Insular ABC's Phase III Task 1

School Facility Planning Workshop

American Samoa

July 2015

American Samoa Department of Education

US Army Corps of Engineers
Honolulu District

Office of Insular Affairs
US Department of Interior

HHF PLANNERS
places for people

Contents

Acronyms

CIP	Capital Improvement Project
CNMI	Commonwealth of Northern Mariana Islands
DMRP	Deferred Maintenance Reduction Program
ECM	Energy Conservation Measures
H/S	Health and Safety
IEQ	Indoor Environmental Quality
MOU	Memorandum of Understanding
O&M	Operations and Maintenance
OIA	Office of Insular Affairs
RR	Restroom
SPED	Special Education

1. Insular ABCs Initiative Background

The US Office of Insular Affair's (OIA) Insular ABCs Initiative is a multi-phase effort focused on improving the physical condition of the US Insular Area Public Schools (in Guam, Commonwealth of Northern Mariana Islands (CNMI), American Samoa and the US Virgin Islands). The Phase III Task 1 (Phase 3.1) planning effort included several steps to prepare for Deferred Maintenance Reduction Program (DMRP) execution and various capacity building efforts. As a part of Phase 3.1, the ABCs Team prepared school facility planning workshops for each of the territories.

1.1. ABCs Phase II findings

Several aspects of the school facilities were documented in Phase II which can be used in facility master planning to help identify needs and guide investments. In American Samoa, the physical condition assessments conducted at 331 buildings of 28 schools identified approximately $10 million (M) DM (2013 dollars, not including costs for needed site improvements), $1.4M of which was considered Health and Safety (H/S) DM. With a replacement value of an estimated $100M, the building inventory totaled 900,000 square feet, carrying a student population of 13,025 students.

The overall facility score is 3.7 on a scale of 1-5—where 1 indicates major DM and major repair and/or replacement is required and 5 indicates that no DM exists and only normally scheduled maintenance is required; 0 was used to note when an item is required but not present. The lowest scores were for mechanical, electrical, and plumbing concerns. Schools are 36 years old on average. Surveys occurred in 2012 following completion of ARRA-funded facility improvements (e.g., roof repairs, painting, etc.). Key problems include electrical system upgrades, weatherproofing, inadequate natural ventilation, emergency vehicle access, fire protection (including fire hydrant provision), and site drainage.

In addition to these other metrics that can be used for facility planning, energy audits were conducted and Energy Conservation Measures (ECM) were proposed. With an estimated $9.1M investment (2013 dollars), the public schools could save $1.1M/year in utility costs.

1.2. ABCs Phase 3.1

Insular ABCs Phase 3.1 began in the fourth quarter of 2014 with preliminary outreach to territory contacts and the establishment of Memoranda of Understanding (MOU) between OIA and the Governors of each territory. The signed MOU effectuate commitments to work together on the Phase III with two major objectives of reducing the DM backlog and build local capacity to assist in ongoing and future facility management efforts.

OIA and the Governor agreed to allocate $1M/year of annual Capital Improvement Project (CIP) grant funds for 5 years as dedicated funding for DMRP projects. OIA is providing technical support through USACE and its contractor, HHF Planners, to oversee program execution and education and training plan initiatives. A DMRP management team will be hired to oversee the repair program over a four-year work period. Capacity building initiatives include the school facility planning workshops, the deployment of an enterprise asset management system (to be used for facility management, including DMRP work order tracking), ongoing education and training activities ranging from job site skill development to best practices in developing school maintenance budgets and overseeing maintenance programs.

The ABCs Team conducted workshops in each territory to describe the school facility master planning process (e.g., establishing a local policy framework, long range plan, short range implementation strategy, CIP plans and facility standards). The workshops were meant to run participants through a range of topics to help broaden understanding of the challenges that facility managers and school administrators face, the breadth of considerations that go into designing and maintaining schools, and some strategies for streamlining facility management efforts and addressing common concerns.

The workshop took place over a two day period, with a full day of presentations and work sessions on the first day and a half day on the second day. Topics on the first day focused on defining adequate space and site design. Presentations and activities focused on planning and administration metrics.

2. Workshop Record

2.1. Visioning Session

The objective of the visioning session was: For stakeholders to articulate a vision for the future of education in American Samoa and what school facilities might look like to support that education vision. Participants were asked:

Figure 2-1 – Small group discussion during Visioning Session

- What role should schools have in shaping the future of the community?
- What would an ideal school be/do?
- What is “success”? For students? For teachers? For the community?
- What actions can be taken to achieve these goals?
- What metrics could measure progress toward these goals (economic goals, graduation rates, employment stats)?

Group responses to the visioning discussion starters included:

- Safe schools
- Focus on healthy lifestyles
- Outcomes for kids
- Different focuses for schools
- College and career
- Community centered

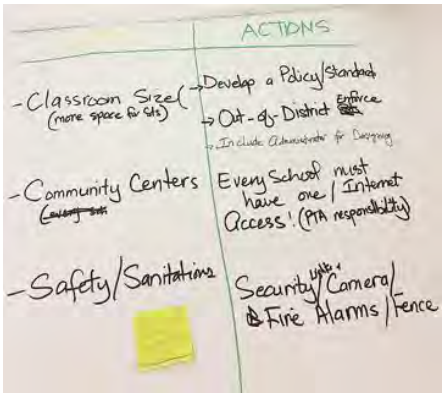


Figure 2-2 – Visioning Exercise: Goals are listed on the left column, Action items on the right.

Comments transcribed from the group work (post-its per Figure 2):

Goals	Strategies		
Promote Health & Safety for Students	Budget (Needed Materials, Security, Drainage)	Design (conducive to student learning)	Meet all ADA requirements
	Security (Improve Security Design, School Fence, Village Mayor, Security Lights, Fire Alarms, Street Lights, Security Guards)	Do an Assessment and Set an Action Plan	Emergency Shelters for Disaster
Improve Stakeholder Collaboration/Promote Awareness	Inclusion in Decision Making (Staff & PTA Meetings, Government Agencies, DOE Office)		
Improvement of Teacher and Student attendance	More Funding. Hire more teachers; improve student-teacher ratio.		
Classroom Size (provide more space for students)	Develop a Policy Standard; Enforce Attendance Zones; Include Administrator in School/Classroom Design.		
Community Centers	Every school must have Broadband Internet Access and enough electricity outlets. Approach PTA to assist.		
Properly Maintain Bldgs	DOI Grant, Private Sector/Energy Service Performance Contracting via ASPA, US DOE Grants, PTA support, Adopt-a-School program.		
Hi-Tech Buildings	Design green and sustainable (net zero) buildings (i.e. optimum use of natural light & ventilation, PV's and windmill, energy efficient fixtures, proactive/preventive maintenance projects, etc.)		
Easy and Safe Accessibility between classrooms and other facilities on campus	Provide covered walkways.		
Create pleasant environment for Teachers	Provide a teacher's lounge.		

Goals	Strategies
Recreational space for Students' health and physical program	Build playground Areas, Play Courts and Gymnasiums.
Pre-Design to include DOE personnel	Create a Task Force
Upgrade and equip all Classrooms with tools and equipment for student usage	Allocate a portion of each school's budget for maintenance purposes and provide materials to support student learning.
Consolidate schools with low student population	Build new school campuses at existing schools that have sufficient space

2.1.1.Visioning Comments from Participants

Several participants expressed concern about maintenance work at their schools. Although there was overwhelming support and appreciation for the Maintenance staff, an underlying concern was the lack of funds available to purchase construction materials to perform needed work.

One Principal stated that her school has plumbing problems. There are also issues with the roofing, bathroom and electricity, she said, "but I don't complain because I know the situation of our government."

There also seems to be a lack of communication amongst and within the DOE. Participants wanted to know more about planned CIP projects, if there was any work planned for this summer and where their school ranked on that list.

"[My school] has no janitor! So I'm going to have to be principal and janitor and all of the above."
–Workshop Participant

Participants commonly expressed concern about the lack of custodial staff to support day-to-day cleaning and sanitation functions. One school principal explained that in addition to filling-in as a teacher, "[my school] has no janitor; so I'm going to have to be principal and janitor and all of the above."

Another participant expressed exasperation that although they have a SmartBoard at their school, they cannot use it because there are not enough outlets.

2.2. Design Session 1.1: Elements of Campus Planning

2.2.1.Requirements and Spatial Organization

Participants were encouraged to use the goals and strategies listed in the previous Visioning exercise, to inform the types of spaces for this exercise.

Drivers of facility requirements were also introduced in terms of curriculum requirements and spatial organization was articulated using functional requirements listed/arranged on post-its.

Figure 2-3 – Discussing School Functional Requirements s and Spatial Relationships

The Design Session 1 break out exercise was conducted in 2 steps. Step one was to list the ideal school requirements and step 2 was to arrange those requirements in physical proximity to each other as a diagram. Groups took the concept further on their own to begin diagramming an actual school layout. The 4 groups were divided according to the type of school (Elementary and High School).

Step 1: Requirements

Figure 2-4 – Discussing Elementary school requirements

Figure 2-5—Presenting High school functional relationships

Step 2: Functional Relationships

Key concerns and issues addressed by the groups in determining the functional relationships between areas included:

- Administrative areas were often located at the campus main entry. Security was commonly located at the front as well.
- Gym areas seem to be an important functional requirement. These areas were listed in all schemes and commonly located at the rear of campus.
- One participant expressed concern that the new school buildings do not have an adequate number of exits in each classroom. Also, participants said school facilities should have ramps, especially at SPED facilities.

"Every school must have a community center. It should be a policy."
–Workshop Participant

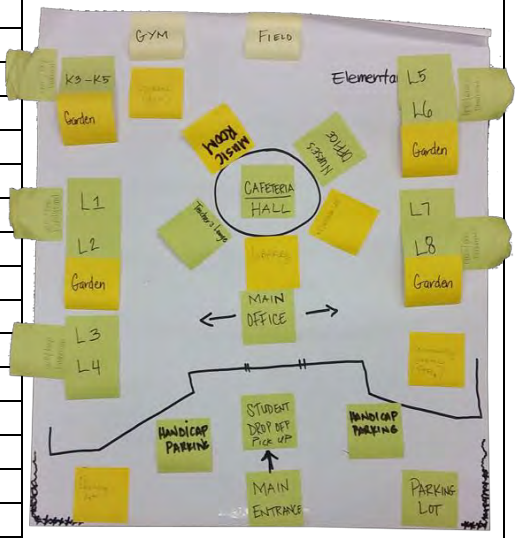
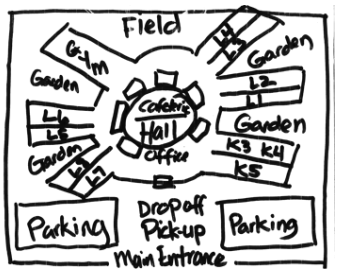
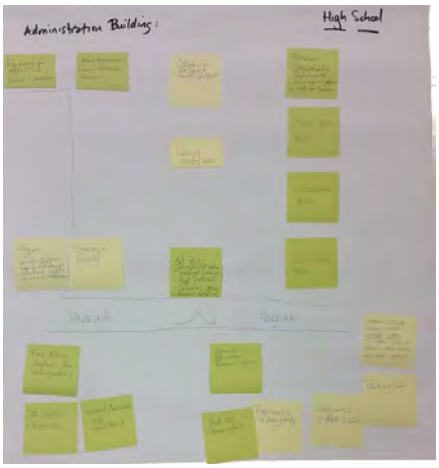
- Campuses were generally centralized with a community area such as a cafeteria, library or play field at the center.
- Transportation – drop off and parking areas were clearly identified although emergency vehicle access areas (including secondary emergency and service access routes) were not specifically addressed. Pedestrian access and separation of bicycles from automobiles was also not clearly delineated, although a slower speed limit (20mph) may make pedestrian accidents less of a concern in American Samoa.
- Perimeter fencing was provided in most schemes.
- Restrooms were commonly dispersed throughout the campuses, proximal to student areas.

Elementary School Requirements (Group #1)	
Gym w/bathrooms	Main Entry
Playground	Parking
Community Center	Main Exit
Cafeteria	Agriculture/Green House
Bathrooms	Home Economics
Bldg 1 (grades K-4	Trades Building
Bldg 2 (grades 5-8)	Bathrooms
ECE (Early Childhood Education)	SPED Building
Administration (Health/Nurse, Counselor, VP/Principal, Teachers' Lounge)	Technology Building (computer lab, Achieve, I-Station)
Security Office	

Figure 2-6 -- Security Office, a critical facility, is featured in ORANGE, upper right.

Figure 2-7 –2-story Admin Bldg w/covered Drop-off area.

High School Requirements (Group #2)	
PE/Health/Equipment Rm	Emergency Exits
Locker Room/Showers	Security Office
Gym w/Weight Room	Parking
Exits	Sidewalk/Walkways
Fence around perimeter of campus	Applied Tech Room/Special Tools
Teacher Space	Science Lab
Conference Room	Family Consumer Science-Large Fridge, Full Kitchen
Library	Janitor's Closet
Community Center	Ramps and Rest Areas (Fale)
Covered Walkway to connect all bldgs. to Cafeteria and Bathrooms	Music Room w/Band Equipment Room
Auditorium/Cafeteria	JROTC
Computer Labs w/enough electric outlets and bandwidth	Football Field, Soccer, Basketball Court
SPED w/ADA accessible facilities and bathroom	SPED Office, Resource Room, Self-Contained Room
Storage Rooms	

Elementary School Requirements (Group #3)		
Main Entrance	Grade 5	
Parking Lot	Grade 6	
ADA Parking	Garden	
Student Drop-off/Pick-up	Bathrooms	
Fence	Grade 3	
Community Center (PTA)	Grade 4	
Main Office	Bathrooms	
Library	Grade 1	
Teacher's Lounge	Grade 2	
Music Room	Garden	
Nurse's Office	Bathrooms	
Computer Lab	K-3 to K-5	
Cafeteria/Hall	Garden	
Grade 7	Bathrooms	
Grade 8	Gym	
Garden	Locker Room	
Bathrooms	Field	
		
Elementary School Requirements (Group #4)		
Main Entry	Restrooms in every building	
Parking	Walkways and ADA Ramps	
Admin Bldg: Principals Ofc, Teachers' Lounge, Staff Restrooms, Counselors' Ofc, Student Services	Upgrade existing Drainage System to control flow of surface water runoff and grounds erosion	
Classroom Bldgs: designated by Departments, have small office in bldg for Teacher	Gym: multipurpose, equip storage, student lockers, showers and bathrooms	
Cafeteria: enclosed, multipurpose	Backup Generators	
Library and Study Hall	Fire Alarm System/Extinguishers	
Family Consumer Science	PA System/Intercom	
Equipment for Applied Tech, Trades & Vocations	Wifi Internet	
Special Education Resource Room	Smartboard	
Storage Facility		

2.3. Design Session 1.2: Elements of Campus Planning

2.3.1.School Site Planning Basics

The school site planning session was conducted in two parts. The first step of the site planning exercise was to do a site analysis. These principles have varying application to existing conditions, new construction, major renovation, repair, and replacement.

Suggested site analysis considerations included:

- Space Requirements
- Facility Adequacy
- Expansion or Consolidation
- Site Constraints and Assets
- Pedestrian Movement
- Environmental Conditions; solar orientation and prominent wind direction
- Location of major/ minor roads
- Community assets
- Proximity to ocean
- Topographic conditions
- Natural hazards
- Amount of land
- Infrastructure limitations
- Adjacent sources of noise

The second step of the site planning exercise was to place a given set of school buildings on an actual site. This exercise challenged participants to integrate their ideas about functional and spatial requirements of an ideal school, while engaging real-world constraints such as topography and street access. Groups were given the freedom to modify facilities in their site plan, such as stacking classroom to increase play areas, incorporate off-site playgrounds, or use post-it notes to supplement the pre-made campus buildings. Overall the groups had a good understanding of integrating spaces and creative discussions about off-site resources.

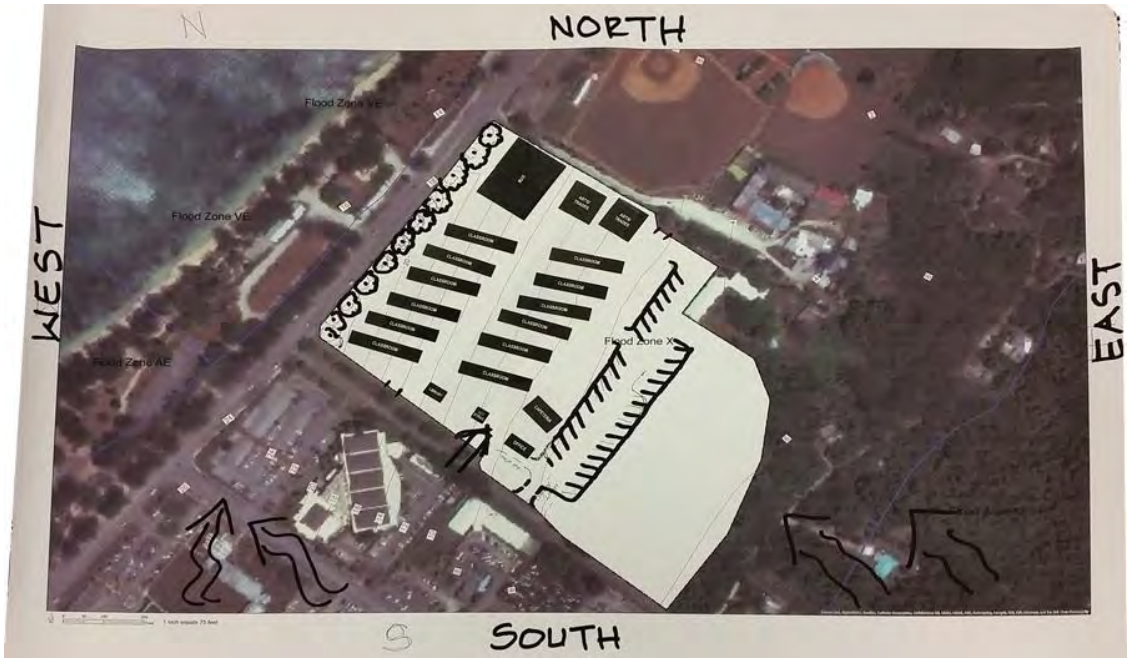


Figure 2-8 -- Wind directions are shown as wavy arrows. Parking is located at the lower flat portion. This area was identified by topographic lines as the lowest part of the site. Classrooms were aligned east-west to minimize solar heat-gain and spaced to maximize natural ventilation. Trees help reduce noise along the street.

Figure 2-9 -- classroom buildings and a large soccer field are sited on the flat area of the site. The Gym (largest structure) is located adjacent to the off-site baseball and other athletic facilities. Although classrooms are not well oriented to reduce solar heat gain, they would have solar PV and be air-conditioned.

Figure 2-10 – This Centralized campus locates the Cafeteria/Library at the heart of campus, with Classroom buildings radiating outward. Parking and drainage facilities are located at the lowest/flat portion of the site.

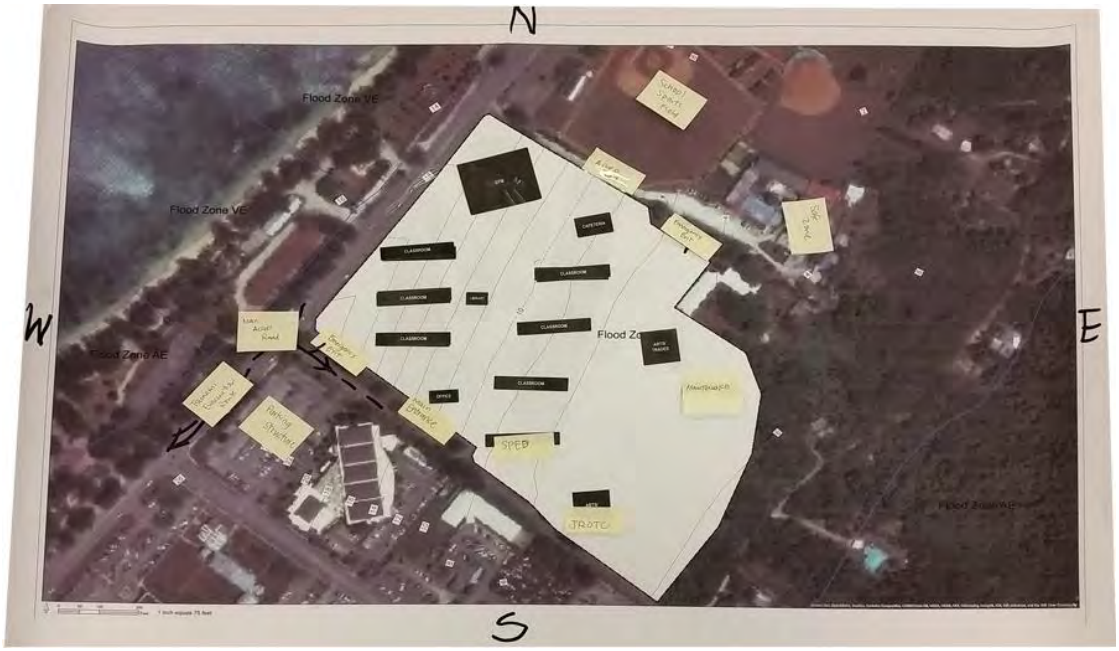


Figure 2-11 – Dashed lines at the left corner mark an Emergency Exit and Tsunami Evacuation route, which is critical for this school's close proximity to the shoreline. This site also takes advantage of an off-site parking facility, meaning the school does not need to provide/maintain a parking lot. 2-story classrooms are oriented east-west to minimize solar heat-gain and spaced to maximize vatural ventilation.

2.4. Design Session 1.3: Facility Spaces – Character and Quality

The objectives of this session was to discuss design elements that affect Interior Environmental Quality (IEQ) and build awareness so that all participants are better

equipped to evaluate and work towards better designed schools and flexible learning environments for students. The third goal for this session was to facilitate communication between: 1) actual classroom users (i.e. Teachers), 2) administrative and facility management staff at the school level, (i.e. Principals and Maintenance staff) and 3) regional decision makers in charge of funding and capital investment decisions (i.e. Board of Education and Legislators).

As ongoing operational and maintenance (O&M) costs reduce funds available for other expenses, participants were shown Life Cycle Costs of various materials and encouraged to consider life-long accumulated O&M costs, not just initial installation costs, when selecting construction materials.

Further improvements in IEQ could be achieved with natural daylighting. Participants were shown a sun path diagram and strategies to reduce solar heat gain, specific to American Samoa's location in the southern hemisphere. Increasing opportunities for natural ventilation was also introduced to improve IEQ and provide operational cost savings. Notably, the Hawai'i Department of Education has estimated it would cost $1.7B to install air-conditioning all schools and $60M a year to run the units.[1]

2.4.1.Interior Environmental Quality (IEQ) Design Exercise

Because the long-term plan for American Samoa's schools will most likely include a few new buildings, many small additions and modernization of existing facilities, this session's exercise focused on case studies or retrofits to improve the IEQ at actual school buildings in American Samoa. The following IEQ factors were discussed: Natural Ventilation, Thermal Comfort, Air Quality, Lighting and Acoustics.

> "You have to stand directly under the [ceiling] fan to feel anything."
> –School Principal

Group discussions focused on ways to improve thermal comfort using passive cooling strategies. Interestingly, participant led discussions rarely included a recommendation for air-conditioned spaces.

Many American Samoa classrooms have high ceilings, making them well suited for natural cooling. But participants frequently commented that ceiling fans often did not work. One principal commented, "You have to stand directly under the fan to feel anything." Future facilities improvements could include larger or more effective ceiling fans. Fans use less energy than air-conditioning and circulating air can help rooms feel cooler.

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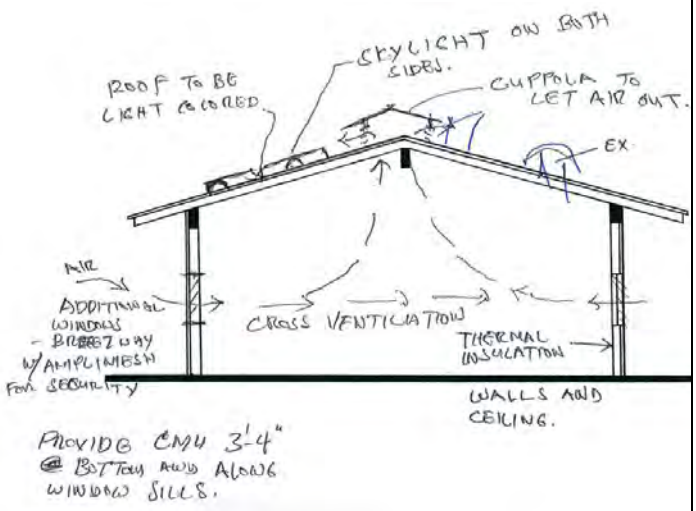
[1] Hawai'i State Department of Education, "Heat Abatement Program at Public Schools," www.hawaiipublicschools.org/ConnectWithUs/Organization/SchoolFacilities/Pages/HeatAbatement.aspx Accessed June 25, 2015.

2.4.2.Findings from Group Discussions:

Figure 2-12 – Leone High School. Light framed or cold formed steel

Recommendations



Other Recommendations:

1. Air Quality:
    a. Remove mold and check for other hazards
    b. Improve drainage at back of bldg
    c. Need covered walkway to bldg; need bigger overhang at entry
2. Thermal Comfort:
    a. Reroof and install solar panels
    b. Remove ACs, install fans
    c. Remove double doors to allow air
    d. Enlarge windows for natural lighting
    e. Install air vents
    f. Add overhangs to block sun
3. Other:
    a. Protect utility panels
    b. Repaint building
    c. Walkway around bldg
    d. Don't build these type of buildings – it won't last; steel corrodes quickly and is expensive to repair; difficult to add windows.

Figure 2-13 – Coleman Elementary School Fale. Masonry wall buildings with wood framed roofs.

Recommendations:

1. Thermal Comfort:
    a. Add heat reflective insulation
    b. Install windows at the top portion of both end walls
    c. Install better ceiling fans (Big Ass Fans!)
    d. Lack of windows caused by inadequate pinup space: provide bulletin boards on wheels
2. Address sagging of roof decking: Remove roofing; reinstall 2x decking; install 2x purlins w/reflective insulation
3. Improve noise insulation:
    a. Provide 2x6 partition wall, w/sound insulation and 2-layers of drywall on both sides of wall.
    b. Partition wall cuts off natural ventilation

Figure 2-14 – Masefau Elementary. Concrete frames with concrete infill walls and wood roof decking.

Recommendations:

1. Thermal Comfort:
    a. Provide roof insulation
    b. Add trees on east and west sides to reduce glare
    c. Provide ceiling fans in all rooms. Fix broken fans. Need better fan to circulate air -- need to stand directly below existing fans to feel any air movement.
    d. Rooms are overlit – don't need as many lights, makes room hot.
    e. Rewire fans to a smaller area. Currently, 1 switch controls several fans. They all turn on unnecessarily.
    f. Wall fans would be nice.
    g. Provide a roof ridge vent
    h. Redesign bldg with higher ceilings
2. Other
    a. Electric breaker needs to be locked in open position. Students turn off power to entire bldg.

Figure 2-15 – Lauli'i Elementary. Masonry wall building with wood framed roof.

Recommendations:

1. Thermal Comfort:
    a. Add plants to shade hot side of bldg
    b. Add windows on short side of bldg
    c. Add roof ridge vent
    d. Add ceiling insulation
    e. Light color roofing

Day 2

2.5. Policy Session 2.1: Enrollment Projections and Regional Influences

The goal of this session is to relate the importance of student enrollment projections in planning and investment in school facilities. Since population growth and decline are often cyclical and it is critical that the Facilities Master Plan integrate local knowledge: where are future residential developments being built, where are the new jobs and where are people moving/commuting to?

Building new classrooms is not the only way to deal with growing enrollment. In fact, construction is often the most expensive way to deal with growing enrollments and should therefore be the last option, after programmatic (i.e. relocating special programs to other campuses, floating teachers to increase classroom utilization) and administrative (i.e. attendance boundaries) changes.

2.5.1.Historic Student Enrollment Trends

Prior to this workshop, ASDOE's Integrated Data Services[2] presented historic student enrollment data. As of July 09, 2015, the total student enrollment in ASDOE was 11,486.

[2] Integrated Data Service. Phone: 699-2098 Email: idshelp@doe.as Helpful website links: PowerschoolSMS: https://sms.doe.as/powerschoolsms Longitudinal Data System: https://lds.doe.as

2.5.2.Regional Influences on Student Enrollment

This session begins with US Census data, comparing population shifts from 2000 to 2010, looking at population density maps and then more specifically, looking at future population projections of school-aged cohorts.

Interestingly, US Census population projections do not factor economic considerations, so their projections are not always accurate. In the case of American Samoa, participants expressed disagreement when shown the map of areas that were growing and declining in population. However, due to an unexpected schedule change in the workshop, we were not able to engage participants in a group exercise or capture their feedback about population shifts that might impact student enrollment changes.

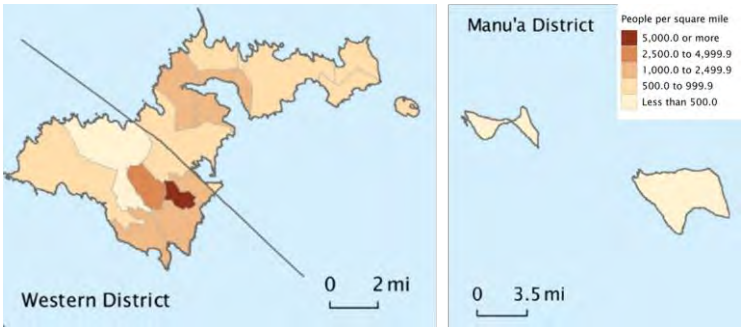


Figure 2-16 – Population Density by 2010 Census Track

2.5.3.Measuring Enrollment Capacity

In a subsequent group exercise we had hoped to capture participant feedback about which schools are over, within and under capacity. In the workshop we briefly describe different methods of measuring Enrollment Capacity. The point of this discussion is to elicit participants' feedback about what criteria they feel is most important in measuring enrollment capacity and how do their schools deal with fluctuations in enrollment. Due to time constraints of the workshop schedule, we were not able to engage the group as a whole to gather this information.

2.5.4.Participant Comments on Shifting Student Enrollment

Based on discussions with individual principals and DPW staff, the most relevant method of measuring capacity would be based on the number of classrooms and/or the number of available teachers. Although participants stated that ASDOE policies limit the maximum teacher student ratio to 1:25 (for elementary and high school levels), certain overcapacity schools often exceed this amount.

One participant commented that Leone High School and Tafuna High School are overcrowded with a teacher-student ratio that can stretch to 1:70 for gym class.

Parent Connect (parent login to check student grades and attendance): https://pc.doe.as Pearson Inform (longitudinal SAT tracking data): https://www.pearsoninform.com/login/as-americansamoa

ASG does have attendance boundaries but they are not enforced. More flexible classroom spaces was one proposed solution, based on thinking about 21st century school design. However, a representative from the A&E Division of DPW said he was using a standard classroom space planning module of 28'x28', providing approximately 25 square feet per student for a classroom.

One principal explained that when an adjacent school closed, his school brought in additional teachers to deal with the temporary surge in student enrollment. They also moved teachers' prep period out of classrooms, increasing classroom utilization.

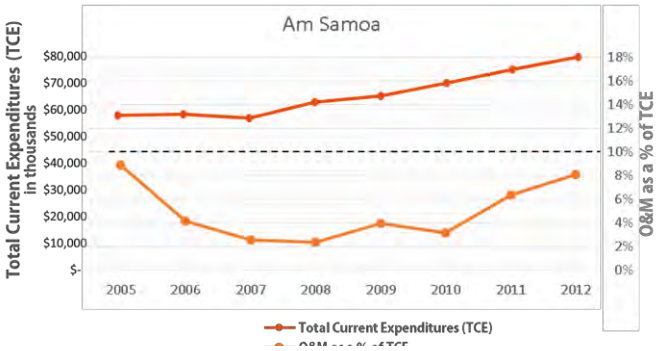
To anticipate incoming student enrollment, one high school principal said he looks at enrollment at his feeder schools to estimate incoming students.

2.6. Policy Session 2.2: Basic Principles of Maintenance Budgeting

The objectives of this session were 1) to underscore the importance of performing adequate maintenance in Life Cycle Costs, 2) differentiate Operations and Maintenance (O&M) from Repair and Maintenance (R&M) costs when comparing performance data, 3) Estimate an R&M Budget, and 4) the importance of having data to defend R&M funding.

As a best practice, Preventive Maintenance costs less than Reactive Maintenance. While the "run-it-til-it-breaks" strategy saves money in the short-run, it costs more when the total Cost of Ownership of the facility is considered.

One participant shared that the DOE maintenance budget is locally funded (secured from 1% of tax revenue) and totals approximately $1.4M/year. A portion of this amount ($300K/year) is used for school busses and other operational costs, which leaves an amount closer to $600K to $800K for school maintenance.



2-17 - Operations & Maintenance Expenditures (2005-2012) data provided by NCES

2.6.1.National Comparisons (O&M)

Nationally, public primary and secondary schools in the US spend on average, 10% of their budgets[3]

[3] 10% of Current Expenditures. Expenditures for capital outlay: construction of buildings, roads and other improvements and for purchases of equipment, land and existing structures were not included because

on O&M. In recent years, American Samoa spent 2% to 8% on O&M.

2.6.2.Estimating a Maintenance Budget

As a rule of thumb, an annual Maintenance Budget should be 2% to 4% of the Current Replacement Value (CRV).[4] CRV is the estimated cost of constructing a new facility, designed and equipped for the same use as the original building. For American Samoa, this means that an appropriate range is $2M to $3M should be budgeted each year for Repairs and Maintenance. (According to information shared by one participant, the actual maintenance budget is approximately $600K to $800K per year.) Annual Maintenance budgets should not include operational costs such as utilities, security, custodial or landscaping services; those are operational costs. Only the staffing, materials and services required to sustain the physical school facilities should be included.[5]

2.6.3.The Purpose of a Master Facility Plan

The group exercise planned for this session was designed to stimulate participants' thinking about allocating an annual maintenance budget to several schools. The goal was to raise awareness of the variables and information that should be considered and the difficulty when there is no Facility Master Plan to guide this effort.

2.6.4.Typical Questions Addressed in a Master Facility Plan

Given a limited budget, the following are discussion questions that could arise when prioritizing maintenance work at school facilities:

- Should older school buildings receive more maintenance funds than newer buildings?

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they vary widely year to year. Source: *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2004-12.* National Center for Education Statistics.

[4] Committee on Advanced Maintenance Concepts for Buildings, *Committing to the Cost of Ownership: Maintenance and Repair of Public Buildings.* National Academy Press: Washington D.C., 1990.

[5] The US Department of Defense Unified Facilities Criteria uses the term "Sustainment" and defines it as: "**...**regular roof replacement, refinishing wall surfaces, repairing and replacing electrical, heating, and cooling systems, replacing tile and carpeting, and similar types of work. It does not include repairing or replacing non-attached equipment or furniture, or bldg components that typically last more than 50 years (such as foundations and structural members). Sustainment does not include restoration, modernization, environmental compliance, specialized historical preservation, general facility condition inspections and assessments, planning and design (other than shop drawings), or costs related to acts of God, which are funded elsewhere. Other tasks associated with facilities operations (such as custodial services, grass cutting, landscaping, waste disposal, and the provision of central utilities) are also not included." US Department of Defense. 2014. *Unified Facilities Criteria (UFC) DoD Facilities Pricing Guide, UFC 3-701-01, March 2011, Change 6, 2014.* http://www.wbdg.org/ccb/DOD/UFC/ufc_3_701_01.pdf, DoD.

- Which school should get more maintenance funding: a school that has higher student enrollment or a larger floor area?
- Should legal requirements (such as upgrades to the alarm system to meet current fire codes or kitchen refurbishment needed to meet sanitation standards) be prioritized over other deferred maintenance items?
- Should certain types of work be prioritized, such as leaking roofs that can quickly lead to costly repairs as other interior components are damaged?
- How do facility investment decisions, such as choosing fans or air-conditioners, affect student learning environments?
- Should schools in flood prone areas or under capacity enrollment, receive less funding because they serve less students or are likely to suffer damage in the future?

2.6.5.The Role of a Master Facility Plan

Ideally, these factors and more would all be given careful consideration and balanced in a systematic, standardized manner. That is the function of a facility master plan – to incorporate the community, school administrators and school board's vision and goals; relate the educational program to facility requirements; ensure that the physical facilities are provided to meet those goals; and to establish a plan to secure funding and a realistic timeline to provide new/renew those assets when facilities are no longer adequate.

One participant stated that her office compiles an End of Year Maintenance Report[6], which is a collection of all maintenance requests that come in monthly. Some of these projects find PTA funding/support.

2.7. Policy Session 2.3: Enterprise Asset Management System (EAMS)

2.7.1.The Importance of Data

Besides a facility master plan to document these standards, an enterprise asset management system (EAMS) is often used as an archive (i.e. warranties, as-built plans and hazmat assessments), track performance data such as man hours worked and costs, and schedule preventive maintenance of major building systems and components. This system should also be able to process Work Orders.

2.8. Feedback from Workshop Participants

At the conclusion of this workshop, participants were asked to complete an optional feedback form. There were a total of 30 respondents who completed a workshop evaluation form. Overall, they rated the workshop 4.6 out of 5, with 1 = "not helpful" to 5 = "very informative".

[6] Contact person for the Elementary End of Year Report: Puleai F. Aloese (Puleaialoese@gmail.com)

2.8.1.Write-in Comments:

Several principals expressed concern about custodial support to address the accumulation of trash and day-to-day sanitation. There was also concern about ABC's work plan – what schools were on the repair list, how they were ranked and how their school could be added to the list.

The following comments were received directly from participants:

- Schools have no say in the budget and most times spend out-of-pocket for O&M [Operations & Maint]. Takes too long for R&M [Repair & Maint]. School administrators have been opposed to all information, yet do not really have a say in the plans – our superiors do all – why are we involved in the first place.
- Our school needs another facility for a bathroom. Our school enrollment is 800+, but there are only 5 toilets to serve 400+ girls and 400+ boys. Our school does not have a janitor. Our bathroom monitors are also doing janitorial work, as well as our school administrators.
- It gives me a great deal of understanding on reasons why things are not moving. When I requested for maintenance for a long time.
- Hope this type of session will meet every month to discuss improvements we had so far in areas discussed as of today.
- Finally, the schools have a chance to see first-hand what goes into the planning and development of school buildings, campuses, and other important factors.
- Everything was informative wish there was more time.
- Very useful, very informative. Interesting.
- Learned something about [how the] direction of the wind determines the location of school campus.
- I feel there should have been more time for input from consultant. Especially after session activity presentations.
- Need some funding for maintenance of the school building.

2.8.2.Other topics that should have been covered, or items that should not be included?

- Federal mandates on size of classroom conducive to ASDOE situation [overcrowded classes].
- Grant funding possibilities.
- Long term program and building designs feasible for Am Samoa climate so they will [be] cost effective.
- More discussion on role of principals and administration and follow-up of all staff involved in regards to cleaning of facilities.