendations regarding each school are provided below.

Figure 3: School Exterior - EHS

Elizabeth High School

Overview: Elizabeth High School (EHS), built in 2000, is the newest of the five schools in the district. (fig 3) It is a 139,000 square foot facility on a 58 acre site designed to support a population of 1,100 students with approximately 750 currently enrolled. The school is located at 34500 County Road 13 just north of the intersection with State Road 86 in the town of Elizabeth.

Construction: Building construction of EHS can generally be described as a two-story structural steel frame supporting bar joists and metal floor and roof deck. The second floor has a concrete topping slab and the first floor is slab on grade, each with typical floor coverings. The exterior building walls are non-load bearing metal studs with 6" fiberglass batt insulation, exterior gypsum sheathing, and fifteen pound asphalt felt paper, and split faced CMU (concrete masonry unit) veneer and stucco at the upper half of the second story. The southern half of the building is of similar construction with the exception of the gym and locker rooms which are Single Wythe 12" load bearing CMU (split faced and ground faced). The roof has rigid

Figure 4: Back-up Generator- EHS

insulation covered with a ballasted EPDM (rubber roof membrane). Indoor air comfort is achieved via packaged roof top mounted HVAC units with Direct Expansion Unitary Cooling Systems (DX Cooling).

Utilities: EHS receives electricity via a single power line feed. Back-up power for life/safety systems is provided via an emergency generator with an automatic transfer switch. (fig 4) Domestic water is received from the city's public water utility and the fire hydrants and suppression systems are on a looped system. Public utility natural gas provides fuel for heating the building. The annual utility cost per student is $260 based on current enrollment.

Assessment:

Figure 5: Water Damage - EHS

Overall Condition: The committee found EHS to be in generally very good condition. The building is well cared for by both custodial staff and the student body. There is clear evidence of pride in the school and little or no signs of abuse, graffiti, or neglect in regard to routine housekeeping. Moisture infiltration and condensation (fig 5) and deterioration of paved areas were the major issues found during on-site inspections. The top areas of concern raised by school staff were roof/door/window issues, air-conditioning, and building security. The committee believes that though there are issues which should be addressed in the near term, the overall condition of this building will not change appreciably in the next twelve to twenty-four months.

Figure 6: Roof Drain Bowl - EHS

Interior: The committee was provided full access to the school and assessed the condition of 98 classrooms, labs, storage areas, offices, bathrooms, locker-rooms, common-use and multi-use areas. (See Appendix II for detailed notes on all findings organized by CSI Division and Room Number.) As noted above, the school is in remarkably good condition. ADA access is good as would be expected in a building of this age. Interior and exterior doors are in good condition though post-construction door stops have been added that reduce fire-ratings. In many rooms, water infiltration and/or condensation around windows has resulted in damaged gypsum board and failure of painted surfaces though the walls are generally in very good condition. Similarly, condensation from uninsulated roof drains (fig 6) has led to staining of ceiling tiles in many locations throughout the school. At various locations throughout the building there are missing electrical outlet and switch cover plates and instances of excessive extension cords and power strips.

Exterior and Grounds: As with the interior of the building, few issues were found with the exterior of the building. Though the walls appear to be structurally sound, there are cracks on opposing sides of the two story projection on the front of the building on the eastern end. These cracks are from slab to roof line along the northern edges of the windows on the first and second story (Rooms C114/214 and C117/217). Additionally, there are extensive small cracks which could allow water infiltration on the stucco on the south east corner of the building (Room 318) and a crack above the lintel on the solid double doors at the center rear of the buildings main lobby indicating possible shifting of the building load above. Around the majority of the building perimeter weep holes that allow penetrating moisture to escape have been covered and walls are showing signs of efflorescence indicating failure of the waterproof coating originally applied to the CMU block. There were minimal signs of erosion around the building with the exception of the slope alongside rooms C318 and C319. Freeze/thaw cycles have caused some heaving and cracking of parking lot pavement in the main lots, sidewalk slabs and curbs that are

described more fully below.

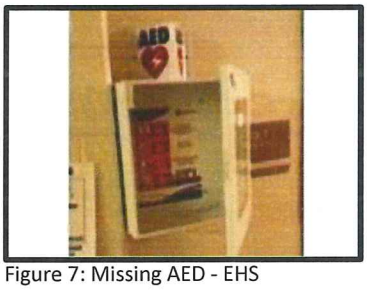

Figure 7: Missing AED - EHS

Safety: The school is relatively free of hazards though there is always room for improvement in this area. Hazards noted during the on-site inspections are as follows: In many classrooms, extensive use of extension cords and daisy-chained power strips were noted; both a trip and fire hazard. Throughout the school there are many broken or missing outlet and switch covers which expose users to electrical shock. Most classrooms have installed door stops that defeat the purpose of the automatic door closers and negate door fire ratings if these cause doors to remain open during a fire. Many toe-caps on main stairwell stairs are missing, loose, or held in place with duct tape; a trip hazard. Outdoors, there are extensive large cracks in the pavement of the main parking lots and at the joint between the sidewalk and the curb directly in front of the main entrance of the school; both trip hazards. Finally, though exterior lighting is generally adequate, the lights for one-third of the north-western main lot do not work increasing the trip/fall risk and risks of someone being struck by a vehicle. (Note: During the initial walk-though of this building, the AED (Automatic External Defibrillator) locker mounted outside the Health Office was found empty. (fig 7) The AED was present during a later inspection.)


Figure 8: Main Entryway - EHS

Security: The major security concern of the committee, staff, parents (as indicated on the ESD 2012-2013 Parent Safety Questionnaire) and first responders is access control. (fig 8) This is a large school with multiple entrances that are extensively used during the after school hours to support multiple extra-curricular activities. Doors are often propped open throughout the day and after hours to ease access for students as they come and go. Other specific findings and concerns regarding building security are found in Appendix VI of this report.

Recommendations:

Quick Fixes: For little or no cost, the district can improve the safety of its employees and students at this school by:

1) The district should inspect/repair and insulate all roof drains and bowls. Condensation on the bare metal on these drains generates significant moisture in the spaces above the drop ceilings. This has led to extensive staining of ceiling tiles and can promote mold growth and destroy interior finishes. This is a building longevity and health/safety issue.

2) School leadership should limit the use of power extension cords and power strips, and request maintenance support to replace broken and missing outlet and light switch covers, and ensure the proper fastening of free standing shelving and storage lockers throughout the school. This would eliminate the primary trip, crush and electrical fire threats noted during on-site inspections.

3) Though house-keeping in general is excellent throughout the school, the set construction shop behind the stage contains a multitude of partially used paints and some other flammables that should be disposed of or moved to a UL approved paint storage locker. Similarly, the dust collector in the fabrication (wood-working) shop associated with the technology classroom should emptied and regular removal of sawdust should be part of the daily close-out for this area.

4) The committee recommends a map with the location for all AEDs be posted by each device in the case that any one device is missing or out of service.

5) School leadership should continuously reinforce the importance of

securing exterior doors at all times to reduce the risk of entry by unauthorized individuals.

Urgent Requirements: The committee recommends that the district address the following items within this budget or the next budget year as funds become available:

1) The district should assess and repair the lighting in the main parking lot to the north east of the school. One-third of the lights in this lot do not operate and this is both a safety and security issue.

2) The district should inspect, and repair/replace or correct as needed, the exterior water repellent coating on the CMU block walls, joint seals, weep holes at the base of walls, and seals around window openings. The repellent coatings typically last five to seven years and they are a very important part of the building envelope. Moisture penetration through the masonry surface and trapped within the walls can lead to mold, damage to interior finishes and freeze/thaw effect can ultimately be destructive to the integrity of the wall and interior finishes. This is a structural and building longevity issue.

Major Projects: The committee recommends that the district plan for the correction of the following issues during the development and implementation of a facilities master plan:

1) The district should plan improvements in access control and physical security of the building. See Appendix VI for specific details regarding this recommendation.

2) The district should contract to repair the cracks in the main parking lots' asphalt surfaces. These cracks are likely too large to be addressed with a simple crack fill and will need to be cut out, patched, and the entire surface should be slurry coated, which should extend the remaining life expectancy and delay the eventual requirement for overlay or replacement. Pavement markings will need to be re-applied after slurry coat. By combining repair with similar requirements at other schools the district would likely receive a cost benefit due to economies of scale.

3) The district should inspect and plan for eventual repair/replacement of the DX cooling units and other rooftop ventilation components of this building. Visual inspection indicates that automatic dampers on several units have failed and/or are not working properly and this can result in unreliable temperature control and increased heating and cooling costs.

Repair/Replacement/Improvement Costs: A recent CDE report estimates that EHS has thirty-seven years of service life remaining and a current replacement value of $41.3 million. The report indicates that the cost to correct all deficiencies and bring all building systems to a "like new" condition (or *Condition Budget*) is $7.9 million. Seventy percent of the condition budget is allocated toward life-span related expenses related to the school's HVAC system. As noted above, specific annual repair and maintenance expenditures for this building are not available as they are tracked within a district-wide account. The district issued bonds to pay for the original construction of this school. The repayment of these bonds will cost the district approximately $13.6M between now and the anticipated 2020 pay-off date.

Figure 9: School Exterior - FHS

Frontier High School

Overview: Frontier High School (FHS), built in 1920, is the oldest of the five schools in the district. (fig 9) It is a 51,000 square foot facility on a five acre site. Originally designed to support a Kindergarten through Twelfth Grade population of approximately 400, it now houses an alternative High School with 65 students enrolled and a pre-K/day-care center with a capacity of 52 children. Pre-K/day-care operations are conducted in a one-story addition constructed in 1971. Several community organizations regularly use space on the second floor of the building and the third level houses the Elbert County Emergency Operations Center (EOC). The school is located at 589 Banner Street in the town of Elizabeth.

Construction: The original portion of FHS is of brick and multiple building additions have been made over its 93 years. Most of the newer construction appears to be load bearing CMU with brick veneers in some areas and stucco or plaster veneers in others. The newer portions of the building are single story and the original building has three floors with a basement. There is a mix of concrete, masonry, steel and wood construction throughout this facility. The pre-K/day-care portion of this building has a fire sprinkler system installed.

Utilities: FHS receives electricity via a single power line feed. Life/safety system power back-up is provided by battery. Domestic water is received from the city's public water utility. Public utility natural gas provides fuel for heating the building. The building is not air conditioned. HVAC operation is controlled centrally from a location at FHS. The annual utility cost per child is $680 based on current high school enrollment and assuming pre-K/day-care is operated at full capacity.

Assessment:

Figure 10: Deterioration - FHS

Overall Condition: Though the building is well cared for by both custodial staff and the student body, the committee found FHS to be in generally very poor condition due to its excessive age. (fig 10) Moisture infiltration due to failing doors and windows and general structure deterioration, inadequacy of HVAC, and lack of internal communication capability were the major issues found during on-site inspections. The top areas of concern raised by school staff were window issues, air-conditioning, adequacy of parking and building security. The committee believes that even if issues recommended for immediate correction are addressed in the near term, this building will continue to deteriorate and planning to replace this building should begin immediately.

Interior: The committee was provided full access to the school and assessed the condition of the classrooms, offices, bathrooms, locker-rooms, common and multi-use areas. (See Appendix II for detailed notes on all findings organized by CSI Division and Room Number). As noted above, this school is in generally very poor condition. ADA compliance is poor as would be expected in a building of this age. Bathrooms are antiquated, indicate a long history of leaks and drain/vent failures, and are generally inaccessible to persons with disabilities. Interior and exterior doors are in need of repair or replacement. In many rooms, water infiltration and/or condensation has resulted in damaged walls and failure of painted surfaces. Windows throughout are in very poor

condition, are inadequately glaze, do not lock properly and offer little or no insulation value. There is a prominent crack in the exterior masonry wall at the south end of Room 115 through which air, moisture and light pass from the exterior. Wear and tear and age have caused significant deterioration of floors throughout the building. The custodial staff indicated that the heating system is in disrepair and several rooms are without heat regularly throughout the year. This is particularly troubling as it affects the pre-k/day-care portion of the building as well as the high school. In some areas, original rooms have been sub-divided and the resulting spaces have no heating systems. Electric space heaters are used extensively to overcome these issues.


Figure 11: Deteriorated Stucco - FHS

Exterior and Grounds: As with the interior, extensive issues were found with the exterior of the building. Though the walls appear to be generally sound, the brickwork of the original building requires repointing, stucco (fig 11) on newer parts of the building is failing and painted surfaces are peeling. All this indicates that the building is subject to excessive moisture infiltration which will inevitably result in structural failure. Freeze/thaw cycles have caused considerable heaving and cracking of parking lot pavement in the lot adjacent to the building. The parking lot used by students to the east of the building suffers from badly deteriorated and poorly supported asphalt and is inadequately unlit. It is not suitable for use during inclement weather. Sidewalk slabs and exterior staircases also show considerable deterioration.


Figure 12: Uneven Sidewalk - FHS

Safety: The physical condition of this school presents multiple hazards to students and employees. Issues noted during the on-site inspections are as follows: In many classrooms, extensive use of extension cords and daisy-chained power strips were noted; both a trip and fire hazard. Throughout the school there are many broken or missing outlet and switch covers which expose users to electrical shock. Extensive use of electric space heaters increases the risk of fire in this older building. One room on second floor is being utilized as a wood shop. There is no ventilation, exhaust or dust collection system in the room. Shop vacuums and window fans are used to help limit dust migration. This is a health and fire hazard. Multiple power cords on portable tools have had the ground pin removed thus creating a shock hazard. Floor coverings are uneven and excessive flexibility of subfloors in several second floor rooms on the eastern side of the original building are troubling; both are trip hazards. The gymnasium bleachers are antiquated and present a hazard due to their proximity to the playing surface. The announcer's podium protrudes toward the court area at head height. The light fixtures in the gymnasium are not designed to resist impact and lenses/bulbs could fall if struck by a ball. Outdoors, there are extensive trip hazards. There are large cracks in the pavement of the main lot as well as uneven sidewalks leading to the main doors (fig 12). The uneven surface of the student parking lot also exposes users to trip hazards. Finally, exterior lighting is generally inadequate. The unlit parking lots are of particular concern due to increased trip/fall risk and risks of someone being struck by a vehicle.

Security: The major security concern of the committee, staff and first responders is access control. This building is used by the alternative high school, a pre-K/day-care, and several community organizations. Though the pre-K/day-care has a separate entrance, it is not easily accessible by stroller and many patrons use the main high school entrance to access the facility. This main entrance is not easily observed from the main administrative office of the building. Panic devices on the doors between the high school and day-care

portions of the building are antiquated and do not function properly. The intercom system within the building does not work hampering the ability to communicate in an emergency situation. Other specific findings and concerns regarding building security are found in Appendix VI of this report.

Recommendations: The district should plan for the closure of this facility and replace both the alternative high-school and pre-K/day-care capability it provides during the development and implementation of a facilities master plan. In the interim, the committee recommends the following:

Quick Fixes: For little or no cost, the district can improve the safety of its employees and students by:

1) The school should strive to limit the use of extension cords, power strips and electrical space heaters. This would reduce the electrical fire threats noted during on-site inspections.

2) Maintenance staff should replace broken and missing outlet and light switch covers and staff should ensure the repair or replacement of power tools in the wood-working shop without proper electrical grounds. This will reduce the possibility of electric shock.

3) The school should limit the use of the wood-working shop until such time that a proper dust collection and ventilation system can be installed to reduce fire hazards.

4) Maintenance staff should ensure the proper fastening of free standing shelving and storage lockers throughout the school to reduce crushing hazards.

5) Maintenance staff should install padding to the announcer's podium in the gymnasium to reduce risk of head injury.

6) School leadership should continuously reinforce the importance of securing exterior doors at all times to reduce the risk of entry by unauthorized individuals.

Urgent Requirements: The committee recommends that the district address the following items within this budget or the next budget year as funds become available:

1) The district should assess and repair the heating system within this building. This will reduce the need for electric space heaters reducing fire risk and provide a healthier work and learning environment.

2) The district should repair the prominent crack in the south wall of Room 115 in order to reduce water and air infiltration.

3) The main entrance doors and doors separating the school and the day-care and associated panic closure hardware should be replaced to reduce the threat of unauthorized access to this building.

4) The parking lot used by students should be graded and graveled to reduce trip/slip/fall hazards when funding is available.

Major Projects: If economically feasible prior to replacement of this building:

1) The district should plan improvements in access control and physical security of the building. See Appendix IV for specific details regarding this

recommendation.

2) The district should contract to repair the building envelope to reduce or eliminate moisture and air infiltration in order to slow the continuing deterioration of the building and lower heating costs which are approximately three times higher than the other schools in the district.

3) If this building site is to be retained for future use, the district should consider repaving and lighting the student parking lot and repair the main parking lot of this school to increase safety of parents, staff, and students.

Repair/Replacement/Improvement Costs: A recent CDE report estimates that FHS has exceeded its service life by thirteen years and that the current replacement value of the building is $15.6 million. The report further indicates that the cost to correct all deficiencies and bring all building systems to a "like new" condition (or *Condition Budget*) is $11.8 million. Over twenty percent of the condition budget is allocated toward life-span related expenses related to the school's heating system, nearly ten percent to repairs of the roof and exterior walls and that extensive work on electrical and plumbing systems is required as well. As noted above, specific annual repair and maintenance expenditures for this building are not available as they are tracked within a district-wide account. However, it is clear that this building is costly to maintain and the expense it represents to the district will continue to rise over time.

Figure 13: Exterior - EMS

Elizabeth Middle School

Overview: Elizabeth Middle School (EMS), built in 1978 with additions in 1984 (additional classrooms) and 1988 (gymnasium and auditorium), is the second oldest of the five schools in the district. (fig 13) It was originally built to house the district high school and was repurposed as a middle school upon the construction of the current EHS. It is a 67,000 square foot facility on a 33 acre site. The school in its current form will support approximately 600 students with 496 currently enrolled. The school is located at 34427 County Road 13 just north of State Highway 86 in the town of Elizabeth.

Construction: As noted above, Elizabeth Middle School has had multiple additions over the years and as such there are several construction types. All building areas are single story with some areas utilizing load bearing CMU walls supporting structural steel, bar joists and metal roof deck. Other areas are structural steel framing with non-load bearing metal stud exterior wall framing, with masonry and stucco veneers. The gym appears to be pre-engineered metal building construction. The roof appears to be ballasted EPDM (rubber roof membrane). All floor systems areas appear to be concrete slab on grade with typical floor coverings.

Utilities: EMS receives electricity via a single power line feed. Life/safety power back-up is provided by battery but, this system requires validation. Domestic and fire water feed is received from the city's public water utility. Hydrants and the partial fire suppression system are on a closed loop system. Public utility natural gas provides fuel for heating the building. The building is not air conditioned. HVAC operation is centrally controlled from EHS. The annual utility cost per student is $220 based on current enrollment.