IGNACIO TOWN BOARD WORK SESSION AGENDA
Monday, August 8, 2022 – 5:30 PM
Abel F. Atencio Community Room, 570 Goddard Avenue
or via Remote Public Meeting

The Town conducts hybrid meetings which allows for remote attendance via Zoom. Remote attendees must login to the Zoom meeting website at the following address: https://us06web.zoom.us/j/81685989084, or Attendees participating by phone shall call: 346-248-7799 and key in Webinar ID Number: 816 8598 9084.

I. WORK SESSION TOPICS

A. ELHI Facility Discussion

II. MISCELLANEOUS

III. ADJOURNMENT

El Hi Facility

Facility Condition Assessment Report

Ignacio, CO

167859 | July 22 , 2022

Prepared For:

Town of Ignacio

Prepared By:

SEH

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El Hi Facility

Facility Condition Assessment

1.0 Introduction

1.1 Purpose

The Facility Condition Assessment is a detailed visual evaluation of the physical and functional performance of the facility. The assessment identifies deficiencies that are anticipated to be corrected or require action within the next five (5) years to provide uninterrupted operation of the systems and continuous delivery of services. The data from this assessment is used to plan, budget, and implement the repair, modernization and replacement of equipment and other systems and components at the facility. Additionally, the assessment may be used to determine whether repairs and upgrades to the facility are feasible, or if stakeholders and the community are better served by a full demolish and new build of the facility.

1.2 Scope

Short Elliott Hendrickson provided an on-site evaluation of the El Hi Facility located at 115 Ute Street, Ignacio, Colorado on June 14, 2022, and June 17, 2022. The site visits included visual inspection of all architectural, life safety, civil, structural, electrical and mechanical systems and their components. Interviews were held with client representatives during the site visit to clarify the history of the facility systems and to identify possible issues and concerns. The on-site evaluation resulted in the findings detailed in the following sections.

1.3 Survey Team Members

Jeffrey Hegg, AIA, Architect
Steven Halewski, PE, Structural Engineer
Joshua Sopata, PE, Electrical Engineer
Darren Stewart, PE, Civil Engineer
Christian Elsner, EIT, Mechanical Engineer

Client Representative

Mark Garcia – Town of Ignacio

1.4 Facility Description

The El Hi Facility, formerly known as Ignacio Elementary, is a single-story masonry structure with steel joist framing and slab on grade foundation and mechanical crawlspace. The facility was constructed in 1955, with a renovation and addition in 1964 to add the east classrooms, and another renovation and addition in 1992 to provide the multi-purpose space. The gross square footage of the facility is approximately 42,135 SF. The space currently operates as a community center. Hours of operation are standard business hours, seven days per week.

1.5 Reference Codes

- American with Disabilities Act (ADA) Guidelines for Buildings and Facilities
- National Fire Protection Associations (NFPA) 101, NFPA 70 (NEC)
- International Building Code (IBC)
- International Fire Code (IFC)
- International Fuel Gas Code (IFGC)
- International Existing Building Code (IEBC)
- International Energy Conservation Code (IECC)
- International Plumbing Code (IPC)
- International Mechanical Code (IMC)
- Local Building Codes

2.0 Facility Condition Survey Results

2.1 Architectural

Virtually all glazing and exterior doors are at the end of useful life. Most of the tile and carpet is significantly degraded and in need of replacement. In numerous areas the ceiling tile and finishes have considerable deterioration. There is evidence of water infiltration in several locations of the building. Most of the roofing, as well as the associated soffits and fascia, is at the end of useful life. It is the expectation that any improvement project will carry a significant potential of asbestos abatement and remediation.

2.1.1 Finding A1: Stained Ceilings - Mold

Multiple instances of stained ceilings were observed. The likely cause is a combination of roof leaks and clogged condensate drains. It is very probable that the building has high levels of mold.

Stained Ceilings

Recommendation: Several areas of the ceiling should be replaced, and intensive mold inspection and testing is highly recommended.

2.1.2 Finding A2: Deteriorated Glazing System

Virtually all the exterior glazing systems are single pane and have deteriorated to the end of useful life. Evidence of water infiltration was present in numerous locations. This state of deterioration significantly impacts the building energy performance and occupant comfort.

Deteriorated Glazing

Recommendation: Replace windows for most of the building.

2.1.3 Finding A3: Corroded Exterior Doors

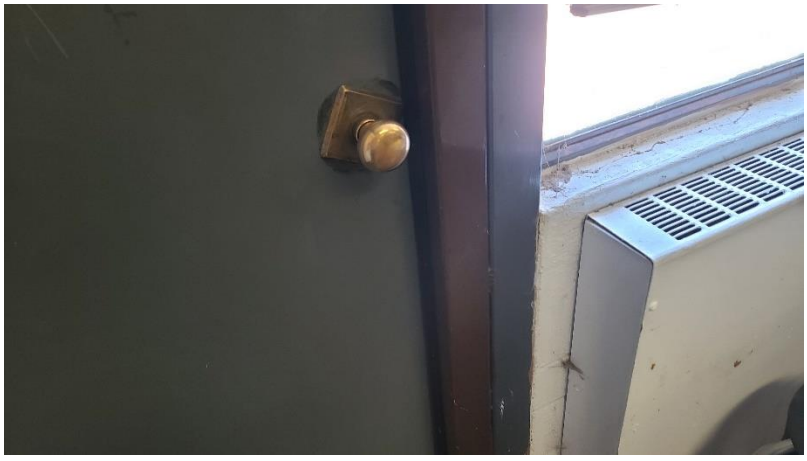
Most exterior doors are at the end of useful life. Steel doors and frames have significant corrosion and delamination. Instances of rot were observed at wood doors and frames. These are good indications that the core of the door has been compromised as well, making it ineligible for repair.

Corroded Exterior Door

Recommendation: Replace most doors in the building.

2.1.4 Finding A4: Door Hardware

Many areas throughout the building lack ADA compliant door hardware. Several instances of loose/damaged hardware were also observed.



Non-ADA Compliant Door Hardware

Recommendation: Replace door hardware on most doors in the building.

2.1.5 Finding A5: Carpeting – Worn and Stained

While some areas were observed with newer carpet instillation, several areas remain worn and stained. Some carpeting has degraded to the point of being a tripping hazzard.

Worn and Stained Carpet

Recommendation: Replace all carpeting that is at the end of its useful life.

2.1.6 Finding A6: Bathroom Condition and Accessibility

While there are some bathroom conditions that adhere to ADA standards, the facility has not achieved over all ADA accessibility. Under sink piping is exposed throughout the facility, presenting a scalding risk to those without feeling in lower extremities. Several bathrooms lack toilets with grab bars and proper seat heights. ADA sinks and drinking fountains were lacking in most locations. Additionally, many of the toilet partitions are in poor condition and are not sized to accommodate use by adults.

Non-ADA Compliant Restroom

Recommendation: Update bathrooms to meet current ADA standards and intended use.

2.1.7 Finding A7: Damaged Masonry

The masonry has intermediate damage. Spalled brick and missing mortar was observed in isolated locations, but no systemic issues appear to be present.

Spalled Brick and Missing Mortar

Recommendation: spot repair masonry and mortar as needed.

2.1.8 Finding A8: Metal Roofing – Lifting Fasteners

While the metal roof panels look to be in good condtion in many areas, there are sections of the roof that have significant weathering and are at end of their useful lifespan. Near eaves of many of the panels, both good and poor condition, the fasteners are backing out, which is an indication that structure andsubstrate is failing and the roof is lifting during stronger wind events.

Lifted Fasteners on Roof

Recommendation: Repair or replace the older roof panels and repair structure/substrate as needed.

2.1.9 Finding A9: Membrane Roofing – Deterioration

While no evidance of recent leaking was present, there are signs that the roofing is nearing end of design life. Facility Staff indicated patching has been needed in recent years. Also alligatoring is present in many locations, especially at roof seams. Given the regional climate, black membrane roofing does not typically have a long lifespan.

Deteriorated Roof System

Recommendation: Replace existing membrane with white membrane roof to ensure a permanent solution.

2.1.10 Finding A10: Wood Eaves and Soffits – Deterioration

Where painted wood eaves are present, significant peeling paint and rot is generally visible.

Peeling Paint and Rot on Wood Eaves

Recommendation: Replace most of the wood soffits with new wood backer and provide prefinished metal fascia.

2.1.11 Finding A11: Wood Siding at Parapet

Several areas of the wood siding at end walls of the roof were observed with generally failing coating and evidence of mildew and water damge.

Mildew and Water Damage at Parapet Wood Siding

Recommendation: Replace parapet wood siding with a more durable material, such as metal siding.

2.2 Civil

The main asphalt driveway and parking lot exhibited longitudinal, lateral and alligator cracking as well as severe weathering. Longitudinal and lateral pavement cracks may be sealed to extend the life of the asphalt pavement for the short term. However, for a long-term solution, a full depth replacement of the pavement is necessary. Pavement markings are highly faded and are only present on the ADA parking spaces. The rest of the parking lot has unstriped parking. The parking lot has an estimated capacity of 30-40 spaces but requires striping to define parking spaces. Two ADA spaces with unloading aisles are striped at the front of the building. Running and side slopes are in accordance with ADA standards.

Stormwater runoff consists of direct roof runoff from the sloped portions of the roof over much of the building. There are no gutters or downspouts in these areas. The gymnasium has a flat roof with downspouts. In general, the site lacks positive runoff away from the structure, and there are no storm drains present. The front entrance of the building is mostly paved which helps mitigate the drainage concerns, but there are multiple areas where drainage pools near the building and infiltrates to the foundation.

2.2.1 Finding C1: Inadequate Drainage on North Side of Building

Description: There are two roof drain downspout outlets (lamb tongues) on the north side of the building with inadequate drainage. These outlets are located 2-ft above the exterior grade, and PVC pipes have been added to each outlet to get the runoff further away from the building. The PVC pipes do not appear securely attached and represent a tripping hazard on the site. Plus the pipes do not extend further than 5-ft, and the gravel parking area does not appear to have sufficient positive drainage to convey runoff away from the building.

Roof spout drain on north side

Recommendation: A landscape drain system should be installed to collect roof downspouts and drain site runoff away from the foundation to the east side of the building where grade change will allow a storm drain to daylight.

2.2.2 Finding C2: Inadequate ADA access on north side of building

Description: There are three doors into the building located on the north side, two of these have concrete landings outside the door. The doors open to the gravel parking area without a paved walkway connecting them to the front of the building or street.

Entry on the north side of building with no walkway

Recommendation: A paved walkway linking these doors with the main parking area is required if these doors are to be used for ingress/egress.

2.2.3 Finding C3: Inadequate ADA access on east side of building

Description: There are multiple doors located on the east side of the building. Each door has a drop at the threshold of a few inches and than a concrete landing. The concrete landings sit an inch or two above the exterior play area pavement. The grade drop at the tresholds, grade drop at the concrete landings, and the cross slope of the existing paved area all exceed ADA requirements.

Entry on east side of building with concrete stoops.

Recommendation: To provide adequate ADA access to these doors, a new paved walkway would need to be constructed from the main parking area to the east side of the building. This would require grading and drainage improvements as well.

2.2.4 Finding C4: Inadequate ADA access on west side of building

Description: A paved sidewalk on the west side of the building accesses multiple doors, an interior courtyard and provides access to the play area on the south side. This sidewalk exceeds ADA standards for cross slope and running slope in mulitiple locations. Additionally, access to the interior courtyard and one door is provided by a concrete risers without a ramp option. The existing sidewalk also has a blocked sidewalk chase drain that needs to be repaired or replaced.

Entry on the south side of building with concrete step.

Recommendation: To provide adequate ADA access, the existing paved walk needs to be removed and replaced with a new paved walkway. Additionally, ramps meeting ADA requirements need to be added to provide ADA access to ingress/egress locations on this side of the building. This will require grading and drainage improvements as well.

2.2.5 Finding C5: Existing public utility mains and overhead lines are located within the building footprint.

Description: The Town of Ignacio ARCGIS database shows a water main and sewer main located within the building footprint on a north-south axis primarily through the courtyards. This needs to be confirmed with utility locate methods. Also, an overhead electric line is located on the same alignment and spans over portions of the building.

Image from ARCGIS showing sewer/water main locations

Recommendation: If confirmed, the water and sewer mains will impact future development of the site. The mains need to be relocated before new building construction can be performed on the site. The presence of the mains also puts the existing building at greater risk from damage from leaks or required maintenance. The overhead electric line should also be relocated around the site prior to any redevelopment.

2.2.6 Finding C7: Existing paved parking area shows signs of failure

Description: The existing paved parking area on the west side of the building shows both longitudinal and lateral cracking as well as areas of alligator cracking. Additionally, the paved surface is worn and unraveling to gravel. The majority of the parking area is unstriped which leads to inefficient parking. ADA parking spaces are striped but do not meet current dimension and signage requirements.

Paved parking area no west side with cracking.

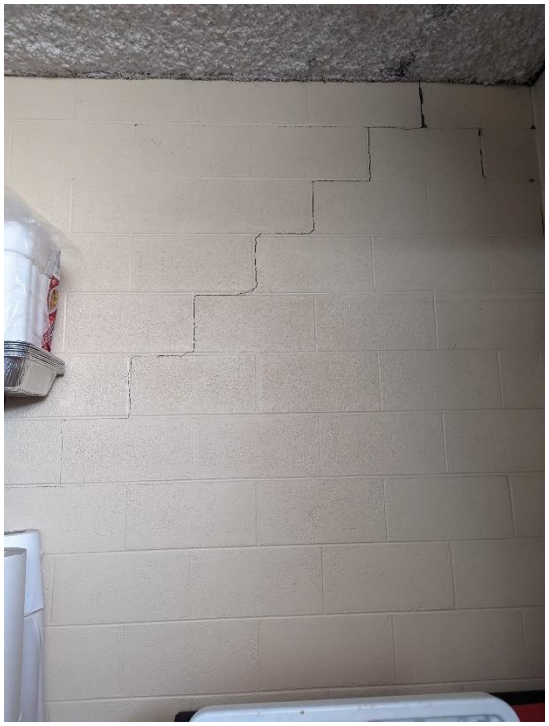
Recommendation: Short term measures such as crack sealing may prolong the useful life of the surface. The pavement will need to be removed and replaced in the near future. The new paved area should be striped to delineate parking spaces and drive aisles.

2.3 Structural

The El Hi Community Center is a single-story masonry structure, with a brick veneer on most of the exterior. The roof consists of both steel and wood framing in different areas, and the foundation is believed to be shallow concrete footers.

2.3.1 Finding S1: Masonry Cracking

There is extensive cracking in the masonry walls throughout the building. The cracking is found in both load bearing and non load bearing walls. The side of the building currently being used by the charter school exhibits cracking in nearly all of the partition walls between classrooms. The location and consistency of these cracks is consistent with settlement of the exterior wall. It was not possible to observe the foundation below grade, so a detailed survey would need to be performed to determine the magnitude of any settlement.



Masonry Cracking

2.3.2 Finding S2: Compromised Joist Bearing

The wall support locations for the steel joist at the cafeteria exit door are compromised. The masonry has cracked and shifted at both ends of the joist.

Compromised Joist Bearing

2.3.3 Finding S3: Buckled Steel Joist

The original steel roof joists in the kiln room (room 20) have buckled. The joists appear to be fabricated out of bar stock, and these bar stock web members have failed in the weak direction. While these steel members no longer make up the roof framing, the new wood roof is supported in the attic with a wood pony wall that bears on the existing joists. This pony wall concentrates the roof loads that were previously distributed along the joist to a single point. While the total load on the joist is similar to the original design, open web steel joists are not designed to carry large point loads, which has likely led to the buckling of the joist.

Buckled Steel Joist

2.3.4 Finding S4: Entry Canopy Column

One of the columns supporting the entry canopy has deflected and separated from the building

Entry Canopy Column

2.3.5 Finding S5: Roof Deflection

The roof framing above the original classroom portion of the buildings has deflected, leading to a noticeable sag in the middle of the framing span.

2.4 Electrical

Power Distribution

La Plata Electric Association, Inc is providing electric power to the El Hi Community Center. The building is supplied with two incoming electrical services. One electrical service is a 208Y/120-Volt 3-Phase 4-Wire service and is fed from the pole mounted utility transformer located on the corner of Shoshone St and Golden Ave. The corresponding electric meter and service disconnect are wall mounted on the exterior of the building in the parking lot area. The Main Distribution Panel (MDP) is located behind the stage of the multi-purpose gymnastics room in a mechanical room. This MDP is rated for 600-Amps. The other electrical service is a 120/240-Volt 1-Phase 3-Wire service and is fed from a pole mounted utility transformer across CO Highway 151. The 1-Phase service is fed underground into the building to the corresponding MDP located in the boiler room. The MDP contains the service disconnect which is a 300-Amp circuit breaker.

The National Electric Code requires facilities with more than one service entrance to have signage informing first responders and/or any maintenance staff of the fact that there are multiple electrical service entrances as well as where the service disconnects are located. The El Hi Community Center does not have any such signage.

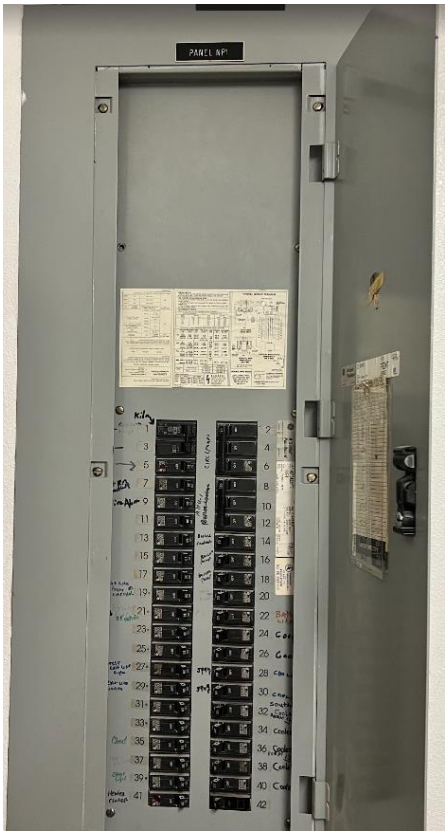
3-Phase Service MDP

1-Phase Service MDP

The division of electrical distribution between the two is not fully known as electrical drawings were not available at the time of the assessment. However, the Panelboards throughout the building are of mixed age, manufacturer, and style. Many of the panelboards are load center type electrical panels and thus are not commercial grade equipment. In addition, many of the panelboards and circuit breakers are beyond their useful life and do not meet current code. The building was designed and constructed prior to the application and use of IT equipment. As a result, most of the spaces do not have an adequate number of receptacles or data ports.

The El Hi Community Center does not have an emergency back-up power system.

The current electrical distribution system should be completely replaced with a single electrical service and brought up to code in all spaces. This would include replacing most, if not all, existing wiring, receptacles, switches, and other electrical devices due to age and non-code compliance.



Typical 3-Phase Service Electrical Panel

Typical 1-Phase Service Electrical Panel

Grounding and Lightning Protection

The El Hi Community Center grounding system could not be observed for either of the service entrances. In addition, the electrical drawings were not available during the assessment; therefore, the facility grounding system could not be determined.

The facility does not have a lightning protection system installed on the roof. A transient voltage surge suppression (TVSS) device is not installed at either of the service entrance MDPs to protect facility wide electronic equipment from lightning surge in either of the electrical distribution systems. At the very least, any panel which feeds power to an IT-room or computer equipment should have a TVSS installed. The lightning protection system requirement should be investigated by a registered lightning protection system professional engineer.

Interior Lighting

Interior lighting throughout the El Hi Community Center consists of mainly recessed, suspended, and surface mount fluorescent fixtures. The fluorescent fixtures vary in color temperature and diffuser style. Many fixtures throughout the building were observed with discolored or damaged diffusers. Automatic lighting controls did not appear to be installed in any of the building spaces.

Typical Recessed Fluorescent Fixture

Typical Suspended Fluorescent Fixture

Typical Surface Fluorescent Fixture

Egress Lighting

Exit signs are inconsistent and sometimes confusing as most do not have the directional arrows showing. Very few of the signs appeared to be LED lit. It should also be noted that in many of the classrooms there is an exit to the outside. This classroom exit is not marked with a powered, battery backed-up, and/or lit exit sign. This exit is only marked with a non-powered exit placard.

Emergency egress lighting is inadequate throughout most, if not all, of the building interior spaces. There were not any surface mounted emergency lighting units (frog-eyes) observed within the building spaces. The same can be said for the exterior of the building. There are switch controlled fixtures at most building entrances and exits, however, none of these fixtures appear to have battery back-up power in case of a power outage.

A thorough, interior and exterior, life-safety investigation should be conducted by an expert in the life-safety standards. The findings and corrective actions should be incorporated into the building to ensure the El Hi Community Center is brought up to current code and to ensure the safety of any occupants and possible first responders.

Typical Red Emergency Exit Sign

Typical Green Emergency Exit Sign

Typical Classroom Exit Placard

Exterior Lighting

Exterior lighting at the El Hi Community Center is inconsistent. As mentioned previously, most entrances and exits have switch controlled exterior surface mount light fixture. The fixture type and style vary at each entrance/exit. There are a few wall-mounted security light fixtures, that appear to be motion sensing, on the East side of the building facing the playground. However, these appear to be the only security lighting around the building except for the parking lot lighting. In general, the site lighting does not appear adequate in the parking lot or along walkways to building entrances.

Main Entrance Light Fixture

Side Entrance Light Fixture

Fire Alarm and Detection System

The building does have a fire alarm and detection system. Detection and annunciation devices are located throughout the facility. However, it is unknown if every space is monitored and controlled properly based on current usage due to building modifications since the system was installed. The fire detection and annunciation devices are monitored and controlled by a Silent Knight Fire Alarm Control Panel (FACP). The FACP is located in the same mechanical room as the 3-Phase electrical service MDP, behind the multi-purpose room stage. As part of the life safety investigation already mentioned in the egress lighting section, the fire alarm system coverage should be investigated space-by space throughout the building to ensure the safety of any occupants.

Fire Alarm Control Panel

CCTV System

The ELHI Community Center does have a closed-circuit camera system. The camera type and style appear to vary from camera to camera. The cameras are positioned around the exterior of the building and interior to the building at the main entrances and exits. The cameras and components appear relatively new and in good condition. However, it is unknown whether the system is operational and functioning as intended.

Typical Indoor Camera

Typical Outdoor Camera

Door Access System

The facility does not have an electronic door access system. Interior and exterior doors, where lockable, were opened via staff or maintenance keys.

2.4.1 Finding E1: Electrical Distribution Equipment Beyond Useful Life

Description: The 120/240-Volt 1-Phase 3-Wire electrical distribution equipment is beyond its useful life and no longer meets the National Electric Code. In addition, many of the receptacles, light switches, and other electrical devices throughout the building are damaged or beyond their useful life.

Figure 16: Existing 1-Phase Electrical Service MDP

Recommendation: Eliminate the 1-Phase electrical distribution system completely. Replace the existing 3-Phase service equipment and service conductors. Upgrade and expand a new 3-phase electrical service to the entire building. This shall include a new MDP, new electrical panels, new feeder and branch circuit conductors, as well as replacement of any damaged or beyond useful life electrical devices.

2.4.2 Finding E2: Exit Sign Placards Do Not Meet Life Safety Code

Description: The ELHI Community Center contains many instances of placard style exit signs. These signs are not illuminated under any power status (normal or emergency) and are just affixed to the wall above the doorways. This is a life safety code violation.

Figure 17: Current Basement Layout

Recommendation: Contract a life safety standards specialist to conduct a space-by-space investigation of interior and exterior of the building to ensure the safety of any occupants and/or first responders.

2.4.3 Finding E3: Emergency Egress Lighting is Inadequate

Description: The El Hi Community Center does not have adequate interior or exterior emergency egress lighting.

Recommendation: As part of Finding E2, contract a life safety standards specialist to conduct a space-by-space investigation of interior and exterior of the building to ensure the safety of any occupants and/or first responders.

2.4.4 Finding E4: General LED Lighting Upgrade

Description: The lighting throughout the El Hi Community Center consists of inefficient fluorescent fixtures. The upgrade to LED fixtures and installation of automatic controls would increase energy efficiency, reduce utility electricity costs, as well as reducing maintenance costs associated with fluorescent fixtures.

Figure 18: Example Fluorescent Fixture

Recommendation: Replace fluorescent fixtures throughout the building with LED type fixtures and install automatic controls in appropriate spaces.

2.4.5 Finding E5: Two Electrical Services Feed the Building without Appropriate Signage

Description: There are two existing electrical services that feed the ELHI Community Center. There is currently no signage outlining the fact that there are multiple services or their respective disconnect locations. This is an NEC code violation

Recommendation: Install appropriate signage in compliance with NEC 230.2(E).

2.4.6 Finding E6: Transient Voltage Surge Suppression Not Installed

Description: Neither of the electrical distribution systems present in the ELHI Community Center have transient voltage surge suppression (TVSS) installed. This finding includes either service entrance MDP, as well as any of the electrical panels in the building.

Recommendation: Install a transient voltage surge suppression device at each of the electrical service MDPs or at each electrical panel which feeds IT equipment.

2.5 Mechanical

The HVAC System consists of:

- (8) Evaporative Cooling Dedicated Outdoor Air Units (Swamp Cooler)
- (12) Packaged Terminal Air Conditioners with Hydronic Heating Coils (PTAC)
- (4) Gas-Fired Hot Water Boilers and associated pumps
- Hydronic baseboard heaters
- Bathroom exhaust fans
- Kitchen vent hood

The eight Swamp Coolers provide ventilation, and evaporative cooling to the classrooms on the west (original) side of the building. The twelve PTACs provide heating, cooling and ventilation to the classrooms on the east (newer) side of the building. Heating is provided by the four modulating gas fired boilers serving the PTACs unit ventilators heating coils as well as radiant baseboard heaters throughout the building. Boilers and recirculation pumps for the boiler plants are located in the boiler rooms.

The restroom exhaust fans are mounted on the roof and are controlled by switches located in the restroom. The fans were observed making loud rattling noises and are in poor condition.

The Plumbing system consists of:

- Domestic cold water
- Recirculated domestic hot water, with (4) electric integral tank water heaters
- Sanitary waste, drain, and vent

Domestic and sanitary piping systems serve fixtures in restrooms and the kitchen. The four electric water heaters are located in the boiler rooms. The system runs 24 hours per day, 7 days a week. The water heaters are in fair condition with no observed deficiencies or concerns.

The facility does not have an automatic fire sprinkler system. Fire extinguisher cabinets are installed throughout the building per fire code.

2.5.1 Finding M1: Swamp Coolers Beyond Design Life

Description: The existing swamp coolers are original to the construction of the facility and are beyond their design life.

Swamp Cooler

Recommendation: Remove existing HVAC systems throughout the building. Engage a mechanical engineer to perform ventilation calculations and determine the building's heating and cooling requirements. Replace existing HVAC systems with new central, forced air HVAC system with ducted supply and returns to all rooms.

2.5.2 Finding M2: PTAC's Beyond Design Life

Description: PTACs located in the classrooms on the east (newest) side of the building are original to the addition and are beyond their design lives.

Classroom Unit Ventilator

Recommendation: Demo and remove the PTACs in the classrooms on the east side of the building.

2.5.3 Finding M4: Replace Boilers and Associated Pumps

Description: The four (4) gas-fired boilers and associated boiler pumps are original to the building and are beyond their design lives. Corrosion and damage were observed on serval boiler pumps. This is an energy savings opportunity.

Existing Gas-Fired Furnace

Recommendation: Replace the four (4) gas-fired boilers with high-efficiency modular boilers sized for new use and capacity. Replace the existing boiler pumps with new pumps sized for new use and capacity.

2.5.4 Finding M5: Replace Bathroom Exhaust Fans

Description: The exhaust fans in all restrooms are original to the building and are beyond their useful lives. The exhaust fans were observed to be excessively loud and rattling. This is typically a sign that the fan has reached its design life as the bearings fail or the fins fall out of alignment.

Bathroom Exhaust Fan on Roof

Recommendation: Furnish and install new exhaust fans for all restrooms.

2.5.5 Finding M6: Replace Baseboard Heaters

Description: The baseboard heaters are original to the building and are beyond their useful lives. Several baseboard heaters throughout the building were observed to be damaged.

Baseboard Heater

Recommendation: Remove and replace the baseboard unit heaters throughout the building with units of similar capacities.

2.5.6 Finding M7: Replace HVAC Controls

Description: The thermostats throughout the building are original to the building and are beyond their useful lives. The thermostats require frequent maintenance and can be considered obsolete.

Existing Thermostat

Recommendation: Replace all thermostats with individual programmable thermostats.

2.5.7 Finding M8: IT Room Requires Mini-Split AC System

Description: There is no cooling system for the IT/Computer room in the library. The room gets excessively hot, which can cause the IT equipment to not function as intended.

Existing IT/Computer Room

Recommendation: Furnish and install a mini-split air conditioner for the IT/Computer room in the library.

2.5.8 Finding M9: Replace Plumbing Fixtures

Description: Plumbing fixtures are original to the building and beyond their design lives. Plumbing fixtures are non-ADA compliant throughout the facility.

Existing Plumbing Fixtures

Recommendation: Replace all plumbing fixtures throughout building with ADA compliant, low-flow fixtures.

2.5.9 Finding M10: Replace Piping Systems

Description: hot water, cold water, and sanitary waste plumbing systems are original to the building are approaching the end of their useful lives. Extensive damage and corrosion was observed on piping in all mechanical boiler rooms. Hot water piping insulation was observed to be damaged or missing in several locations.

Damaged Hot Water Pipe Insulation

Recommendation: Replace hot water, cold water, and sanitary systems throughout the building as well as all associated pumps and appurtenances.

2.5.10 Finding M11: Grease Trap Cleanout

Description: Facility staff mentioned the grease trap is in need of being cleaned out. Staff previously received a quote to clean the grease trap for approximately $35,000.

Recommendation: Engage a cleaning technician to clean the sanitary grease trap.

2.5.11 Finding M12: Install Fire Protection System

Description: There is no fire protection system installed in the main building. An NFPA 13 automatic sprinkler system is required for the current and future occupancy of the facility.

Typical Missing Fire Sprinklers in Attic Space

Recommendation: Furnish and install a fire sprinkler system throughout the main building as required by NFPA 13 code.

2.5.12 Finding M13: Clean Roof Drains

Description: The roof drains were observed to be clogged with leaves and other debris. Ponding and damage to the roof can occur if water is unable to adequately drain through the roof drains.

Clogged Roof Drain

Recommendation: Clean and clear the roof drains of leaves and debris. Develop maintenance schedule for routine cleaning of roof drains and downspouts to prevent future blockages.

3.0 Summary of Recommendations

During the site visit, it was determined that the findings were severe enough to warrant the recommendation to demolish the existing facility and build new a facility that meets all current building/ADA/life safety codes as well as the needs of the community.

The major findings that led the assessment team to this conclusion are the structural deficiencies in the building that would necessitate extensive redesign and repair to the existing framework as well as settlement issues which may require costly foundation work. The MEP systems are all beyond their design life and cannot be easily redesigned or reworked to serve a renovated facility. Therefore, a full replacement and new design is required. Many of the finishes throughout the facility are deteriorated and show evidence of water infiltration. This issue is apparent throughout the facility and requires extensive renovation as well as a full roof replacement to address the leaks. There are major life safety and ADA concerns as well, such as the lack of an automatic sprinkler system and deficiencies in ADA access to the facility. Finally, the locations of sanitary sewer and electric utilities in the area are cause for concern as costly utility relocations will be required as part of a major renovation.

4.0 Cost Opinion

A cost opinion has been provided for the asbestos, lead, and mold remediation, as well as the demolition of the existing building. The total estimated cost of the remediation efforts is approximately $436,0000. The total estimated cost of the demolition of the existing building is $794,000.

The asbestos abatement is estimated based on a $/sqft basis with 29,000 sqft selected as the area based on the 2009 El Hi Asbestos Report. Lead abatement is also estimated on a $/sqft basis with 25% of the total building square footage used as the baseline area. Mold remediation is also estimated on a $/sqft basis with 20% of the total building square footage used as the baseline area.

The demolition is divided into structure, foundation, utilities, groundwork, and hauling/hazardous material disposal. A FEMA calculation was used, which assumes 33% of the total cubic foot volume of the building is comparable to the volume of demolition required. The largest component of the demolition cost is the foundation demolition. The foundation may be abandoned in place, but if future development is anticipated on the site, the foundation will need to be removed in order to build anew.

El Hi Facility Condition Assessment

Cost Estimate Worksheet - Building Demo and Abatement

Ver 1.0 March 3, 2020

Building:	EL HI FACILITY
Project Name:	EL HI FACILITY CONDITION ASSESSMENT
Location within Building:	WHOLE BUILDING / VARIOUS
Date of Estimate:	Friday, July 29, 2022
Cost Estimate Data Source:	RS MEANS - 2022
Name/Company of Estimator:	M. Massa - SEH
Scope of Work:	Provide Asbestos, Lead and Mold Abatement for entirety of affected areas in the El Hi Facility prior to demolition. Demolish entire facility including foundations. Cap utilities and prep site for future construction.

	ITEM	LABOR	MATERIAL	EQUIPMENT	CONTINGENCY (10%)	OVERHEAD & PROFIT (15%)	TOTALS
1	Asbestos Abatement (29,000 SF)	$ 160,225.00	$ -	$ 28,275.00	$ 18,850.00	$ 28,275.00	$ 235,625.00
2	Lead Abatement (10,534 SF)	$ 75,843.00	$ -	$ 8,427.00	$ 8,427.00	$ 12,640.50	$ 105,337.50
3	Mold Abatement (8,427 SF)	$ 75,843.00		$ -	$ 7,584.30	$ 11,376.45	$ 94,803.75
	ABATEMENT SUBTOTAL	**$ 311,911.00**	**$ -**	**$ 36,702.00**	**$ 34,861.30**	**$ 52,291.95**	**$ 435,766.25**
4	Demolish Building (6,180 CY)	$ 36,708.10	$ -	$ 30,033.90	$ 6,674.20	$ 10,011.30	$ 83,427.50
5	Demolish Foundation (1,030 CY)	$ 446,638.90	$ -	$ 61,338.00	$ 50,797.69	$ 76,196.54	$ 634,971.13
6	Demolish and Cap Utilities (Lump Sum)	$ 5,000.00	$ -	$ -	$ 500.00	$ 750.00	$ 6,250.00
7	Earthwork - General Fill (3,121 CY)	$ 2,715.27	$ -	$ 4,275.77	$ 699.10	$ 1,048.66	$ 8,738.80
8	Demo - Hauling (7,210 CY)	$ 28,335.30	$ -	$ 19,899.60	$ 4,823.49	$ 7,235.24	$ 60,293.63
	DEMOLITION SUBTOTAL	**$ 519,397.57**	**$ -**	**$ 115,547.27**	**$ 63,494.48**	**$ 95,241.73**	**$ 793,681.05**
							-
							-
							-
							-
							-
							$ 1,229,447.30
						TOTAL COST	**$ 1,229,500.00**