

**Judith Hempfling**

**6/9/2022 Facilities Committee Meeting**

**Report on Lifecycle of Modular Classrooms and Building Experts thoughts on prioritized needs of facilities.**

School Board members asked for information regarding the lifecycle of modular classrooms such as the affectionately named Shoebox at the highschool and the modular classroom at Mills Lawn. Below are articles regarding the lifecycle of modular units. When properly maintained, according to articles below can result in a lifecycle of 50 years or longer and can be indistinguishable from “stick built” buildings. It is noted in the one article that modular classrooms can be incorporated into a building by bricking them in and building a roof over them which is what was done with the Shoebox. The current roof of the Shoebox still has a 6 or 7 year warranty on it.

Craig Conrad, who was the Maintenance Supervisor when the Shoebox was installed, does not believe the intention of the school district was that this part of the facility was temporary. The fact that it was bricked in and covered with a standard roof would also indicate this was not the original intention of the district. We do know that the rooms have had moisture issues in part because the foundation was not properly fitted and installed with a moisture barrier. The placement of a moisture barrier and a skirting around the foundation should solve much of the moisture issue. The bouncy floors are a noticeable characteristic which distinguishes the Shoebox. This is something that could be addressed fairly easily with additional supports under the structure. We know the modular unit at Mills Lawn is in much poorer condition. It is not bricked in. It is also located outside several classrooms so that when music is being played, it can be disruptive to the classrooms nearby.

**Lifecycle Modular Classrooms**

**Lifecycle of modular classrooms 50 years to indefinite if cared for.**

<https://comstruc.com/how-long-do-modular-buildings-last/>

“How Long Do Modular Buildings Last?”

When considering modular construction, it is natural to wonder whether prefabricated structures will be as durable as those built with traditional construction methods. In addition to efficiency, sustainability, and affordability, modular buildings offer a service life comparable to structures built with traditional construction methods.....Just as with traditionally constructed buildings, the longevity of a modular building depends on how well it is maintained. When properly cared for, permanent modular buildings last for 50 years or more.”

## Durability of a Modular Building

**Temporary/Relocatable:** Temporary modular buildings, also known as portable or relocatable buildings, are designed to be reused or re-purposed multiple times and transported to different sites. “Temporary” does not mean they are not built to last. They are intended to serve short term and/or urgent needs and are designed for easy tear down and relocation. The “temporary” designation has more to do with how the structures are installed on the building site.

Temporary buildings are not permanently affixed to real estate. They are typically anchored to a concrete pier foundation. The crawl space is enclosed with skirting material, and decks, steps, or ramps are built for access to the exterior doors. Consequently, floor plans for these buildings may be less complex, and the interior/exterior finishes incorporate lighter materials to make the building more conducive to easy dismantling and relocation.

With proper care, temporary modular buildings have a service life of at least 25 to 30 years, after which the components are typically repurposed or recycled.

**Permanent:** Permanent modular buildings can be installed on a concrete pier foundation in the same manner as a temporary building, however, they are most often installed on a full perimeter foundation with an excavated crawl space, eliminating the need for skirting and decking.

Like relocatable modular buildings, sections or “modules” of the structure are manufactured off-site in a controlled factory environment, including all mechanical, electrical, and plumbing fixtures and interior finishes.

Permanent modular buildings can be constructed of wood, steel, or concrete, and can be integrated into site-built projects or stand alone as turnkey solutions.

When permanently affixed to real estate, they offer far greater flexibility, such as the ability to incorporate brick facings, site-built roofs, entrance canopies, interior lobbies and stairwells, elevators, glass storefronts, and custom layouts. They become virtually indistinguishable from stick-built buildings and would be very difficult (and expensive) to relocate.

With proper care, permanent modular buildings have a lifespan of at least 50 years.

<https://www.popeindustries.net/schools/>

There will always be a need for acquisition of modular buildings on a fast track basis for quick high quality educational space. While the buildings are designed in relocatable building components, the useful life of the buildings if properly maintained is over 30 years.