

Jeremy Ranch Elementary Facility Analysis

FINDINGS/CONCLUSIONS

FINDINGS

General

Jeremy Ranch Elementary School was completed in 1994 and is one of the newer schools the in Park City School District. It is a prototype school, based on the same model as McPolin Elementary; however, the classroom wings to the south were extended making it significantly larger than McPolin. The school currently has over 700 children enrolled making it a large elementary school for almost any Utah School District.

The school's site is located East of I-80 on the frontage road. Despite its immediate highway adjacency, an elevation change makes the school lower than the highway and lends to its secluded setting. The site has been developed with separate areas for parent drop-off in front of the school and bus drop off to the north. While this separation is desirable, problems exist within each area. The bus drop-off lacks adjacency to the school, as it requires kids to walk through a playground area to access the buses. The parking area is undersized and has only one entrance which results in heavy congestion at the parent drop-off points during the peak (morning and after-school) pick-up/drop off times and creates a potentially dangerous environment.

Site landscaping can be broken down into three sub-categories; playgrounds, fields, and vegetation. There are three separate playgrounds on the site. Each playground area has appropriate equipment and a safe base on which the children can play. The fields need attention as they are lacking grass in many areas, specifically the northwest corner near the main parking lot, and currently none of the fields are draining well. There are many areas with standing water or mud as was illustrated by the many children who re-entered the building with soaked and muddy clothing. With very few trees and the difficulty in growing grass the site appears rather barren.

Jeremy Ranch Elementary School's exterior finishes are in good to fair condition. The brick walls appear to have minor aesthetic damage, primarily small chips - most likely the result of repeated snow removal. The wall fascia needs to be replaced in a few areas where it has been dented. All of the doors and windows appear to be in good condition; there were no leaks apparent because of wall apertures. The roof and skylights also appear to be in good shape. The roof was reported to have had problems in the past but all previous problems appear to be resolved.

The school's interior appears to be well built and maintained. The classrooms are in good condition and many of the problems presented at McPolin have been resolved in this version of the school. For instance, the classroom sunken kivas are gone, there is walk-off matting in front of the exit doors protecting the floor finishes and there are coat rooms. The main problem still evident, as with McPolin, is the dark carpet on the walls. The carpet is a fire hazard and soaks up some of the illumination. The only other problem in the classroom areas is that the exit door opens into the room. In the event of an emergency, although it is not required by code, it would be more desirable for the doors to swing outwards. The hallway kivas, located just outside the classrooms, were originally intended for use as breakout space but are currently being used for classes resulting in limited break out-space.

The computer labs and media center are located off the main corridor of the school and appear to be in good condition. The media center is spacious with plenty of room for books, reading areas, and even has a small television studio. Once again, the carpet tack wall has been applied as a wall finish. The computer lab has 29 student stations and 1 teacher station with sufficient space. The computers have been clumped in circles of 6 which makes teaching and student observation difficult. There is a secondary computer lab to the east of the faculty lounge that has a couple of problems: the lights are direct down- lights causing glare problems, and the projection screen has been placed in front of the windows making it difficult to see.

The Multi-Purpose/Cafeteria is in fair condition. The VCT floor has been maintained and shows few signs of wear. Masonry walls surround this area and also appear to be in good condition. Carpet sound absorbing panels have been applied to the walls; however, they are not sufficient and potentially pose a fire hazard. A 12"x12" glued up acoustical ceiling is in place and appears fine. There are separate storage rooms for chairs/tables, gym equipment and stage supplies. The kitchen has sufficient space and the ability to produce the meals necessary for the number of students currently enrolled.

The administration wing is in good condition. There is both physical and visual access from the reception area to the main entry doors. The reception area is large enough for two receptionist's stations and has plenty of storage space. There is a student conference room adjacent to the reception area that can be visually controlled. In addition to the reception space, there are a nurse's office, two administrator offices, and a conference room. All appear to be in good condition and of fair size. There is a "time-out" room that was built after construction was completed which needs to be removed or modified. Currently the room has no light controls and no fire sprinkler which are both code violations.

Structurally, the building is sound with a few conditions that are not life-safety issues presently but should be monitored and dealt with during any renovation or remodel. There are shrinkage cracks in the masonry throughout the CMU Walls in the building. The worst cracking appears in the wall adjacent to the entrance to the media center. However, there are steel columns located intermittently within this wall and in no way does the cracking compromise structure stability. Due to code changes the connections between the steel brace frame no longer meet code requirements. After review by the structural engineers, it is their opinion that the connections will perform satisfactorily in the event of a seismic occurrence.

Mechanically, the building's systems are in fair condition and all are within their expected service life. The most pressing mechanical issues, as was the case at McPolin, is the school's heating source. The school relies on gas-fired furnaces distributed throughout the school, with approximately 1 for every 2 classrooms. These furnaces are the source of two problems; the design of the thermostatic zones causes many rooms to frequently be uncomfortable, and the entire system, including its outside air dampers, requires intensive maintenance. This type of furnace has a useful life of around 18 years and thus, is a little over half way through its normal life expectancy.

Smaller mechanical issues include a lack of fresh air ventilation, galvanized piping at the water softeners should be replaced with copper, and the thermostat temperature controls should be upgraded. It is recommended that the building be integrated into the School District energy management system.

Electrically, the various systems appear to be acceptable although some could benefit from upgrades and the life safety systems should be brought up to current standards. The building's main service is not sufficient. A reading was taken that showed the main service was over voltage. In addition, the main service room lacks the necessary clearances when compared to code requirements and the suspended transformers are not seismically braced.

The only secondary system requiring immediate attention is the fire alarm system. The current system is not code compliant because there are no horns or strobes in the classroom or restroom areas; only three of the exits have pull stations; and the exterior horn locations are inadequate. The other secondary systems, including intercom, clocks, security, data/telephone, television, and classroom power are useable in their current state although slight improvements could yield great benefits.

Lighting throughout the school needs to be upgraded. The classrooms have decent lighting at the task level but lighting of vertical surfaces is insufficient. This is because the lights are perpendicular to the white boards and the carpet tack wall absorbs a large measure of the light produced. There is a similar condition in the media center. At the computer labs the indirect lighting is poor, primarily because the fixtures is not efficient. The stage lighting is acceptable but has extremely limited

capabilities. Exterior lighting of the parking lot is not up to code and exterior egress lighting must be added.

Jeremy Ranch Elementary School is in fair condition for a 10 year-old school. Both the exterior and interior have many years of use left before extensive work will be required. The school's inhabitants like the space and for the most part find it comfortable. Out of eight teachers interviewed, six had no complaints and the other two complained only about the temperature control system. However, the mechanical system is in need of replacement in order to reduce operational and maintenance costs, and the lighting should be upgraded. New technology and improvements in mechanical and electrical systems have greatly reduced the amount of energy required and thus pay themselves back in saved energy in a short time.

With mechanical and electrical improvements to Jeremy Ranch and enhancements to the educational adequacy of the school Jeremy Ranch will be a great learning environment for many years to come.

CONCLUSIONS

Summary

After extensive study of Jeremy Ranch Elementary School, as well as interviews with teachers, staff, and students, the study team has concluded that Park City School District has some concerns regarding this school but nothing pertinent to life safety. **Our research and analysis demonstrates that the building only necessitates small upgrades and/or replacements.**

The school's primary issues revolve around the site and mechanical systems. Both can be solved within the scope of the existing site and building. Other secondary issues that can also be resolved within the scope of the building include slight architectural modifications and systems upgrades.

The following summary of costs compares remodel/addition costs for three different schemes.

The scenarios are:

Scenario #1:

- A mechanical systems upgrade that would include a new centralized boiler and necessary ducting.
- An electrical systems upgrade including new lights throughout and a new fire alarm system.
- Caulk and repair masonry cracks. Include any new structure necessary for supporting the new mechanical systems.
- Slight architectural modifications to accommodate the new systems. Paint all of the walls and replace the carpet tack-wall.

Scenario #2:

- A mechanical systems upgrade that would include a new centralized boiler and necessary ducting.
- An electrical systems upgrade including new lights throughout, new fire alarm, and upgraded secondary systems that meet current standards.
- Caulk and repair masonry cracks. Include any new structure necessary for supporting the new mechanical systems.
- Architectural changes including making the hallway kivas into break out spaces, new wall coverings and paint, new ceilings throughout and site modifications including an enlarged parking lot and adjusted drop off areas.

These options are presented as a summary to the report and are intended to generate dialogue and discussions as Jeremy Ranch Elementary School's committee and the Park City School District Board move into the next phase of the building program.