FMP 2019
Portable Reduction and Management Strategy
Draft for FABPAC Discussion 06.06.2019

Introduction

The 2017 FMP Update set forth the vision to modernize all district schools into 21st century learning environments. To achieve this vision, the district must re-assess its decision-making practices around the use and management of portables, and work towards minimizing its dependence on portables as long-term solutions.

Most portables contain two classrooms and are primarily used for student instruction, while other uses include student support, daycares and other community wrap-around services. The district owns the majority of the portables, but also has some long-term leases, and newer short-term leases that serve as swing space for the 2017 bond modernization projects. The district chose the short-term leasing option for modernization projects due to the high cost to re-locate and set-up portables. Additionally, the leased portables being used for swing space are generally in better condition than the district's current stock.

The average useful life of a portables is approximately 20 years—the district's oldest portable was constructed in 1952 (67 years ago), while the newest district-owned portable is from 1997 (22 years ago). A 2016 portable assessment classified the condition of 650 portables as Excellent, Good, Fair, Poor or Failing. At that time, over 78% of portables were rated as Poor, 11% as Failing, and 10% as Average, while none were rated as Good or Excellent.

As of January 2019, the district had 622 portables (605 district-owned and 17 long-term leases) located on campuses, a reduction of 28 since 2016. Nineteen of the 28 portables were demolished, while nine of the long-term leases were terminated. As the 2017 bond modernization projects are completed, it is anticipated there will be an additional 119 (need to verify) portables that could be demolished or used to replace the eight remaining long-term leases.

Number of Portables by Campus Level – 2018-19 School Year

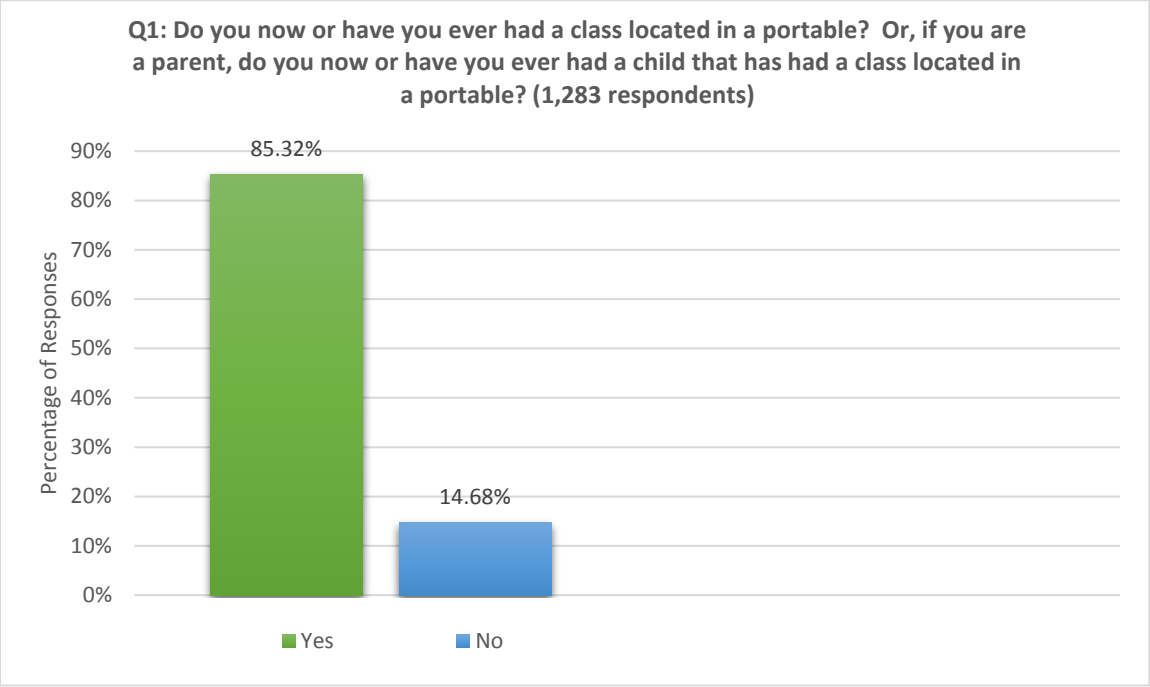
	Total # of Schools	# of Schools with Portables	Percentage
Elementary School	83	73	88%
Middle School	18	14	78%
High School	12	12	100%

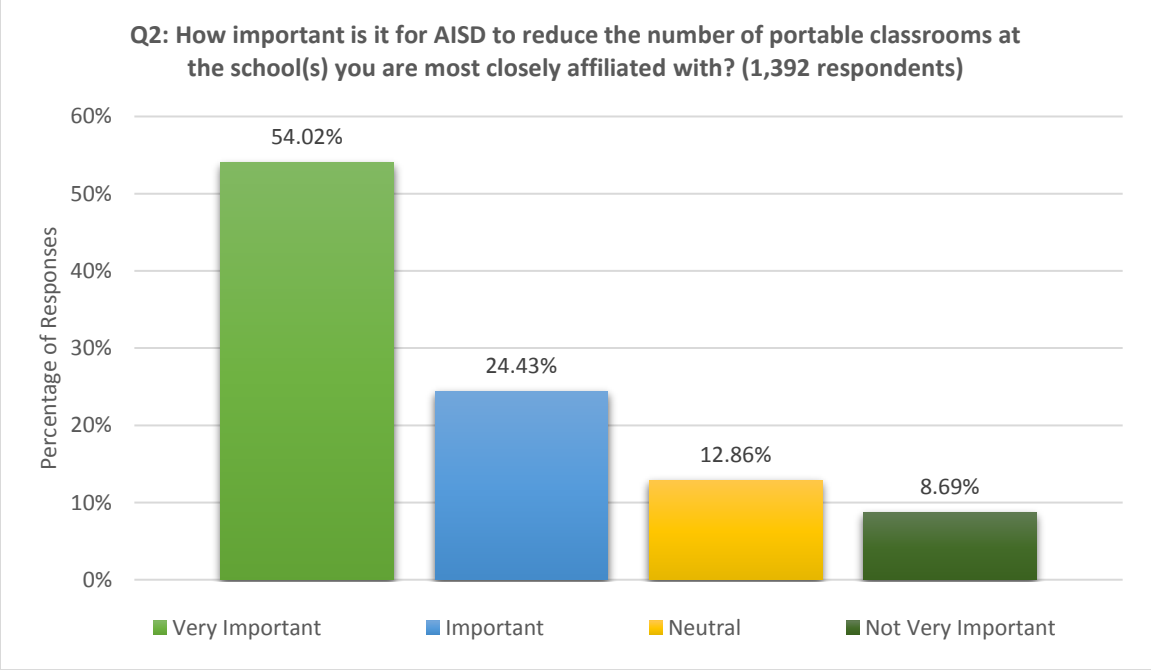
The schools with the most portables at each level are Blazier Elementary School at 16, Murchison Middle School at 16, and Akins High School at 20. Both Blazier ES and Murchison MS were funded in the 2017 bond program to receive additional permanent capacity, which should result in all or the majority of the portables being removed from the campuses once complete.

[Include portable count and location map]

Community Survey

In February 2019, the district conducted a survey with three questions specific to the district's use of portables. As shown below, most survey participants felt it was **very important or important to reduce the number of portables** at campuses, and many responses included concerns about **health and safety**.





Q3: What is your biggest concern about AISD portables, if any?
Almost all of the responses stated a variety of concerns about portables, while very few respondents stated they did not have concerns.

> *"Feeling **disconnected** from campus community"*

> *"**Safety** issues, **air quality**, not convenient/waste of time to travel from portable to school building, **smaller classrooms**"*

> *"**Communication** with the building, seems on an island when you are teaching in a portable"*

> *"Learning conditions are impacted by **loud air conditioning equipment**, lack of space, poor facilities, etc... More time spent in passing periods for students, more unprotected spaces at a school."*

> *"**Security** as compared to being within the school building itself"*

> *"Too many are becoming permanent fixtures and they **do not provide the 21st Century opportunities** that a modern classroom provides."*

> *"As long as students have only a **class or two** in a portable, I think it offers an **interesting variation** to the class day for students. If they spend all day in a portable, then "no"."*

> *"I have **no concerns**. I think portables are great. Access to fresh air, reduction in noise in halls, control over HVAC are all benefits."*

Purpose Statement

The purpose of a portable reduction and management strategy is to provide as many students as possible the opportunity to be educated in modernized learning environments.

Ideally, a portable building should be placed on a campus to temporarily provide additional classroom space where there is a lack of capacity within the permanent structure. Portables should be removed once the capacity situation is resolved, either through the construction of additional permanent capacity, a change in attendance area boundaries, or a reduction in student enrollment.

When portables become a long-term solution for capacity issues, it can result in negative impacts to academics, sustainability, and safety and security goals. Therefore, the district should implement a portable reduction and management strategy to guide district staff when making decisions to purchase, relocate, demolish and retain portables in the most efficient manner, and in alignment with district goals.

The reduction of portables, and increase of student instruction within the permanent structure will:

- Increase opportunities for collaboration amongst students and teachers
- Expand options for flexibility within the learning environment
- Improve equity amongst students and teachers
- Reduce security and safety risks inherent to the location of portables

- Support sustainability goals

Campus Safety and Security Impacts

Austin ISD's Police Department has stated that portables present notable safety obstacles, and supports a district effort to reduce the number of portable buildings on school campuses.

Portable buildings by design are thin and weak structures that present safety challenges if our campuses were to encounter an active shooter on the exterior, a tornado, or any extreme inclement weather. To add, these structures are intended to be *temporary* structures, and it is incredibly common for these portables to show some "wear and tear" after only a few years.

Listed below are issues identified by the District Police Department.

Poor structure quality of portable buildings causes concern

- While the portable buildings provide shelter from minor weather, they are not fit to withstand severe weather or HAZMAT releases. As a result, all classrooms located in portable buildings are forced to face the weather and come into the main building(s) should the threat of high winds/tornados be present; disrupting not only the general classroom instruction but also adding multiple safety risks associated with mass movement during bad weather.

- Air quality is much easier to control in newer model portable buildings, however many portables throughout the district are older and have incurred wear and tear to include gaps in window and door seals-costing more than necessary to maintain safe airflow in the event of HAZMAT incidents near the campus. If a HAZMAT incident occurs, a portable building must use all necessary material inside the portable such as tape, paper, clothing to seal the gaps to prevent air from coming inside.

Lack of proper layers of security

- Due to the nature of the structure, portable buildings are only secured by one door, as opposed to the classrooms in main buildings that have multiple layers of protection from intruders and other types of hazards.

- Many portable buildings are two classrooms within one building. This means each portable building has a door for each classroom with a small walkway between the two classrooms inside. This means that if one teacher in the portable forgets to lock their portable door, or purposely props it open as often seen, the entire portable is left unsecure possibly without the other teacher even knowing they are unsecure. This means that during a threat-based event a teacher could believe they were secure inside their classroom, do everything correctly, and still not be safe due to the other teacher not properly securing their side of the portable.

- Classrooms in the main building have the protection of a secured vestibule or a parent/visitor check in system, but in general more vigilance in human behavior as most staff and adults on campus are located in the main building.

Lack of property accountability and access control

- In order for a student to move from a portable building to the main building, students have to use badge access passes. This has the possibility of making the students targets of anyone wanting to gain access to the school for ulterior motives.

- In terms of protecting district property located within any given portable, the values are often not recorded until a crime or damage has already occurred with little to no existing guidelines on the type of property allowed to be stored within those buildings (e.g. MAC computer lab, vet tech equipment, etc.)

Portable buildings may house more at risk populations

- Classrooms located in portables may be used to educate more vulnerable populations such as child daycares, students with special mobility, functional, behavioral needs, and other populations that by nature are more vulnerable to threats and hazards in general. The distance from the main building and the resources accessible in the main building are cause for concern, and there are currently no policies or guidelines to structure more safe planning for the types of classrooms that are assigned to portable buildings.

"Portable" makes it hard to plan for (Emergency Planning/Response)

- During emergency planning and/or response to any campus during a critical incident, the lack of accurate information about the number of portables and placement of portable classrooms at any given campus impede the ability for first responders and emergency planners to accurately assess a situation and risks associated with each property due to the fact that those buildings are by nature portable-and can be removed, replaced, or repositioned.

Academic Impacts

The district is striving to modernize its learning environments to support the Six C's – collaboration, communication, connection, cultural proficiency, creativity, and critical thinking. Although current studies show minimal, if any, impact on academic achievement for students who are taught in portables compared to their peers taught in a school building – portable classrooms are a less desirable option for learning experiences.

Fewer opportunities for collaboration and flexibility in learning techniques

- The isolation of portable classrooms from other classrooms limits opportunities for collaboration.

Loss of outdoor space for learning and physical education

- Portables often take up valued outdoor space, decreasing or eliminating the ability of some campuses to have authentic outdoor learning opportunities. Due to the smaller size of an elementary school campus, the track and outdoor play area are often impacted.

Exposure to weather conditions

- During inclement weather, students are exposed to rain, cold, extreme heat and possible hail during transitions between classes and at the beginning and end of the school day, and to and from lunch. Although elementary portables have restrooms, most of the middle and high school portables do not, increasing the weather exposure during restroom breaks.

Reduced classroom size

- The difference between the available space in a portable and the recommended space in the AISD's Educational Specifications and TEA will greatly reduce the flexible use of space for both kinesthetic and modernized learning for classes held in portables.
    - The size of the classrooms within a portable range from 728-768* square feet, which do not meet the 2017 Ed Specs of 800-850 square feet.

**Square footage varies based on whether restrooms are located within the portable*

- Additionally, the Texas Education Code (§61.1033) recommends that elementary classrooms (of 22 students) have a minimum of 800 square feet and that secondary classrooms (of 25 students) have a minimum of 700 square feet. Most of the district's secondary schools have class sizes larger than 25.

Sustainability and Energy Impacts

Portable classrooms do not support the standards set forth in the district's Ed Specs for green building design that enhances engaging and effective learning environments. The levels of air quality, thermal comfort, daylighting, and acoustic performance that the district wishes to provide for students and educators is challenging with portables, and the life-cycle environmental impact of portable classroom materials is also a concern.

The Environmental Protection Agency has additional information on portable classrooms: https://www.epa.gov/iaq-schools/maintain-portable-classrooms-part-indoor-air-quality-design-tools-schools)

Health Conditions - California Case Study

A 2004 study and report to the California legislature regarding environmental health conditions in portable classrooms identified the following:

- 60% of teachers in portables indicated they turn off the ventilation system at times due to excess noise; 23% of teachers in traditional classrooms reported doing this.
  - Complaints of stuffy room air usually result from the HVAC not being operated properly.
- A substantial portion of unoccupied classrooms (50% portables, 38% traditionals) had measured noise levels exceeding the outdoor nuisance standard of 55 decibels used by some California cities. It is excessive noise levels that lead some teachers to turn off the HVAC systems.
- Portables had more HVAC problems than traditionals, including higher rates of dirty air filters (40% vs. 27%), blocked outdoor air dampers (11% vs. 3%), and poor condensate drainage (59% vs. 12%) which can lead to microbial contamination.
- 27% of portables and 17% of traditionals experienced temperatures below ASHRAE's thermal comfort standards for the heating season.
- Portable classrooms had slightly higher relative humidity than traditional classrooms.
- Portable classrooms had somewhat lower lighting levels than traditional classrooms.
- [For particulate matter], total particle counts were similar for both types of classrooms for PM10 and PM2.5 size ranges, but the highest levels were seen in portables. / Portables often are sited with their ventilation units and air intake facing roadways and parking lots, which may account for the higher counts in some of the portables.

The complete report can be viewed at: https://ww3.arb.ca.gov/research/apr/reports/l3006.pdf

Increased District M&O Expenses

- Portables that are not connected to an existing electrical supply incur additional account and clean community fees of $465 annually. The total of these extra costs throughout the district is currently over $120,000 annually.
- Portable classrooms do not have programmatic thermostats and the district's Service Center does not have the ability to remotely control and monitor HVAC systems.

Two recommendations the district should consider to reduce M&O costs include:

- Investigate the installation of internet connected thermostats, for those portables that are expected to remain in place for one to two years minimum to ensure there is a return on investment.
- Assess the feasibility of connecting multiple portables (up to 8) to a single meter, as has been done at some campuses, to reduce utility account fees.

Air Quality and Heating and Air Conditioning Unit Issues

Due to the noise from the HVAC systems and the lack of centralized controls, teachers will often turn off the heating and air conditioning units. Several studies have shown that adequate ventilation through the HVAC system is difficult to maintain. Because there is not a centralized control, the HVAC system can be overridden by teachers, and are sometimes turned off due to noise issues. Portable classrooms are "leaky", so although they are still ventilated when HVAC systems are off, this air may be from attic spaces and wall cavities which is not fresh air.

Reduction Goals

The district should consider the following portable reduction goals:

- Remove 30% of portables by 2022. This number reflects the removal of portables due to increased capacity through the 2017 bond program, all failing portables, and some additional portables that are no longer needed to support the campus.
    - Note for FABPAC: the 30% is based on approximately119 portables removed due to bond modernization projects; 60 failing portables (some of these may be included in the 119) and a small number of additional portables that are not needed on campuses. Verification of this data and the 30% assumption is pending.
- Remove portables from a campus when:
    - Additional permanent capacity for student instruction is available due to
        - new construction,
        - a decline in enrollment, or
        - an increase in the number of students taking courses offsite or through digital learning.
    - The space is vacated due to a loss of community program
    - The condition of the portable is rated as failing
    - A major investment is required for repair (cost-benefit analysis)
- Removal of additional portables beyond 30% is limited as there is no funding allocated specifically to the removal and demolition of portables.
- Reduction goals should be re-evaluated with the next major FMP Update.
- Discuss potential portable reductions during the development of annual campus improvement plans (CIPs).

Management Guidelines

Coordination between campuses and Maintenance Department

Campuses and the Maintenance Department should work together on requests to repair portables (work orders). Campuses must be diligent in requesting repairs for issues such as locks, accessibility, and heating and air that impacts the health and safety of students and teachers.

When a project request is received that is beyond the scope of the district's maintenance team, the following considerations should be evaluated to determine whether money should be spent to repair or replace a portable.

- First verify that the portable use is consistent with the portables use guidelines.
- If the use is consistent with the guidelines, determine whether there is space available within the permanent structure for the use.
- If no space available within the permanent structure – then examine the cost to determine if it should be repaired or replaced.
- If the use does not meet guidelines, schedule for removal (dependent on funding) of shutter until funding becomes available.

Budgeting (non-bond dollars)

The district's Construction Management Department identified several approximate costs associated with the set-up, relocation and demolition of portables:

- Cost to purchase new: $100-$150K
- Cost to lease (includes set-up and removal): $1,000 – 2,500/month
- Relocation: $25-30K

Currently, there is no M&O funding allocated specifically for the replacement or removal of portables. This continues to restrict the district's ability to purchase new portables (or alternative modular structures) as the inventory continues to age and worsen. Additionally, it limits the number of portables that could be removed from campuses, when no longer needed, as bond funds can only be used to remove portables when it is part of a modernization project.

- District should plan for the replacement and removal of portables each fiscal year by the allocation of M&O funding designated for these purposes.
- Strategic efforts to take advantage of cost savings opportunities should be considered and bond funds should be leveraged when possible.

Portable request process

- District shall develop a formal process to request portable relocation and establish a review team.
- Approval of portable relocations should be consistent with the portable use guidelines.

Portable improvement request process

- District shall establish a process for school communities to invest in the beautification of portables (e.g. painting).

Leasing guidelines

The remaining long-term leased portables should be replaced as district-owed portables become available – first look at highest dollar leases, worst condition, and those easily removed due to location on the site. The district should only lease portables to satisfy the following conditions. In addition, the district should investigate alternatives to current portable building types (e.g. modular building with multiple classrooms).

- Swing space for schools receiving modernization or renovation projects
- Emergency situations
- Special-sized portables that meet either the special needs of a constrained site, or use (gym, cafeteria).

Use Guidelines

Portables do serve a purpose, however, the uses within them should be carefully considered. Portable uses should be approved by a committee with representatives from School Leadership, Planning & Asset Management, Construction Management, and School, Family & Community Education departments.

Acceptable uses:

- To temporarily address overcrowding – portables should not be a long-term solution. If demographic projections indicate that overcrowding will be a long-term issue, then boundary changes should be evaluated as the first solution. Additional capacity would need to be funded through a bond program.
- To temporarily provide space for new or enhance academic programs when space within the permanent structure is not available.
- To address emergency situations (flood, fire, etc.)
- To provide swing space when a campus is being renovated or modernized.
- To provide space for approved campus and community resources (e.g. family resource centers, daycares, non-profit leases, etc.). This should only be considered if campus and district safety and security protocols are maintained.

Portable Removal Decision Tree (to be developed)

Prioritized removal of portables should include:

1. Vacated portables due to bond modernization projects
    a. When construction of additional capacity allows for the removal of portable classrooms.
    b. Bond funding can be utilized for the removal of portables in this circumstance.
2. Portables in failing condition.
3. Vacated portables not associated with bond modernization projects.
    a. When a portable is no longer needed due to a decline in enrollment, a program is no longer supported, or termination of a lease by an outside entity.
4. When the use is not in line with the portable use guidelines.

Recommendations

- The Construction Management Department and School Leadership should work together to lead the implementation of the outlined strategies.
- Implementation should begin upon Board approval and be assessed annually.