

Appendices

Appendices for the U.S. Insular Areas Education Facility Inventory and Condition Assessment Study Phase 1 Report include the following:

- A. Program Fundamentals of the Selected Assessment Model
- B. Facility Assessment Program Investigation
- C. Campus Locations and Site Photos
- D. Flood Hazard Zone Assessment
- E. Site Visit Meeting Records
- F. OIA staff comments on December 2010 Pre-Final Report

Appendix A

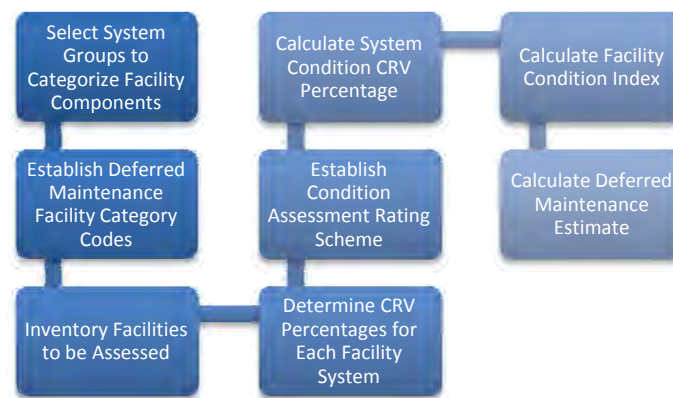
Program Fundamentals of the Selected Assessment Model

Appendix A

Program Fundamentals of the Selected Assessment Model

This facility condition assessment method study aims to create a system that helps facility managers to inventory and assess campus facilities and estimate remediation costs. Deferred maintenance estimation is best suited to meet this objective.

Under the selected model, condition assessments will be undertaken at the system level. The nine systems used by NASA were selected. These categories were selected after review of the FCI and DM estimating methods reviewed above and the American Society for Testing of Materials (ASTM) UNIFORMAT II Classification for Building Elements. Unique values are used to calculate DM estimates for different types of facilities as established in the NASA Deferred Maintenance Parametric Estimating Guide. The steps required in estimating deferred maintenance in the selected method are outlined below:



Facility Service Cycle

Ineffective maintenance programs can cause advanced facility degradation as shown in Figure 1:

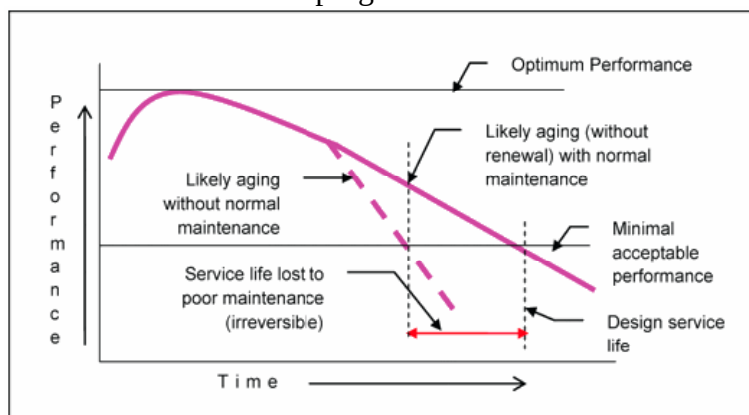


Figure 1 – Service Life Impacts of Deferred Maintenance; (Source: NASA-PR, 2008, p. 129)

Inadequate maintenance is attributed to insufficient funding and ineffective maintenance programs. Both causes lead to deferred maintenance or backlogging of maintenance work needed.

Deferred Maintenance

Deferred maintenance (DM) is “the unfunded facilities maintenance work required to bring facilities and collateral equipment to a condition that meets acceptable facilities maintenance standards.” (NASA-PR, 2008, p. 16) This is work that is not scheduled to be undertaken due only to the lack of funding. A high level of deferred maintenance is a sign of an inadequate maintenance program. An effective maintenance program will correspond with the percentages shown in Table 1 below.

Table 1 – Ideal Budget Allocation Percentages

Preventive Maintenance (PM)	15-18
Predictive Testing & Inspection (PT&I)	10-12
Programmed Maintenance (PGM)	25-30
Repair (other than TC)	15-20
Trouble Calls (TC)	5-10
Replacement of Obsolete Items (ROI)	15-20
Service Requests (SR)	0-5
Total	100

Source: Adapted from NASA-PR Table 3.3, (2008)

It is assumed that reduced DM corresponds with the amount of adequate and timely maintenance performed. As more resources are directed to programmed and preventative maintenance, the percentage of scheduled work should increase, and the percentage of resources spent on trouble calls should decrease. Total maintenance funds may have to increase until ‘steady state’ expenditures are achieved. By tracking maintenance funding facility managers can illustrate program performance over time. Figure 2 shows a deferred maintenance reduction scheme with additional funding.

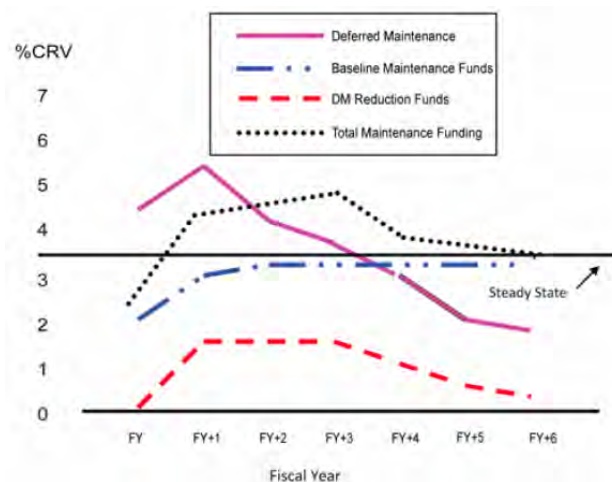


Figure 2 – Service Life Lost From Inadequate or Untimely Maintenance; (Source: NASA-PR, 2008, p. 131)

Program fundamentals developed in this study include the following:

- Facility Inventory
- Facility Condition Standards
- Assessment: SCR, CRV, SCI, FCI, and DM.

*“In the public sector, life-cycle cost, rate of return on investment, and cost-avoidances are not normally the most significant determining factors in facilities investment decisions. As budgets are tightened, the first thought is to protect “mission” as much as possible, and facilities investments are frequently deferred. Most maintenance actions can be deferred without immediate failure or observable deterioration by the uninitiated. But repetitive deferrals of many maintenance actions over time take a significant toll in the originally expected useful lifetime of facilities and equipment.”***Invalid source specified.**

Facility Inventory

Facility inventory is the baseline that determines what is included in the maintenance program and the point from where maintenance program success is measured. Ensuring inventory accuracy is critical.

Inventory includes the documentation of every structure on every campus. To correlate with NASA costing estimates dividing structures into the following types is recommended:

- Administration (educational uses)
- Work Shop
- Fuel Storage
- Drainage/ Retaining Walls

Educational Facility Inventory is divided as follows:

- Campuses – The number of schools in a Territory
- Facilities – The number of structures on a campus
- Systems – The components of each facility

Methodology for Phase I inventorying of campus facilities throughout the territories included the following steps:

- Define inventory attributes
- Identify campuses using public records and visual examination of aerial imagery
- Tabulate available data for each record
- Circulate for stakeholder review
- Request unavailable data

The inventory program developed for Phase II of this study recommends cataloging the following attributes:

- Structure Number (unique to each school campus)
- Structure Name (if different than above)
- Structure Purpose (e.g., classroom, office, bathroom)
- Year Built
- Dimensions
- Stories
- Gross Floor Area
- Design Capacity
- Construction type (e.g., reinforced concrete, CMU, wood frame, etc.)
- Utilization: (full, partial or vacant)

Structures should be divided into at least two groups to identify those used by students and teachers, and those used for other functions such as storage, maintenance, or mechanical uses. Making this distinction is important when prioritizing projects to bring structures into conformance with current building codes.

With limited resources, making health and safety repairs to structures utilized by students may be higher priority than for other structures. Inventory will also include campus grounds and must address drainage issues, safety hazards, impacts from or to adjoining properties, and the conditions of underground utilities.

Facility Condition Standards

Consistent facility maintenance standards should be used throughout the study area as the basis for the facility condition assessment rating system to determine minimum acceptable and desired conditions.

Initial condition assessment will be limited to a rapid visual assessment and should be undertaken by qualified professionals. Examples of visual assessment attributes are offered in Table 2 below. More detailed assessment criteria are provided in Appendix A.2 – NASA Condition Rating Criteria for Buildings.

Table 2 - System Deficiency Attributes for Visual Assessments

Structure - Failed foundations and structures. - Spalled or scaling concrete. - Cracked or rotten support columns or beams	Roof - Leaking roofs. - Damaged roofing materials (cracked, peeling, rotting) - Inadequately secured gutters - Damaged flashing
Exterior finishes - Peeling or flaking paint. - Rust stains or corrosion. - Stained or mildewed concrete surfaces. - Broken or cracked windows. - Cracked or rotten materials	Interior finishes - Stained or broken ceiling tile. - Worn or broken floor tile. - Painted surfaces worn through to base materials. - Carpet wear-paths or ripples. - Cracked or rotten materials
Mechanical - Outdated building automation, fire, security, and safety systems configurations. - Equipment and systems operating well past life cycle. - Leaking steam traps. - Electrical or mechanical equipment not meeting current codes. - Leaking and nonoperational components. - Abandoned-in-place conduit	Electrical - Permanent electrical extension cords. - Inadequate/ excessive lighting - Abandoned-in-place conduit, wiring, cables, or piping. - Unsecured or failed pipe insulation. - Overheated motors or electrical devices. - Unmetered utilities.
Plumbing - Leaking pump seals. - Unmetered utilities. - Unsecured or failed pipe insulation. - Abandoned-in-place conduit, etc.	Grounds - Failed asphalt or concrete paving. - Debris on grounds or in mechanical areas. - Tripping hazards. - Traffic signs and markings not meeting the Manual on Uniform Traffic Control Devices. - Inadequate brush clearance around buildings in fire hazard areas.
Program-support equipment Energy-inefficient equipment and systems.	

Source: Adapted from: (NASA-PR, 2008, pp. 133-134)

The establishment of clear, unambiguous standards is necessary to ensure consistent inspection results and reduce variations caused by inspector perspective.

Development of facility condition standards should consider relevant legal requirements, regulations, industry standards, and the support of educational services.

Maintenance cycles should account for manufacturer's recommended maintenance schedules, level of use and environmental conditions.

Developing maintenance standards during facility design is ideal in the creation of a proactive maintenance program because equipment specification and maintenance-related information is readily available.

As facilities are created or renovated such specifications should be recorded and

Facility Assessment

Deferred maintenance is estimated from the replacement value of a facility's systems and standardized System Condition CRV Percentage factors. Once inventory is complete, six metrics are calculated:

- System Condition Rating (SCR)
- Current Replacement Value (CRV)
- System CRV Percentage
- System Condition CRV Percentage
- System Condition Index (SCI)
- Facility Condition Index (FCI)

Cost Estimation

Knowing, or being able to estimate, the replacement cost of each system in a facility and the cost of repairs needed to bring the system to an acceptable condition are essential to facility assessment. These two components are the foundation of calculating FCI and DM.

System Condition Rating

Initial assessment will be limited to a quick visual rating of facility condition. In addition to gauging the current conditions of facilities in the study area the inspection will verify inventory accuracy for both number of structures and construction materials identified. Ratings to be used are described below:

Table 3 – NASA Condition Rating Method

Rating	Condition	Description
5	Excellent	Only normal scheduled maintenance required.
4	Good	Some minor repairs needed. System normally functions as intended.
3	Fair	More minor repairs and some infrequent larger repair required. System occasionally unable to function as intended.
2	Poor	Significant repairs required. Excessive wear and tear is clearly visible. Obsolete. System not fully functional as intended. Repair parts not easily obtainable. Does not meet all codes.
1	Bad	Major repair or replacement required to restore function. Unsafe to use.
0	Not Present	

Source: (NASA-DM, 2005)

Teams of two qualified assessors will perform visual inspections. It is anticipated that the teams will be able to assess 2 to 4 campuses a day. If one team is used than the assessment should be completed in 9 to 18 days depending on the number of schools in the region.

Current Replacement Value

DM Estimation requires known CRV for each system. This figure can be based on original construction costs and adjusted to current dollars or be estimated according to current replacement costs. If system CRV cannot be determined calculations will be made based on System CRV Percentage (B) below.

System CRV Percentage (A)

If the System CRV is known each can be divided by the total sum of system CRVs to provide the system CRV percentage. This figure shows the proportion of value of each system in a facility. This figure can be adjusted based on actual facility assessments and should be adjusted when modifications to facility systems are made.

$$\text{System CRV Percentage} = \frac{\text{System CRV}}{\text{Total CRV}}$$

System CRV Percentage (B)

The System CRV Percentages detailed below were adapted from the PACES model and from NASA's experience applying the MD method. They have been adapted to correlate with the systems selected for the OIA DM method:

Table 4 – Example System CRV Percentages

DM Code	Type	Struc	Ext	Roof	HVAC	Elec	Plumb	Conv	Int	Equip	Sum
1	Administrative	.19	.17	.06	.16	.18	.05	.03	.16	.00	1.0
2	Work Shop	.20	.14	.06	.13	.30	.09	.09	.08	.00	1.0
3	Fuel Storage	.70	.13	.02	.00	.10	.05	.05	.00	.00	1.0
4	Drainage/ Retaining walls	.90	.00	.00	.00	.05	.05	.05	.00	.00	1.0

Source: Adapted from NASA-DM Table 2, 2005; Figures based on PACES model and NASA experience applying the DM method

System Condition CRV Percentage

The system condition CRV percentages were developed based on NASA's review of typical costs for major and minor repair projects for the given systems and engineering judgment. These percentages can be adjusted as the program progresses to correspond with known costs for repairs made. CRV percentages are used to normalize the condition ratings for the system and provide the overall facility rating.

Table 5 – NASA System Condition CRV Percentages

System	5	4	3	2	1
Structure	0	1	10	25	150
Exterior	0	1	10	50	101
Roof	0	9	38	75	150
HVAC	0	2	13	63	133
Electrical	0	2	13	63	133
Plumbing	0	2	10	57	121
Conveyance	0	2	13	50	100
Interior Finishes	0	1	10	50	101
Equipment	0	2	13	50	100

Source: NASA-DM Table 3, 2005

System Condition Index

Recording SCI allows facility managers to assess the performance of a particular system across different types of facilities in a given sample but is not necessary for facility assessment. Condition factors vary for facility systems and therefore must be calculated separately.

Calculating SCI requires the following steps:

1. Estimate the CRV of the systems in question: facility CRV x system CRV percentage (Table 4)
2. Sum all of the system CRVs being considered in the sample
3. Normalize/Weight the system CRV for each facility by dividing the system CRV by the sum of all the system CRVs
4. Multiply this quotient by its respective assessment rating
5. Add the “weighted” SCI together to determine the sample’s system SCI

The SCI value can be calculated for the campus, school district or Territory. Table 6 offers an example SCI for structural systems:

Table 6 – Example SCI for Structural Systems

Facility	CRV	DM Category	System CRV Percentage (Structure)	Assessed Rating	System Value (CRV*System CRV %)	Normalization to value of system (System Value/ Total System Value)	SCI (Normalized value * Assessed Rating)
N200	\$12,392,787	5	0.19	5	\$2,354,630	0.028739789	0.143698943
N201	\$6,424,036	5	0.22	3	\$1,413,288	0.017250101	0.051750302
N202	\$5,822,212	5	0.19	5	\$1,106,220	0.013502140	0.067510699
N202A	\$1,477,062	1	0.22	4	\$324,954	0.003966271	0.015865084
N203	\$11,164,122	1	0.22	4	\$2,456,107	0.029978385	0.119913541
N203A	\$14,182	25	0.9	5	\$12,764	0.000155791	0.000778953
N204	\$17,561,478	5	0.19	5	\$3,336,681	0.040726365	0.203631825
N204A	\$790,405	1	0.19	4	\$150,177	0.001833008	0.007332030
N205	\$328,338	3	0.76	5	\$249,537	0.003045760	0.015228802
N206	\$158,490,513.00	3	0.3	5	\$47,547,154	0.580344014	2.901720069
N206A	\$22,117,872.00	3	0.31	5	\$6,856,540	0.083688545	0.418442725
N207	\$64,259,365.00	1	0.22	4	\$14,137,060	0.172552038	0.690208153
N207A	\$9,018,845.00	1	0.22	4	\$1,964,146	0.024217794	0.096871177
	\$55,974,622				\$81,929,257		4.7

Source: (NASA-DM, 2005, p. 18)

Facility Condition Index

The Facility Condition Index (FCI) is the CRV normalized sum of the condition ratings for each system within each facility. The building FCI weights each of the nine system condition ratings by its associated system CRV percentage per DM category code shown in Table 2, above. In each system, the rating is multiplied by its system CRV percentage to get a weighted SCI. The sum of the nine weighted SCIs equals the facility’s FCI. Table 7 is an example for a Center comprised of different facilities:

Table 7 – Example Facility FCI

Facility Description	Facility CRV \$	STRUC		EXT		ROOF		HVAC		ELEC		PLUMB		CONV		INTF		EQUIP		FCI
		Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	Insp Rat	% Sys CRV	
WAREHOUSE	1,172,019	4	0.40	3	0.19	2	0.06	0	0.18	3	0.20	0	0.02	0	0	3	0.15	0	0	3.3
COVERED STORAGE	102,267	5	0.63	5	0.22	5	0.11	0	0.03	5	0.04	0	0.01	0	0	0	0.04	0	0	5.0
FEMA EQUIPMENT STORAGE SHED	92,789	5	0.48	5	0.17	5	0.05	0	0.15	5	0.15	0	0.15	0	0	5	0.15	0	0	5.0
GENERAL WAREHOUSE	7,781,631	4	0.60	4	0.15	4	0.10	3	0.04	3	0.06	4	0.01	0	0	4	0.04	0	0	3.9
ADMINISTRATION BUILDING	12,166,903	5	0.19	5	0.17	3	0.06	4	0.16	4	0.18	4	0.05	5	0.03	5	0.16	0	0	4.4
AUDITORIUM	6,306,944	3	0.22	4	0.17	4	0.06	4	0.16	2	0.18	4	0.05	0	0.03	2	0.16	0	0	3.1
MAIN LIBRARY	5,716,090	5	0.19	4	0.17	4	0.06	4	0.16	4	0.18	4	0.05	4	0.03	4	0.16	0	0	4.2
PHOTOTECHNOLOGY LAB.	10,960,633	4	0.18	3	0.19	4	0.04	3	0.15	4	0.20	4	0.04	5	0.01	5	0.15	5	0.04	3.9

Source: (NASA-DM, 2005, p. 19)

Table 8 offers an example of how the FCI for the Center would be reported. The overall Center FCI value is a sum of each facility's CRV normalized FCI. Normalized/weighted FCIs for the center are calculated in the following steps (Weighted FCI = (Facility CRV ÷ Center CRV) × Facility FCI):

- Divide each facility CRV by the total Center CRV
- Multiply this quotient by each facility's FCI

The sum of these weighted facility FCIs provides a total Center FCI.

Table 8 – Example Weighted FCI

Center "A"		Facility FCI	Weighted FCI
Facility Description	Facility CRV \$		
WAREHOUSE	1,172,019	3.3	0.1
COVERED STORAGE	102,267	5.0	0.0
FEMA EQUIPMENT STORAGE SHED	92,789	5.0	0.0
GENERAL WAREHOUSE	7,781,631	3.9	0.7
ADMINISTRATION BUILDING	12,166,903	4.5	1.2
AUDITORIUM	6,306,944	3.1	0.4
MAIN LIBRARY	5,716,090	4.2	0.5
PHOTOTECHNOLOGY LAB.	10,960,633	3.9	1.0
Center "A" Totals	44,299,276		3.9

Source: (NASA-DM, 2005, p. 19)

Deferred Maintenance Calculation

The facility DM estimate is determined by adding the deferred maintenance estimates of the nine facility systems. Table 9 provides a sample deferred maintenance estimate for an administrative facility (DM category 5) with a CRV of \$10 million.

Table 9 – Example DM Calculation

System	System %	CRV Total \$	System Rating	System Condition CRV %	DM \$
Structure	0.18	1,800,000	5	0.00	0
Exterior	0.17	1,700,000	4	0.05	85,000
Roofing	0.05	500,000	4	0.05	25,000
HVAC	0.16	1,600,000	3	0.15	240,000
Electrical	0.18	1,800,000	4	0.05	90,000
Plumbing	0.05	500,000	3	0.15	75,000
Conveying	0.06	600,000	5	0.00	0
Interior Finishes	0.15	1,500,000	3	0.20	300,000
Facility Equipment	0.00	0	0	0.00	0
Total	1.00	10,000,000			\$815,000

Source: (NASA-DM, 2005, p. 20)

References:

- NASA-DM. (2005, September 15). *Deferred Maintenance Parametric Estimating Guide, Version 5*. Retrieved October 18, 2010, from National Aeronautics and Space Administration, Facilities Engineering and Real Property Division:
<http://www.hq.nasa.gov/office/codej/codejx/Assets/Docs/DMmethodV5.pdf>
- NASA-PR. (2008, November 18). *NASA Procedural Requirements*. Retrieved October 4, 2010, from NASA Facilities Maintenance and Operations Management:
http://nodis3.gsfc.nasa.gov/npg_img/N_PR_8831_002E_/N_PR_8831_002E_.pdf

Appendix A.1

Methodology for Assessment

The NASA model can easily be adopted by facility managers and operated by local maintenance staff. First assessments should be undertaken by trained professionals shadowed by the regional or otherwise local staff that will be taking over on future assessments to gain an understanding of what is required and how to interpret conditions. CRV estimates and System CRV percentages should be modified as the program develops to improve overall program accuracy. Once the process is firmly established the program should be fully managed within each territory with annual reports updating the condition assessment and illustrating progress.

Steps required for the Phase II assessment include the following:

- Determine standardized building condition requirements
- Interview school staff to identify ongoing problems or deficits
- Inventory buildings
- Calculate CRV for each facility system
- Rate existing conditions for each facility system
- Calculate FCI and DM for facilities/campus/region

Example

One school from American Samoa, Masefau Elementary, was selected for this exercise because DOE school inventory and Civil Defense (CD) critical infrastructure data is available for this facility and the low number of buildings on this campus. Inventory, including facility count, floor area, and current replacement value, must be roughly estimated for the purposes of this exercise.

The information detailed below is only an exercise to illustrate the assessment methodology proposed in this report and should not be considered an accurate assessment of current inventory or an account of actual deficiency remediation estimates.

Assumptions

1. The figures below are based on the replacement value per square foot (\$/sf) figures identified in the assessment program review in Section 2:

Location	Replacement Value
Arkansas	\$101.62/sf
Idaho	\$100.00/sf
Howard County, MD	\$167/sf

The CRV factor of \$167/sf, being the more conservative, will be used in this exercise.

2. DOE school inventory for Masefau Elementary shows 3 buildings, CD critical infrastructure data shows four, and visual inspection of aerial photography (Google Earth) shows five. DOE facility records show that this campus was built in 1997. For this example, it is assumed that building 4 was built after this date, and is in better condition than buildings 1-3, and that building 5 is new.

- Floor areas are based on rough area take-offs using Google Earth imagery and tools. Buildings 2 and 5 appear to be the main classroom buildings, and it is assumed that these buildings receive more regular maintenance than buildings 1, 3, and 4.
- HVAC and conveyance systems are not included in these facilities for this example. System CRV Percentages, shown in Table 2, are adjusted by dividing the remaining system percentages by 0.81 for educational buildings and .87 for the work shop to account for this exclusion.

Table 1 – System CRV Percentage Conversion

System	Edu	Adjusted	Shop	Adjusted
Structure	0.19	0.23	0.2	0.23
Exterior	0.17	0.21	0.14	0.16
Roof	0.06	0.07	0.06	0.07
HVAC	0.16	0.00	0.13	0.00
Electrical	0.18	0.22	0.3	0.34
Plumbing	0.05	0.06	0.09	0.10
Conveyance	0.03	0.00	0	0.00
Interior Finishes	0.16	0.20	0.08	0.09
Equipment	0	0.00	0	0.00
	0.81	1.00	0.87	1.00

Inventory

Rough floor area measurements multiplied by the selected CRV factor for Maséfau Elementary buildings are as follows:

Table 2 – CRV Estimation

School	Bldg	sf	\$/sf	Estimated CRV*
Maséfau Elementary	1	1120	167	187040
	2	6300	167	1052100
	3	1216	167	203072
	4	1600	167	267200
	5	2464	167	411488

**Accurate floor area measurements and current replacement values based on building type/materials are needed for actual assessment*

System Condition Rating

Ratings for these systems are arbitrary and only based on the assumptions above. Based on CRV Percentages in Table 2, and further assumptions for this exercise, the HVAC, Conveyance, and Equipment systems are not present.

Table 3 – CRV Estimation

Building	Struc	Ext	Roof	HVAC	Elec	Plmb	Conv	IntF	Equip
1	3	2	3	0	3	3	0	3	0
2	4	3	4	0	3	3	0	4	0
3	3	3	3	0	3	3	0	3	0
4	4	4	4	0	4	4	0	4	0
5	5	4	4	0	5	5	0	5	0

System Condition Index

The condition of structural systems on the campus is calculated below. Facility CRV, DM Code for each facility and the respective System CRV percentage, and the assessed rating are needed.

Table 4 – Calculating SCI

#	CRV	DM Code	System CRV % (Structural)	Insp Rate	System Value (CRV * System CRV %)	Normalization to value of System (systems value/total system value)	SCI (normalized value * assessed rating)
1	\$187,040	1	0.23	3	\$43,019.20	0.088188976	0.264566929
2	\$1,052,100	1	0.23	4	\$241,983.00	0.496062992	1.984251969
3	\$203,072	1	0.23	3	\$46,706.56	0.095748031	0.287244094
4	\$267,200	2	0.23	4	\$61,456.00	0.125984252	0.503937008
5	\$411,488	1	0.23	5	\$94,642.24	0.194015748	0.97007874
	\$2,120,900				\$487,807.00		4.01007874

Estimating SCI across a given region can help identify system-specific deficiencies and guide investment decisions. Calculating SCI for all systems is time consuming and may not offer valuable information. Verifying the need for SCI investigation before undergoing these calculations is recommended.

Facility Condition Index

The campus average FCI is calculated below. Facility types, system percentages of facility CRV, and inspector rating for each system are needed.

Table 5 – Calculating FCI

#	Description	Facility CRV	Struc		Ext		Roof		HVAC		Elec		Plumb		Conv		IntF		Equip		FCI
			Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	Insp Rate	Sys % CRV	
1	Educational	\$187,040	3	0.23	2	0.21	3	0.07	0	0	3	0.22	3	0.06	0	0	3	0.2	0	0	2.76
2	Educational	\$1,052,100	4	0.23	3	0.21	4	0.07	0	0	3	0.22	3	0.06	0	0	4	0.2	0	0	3.47
3	Educational	\$203,072	3	0.23	3	0.21	3	0.07	0	0	3	0.22	3	0.06	0	0	3	0.2	0	0	2.97
4	Work Shop	\$267,200	4	0.23	4	0.16	4	0.07	0	0	4	0.34	4	0.10	0	0	4	0.09	0	0	3.96
5	Educational	\$411,488	5	0.23	4	0.21	4	0.07	0	0	5	0.22	5	0.06	0	0	5	0.2	0	0	4.67

FCI is the most common condition assessment metric and can illustrate which campuses in a region, or which buildings on a campus, have higher deficiencies. Knowing the facility use, in addition to its condition, is important when project prioritization is required.

Weighting FCI in a Sample

To calculate the overall FCI for a sample, campus or otherwise, the facility CRV is divided by the total sample CRV and multiplied by respective CRV. The sum of each weighted facility FCI gives the sample total. In this case it is 3.02.

Table 6 – Weighting FCI in a Sample

Masfau Elementary		Facility FCI	Weighted FCI
Facility Description	Facility CRV		
Admin Offices	\$187,040	2.76	0.24
Classroom Bldg 1	\$1,052,100	3.47	1.72
Classroom Bldg 2	\$203,072	2.97	0.28
Work Shop	\$267,200	3.96	0.50
Cafeteria	\$411,488	4.67	0.91
Campus Totals	\$2,120,900		3.65

Deferred Maintenance

DM calculations require facility CRV, System CRV Percentages, inspector ratings for each system, and System Condition CRV Percentages. System CRV costs are estimated by multiplying the system percent by the total facility CRV. Multiplying this factor by the standard System Condition CRV Percentages gives the deferred maintenance cost for each system, the sum of which provides the deferred maintenance estimate for the facility.

Table 7 – Calculating DM

System	System %	CRV Total \$	System Rating	System Condition CRV %	DM \$
Structure	0.23	\$43,874	3	10%	\$4,387.36
Exterior	0.21	\$39,255	2	50%	\$19,627.65
Roof	0.07	\$13,855	3	38%	\$5,264.83
HVAC	0.00	\$0	0	0%	\$0.00
Electrical	0.22	\$41,564	3	13%	\$5,403.38
Plumbing	0.06	\$11,546	3	10%	\$1,154.57
Conveyance	0.00	\$0	0	0%	\$0.00
Interior Finishes	0.20	\$36,946	3	10%	\$3,694.62
Equipment	0.00	\$0	0	0%	\$0.00
Totals	1.00	\$187,040			\$39,532.40

The total deferred maintenance estimate (hypothetical) for Maséfau Elementary is \$39,532.

Appendix A.2

NASA Condition Rating Criteria for Buildings

A	Structure	Definition: The structure system in this sub-category applies to the foundations, super structure, slab, basement walls, floors, exterior stairways, loading docks, sidewalks, and parking lots. This system constitutes a large (20%) percentage of the CRV for this sub-category.	
5	Excellent	Assessment: There are no visible structural defects. This system should appear and work as new. Only normal preventive maintenance is required. Action items for corrective work should not exist. Additional observations: There is 100% structural integrity of load bearing elements and foundations. Discoloration of concrete structural elements is allowed. There is no erosion or subsiding in the base or sub-base of asphalt parking lots.	User Impact: There is no impact to the user; the system is functional and reliable. There are no structural issues that affect this facility's requirement to support operations and safety.
4	Good	Assessment: There are noticeable but minor defects. These minor defects do not affect the structural integrity or intended use. Defects include misalignments in some of the main structural components that can be easily repaired; simple welds, re-attachment of hardware, etc. Minor corrective work is required. Additional observations: Very minor cracking or crazing which are only visual only defects. Load bearing elements do not appear to be affected. There are minor surface cracks with very limited erosion or subsiding in the base or sub-base of asphalt parking lots.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: There are noticeable defects. Further deferment of action for these defects may affect the structural integrity or intended use of the facility. Defects include minor misalignment in the main structural components that requires substantial repair. Corrective work is required. Additional observations: Limited erosion and/or subsiding of the base or sub-base of asphalt parking lots.	User Impact: The system is providing minimal functionality, reliability is questionable, and repairs may have minor impact on the users. A failure could affect other systems. Engineering involvement is possible because required repairs will result in a capital project. Structural issues may affect the facility's operations, missions and safety. Repairs to the structure system may temporarily affect the building's operations.

2	Poor	Assessment: Structural defects such as bending or misalignment of superstructure are evident and require substantial repair. Significant corrective work or component replacement is required. Further deterioration could render the structure unusable. Additional observations: Visible settlement and/or other structural defects such as significant cracking in the slab, foundation or load bearing elements. Significant erosion and/or subsiding in the base or sub-base or asphalt parking lots.	User Impact: A large percentage of the structure system is unusable or reliability is highly questionable. Significant corrective work will impact users. Cost of corrective work will require a capital project to repair the structure. Structural issues will affect the facility's operations, missions and safety. Repairs to the structure system will interrupt normal building services. The required repairs are extensive enough that concurrent habitation is not practicable in part or all of the facility. Users will not be able to use the facility for an extended period while repairs are affected.
1	Bad	Assessment: There is major settling of foundations and footings. Major bending of the superstructure is evident. Structure is un-repairable; demolition/replacement is required. Structure is unsafe and will not support the mission at all. Additional observations: Large areas of settling, major cracks and loss of structural integrity in the slab, foundation or load bearing elements. Major erosion and subsiding of the base and/or sub-base of asphalt parking lots.	User Impact: The structure is not safe or usable. Entry into the facility is restricted or prohibited due to possible personnel safety concerns. The structure system will shut down the facility's operations and missions. Demolition will have to take place.
A	Roof	Definition: The roof system in this sub-category applies to all building roofs. For these, the roof consists of the roof covering, roof penetrations, gutters, and flashing. Roofs in this sub-category are typically made of all types of materials. This system has a small CRV percentage impact to the subcategory.	
5	Excellent	Assessment: Building roof is watertight, with positive drainage, and sound flashing and penetrations. The roof system is new or looks to be in new condition. Only normal preventive maintenance is required. Action items for corrective work should not exist. Additional observations: There is no evidence of deterioration other than surface flaws. Roof feels firm or solid to walk on.	User Impact: There is no impact to the user; the system is functional and reliable. There are no roof related issues that affect this facility's requirement to support operations and safety.
4	Good	Assessment: There are noticeable but minor defects. These minor defects do not affect the roof's watertight integrity or intended use. Minor corrective work is required. Additional observations: there is loose flashing, plugged drains, some evidence of patching, and minor cracking of the roof surface that has not resulted in leaks.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.

3	Fair	Assessment: There are noticeable defects; minor leaks are possible. Without corrective action, these defects may affect the watertight integrity of the roof system. Corrective work is required. At this level, there is no significant interior damage. Additional observations: Bubbling and some cracking are evident in composite or built up roofing. There is limited standing water or evidence of pooling in composite or other types of flat roofs. There may be evidence of substantial patching. The interior of a facility may show limited waterspots in ceiling tiles, bubbling in wall finishes or scaling on masonry type walls. Metal roofs may require coating to seal minor leaks, they may have surface rust and may have some panel fasteners missing. Roof system may have minor areas that do not feel solid to walk on. There are significant drainage problems with standing water after rainfall.	User Impact: The system is providing minimal functionality; reliability is questionable; and repairs may have minor impact on the users. A failure could affect other systems. Engineering involvement is possible because required repairs will result in a capital project. Structural issues may affect the facility's operations and safety.
2	Poor	Assessment: The roof system is not waterproof. There are many defects including severe bubbling or cracking in composite roofing and standing water or substantial evidence of pooling in composite or other types of flat roofs. Significant repairs are required. There is significant leaking to the interior; there are substantial waterspots in ceiling tiles, bubbling in wall finishes or scaling on masonry type walls. A large percentage of the roof system is not functional because its integrity and reliability are highly questionable. Metal roofs may have rust through areas, missing fasteners and/or loose panels. Roof has significant areas that are soft or "mushy" to walk on. There are major drainage problems; large areas have standing water after rainfall.	User Impact: A large percentage of the roof system is unusable or reliability is highly questionable. Significant corrective work will impact users. Cost of corrective work will require a capital project funds to repair. The facility's operations, missions and safety will be affected. Repairs to the roof system will interrupt R&D services. Personnel safety may require a restricted access to certain areas.
1	Bad	Assessment: The roof system has significant leakage in many large areas. There is evidence of deterioration, drainage problems, and holes or cracks visible from inside the facility. The entire roof needs to be replaced. Re-roofing may also require the repair or replacement of wooden structural elements that support the roof (if applicable).	User Impact: Entry into spaces below the roof defects is restricted due to possible personnel safety issues. The facility, or major portions thereof, is uninhabitable due to leaks. Demolition will have to take place. Users would be better off with their office outside.
A	Exterior	Definition: The exterior system for these facilities applies to exterior surfaces (including coatings and sealants), exterior walls, windows, and doors on buildings, sheds and trailers. The exterior surfaces or walls may be made of metal, brick, CMU, wood, or glass. This system has a relatively large (16%) percentage CRV percentage impact to this subcategory.	

5	Excellent	Assessment: There are no visible exterior defects. Exterior paint and surfaces are clean and look new. The exterior is considered watertight; the surfaces, paint coatings, and sealants are providing a complete weather barrier to the rest of the facility. There is no evidence of corrosion or surface deterioration. Doors and windows are fully functional and provide a good seal; gasket material is firm and shows no signs of cracking. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no exterior system issues that affect this facility's operations and safety.
4	Good	Assessment: Minor exterior wall surface defects are present; minor rust or other corrosion on structural members; brick and mortar damage is visible with a small percentage needing replacement or repair. Some surface corrosion is evident; touch up painting is required. Small percentage of exterior window and door seals allow water to pass; exterior is not completely weatherproof. Some visible damage of leakage may be present. Minor corrective work is required.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: Exterior wall surface defects are present; limited brick and mortar damage is visible with a small percentage needing replacement or repair; a small percentage of metal siding needs replacement. Surface rust or corrosion is evident; painting is required for 25% of the surface area. Small percentage of exterior window and exterior door seals allow water to pass; exterior is not completely weatherproof. Leakage may be visible from inside the facility. Corrective work is required.	User Impact: The system is providing some functionality and reliability is questionable. Repairs to the exterior system such as exterior spot painting, caulking and sealing leaks may require temporary relocation of sensitive equipment. Minor weatherproofing problems may inconvenience users. The deterioration of the facility's exterior system should not damage internal furniture or supplies. Energy efficiency may be reduced as well.
2	Poor	Assessment: Major exterior wall surface defects are present; brick and mortar damage is visible with a large percentage needing replacement or repair; significant sections of metal siding/skin are damaged and need repair or replacement. Significant surface corrosion is evident; painting is required for half of the surface area. A large percentage of exterior window and exterior door seals allow water to pass; exterior is creating weatherproof problems on other systems. Significant corrective work is required.	User Impact: A large percentage of the exterior system is unusable or reliability is highly questionable. Significant corrective work will impact users. Cost of corrective work will require capital project funds. Weatherproofing problems will potentially damage the facility's contents. Energy efficiency is severely affected. Exterior defects will interrupt the facility's operations, missions and safety. Personnel safety may require a restricted access to certain areas. The appearance of the facility is not acceptable.

1	Bad	Assessment: The exterior system has significant leakage in many large areas and is possibly unsafe. There is significant evidence of deterioration, corrosion, and holes or cracks visible from inside the facility. The entire exterior system needs to be replaced. A significant percentage of exterior window and exterior door seals allow water to pass; the exterior is not weatherproof. Extensive crumbling or collapse of brick and mortar. Many exterior doors and windows are broken.	User Impact: The exterior system is not safe and in the case of brick or masonry facades, has the potential to collapse. Without replacement of the exterior, personnel, equipment and supplies will be exposed to weather and probably be damaged by its condition. Demolition will have to take place so that a new exterior can be fabricated; this will impact the user and temporarily interrupt operations. The appearance of the facility is not acceptable.
A	Interior	Definition: The interior system consists of the interior wall finishes, floor coverings, ceilings, doors and stairs of the buildings that house equipment in this sub-category. It does not include any internal structural walls (load bearing) or weather insulation but it can include specialized material, i.e. acoustical and fire proof materials. This system has a relatively large (14%) CRV percentage impact to the subcategory.	
5	Excellent	Assessment: There are no visible interior defects. Interior paint and surfaces are clean and look new. The ceiling, flooring and wall materials are 100% intact; paint is continuous with no flaking; carpet and floor tiling show no fraying or chipping; ceiling tiles show no evidence of staining; stairway treads show no visible deterioration. Doors are fully functional. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no interior system issues that affect this facility's requirement to support operations and safety. The interior meets all requirements for its intended work environment and is completely presentable.
4	Good	Assessment: Minor interior surface defects are present. There is evidence of very little marring, discoloration, fading or cracking. The ceiling, flooring and wall materials are mostly intact; touch up painting or spackling is required; carpet and floor tiling show little fraying or chipping; ceiling tiles show some staining; stairway treads have noticeable deterioration. Small percentage of doors do not seal. Minor corrective work is required.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: Interior surface defects are present. Ceiling, flooring and wall materials show evidence of marring, discoloration, fading or cracking; painting is required for 25% of the surface area; carpet and floor tiling show some fraying or chipping; ceiling tiles show staining; some stairway treads need to be replaced. Small percentage of doors do not seal properly. Corrective work is required. Sheetrock needs minor repairs.	User Impact: The system is providing some functionality and reliability. Repairs to the interior system such as spot painting, caulking and replacement of floor/ceiling tiles may require temporary relocation of personnel and sensitive equipment. Minor weatherproofing problems may inconvenience users.

2	Poor	Assessment: Major interior surface defects are present; wear and tear is excessive. Ceiling tiles, flooring and wall materials have broken or damaged elements; carpet and floor tiling show worn traffic patterns, broken/cracked/missing tiles, and visible subflooring. Walls have holes or furniture related damage. Ceiling tiles are stained, missing, or broken. Many stairway treads need to be replaced. A large percentage of doors do not seal properly. Significant corrective work is required.	User Impact: A large percentage of the interior system is unusable or reliability is highly questionable. Significant corrective work such as replacement of flooring and ceiling elements will temporarily impact users and disrupt the work environment. Interior defects may interrupt the facility's operations and safety.
1	Bad	Assessment: The interior system shows significant damage, corrosion, or deterioration. The interior is not providing an aesthetic function; flooring or floor coverings require replacement and interior surfaces require complete repainting. Ceilings require refurbishment. The entire interior needs to be replaced. Extensive if not total sheetrock repair and replacement are required.	User Impact: The interior system is not safe. Without replacement of the interior, personnel, equipment and supplies will be exposed or damaged by its condition. Demolition will have to take place so that a new interior can be fabricated; this will impact the users and temporarily interrupt operations. During any floor replacement or painting or ceiling work entry into the area will be restricted. The interior meets no requirements for its intended work environment and is not at all presentable.
A	Electrical	Definition: The electrical system in this sub-category applies to buildings that contain all service and distribution switches, switchgear, breakers, transformers, breaker panels, grounding systems, lighting fixtures, branch wiring, telecommunications systems, and security and fire protection monitoring systems. This system has a large (20%) CRV percentage impact to the sub-category.	
5	Excellent	Assessment: There are no visible electrical defects. This system should work as new. There are no electrical code issues. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no electrical issues that affect this facility's requirement to support operations and safety.
4	Good	Assessment: There are noticeable but minor defects. Typically circuit breakers or switch gear need repairs. Equipment is modern and up to date. The system meets electrical code requirements. Monitoring systems are fully functional and provide reliable information. Wiring shows signs of aging but coatings are not cracking, dry, brittle, or frayed. Minor corrective work is required.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: There are noticeable defects. Equipment may be outdated but is mostly functional. There is a potential for electrical code violations. Monitoring systems function the majority of the time, but information may not be consistent. Wiring shows signs of aging with coatings that have very minor cracking and fraying or are dry and brittle Corrective work is required.	User Impact: The system is providing minimal functionality, reliability is questionable, and repairs may have minor impact on users. A failure could affect other systems or degrade the facility's capabilities. The deterioration of the facility's electrical system may threaten or damage sensitive equipment if electrical service is interrupted or power surges occur. Electrical issues may affect the facility's operations and safety.

2	Poor	Assessment: Electrical defects are evident and require substantial repair or replacement. System experiences infrequent failures. Some components of the systems may be obsolete; equipment age is becoming a factor. Does not meet all electrical codes. Distribution switches, switchgear, circuit breakers, transformers, and/or panels may need to be replaced. Monitoring systems may not function and information is inconsistent and unreliable. Wires are exposed with cracking and fraying, and they are dry and brittle. Significant corrective work or component replacement is required.	User Impact: A large percentage of the electrical system is unusable and/or unsafe. The system is not reliable; power supply is inconsistent and interrupted. Emergency generators are required to insure the most basic mission can be carried out. Electric motors, pumps, vacuums and other equipment cannot be relied upon to function for the duration of a project. Significant corrective work will impact users. The facility's operations, missions and safety will be affected. Monitoring systems are unreliable or will fail to operate, which can result in damage to sensitive materials.
1	Bad	Assessment: The system is un-repairable; replacement is required. Repair parts are not readily available due to age. Systems do not meet current electrical codes and are unsafe. Distribution switches, switchgear, breakers, transformers, and panels show rust and exposed circuitry. The grounding system fails. Communications equipment does not work. Monitoring systems do not function.	User Impact: The system is in complete shutdown. The system is tagged out and entry into the area is restricted due to probable personnel safety issues. The facility, or major portions thereof, is uninhabitable due to lack of power for environmental services. Demolition will have to take place.
A	HVAC	Definition: The heating, ventilation, and air conditioning (HVAC) system in this sub-category applies to buildings that contain window mounted ac units and air circulation fans, exterior pad mounted DX units, air handlers, heating fans, exhaust fans, controls. This system may also contain chillers, chilled water distribution piping and pumps, boilers or hot water generators used for heating purposes, hot water heating distribution piping and heat pumps, and testing & balancing instrumentation. This system contributes a relatively large (13%) percentage to the CRV in this sub-category.	
5	Excellent	Assessment: There are no visible HVAC system defects and air flow is adequately controlled. This system should work like new. Equipment room is clean and neat. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no HVAC issues that affect this facility's requirement to support operations and safety.
4	Good	Assessment: There are noticeable but minor defects. There is some evidence of recent replacement to parts within the HVAC systems. Those parts include fan sheaves, drain pans, drain lines, control valves, insulation, etc. There are signs of system modifications but the equipment is modern and up to date. These systems meet appropriate building codes. Monitoring systems are fully functional and provide reliable information. Aging is evident in pipes and ducting. Minor corrective work is required. There are very few if any complaints from building users that the system will not control temperature in building.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. Minor complaints regarding environmental control are being reported by personnel. This system's reliability is not significantly jeopardizing the facility's operations and safety.

3	Fair	Assessment: There are noticeable defects. An HVAC unit or two may be out of service awaiting parts for repair, or awaiting bearing replacements on air handlers and other fans. Although equipment may be outdated, this system is mostly functional. A large number of complaints are being reported by building users that say the system will not control temperature within the building. There is a potential for building code violations. Some signs of corrosion, leaking, alarm indicators in alarm and poor housekeeping are evident. Corrective work is required.	User Impact: The system is providing minimal functionality, reliability is questionable, and repairs may have minor impact on users. A large number of complaints regarding environmental control are being reported by building users. A failure could affect other systems or degrade the facility's capabilities. The deterioration of the facility's HVAC system may threaten or damage sensitive equipment or stored supplies if service is interrupted. HVAC issues may affect the facility's operations and safety.
2	Poor	Assessment: HVAC component defects are evident and require substantial repair or replacement. System experiences infrequent failures. Some components of the systems may be obsolete; equipment age is becoming a factor. It does not meet all current building codes. Window mounted ac units and air circulation fans are being replaced on an irregular basis. Monitoring and control systems may not function. Piping, duct work, insulation, and control valves show significant signs of repair or replacement. Poor housekeeping and loose maintenance practices are producing excessive corrosion, air and water leakage, and alarm indications. Significant corrective work or component replacement is required. There are a high number of complaints from building users that system will not control temperature in building and/or that the system creates excessive noise and vibration that can be heard or felt in the habitable spaces.	User Impact: A large percentage of the HVAC system is unusable and/or unsafe. The system is not reliable; environmental controls are inconsistent. Significant corrective work will shut off air conditioning or heat thus impacting users. Monitoring systems are unreliable or will fail to operate, which can result in damage to sensitive materials. The facility's operations, missions and safety will be affected.
1	Bad	Assessment: The system is un-repairable; replacement is required. Repair parts are not readily available due to age. Systems do not meet current building codes and are unsafe. Window mounted ac units and air circulation fans do not work. Other HVAC systems do not function.	User Impact: The system is in complete shutdown. The system is tagged out and entry into the area is restricted due to probable personnel safety issues. The facility, or major portions thereof, is uninhabitable due to lack of environmental services. Demolition will have to take place.
A	Plumbing	Definition: The plumbing system within this sub-category consists of fire protection plumbing, potable water systems, a sanitary sewer, and bathrooms found in buildings. Components include all fixtures, piping, valves and associated pumpage equipment. This system contributes a small percentage to the CRV in this sub-category.	
5	Excellent	Assessment: There are no visible plumbing system defects. This system should work like new. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no plumbing issues that affect this facility's requirement to support operations and safety.

4	Good	Assessment: There are noticeable but minor defects. There is some evidence of recent replacement to parts within the plumbing system but there are no leaks at the flanges or fittings. Those parts include pipe flanges, valve fixtures, associated pumpage equipment, drain lines, control valves, house pumps and water tanks. There are signs of system modifications; it is possible to find the need for pump seal repairs or valve repacking. These systems meet appropriate building codes. Aging is evident in pipes. Minor corrective work is required.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. Minor complaints regarding plumbing services are being reported by personnel. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: There are noticeable defects. Although plumbing may be older, this system is mostly functional. There is a potential for building code violations. Corrosion and leaking are noticeable on bathroom fixtures and system equipment. Piping system flanges and/or fittings leak; pooling is evident. Pump repairs and/or rebuilds are a common occurrence. Alarm indicators are in alarm and poor housekeeping is evident. Corrective work is required.	User Impact: The system is providing some functionality, reliability is questionable, and repairs may have minor impact on users for a short period of time. Leaks from the plumbing system may threaten or damage sensitive equipment. A large number of plumbing complaints are being reported by building users. Plumbing issues may affect the facility's operations, missions and safety [like leaks to the fire suppression system].
2	Poor	Assessment: Plumbing component defects are evident and require substantial repair or replacement. System experiences infrequent failures. Fixtures and other system components may be obsolete; equipment age is becoming a factor. It does not meet all current building codes. There are areas of large pooling and water containment; there is excessive corrosion, water leakage, and alarm indications; pumps and piping systems need complete sections replaced or complete rebuilds. Significant corrective work or component replacement is required.	User Impact: A large percentage of the plumbing system is unusable and/or unsafe. The system is not reliable; the fire suppression system cannot be relied upon to adequately protect equipment, supplies, and personnel. Significant corrective work may shut off plumbing services thus impacting users. Plumbing failures will result in damage to sensitive materials. The facility's operations and safety will be affected.
1	Bad	Assessment: The system is un-repairable; replacement is required. Repair parts are not readily available due to age. Systems do not meet current building codes and are unsafe. Fixtures, pumps, and fire suppression piping does not work. Plumbing systems do not function.	User Impact: The system is in complete shutdown. The system is tagged out and entry into the area is restricted due to probable personnel safety issues. The facility, or major portions thereof, is uninhabitable due to lack of plumbing services. Demolition will have to take place.
A	Conv	Definition: The conveyance system in this sub-category consists of the personnel or maintenance elevators, escalators, cranes over 50 tons, and other specialized lifts. This system contributes a very small percentage of the CRV in the 'building' sub-category.	
5	Excellent	Assessment: There are no visible conveyance system defects. This system should work like new. Certification is up-to-date. Only normal preventive maintenance is required. Action items for corrective work should not exist.	User Impact: There is no impact to the user; the system is functional and reliable. There are no conveyance issues that affect this facility's requirement to support operations and safety.

4	Good	Assessment: There are noticeable but minor defects. There is some evidence of recent replacement to parts within the conveyance system but system is certified. Minor corrective work is required.	User Impact: The system is functioning as intended, but corrective work is managed so that there is no impact on the user. This system's reliability is not significantly jeopardizing the facility's operations and safety.
3	Fair	Assessment: There are noticeable defects. Although the system may be older, it is mostly functional; the system is certified. There is a potential for building code violations. Corrosion and leaking are noticeable on system components. Corrective work is required.	User Impact: The system is providing some functionality, reliability is questionable, and repairs may have minor impact on users for a short period of time. Conveyance issues may affect the facility's operations and safety.
2	Poor	Assessment: Conveyance component defects are evident and require substantial repair or replacement; system may not be certified. System experiences infrequent failures. System components may be obsolete; equipment age is becoming a factor. It does not meet all current building codes. Significant corrective work or component replacement is required.	User Impact: A large percentage of the conveyance system is unusable and/or unsafe; this system should not be used until re-certified. The system is not reliable and needs to be inspected.
1	Bad	Assessment: The system is un-repairable; replacement is required because user is unable to maintain certification. Repair parts are not readily available due to age. System does not meet current building codes and is unsafe. Conveyance systems do not function.	User Impact: The system is in complete shutdown. The system is tagged out. Demolition will have to take place.
A	Equip	Definition: Program support equipment is not rated in this sub-category.	

Appendix B

Facility Assessment Program Investigation

Appendix B

Facility Assessment Program Investigation

Literature review for this study was undertaken to identify two overarching program features:

1. Methods of approach to facility condition assessment
2. Features of example facility assessment systems

Facility condition assessment programs estimate the amount work needed to bring a facility to an acceptable condition. Measurements target either the gross monetary value of work required for a facility to meet acceptability standards, or the total work needed excluding regular maintenance, programmed repairs, and capital improvements. The latter is defined as deferred maintenance which calculates the amount of maintenance work undone each year due to budget inadequacy or maintenance program inefficiency. Calculating deferred maintenance gives a more accurate record of additional funding needed and can focus additional or redirected funds on specific facility systems or priorities.

Facility “systems” refer to the functional components of a facility such as the foundation, roof, walls, and utilities. Elements or features of these systems are visually inspected to determine the overall condition of the system. System deficiencies can be grouped into different priority levels to help direct investment efforts.

This study reviewed the following 7 example programs: 1) Bureau of Indian Affairs’ Facility Management Information System, 2) NASA Parametric Cost Estimating for Deferred Maintenance, 3) State of Montana Facility Condition Assessment program, 4) Arkansas Statewide Educational Facilities Assessment, 5) State of Colorado School Facility Assessment, 6) Idaho Statewide School Facilities Needs Assessment Update, and 7) Howard County Public School System Facility Assessments.

These models were reviewed to determine best way to divide campus facilities into systems and to determine what considerations were needed for assessing the facility systems. Additionally, the assessment method for these models was analyzed to determine critical components and overall effectiveness and efficiency of the model. The ability to replicate the model was considered.

Key program features evaluated in this review include:

- Assessment categories
- Condition rating method
- Reporting method
- Part responsible for condition assessment and level of training required
- Program operation costs

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) utilizes the Facility Management Information System (FMIS), a detailed computer-aided facility management (CAFM) program. In 2003, FMIS inventoried condition assessments for approximately 2,200 buildings on 171 elementary and secondary school campuses. (GAO-03, 2003) The total square footage of BIA school campus buildings in 2006 totaled 1,924,249 square feet (sf). (USASPENDING.GOV, 2010)

Table 1 – BIA Program Features

Assessment Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
• Emergency • Safety • Physical plant (maintenance) • Handicapped • Environmental • Predictive renewals • New construction • Programmatic capital improvements • Energy	• Deficiencies to be addressed within 1 year • Deficiencies to be addressed in 1 to 2 years • Deficiencies to be addressed in 3 to 5 years • Planned work scheduled for 5 to 10 years • New construction and other capital improvements	• Visual inspection • Record deficiencies based on estimated repair costs • Submit work requests via computer program • Contractor validates data and submits funding requests	• Assessed by facility maintenance staff • Extensive training and monitoring required • High cost	• \$1.21/sf annually* • High

**Based on HHF estimate, (Appendix B.1. – BIA FMIS System Evaluation), includes program development*

Notes:

Data records show that over time the percentage of schools in acceptable condition is increasing. (USASPENDING.GOV, Exhibit 300: Capital Asset Plan and Business Case Summary, 2010) However, as of 2009, after 15 years of operation (from 1994), school facilities are still in poor condition and require 1.3 billion dollars of repairs as of 2009. (BIA, 2009)

Assessor knowledge of assessment method and data entry was a major problem. Between August 2001 and December 2002, nearly 50 % of the 650 entries made were rejected. Approximately 75% of schools had at least one entry disapproved, and 33% of all BIA schools had all of their entries disapproved, a 100% error rate. (GAO-03, 2003, p. 23) Significant resources were spent on training and a special work group had to be created to address GAO recommendations.

\$12.5M was spent, between 1995 and 2002, to develop and begin implementing FMIS. Between 1999 and 2003, \$13M was spent on contractor inventory validation, condition data, and engineering support activities. BIA expected to pay \$1.95M per year for operation costs from 2003 through 2006, and \$1M per year thereafter. BIA expected to spend \$8.3 for AME to validate inventory and condition data from 2004 through 2006. (GAO-03, 2003, p. 8) Most recent information was not found regarding reporting errors and training efforts.

The following problems with FMIS were identified by the U.S. Government Accountability Office (formerly the U.S. General Accounting Office) (GAO) in 2003 and the Committee on Bureau of Indian Affairs in 2008:

- Data entry is laborious, and skill- and time-intensive with high levels of inaccuracy for backlog and project prioritization.
- Efforts are not made to enforce employee accountability.
- Project linkage problems exist due to limited funding. Problems arise in sequencing and coordinating across projects.
- Schools are not well informed about the priority list for replacement and new construction.
- The prioritization process is viewed as too multi-layered, bureaucratic and subjective and the prioritization of funding is often viewed as disconnected from the pressing needs of the school.
- Pressing needs can overwhelm the system. *Sources: (CBI, 2008), (GAO-03, 2003)*

NASA

NASA uses a parametric estimating method that calculates the system condition index rating (SCR) and the facility condition index rating (FCR) for each building. The DM model can estimate the maintenance budget deficiency, and, when tracked over time, can show the effectiveness of the maintenance program. Condition is rated for each system of each facility, and based on the system's current replacement value (CRV), the amount of deferred maintenance (DM), or the amount non-programmed funding needed to bring a facility to acceptable condition, can be calculated. Determining SCR and FCR allows the program manager to determine condition trends for facility complexes or specific facility systems across a region.

Table 2 – NASA Program Features

Assessment Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Structure • Exterior • Roofing • HVAC • Electrical • Plumbing • Conveyance • Interior • Facility Equipment	• 5: Excellent: Only normal scheduled maintenance required. • 4: Good: Some minor repairs needed. System normally functions as intended. • 3: Fair: Minor & some larger repair required. System occasionally unable to function as intended. • 2: Poor: Significant repairs required. System not fully functional as intended. • 1: Bad: Major repair or replacement required to restore function. Unsafe to use. • 0: System does not exist (NASA-DM, 2005)	• Visual inspection • Record deficiencies based on system rating and System Condition CRV Percentages to determine DM • Data submitted through handheld reporting device • DM estimates and project priority influence funding allocations	• Assessed by facility maintenance staff • Minimal training and monitoring required • Low cost	• \$0.02/sf annually* • Low

**This figure represents regular assessment cost and does not include program development. (Sapp, 2007, p. 1)*

Notes:

This model seems to offer the most efficient and adaptable program for OIA purposes and is detailed as the selected method in Section 3. Estimating DM allows the funding manager to track the effectiveness of changes to the program and monitor specific problems and investments. Metrics and calculation factors are identified and openly available. A private contract is not required for use.

Montana K-12 Public School Facility Condition Assessment

Montana calculates the Facility Condition Index (FCI) for school facilities based on a system deficiency ratio. This method identifies needed repairs, estimates project costs, identifies building replacement costs (current in-kind costs), and uses a comparative cost database to generate FCI for 11 systems in 7 categories. This is all based on automatically generated calculations within a proprietary Facility Condition Inventory computer program, and uses deficiency remediation and replacement costs derived from *RS Means Square Foot Cost*, 28th annual edition (2007). Development of this program required significant effort and resource investment. (DLR, 2008, p. 15 and 18)

Table 3 – Montana Program Features

Assessment Categories	Deficiency Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Foundations • Envelope • Floor system • Roof system • Finishes • Specialties • HVAC • Plumbing • Electrical • Conveyance • Safety	• Safety • Damage/wear out • Codes and standards • Environmental • Energy • Aesthetics • Other/non-FCI	Deficiency Ratio • Good: 0 - <5% & 5 – 9% • Fair: 10 – 14% & 15 – 19% • Poor: 20 – 24% & >25%	• Visual inspection • Record deficiencies • Estimate cost of remediation • Calculate facility replacement value • Calculate deficiency ratio (deficiencies/ CRV)	• Assessed by contractor • 732 buildings per month • Assess every 2-4 years • 2 days of training: classroom and field • Low cost	• \$0.07/sf annually* • Low

Notes:

Standardized construction costs (estimated annually) are used for replacement costs using Engineering News Record data (DLR, 2008, p. 18)

Inventory includes records of the following:

1. building type by use, building materials, building construction year, building floor area, equipment and systems present, level of fatigue or failure of systems;
2. total number of buildings, total floor area, total buildings by type, total vacant buildings;
3. count of total buildings solely used for education and respective floor area, total student enrollment, estimate floor area per student (DLR, 2008, pp. 4, 7, and 14)

Arkansas Statewide Educational Facilities Assessment (2004)

The Arkansas school system also measures FCI, or the cost to repair a facility compared to the costs to replace the facility: $FCI = \text{repair costs} / \text{replacement costs}$. FCI calculation is represented as a percentage. A lower percentage correlates with better facility condition. If the FCI is 65% or greater replacement, versus repair, is recommended. Facility Condition is defined as the sum of the Current Deficiencies and the Year Zero Life Cycle, so replacement of some systems is factored in based on building age not only present system condition.

Table 4 – Arkansas Program Features

Assessment Categories	Deficiency Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Site • Roofing • Exterior • Structural • Interior • HVAC • Plumbing • Electrical • Technology • Fire & Safety • Specialties	• Mission critical • Impact Functioning of School • Short Term Conditions • Least Critical	Condition Index • <10% • 10 – 19% • 20 – 29% • 30 – 39% • 40 – 49% • 50 – 59% • 60 – 69% • 70 – 79% • 80 – 89% • 90 – 100% • >100%	• Visual inspection • Record deficiencies • Estimate cost of remediation • Calculate facility replacement value • Calculate FCI	• First assessed by contractor • Recommends local asst., frequency unstated • 1642 buildings/ month • Training requirements not available	• \$0.12/sf annually* • Low

*HHF estimate, includes program development. Source: (JCEF, 2004, p. 3 & 5)

Notes:

Project cost estimates based on an average of \$101.62 per square foot. (JCEF, 2004, p. 10 & 23)
 The contractors that undertook the 2004 assessment recommend that school districts dedicate 9% of their operating expenditures exclusively for custodial/maintenance operations.

Inventory includes records of the following:

1. Number of schools, number of buildings, facility use (building type) [construction type/material not inventoried], count of total buildings solely used for education and respective floor area, total student enrollment, estimate floor area per student
2. Facility Condition – current deficiencies (item requiring repair or replacement), year zero life cycle (systems that have expired based on age as assessed) (JCEF, 2004, p. 19)

Colorado School Facility Assessment (2005)

Deferred maintenance is calculated for Colorado schools using BASYS® School Facility Assessment System. Higher scores indicate better condition; a score of 90 or higher indicates only routine maintenance is required and a score below 50 indicates the building should be replaced. Scores are given for each building at each school and are therefore weighted by respective floor area, but the score for each system is based on the systems contribution to the overall cost of building construction (replacement value), so normalization also occurs based on system value. Calculation units for estimating deferred maintenance costs are not publically available. (MGT, 2005, p. 1)

Table 5 – Colorado Program Features

Assessment Categories	Deficiency Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Structural • Mechanical • Safety/ Fire protection • ADA	• Physical Condition • Educational Suitability • Technology Readiness • Site Condition • Capacity/ Utilization	• New: 100 • Good: 90+ • Fair: 75 – 89 • Poor: 50 – 74 • Unsatisfactory: Below 50	• Visual inspection • Record deficiencies • Estimate cost of remediation • Calculate facility replacement value • Calculate FCI • Total remediation costs	• Assessed by contractor • Training requirements not available	• NA

Notes:

Inventory includes records of the following:

1. Region number, school name, building name/number, system components, component percent of system, score, possible score, percent score, building totals, and deferred maintenance costs.

Deferred maintenance is only estimated for the Physical Condition Assessment category. This category also includes additional capacity requirement costs.

Idaho Statewide Facility Condition Assessment (1999)

The Idaho program is also based on FCI calculation. Deficiency estimates are subtracted from 100% so a higher score indicates better facility condition; a score of 90 or higher indicates only routine maintenance is required and a score below 50 indicates the building is in poor or unsatisfactory condition. (IIFP, 1999, p. 18)

Table 6 – Idaho Program Features

Assessment Categories	Deficiency Categories	Rating Method	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Exterior • Interior • Mechanical • Safety/ building code	• 29 • Overly detailed	• Good • Fair • Poor • Unsatisfactory *Numerical rating value range varies by system	• Visual inspection • Rate system components on a 37 page checklist • Calculate adjusted score • Submit • Calculate FCI • Total remediation costs	• Assessed by contractors • Training requirements not available	• NA

Notes:

Estimated deficiency remediation costs are based on an estimated upgrade factor of \$100 per square foot (FPCo, 2006). (IIFP, 1999, p. 12) Estimate source could not be identified, but R.S. Means was mentioned in relation to new construction (\$83.58) to meet enrollment increases. (IIFP, 1999, p. 32)

Basic records are inventoried. Facility use and construction type/material are not included.

Howard County Public School System Facility Assessment – High Schools (2008)

Howard County assessment estimated deferred maintenance for 12 high schools, excluding programmatic renovations or changes. Total net present value cost estimates were used to develop repair costs per square feet, Facility Condition Indices (FCI), Systemic Renovation Indices (SRI), mean costs per year, percentages of current replacement value (CRV), and to breakdown repair costs for system areas. The FCI is calculated by dividing the cost of deferred maintenance by the Current Replacement Value (CRV) of the building. The FCI is a ratio and

thus the higher the FCI the worse the buildings condition. A new building with no or very few deficiencies and a 100% replacement value would have an FCI of 0.

Table 7 – Howard County Program Features

Assessment Categories	FCI Rating Index	SRI Rating Index	Reporting Method	Assessor/ Training	Operating Costs
Systems: • Site • Structural • Exterior • Roofs • Mechanical • Electrical • Plumbing • Conveyance • Fire and life safety • Interiors	• Excellent: <0.05 • Good: 0.05 – 0.14 • Average: 0.15 – 0.29 • Poor: 0.30 – 0.50 • Crisis: >0.50	• Excellent: <0.05 • Good: 0.05 – 0.10 • Average: 0.11 – 0.30 • Poor: 0.31 – 0.50 • Crisis: >0.50	• Visual inspection • Estimate FCI and CRV • Estimate SRI • Calculate DM/ remediation costs	• Assessed by contractors • Training requirements not available	• NA

Notes:

CRV was calculated by multiplying floor area for each school by a typical replacement cost per square foot of \$167 per square foot (sf) for base building systems (not including land acquisition, site systems, and programmatic fixtures, furnishings, and equipment). System and building replacement costs derived from R.S. Means Square Foot Costs (2006) for Middle Schools. The \$167/sf value was selected from the high end of the cost per square foot range established by R.S. Means for new high school construction for the Baltimore/Washington DC areas. (GAI, 2008, pp. 1.3-7)

SRI was calculated to consider the cost of deferred maintenance directly related to interior building systems: mechanical/HVAC, electrical, plumbing, fire and life safety, and conveying systems and interior finishes. It excludes major repairs and replacements to site systems, exterior elements, and roofing systems that may be budgeted and completed independently of the interior renovation requirements. The interior system deferred maintenance is then normalized by the replacement values of those specific systems which represent between 55% and 60% of the total CRV. (GAI, 2008, pp. 1.3-8)

The Federal Facilities Council (FFC) reported an optimal range of Maintenance and Repair (M&R) budgeting to be in the range of 2 to 4% of the current replacement value (CRV) for facilities. HCPSS is successfully maintaining their facilities with a range of 1.4 – 2.6% CRV and average \$1.67 per square foot per year, evidencing a successful and well balanced maintenance program. (GAI, 2008, pp. 1.3-10)

Calculation factors for deficiency estimation and buildings inventory data points are not available.

Selected Method

The NASA model is preferred because of its applicability and adaptability to OIA needs and the accessibility of program elements. Assessment and calculations can be easily and readily undertaken with the existing system. As shown in Table 8, NASA facility system categories aptly capture facility elements. The most obvious exclusions from NASA's systems are Fire/safety and Site. Fire protection should be addressed with plumbing, and safety (egress/ADA compliance) should be considered in all categories. Site condition is important to facility assessment, but does not correspond with deferred maintenance estimation for facility systems. Site evaluation should be considered separately. Conveyance is likely not needed, and the exclusion of this system is discussed in Appendix A – Program Fundamentals of the Selected Assessment Model.

Table 8 - Program Systems Comparison

BIA	NASA	Montana	Arkansas	Colorado	Idaho	Howard County
Emergency	Structure	Foundation	Site	Structure	Exterior	Site
Safety	Exterior	Envelope	Roofing	Mechanical	Interior	Structure
Physical plant	Roofing	Floor System	Exterior	Fire/Safety	Mechanical	Exterior
ADA	HVAC	Roofing	Structure	ADA	Safety/code	Roofing
Environmental	Electrical	Finishes	Interior			Mechanical
Predictive renewals	Plumbing	Specialties	HVAC			Electrical
New construction	Conveyance	HVAC	Plumbing			Plumbing
Planned Imprvmnts	Interior	Plumbing	Electrical			Conveyance
Energy	Equipment	Electrical	Technology			Fire/Safety
		Conveyance	Fire/Safety			Interiors
		Safety	Specialties			

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Appendix B.1

BIA FMIS System Evaluation

The Bureau of Indian Affairs (BIA) began investing in the Facilities Management Information System (FMIS) in 1994 when BIA conducted a facility assessment survey. At the time 62% of schools had at least one building in need of extensive repair, 79% of schools reported inadequate building features on their campuses, and 94% reported at least one unsatisfactory environmental condition. (GAO-97, 1997, pp. 5-7) Data from the 1994 National School Facilities Survey showed that, “compared with other schools nationally, responding BIA schools (1) are generally in poorer physical condition, (2) have more unsatisfactory environmental factors, (3) more often lack key facilities requirements for education reform, and (4) are less able to support computer and communications technology.” (GAO-97, 1997, p. 2) In 1997, “Officials at the three responding schools that [GAO] visited told [GOA] that although some repairs and improvements had been made, overall conditions had not changed materially since [the] 1994 survey.” (GAO-97, 1997, p. 5)

ITDashboard, on USASPENDING.GOV, offers data on the percent of BIA schools in acceptable condition:

- o 2007 – 39%
- o 2008 – 45%
- o 2009 – 52%
- o 2010 – TBD, but the goal is 58% (USASPENDING.GOV, Exhibit 300: Capital Asset Plan and Business Case Summary, 2010)

This data trend shows improvement is taking place.

Applied Management Engineering, Inc. (AME) completed its first inventory verification in 1999, and found 75,000 adjustments that needed to be made to the backlog inventory. This increased the backlog estimate by approximately 28%. Backlog validation in 2002 identified a needed \$11M increase of the \$39M unfunded backlog, again a 28% increase.

Available backlog data is listed below:

- o 1997 - \$754M Backlog (GAO-97, 1997, p. 4)
- o 1999 - \$970M Backlog (GAO-03, 2003, p. 18)
- o 2001 - \$776M Backlog; note: this exceeds 2000 funding levels by 30%. (GOA-01, 2001, p. 5)
- o 2002 - \$642M Backlog; note: inventory includes approximately 2,200 buildings on 171 campuses. (GAO-03, 2003, p. 3)
- o 2003 - A backlog of 2/3 that of 2002 was predicted, but no further information was found

Between August 2001 and December 2002, nearly 50 % of the 650 entries made were rejected. Approximately 75% of schools had at least one entry disapproved, and 33% of all BIA schools had all of their entries disapproved, a 100% error rate. (GAO-03, 2003, p. 23) Significant

resources were spent on training and a special work group had to be created to address GAO recommendations.

\$12.5M was spent, between 1995 and 2002, to develop and begin implementing FMIS. Between 1999 and 2003, \$13M was spent on contractor inventory validation, condition data, and engineering support activities. BIA expected to pay \$1.95M per year for operation costs from 2003 through 2006, and \$1M per year thereafter. BIA expected to spend \$8.3 for AME to validate inventory and condition data from 2004 through 2006. (GAO-03, 2003, p. 8) The sum of the estimates from 1995 to 2010 equals a total expenditure of \$37.3M. This does not include costs incurred by the special working group.

$$12.5 + 13 + 1.95(4) + 1(4) = \$37.3M$$

ITDashboard gives statistics on the BIA FMIS. The identified square footage of BIA buildings in 2006 totaled 1,924,249 square feet (sf). (USASPENDING.GOV, 2010) Given an operations and maintenance (O&M) expenditure of \$37.3M, the total implementation cost per square foot equals \$19.38 per square foot or \$1.21 per square foot per year from 1995 to 2010.

$$37,300,000/1,924,249 = \$19.38/sf$$

O&M costs reported on ITDashboard reported up to 2009 total \$19.6M and are detailed below:

Enhancements FMIS FY02 -	\$1.2 M
O&M for FMIS prior to FY07 -	\$14.5 M
O&M for FMIS FY07 -	\$1.5 M
O&M for FMIS FY08 -	\$1.1 M
O&M for FMIS FY09 -	\$1.3 M
Total -	\$19.6M

Source: (USASPENDING.GOV, IT Dashboard, 2010)

These figures appear to cover years 2002-2009 or eight total years and equate to annual expenditures of \$2.45M per year and an annual O&M cost of \$1.27 per square foot of inventoried area.

$$19.6/8 = \$2.45M/yr$$

$$2,450,000/1,924,249 = \$1.27/sf-year$$

ITDashboard identifies the investment start date as 1994. Given that these were the total expenses incurred over 16 years the annual O&M cost would equal \$0.64 per square foot.

$$19.6/16 = 1.225M/yr$$

$$1,225,000/1,924,249 = $.64/sf$$

This figure seems inaccurate since back log validation began in 1999. (GAO-03, 2003, p. 7) Regardless, the NASA parametric model boasts an implementation cost of \$.02/sf or 3% the FMIS cost. (Sapp, 2007, p. 2) Available data for the FMIS system is dated. If it is imperative that HHF pursue this model further we will need access to more current information and model details.

Pro Con Assessment of the FMIS System

Pro:	Con:
• Improvement is evident across the study area • Data entry restricted to one manager maintains consistency in inventory changes • Categorizes and ranks deficiencies (Emergency, Safety, Maintenance, ADA, Envi, Predictive Renewals, New Construction, CIP, Energy Codes Compliance) • Many interviewees believe the system is generally sufficient (even though they don't understand the prioritization and funding for projects) • Life safety issues seem to be adequately addressed	• Accounts for all facility funding in the system - overwhelming • Dependant on internet access – Potentially unreliable • Backlog entries categorized incorrectly • Data entry is laborious, and skill- and time-intensive • Backlog data contains significant inaccuracies. Review process and training programs for data quality assurance have been ineffective (50% inaccuracy, flagged by BIA contractor) • Efforts not made to enforce employee accountability • Does not provide a holistic view of the school facility as it actually is. Project linkage issues exist due to limited funding. Problems arise in sequencing and coordinating across projects • May not meet the full requirements of the [No Child Left Behind Act] NCLB “catalogue of school facilities” • Prioritization can be distorted • School replacement, repair, and renovation prioritization may cause short-term problems • Schools are not well informed about the priority list for replacement and new construction. • The prioritization process is viewed as too multi-layered, bureaucratic and subjective • The prioritization of funding for repairs and renovation is often viewed as opaque, arbitrary, and disconnected from the pressing needs of the school • Pressing needs can overwhelm the system • Repair and renovation budget is insufficient • Budgets for replacement and new construction do not account for inflation. • Critical needs are left out of new schools

Sources: (CBI, 2008), (GAO-03, 2003)

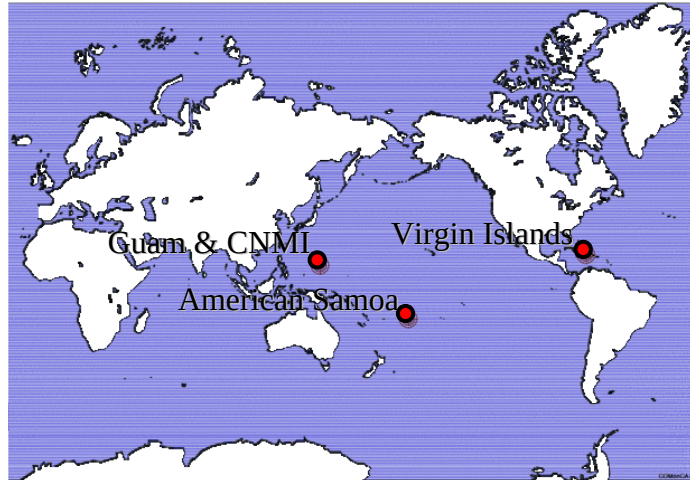
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Appendix C

Campus Locations and Aerial Site Photos

GIS Point Data and Aerial Photographs for Campuses within the Study Area



Coverage of the Four U.S. Territories is presented as follows:

- 1. American Samoa**
- 2. Commonwealth of the North Marianas Islands**
- 3. Guam**
- 4. U.S. Virgin Islands**

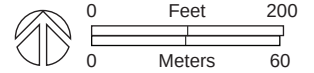
1.A American Samoa

Island of Tutuila





Early Childhood Education Center
Tutuila, American Samoa

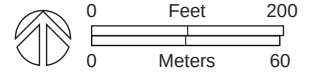


Special Education
Tutuila, American Samoa





Afono Elementary School
Tutuila, American Samoa

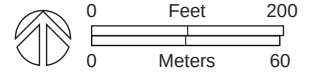


Alatau-ia Elementary School
Tutuila, American Samoa





Alofau Elementary School
Tutuila, American Samoa



Aua Elementary School
Tutuila, American Samoa





Coleman Elementary School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



Lailii Elementary School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



Le'atele Elementary School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



Leone Midkiff Elementary School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



Lupelele Elementary School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



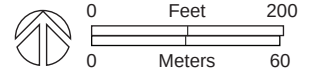
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Anun'u, American Samoa



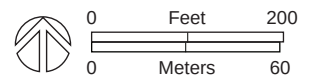
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Manulele Elementary School
Tutuila, American Samoa

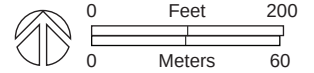


Masefau Elementary School
Tutuila, American Samoa





Matafao Elementary School
Tutuila, American Samoa

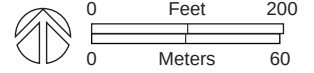


Matatula Elementary School
Tutuila, American Samoa





Mauga-o-alava Elementary School
Tutuila, American Samoa

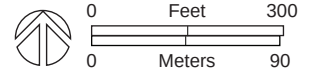


Olomoana Elementary School
Tutuila, American Samoa

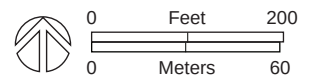




Pavaiai Elementary School
Tutuila, American Samoa

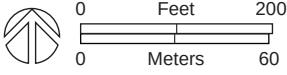


Siliaga Elementary School
Tutuila, American Samoa





Taputapu Elementary School
Tutuila, American Samoa





Manulele Jr. High School
Tutuila, American Samoa



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0 Meters 60



Fagaitua High School
Tutuila, American Samoa



0 Feet 200
0 Meters 60



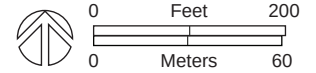
Leone High School
Tutuila, American Samoa



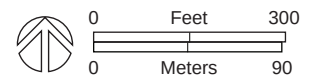
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0 Meters 120



Nu'uuli Poly Tech High School
Tutuila, American Samoa



Samoana High School
Tutuila, American Samoa





Tafuna High School
Tutuila, American Samoa



0 Feet 400
0 Meters 120

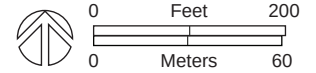
1.B American Samoa

Islands of Tao and Olosega – Manua District





Faleasao Elementary School
Manua, American Samoa



Fitiuta Elementary School
Manua, American Samoa





Olosega Elementary School
Manua, American Samoa



0 Feet 200
0 Meters 60



Manu'a High School
Manua, American Samoa



0 Feet 300
0 Meters 90

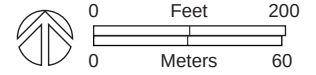
2.A Commonwealth of the North Marianas Islands

Island of Saipan

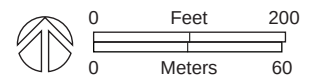


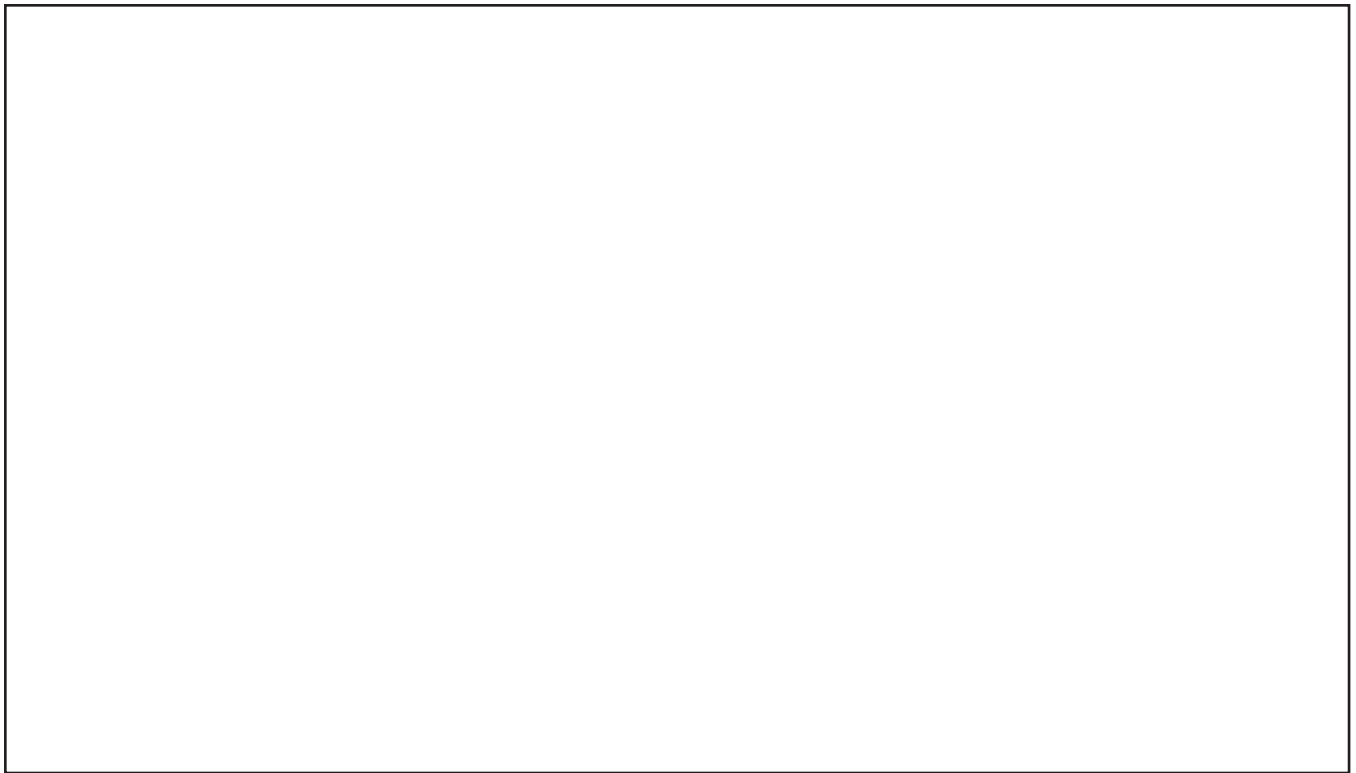


Dan Dan Elementary School
Saipan, CNMI



G.T. Camcho Elementary School
Saipan, CNMI





Garapan Elementary School
Saipan, CNMI



0 Feet 000
0 Meters 00



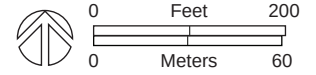
Kagman Elementary School
Saipan, CNMI



0 Feet 300
0 Meters 90



Koblerville Elementary School
Saipan, CNMI

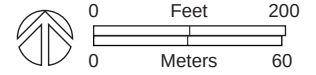


Oleai Elementary School
Saipan, CNMI





San Antonio Elementary School
Saipan, CNMI

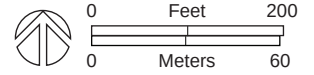


San Vicente Elementary School
Saipan, CNMI

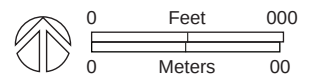




Tanapag Elementary School
Saipan, CNMI

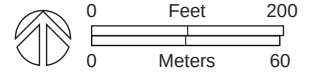


William Reyes Elementary School
Saipan, CNMI

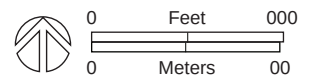




Chacha Oceanville Jr High School
Saipan, CNMI

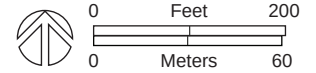


Hopwood Jr High School
Saipan, CNMI

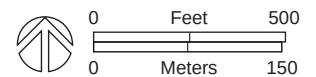




Kagman High School
Saipan, CNMI



Marianas High School
Saipan, CNMI





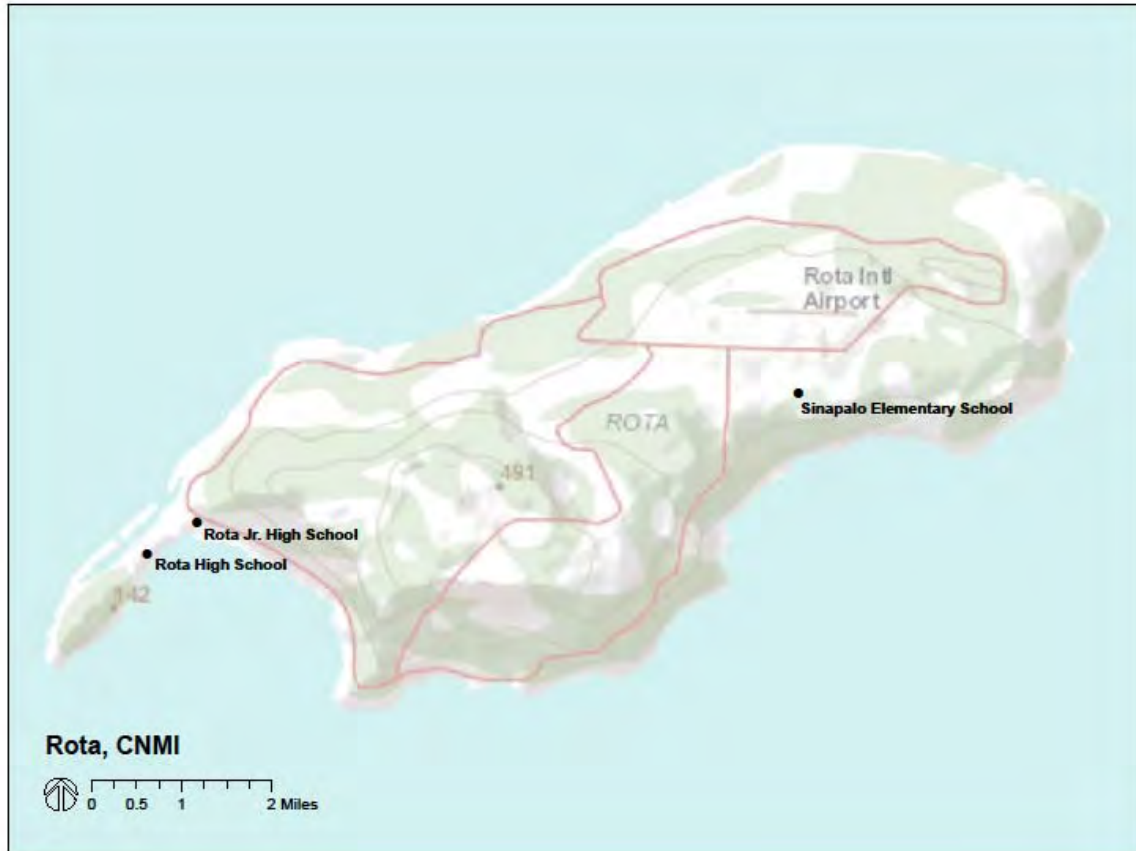
Saipan Southern High School
Saipan, CNMI



0 Feet 200
0 Meters 60

2.B Commonwealth of the North Marianas Islands

Island of Rota





Sinapolo Elementary School
Rota, CNMI



0 Feet 200
0 Meters 60



Rota Jr High School
Rota, CNMI



0 Feet 300
0 Meters 90



Rota High School
Rota, CNMI



0 Feet 400
0 Meters 120

2.C Commonwealth of the North Marianas Islands

Island of Tinian





Tinian Elementary School
Tinian, CNMI



0 Feet 200
0 Meters 60



Tinian Jr / Sr High School
Tinian, CNMI



0 Feet 200
0 Meters 60

3. Guam

Island of Guam





Adacao Elementary School
Guam



0 Feet 200
0 Meters 60



Astumbo Elementary School
Guam



0 Feet 200
0 Meters 60



C.I. Taitano Elementary School
Guam



0 Feet 200
0 Meters 60



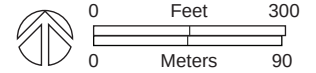
Capt Price Elementary School
Guam



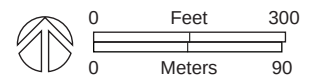
0 Feet 300
0 Meters 90



Carbullido Elementary School
Guam



Chief Brodie Memorial Elementary School
Guam





Daniel L. Perez Elementary School
Guam



0 Feet 300
0 Meters 90



F.Q. Sanchez Elementary School
Guam



0 Feet 200
0 Meters 60



Finegayan Elementary School
Guam



0 Feet 300
0 Meters 90



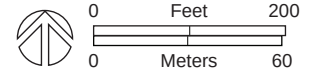
Hagatna Heights Elementary School
Guam



0 Feet 200
0 Meters 60



Inrajan Elementary School
Guam



J.P. Torres Elementary School
Guam





J.Q. Miguel Elementary School
Guam



0 Feet 200
0 Meters 60



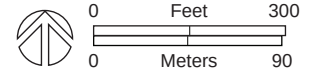
Juan M. Guerrero Elementary School
Guam



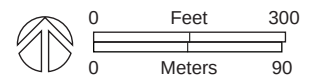
0 Feet 300
0 Meters 90



LBJ Elementary School
Guam



Ligan Elementary School
Guam





M.A. Sablan Elementary School
Guam



0 Feet 300
0 Meters 90



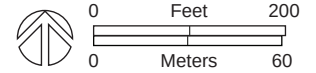
M.U. Lujan Elementary School
Guam



0 Feet 200
0 Meters 60



Machananao Elementary School
Guam



Maria A. Ulloa Elementary School
Guam





Merizo Martyrs Memorial Elementary School
Guam



0 Feet 200
0 Meters 60



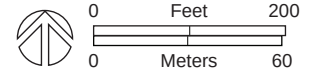
Ordot/chalan Pago Elementary School
Guam



0 Feet 200
0 Meters 60



P.C. Lujan Elementary School
Guam

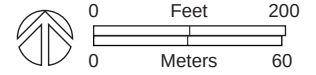


Talofofo Elementary School
Guam

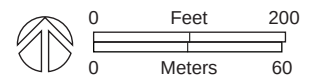




Tamuning Elementary School
Guam

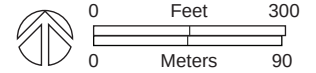


Truman Elementary School
Guam

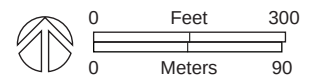




Upi Elementary School
Guam

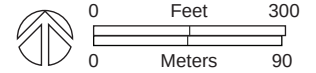


Wettengel Elementary School
Guam

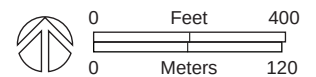




Agueda Johnston Middle School
Guam

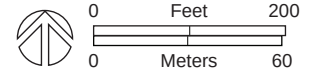


Astumbo Middle School
Guam

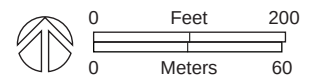




F.B. Leon Guerrero Middle School
Guam



Inarajan Middle School
Guam





Jose Rios Middle School
Guam



0 Feet 200
0 Meters 60



L.P. Untalan Middle School
Guam



0 Feet 300
0 Meters 90



Oceanview Middle School
Guam



0 Feet 300
0 Meters 90



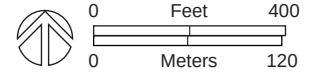
Vincente S.A. Benavente Middle School
Guam



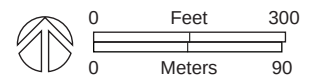
0 Feet 300
0 Meters 90



George Washington High School
Guam

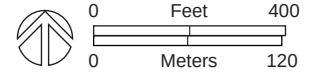


JFK High School
Guam

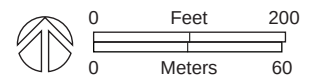




Okkodo High School
Guam

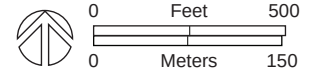


Simon Sanchez High School
Guam



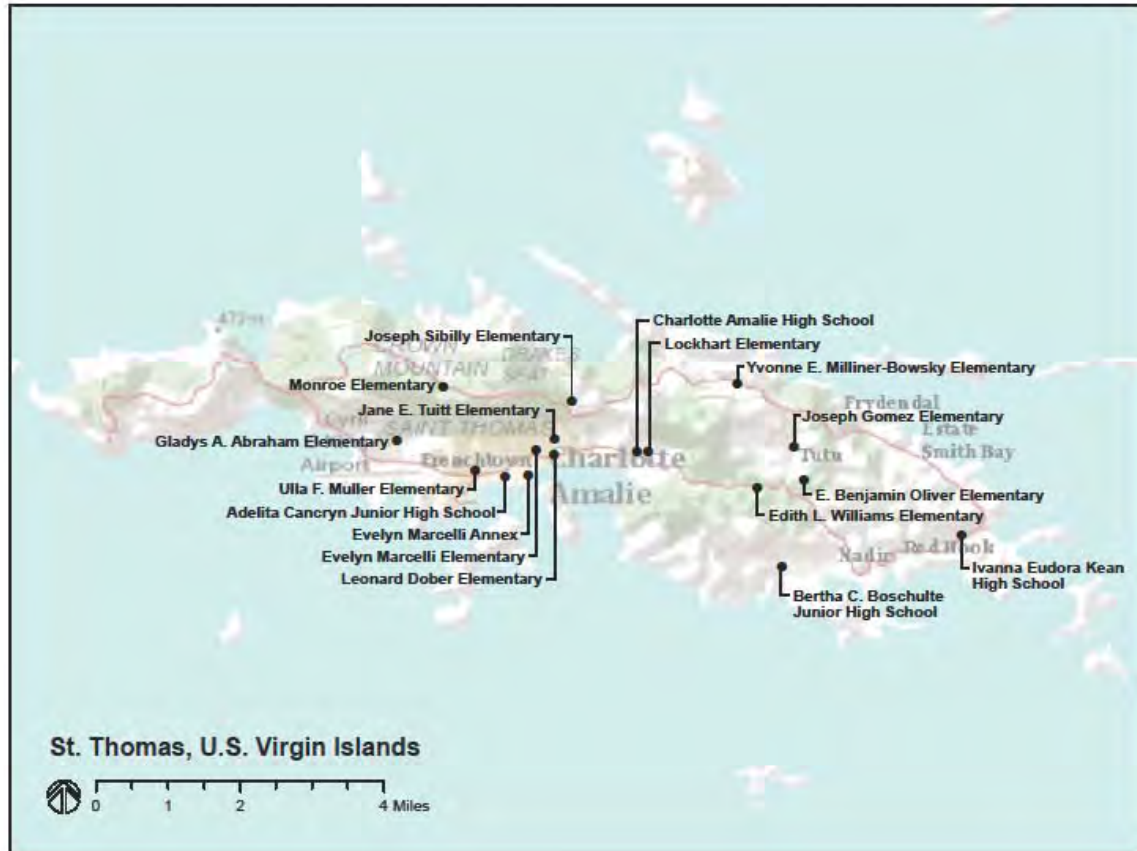


Southern High School
Guam



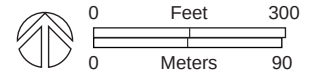
4.A U.S. Virgin Islands

Island of St. Thomas

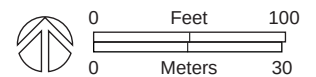




E. Benjamin Oliver Elementary School
St. Thomas, U.S. Virgin Islands



Evelyn Marcelli Elementary School
St. Thomas, U.S. Virgin Islands





Gladys A. Abraham Elementary School
St. Thomas, U.S. Virgin Islands



0 Feet 100
0 Meters 30



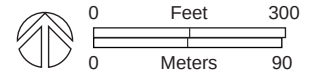
Jane E. Tuitt Elementary School
St. Thomas, U.S. Virgin Islands



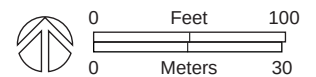
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0 Meters 30



Joseph Gomez Elementary School
St. Thomas, U.S. Virgin Islands

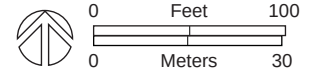


Joseph Sibilly Elementary School (plus Annex 1.7 mi west)
St. Thomas, U.S. Virgin Islands

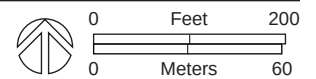




Leonard Dober Elementary School
St. Thomas, U.S. Virgin Islands

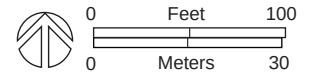


Lockhart Elementary School
St. Thomas, U.S. Virgin Islands

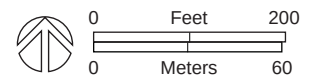




Monroe Elementary
St. Thomas, U.S. Virgin Islands



Ulla F. Muller Elementary School
St. Thomas, U.S. Virgin Islands





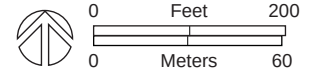
Yvonne E. Milliner-Bowsky Elementary School (FKA Peace Corps ES)
St. Thomas, U.S. Virgin Islands



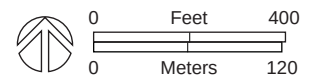
0 Feet 200
0 Meters 60



Addelita Cancryn Junior High School
St. Thomas, U.S. Virgin Islands



Bertha C. Boschulte Middle School
St. Thomas, U.S. Virgin Islands





Charlotte Amalie High School
St. Thomas, U.S. Virgin Islands



0 Feet 300
0 Meters 90



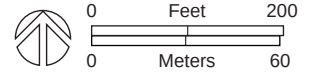
Ivanna Eudora Kean High School
St. Thomas, U.S. Virgin Islands



0 Feet 400
0 Meters 120



Edith L. Williams Alternative Academy
St. Thomas, U.S. Virgin Islands





Evelyn Marcelli Annex
St. Thomas, U.S. Virgin Islands



0 Feet 100
0 Meters 30

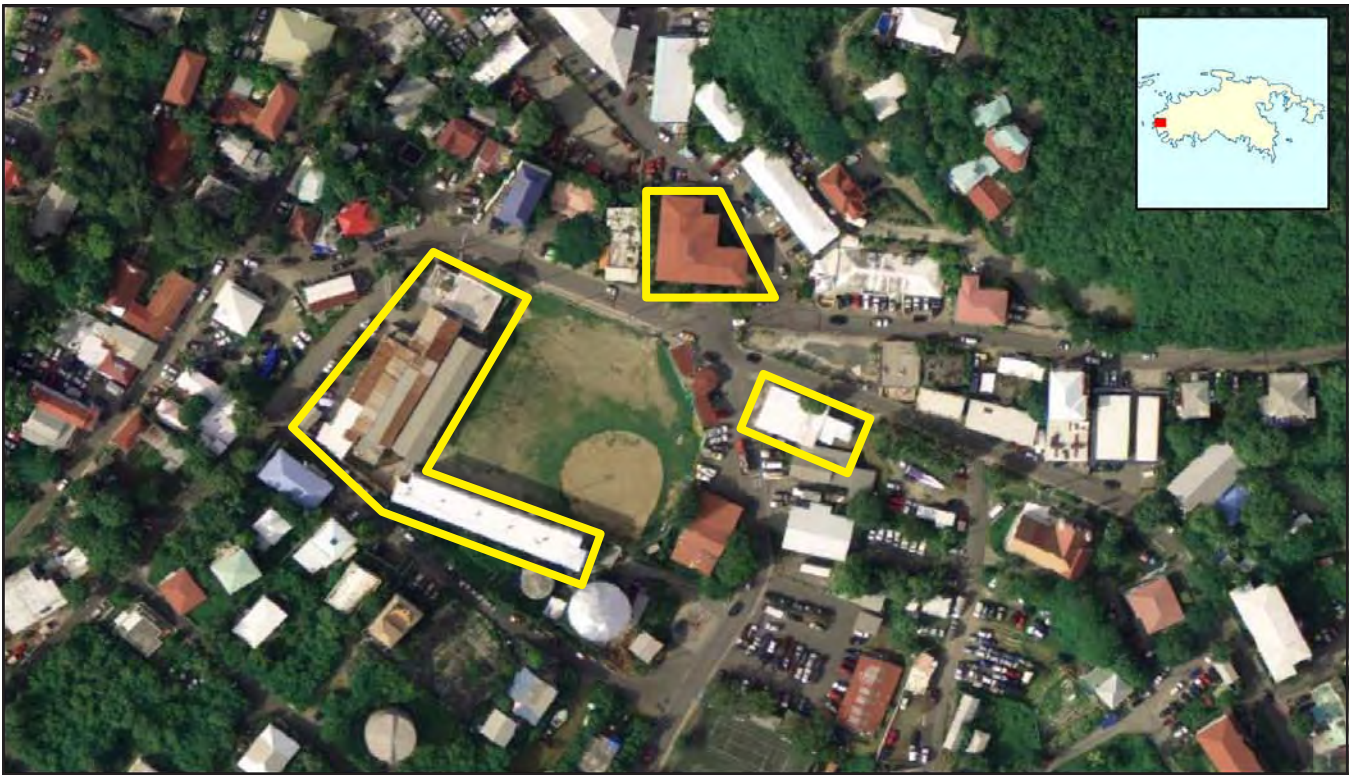
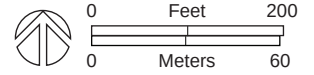
4.B U.S. Virgin Islands

Island of St. John





Guy Benjamin Elementary School
St. John, U.S. Virgin Islands

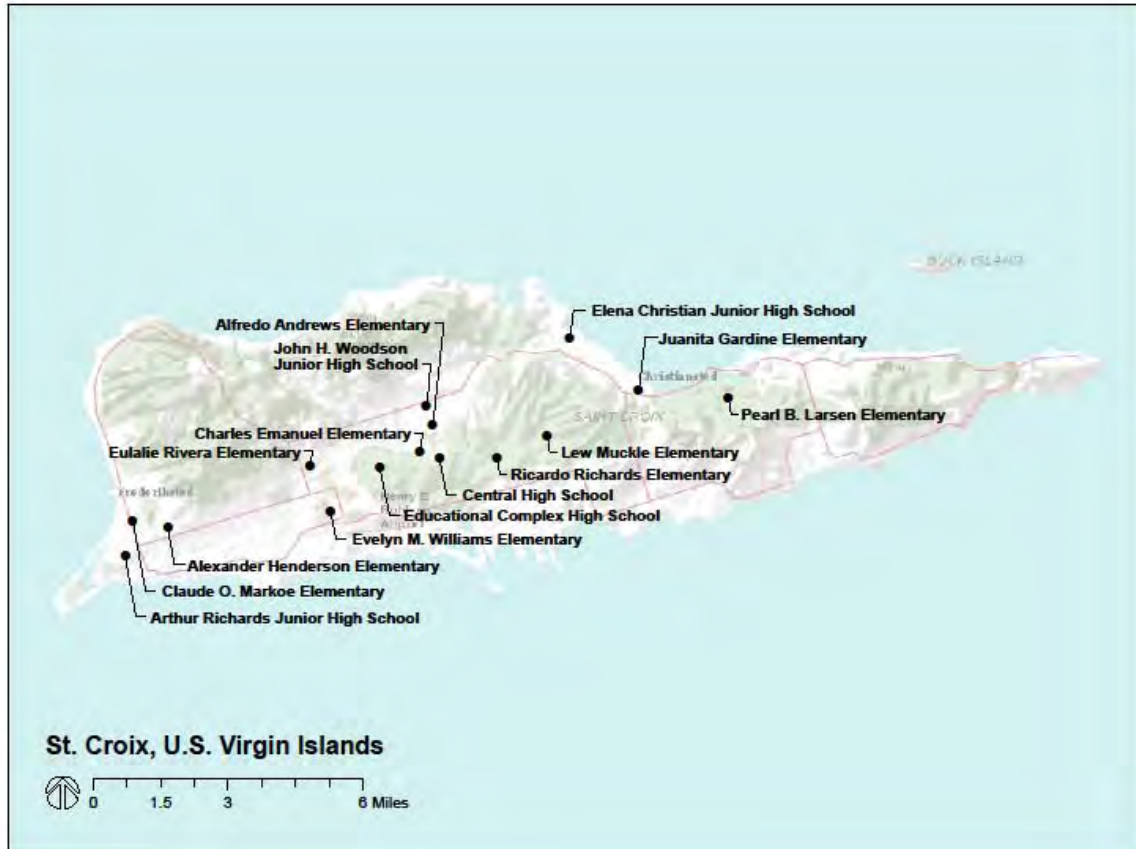


Julius Sprauve Elementary/Jr High School
St. John, U.S. Virgin Islands



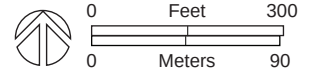
4.C U.S. Virgin Islands

Island of St. Croix

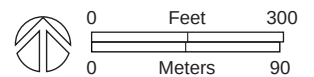




Alexander Henderson Elementary School
St. Croix, U.S. Virgin Islands



Alfredo Andrews Elementary School
St. Croix, U.S. Virgin Islands





Charles H. Emanuel Elementary School
St. Croix, U.S. Virgin Islands



0 Feet 200
0 Meters 60



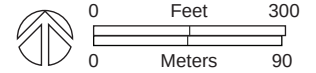
Claude O. Markoe Elementary School
St. Croix, U.S. Virgin Islands



0 Feet 300
0 Meters 90



Eulalie Riveria Elementary School
St. Croix, U.S. Virgin Islands

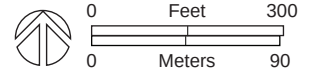


Evelyn M. Williams Elementary School
St. Croix, U.S. Virgin Islands





Juanita Gardine Elementary School
St. Croix, U.S. Virgin Islands

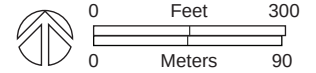


Lew Muckle Elementary School
St. Croix, U.S. Virgin Islands

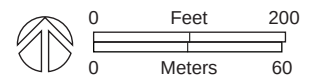




Pearl B. Larsen Elementary School
St. Croix, U.S. Virgin Islands

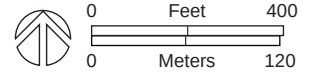


Ricardo Richards Elementary School
St. Croix, U.S. Virgin Islands

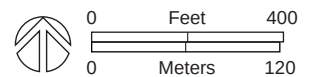




Arthur A. Richards Junior High School
St. Croix, U.S. Virgin Islands



Elena Christian Junior High School
St. Croix, U.S. Virgin Islands





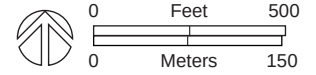
John H. Woodson Junior High School
St. Croix, U.S. Virgin Islands



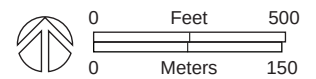
0 Feet 300
0 Meters 90



Central High School
St. Croix, U.S. Virgin Islands



Vocational & Complex High School
St. Croix, U.S. Virgin Islands



Appendix D

Flood Hazard Zone Assessment

A sample Flood Hazard Zone assessment was undertaken for the U.S. Virgin Islands and includes the following:

1. Hazard Zone Assessment
2. Hazard Zone Definitions
3. Flood Hazard – Zone Best Practice
4. FEMA Flood Maps for U.S. Virgin Island Schools within Flood Zones

Appendix D

Flood Hazard Zone Assessment

Hazard Zone Assessment

All facility investments should consider life-cycle costs as well as capital costs. Large investments made to hazard prone facilities represent a drain on resources. Facilities prone to damage will be included in the facility condition assessment, but site conditions must be a factor in considering the level of investments made. During Phase 2 site assessment site and location considerations are evaluated in the grounds category. Facilities located in hazardous areas will be flagged for special consideration regarding relocation.

Stakeholder interviews revealed storm water management challenges throughout the study area. Federal Emergency Management Agency (FEMA) Flood Interest Rate Map (FIRM) GIS data were acquired for the U.S. Virgin Islands to determine which schools were in flood hazard areas.

Inundation from storm water runoff may not be identified by FEMA FIRMs and will require onsite investigation by civil engineers.

Due to time and data constraints flood hazard information was only available for the U.S. Virgin Islands so the following assessment will serve as an example of hazard zone assessment for flood zones. Hazard zone assessment should include soil stability, tsunami inundation zones, and force wind corridors based on applicability and availability of information.

The following 8 schools in the U.S. Virgin Islands are located within Flood Hazard Zones:

Table 1 - USVI Schools Located in Flood Hazard Zones

USVI Schools in Flood Hazard Areas	Level	Island	Fac #	Sq Ft	Flood Zone
Gladys A. Abraham Elementary	Elementary	St. Thomas	7	10076	AO (2 ft.)
Ulla F. Muller Elementary	Elementary	St. Thomas	10	11424	AO (2 ft.)
Evelyn Marcelli Annex	Annex	St. Thomas	1	NA	AE (7 ft.)
Addelita Cancryn Junior High School	Middle	St. Thomas	16	46094	AO (2 ft.)
Bertha C. Boschulte Middle School	Middle	St. Thomas	15	102581	A
Edith L. Williams Alternative Academy	Other	St. Thomas	14	NA	A
Pearl B. Larsen Elementary*	Elementary	St. Croix	4	87549	A*
Ricardo Richards Elementary	Elementary	St. Croix	8	38905	A

**Pearl B. Larsen encroaches "Other Flood Areas", Zone A, and abuts a Zone AE floodway near an existing dam.*

Source: FEMA FIRM, Maps 7800000001 through 7800000094

Additionally, 2 schools are located within close proximity to Flood Hazard Zones:

- Guy H. Benjamin Elementary (St. John) – near Zone AE (9 foot base flood elevation)
- Lew Muckle Elementary (St. Croix) – near Zone A (undetermined flood elevation)

Deeper analysis is required to determine real threats and potential costs to these schools. Regardless, replacement of these schools should be considered to address student and staff safety and long-term

maintenance costs. Efforts to satisfy capacity needs due to enrollment increases should include school replacement considerations.

Hazard Zone Definitions

The following are brief definitions for the flood zones identified in Table 1 above.



Flood Hazard Area

Flood hazard information for the U.S. Virgin Islands is based on FEMA assessment of Special Flood Hazard Areas that have a 1% chance of being flooded (to equal or exceed a designated “base flood elevation” if known) in any given year. U.S. Virgin Island schools are located within the following Flood Hazard Zones:

- Zone A – No base flood elevations determined
- Zone AE – Base flood elevations determined
- Zone AO – Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined



Floodway Areas in Zone AE -

FEMA defines the floodway as “the channel of a stream plus and adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.”



Other Flood Areas –

Other flood areas include areas exposed to a 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

Flood Hazard Zone – Best Practice

The 1% reference is based on the impact of the largest event to occur in the past 100 years and projected to be the largest event to occur in the next 100 years. Though it is referred to as a 100 year storm the assumption cannot be made that an event of this force will only occur once in 100 years or that associated flooding will not exceed the estimated levels depicted on the FIRMs.

Hazard areas simply indicate where damage is likely to occur. Adaptation, or redesigning structures to withstand hazard events, is a possibility, but retreat, or facility relocation, is likely to be safer and less costly option over the long-term. Schools located in high risk hazard zones are recommended for relocation.

FEMA Flood Maps for U.S. Virgin Islands Schools

FEMA FIRMs for the schools identified in Table 1 (above) are offered below:



Gladys A. Abraham Elementary – Zone AO (2 feet)



Ulla F. Muller Elementary – Zone AO (2 feet)



Bertha C. Boschulte Jr. High – Zone A



Edith L. Williams Elementary – Zone A



Appendix E

Site Visit Meeting Records

Meeting records are organized chronologically in the following order:

1. American Samoa
2. Guam – CNMI
3. U.S. Virgin Islands



1221 Kapiolani Boulevard Suite 1030
Honolulu, HI 96814

733 Bishop Street Suite 2590
Honolulu, HI 96813

16 September 2010

Mr. Milton Yoshimoto
Civil & Public Works Branch
U.S. Army Corps of Engineers, Honolulu District
Building 230, Room 202
Fort Shafter, Hawaii 96858-5440

Dear Mr. Yoshimoto,

AMERICAN SAMOA TRIP REPORT
Phase I Educational Facility Inventory and Condition Assessment for
Department of Interior, Office of Insular Affairs, Various Locations Pacific
Region and Virgin Islands
Contract No. W9128A-08-D-0008

This letter summarizes the recent American Samoa trip completed between 6 and 9 September 2010 (trips to the three other territories, Guam, CNMI and VI, are pending). It provides a brief overview of the itinerary and summary of salient findings. Records of the various meetings are attached. It would be an oversight not to recognize the OIA Field Representative's (Ms. Paleafine-Nomura) significant role in making the trip a success. Her advice and support in all the meetings were invaluable.

1. ITINERARY

Date	Action
Monday, 6 September	Windshield tour of ASG public schools on Tutuila Island (ended up visiting 3/4ths of the ES and all of the HS on Tutuila -- did not visit Manu'a District or Anunu Island schools).
Tuesday, 7 September	Introductory meeting with OIA Field Representative* Introductory Meeting with DOE* Continued windshield tour of ASG schools
Wednesday, 8 September	Briefing to the Governor* Interview ASG GIS staff (Department of Commerce)* Meeting with DPW Director and Staff* Debrief with OIA Field Representative
Thursday, 9 September	Follow-on meeting with DOE staff* Continued windshield tour of ASG schools Depart ASG

* Meeting Record Attached

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Mr. Milton Yoshimoto
U.S. Army Corps of Engineers, Honolulu District
16 September 2010
Page 2

2. FINDINGS

1. All interviewees were receptive to the OIA initiative and understood the value of an independent report that highlighted the need to address deferred maintenance in ASG schools.
2. In general, no regular, systematic maintenance program is exercised by DOE or DPW. Both agencies are focused on responding to trouble calls.
3. ASG interviewees had a fairly good topical understanding of general R&M deficiencies but there didn't appear to be any documentation or serious assessment available to review.
4. Interviews indicated some DOE maintenance program dysfunction (e.g., job insecurity, basic lack of written procedures, general lack of higher level support, etc.)
5. No facilities inventory/baseline information was provided during our visit (with the exception of a single page, undated inventory provided by DOE staff), despite repeated requests. A follow-on request will be submitted since some staff indicated facilities information exists.
6. Interest was expressed in expanding the scope of the OIA study (beyond identifying, budgeting and prioritizing facility condition deficiencies) to include best practices for a deferred maintenance program, standardizing building materials, considering lifecycle cost analysis (e.g., balancing initial costs with O&M costs), highlighting lessons learned, introducing concepts of green building such as passive survivability and energy efficiency, and a series of process and policy recommendations.
7. One of the OIA study's policy recommendations could be how ASG should structure its school R&M program (e.g., should it be retained by DOE, relocated to DPW, should more work be contracted, etc.). This type of rigorous, systematic management analysis seems to be beyond the scope of a facilities assessment study but could be a study recommendation.
8. The initial conception of the OIA study is that it's focused on the bricks and mortar/vertical aspects of school facilities. Drainage and encroachment issues are also recognized problems for the schools that may also need to be addressed, or at least mentioned in the report (why spend money repairing a building when its damaged by flooding every rainy season?). An extension to this would be to document hazard areas such as school location in regards to flood, tsunami and landslide hazard areas (should schools in these zones

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Mr. Milton Yoshimoto
U.S. Army Corps of Engineers, Honolulu District
16 September 2010
Page 3

receive significant recapitalization funds?). Or even location in severely exposed coastal sites (and resultant reduction in building performance/life).

9. School grounds were uniformly neglected and in poor condition resulting is a diminishment of campus character (e.g., exposed soil, complete lack of landscaping and walkways, etc.). Should grounds condition be added as a parameter to the facilities assessment? Are there opportunities to engage the local school community (e.g., parent-teacher associations or a local booster club) to assist the school principals in school grounds maintenance and security?

10. It was recommended that local school staff (principals and teachers) should be engaged in the facility assessments and prioritization process because of their working knowledge of school conditions and keen awareness of how facility condition translates to student performance. Centralized administrators don't have this hands-on perspective. Input from this disperse group may best be achieved through a survey. Apparently there is a fair amount of reshuffling of school principals which could account for some of the challenges in the maintenance program.

11. OIA's ~\$7M AARA repair project (to be obligated in FY11 and executed in FY 12) is an important new initiative that needs to be reconciled with OIA's facility condition assessment.

12. OIA's mandatory 5% maintenance set aside program and ASG's 1% excise tax set aside program generate about \$500,000 in annual school maintenance funds. There is no way at this early stage to determine the adequacy of this allocation given the lack of available facility inventory information (standard rule of thumb is 2-4% of current replacement value (CRV)).¹ The Governor noted that the mandatory maintenance set aside programs were important policy initiatives that have helped the territory regain some control of its deferred maintenance obligations

Sincerely,

Thomas A. Fee, AICP, LEED AP
Principal

Enclosure

¹ A "back of the envelope" estimate of ASG school facility CRV is in the range of \$100M, indicating an annual maintenance budget of between \$2-4M.



1221 Kapiolani Boulevard
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DRAFT

Date:	7 September 2010	Project #	2010130
Time:	0830 hrs	Project Name:	OIA Study (Ph 1)
Location:	OIA Field Office, Pago Pago	Recorded by:	T. Fee
Attendance:	Lydia Falefine-Nomura (OIA), Milton Yoshimoto (USACE), Tom Fee (HHF)		
Subject:	Preliminary meeting		

Purpose was to meet OIA's AS field representative, solicit her input and advice, and review logistics for the week ahead.

Mr. Yoshimoto reviewed the purpose of the Phase 1 and Phase 2 study components and what the team hoped to accomplish in this AS trip.

Ms. Falefine-Nomura did not believe ASG DOE (or other government entity) had a long range maintenance plan in place.

Five Percent Maintenance Set Aside. Ms. Falefine-Nomura described the program instituted by DOI (based on a 1996 Congressional appropriations bill) to earmark minimum maintenance funding for DOI CIP-built projects (no other Territory has this stipulation). Five percent of DOI CIP funds are required to be matched by ASG and allocated to one of six program areas (see attached letter to Mark Brown, DOI CIP Coordinator from Jack Kachmark, CIP Chairman, ASG Territorial Office of Fiscal Reform (TOFR) dated March 23, 2010 for summary of the 2010-2014 set aside). The ASG agencies receiving the matching funds use their own discretion to allocate CIP and maintenance funds within the assigned program area. For example, the TOFR letter indicates ASG will receive \$22.473M in the FY 2010-2014 period from DOI which generates \$1.123 M in maintenance set aside (5% of total), which is matched by an equal or greater amount of ASG funds. This results in a total 5-year maintenance set aside of \$2.605M that is then divided into five annual increments of \$521K and then allocated across the six program areas. ASG DOE is allocated 55.66% of the annual increment (\$290K/year).

What's to stop legislators from reallocating the maintenance set asides? ASG has discretion where they build schools and how school maintenance dollars are spent. How will the DOI facilities plan be received when it identifies funding priorities and the Territory ignores the priorities (when plan is attached to the appropriation)? Appropriation bills (PL 111____) include a provision that the Secretary of Interior has the flexibility to change the plan. Milton mentions problems with the local legislature in implementing the CNMI infrastructure CIP plan.

Even though the five percent set aside is limited to OIA-funded facilities, OIA's building condition study should be comprehensive and include all DOE facilities (DOI funded facilities will be identified in the database).

ASG DOE recently rec'd \$7M+ of AARA funding for maintenance. The OIA study should go a long way to helping DOE allocate maintenance funding. Limitation with AARA funding is that projects need to be shovel ready.

Meeting Record: OIA Field Representative
7 September 2010
Page 2

DRAFT

Four schools were damaged by the tsunami – Taputapu, Matarula, Paloa (same as Taputapu?) and Alataua. Some concern about rebuilding them in the tsunami evacuation zone.

DOE maintenance staff should be more autonomous from DOE administration (now at “beck and call” of their bosses).

The standard two-story concrete 6-10 classroom building with handicap ramp (one of several basic building types used in the ASG school system) has relatively low maintenance cost, and has been designed to withstand 155 MPH winds (an outcome of the 1991 Hurricane Val) and is also used as a hurricane shelter. The buildings are a standard DPW prototype and all of these buildings have been constructed with DOI funds (basic design needs to be updated to meet school needs – more interaction between the designer and the users is recommended).

Ms. Faleafine-Nomura provided a hardcopy summary of DOI-funded school projects from FY 96 through FY 2013 (attached). She would need to confirm if the construction actually happened in the same sequence and what the specific improvements were. OIA budget also includes funding for furniture, equipment, school buses and bus parts and repair. Her office disposed of all its reference materials older than 10 years so older reference materials are no longer available for research purposes.

The DOE Director has been slow to respond to the interview request so the 11AM mtg today is planned with DOE staff (assuming Director won't be present). Ms. Faleafine-Nomura doesn't think DOE maintenance staff have a maintenance plan. They're probably given an annual budget and told to figure out how to spend it (usually based on some proportion of prior years' budgets).

Local school priorities are very different from central administrators' perspective. Great need to include local school leadership (principals and teachers) in identifying and prioritizing school facility requirements. Survey instruments may be a good way to get input from local schools; Phase 1 might be the best time to develop a local school check list and identify low hanging fruit.

How will you prioritize between schools? Needs to be a typology of schools to assist comparison and evaluation (rural/urban, high school/elementary, old/new, etc.). Health and safety is an obvious criterion.

Do schools get other federal funding? Not getting any. FEMA provided temporary school buildings as part of tsunami relief (sprung structures) that apparently will be re-used as ASG prisons shelters when the school facilities are rebuilt.

Meeting Record: OIA Field Representative
7 September 2010
Page 3

DRAFT

DPW is not responsible for general ASG facility maintenance. Five to six years ago there was an attempt to bring all of DOI maintenance under DPW (that's why their warehouse was constructed). Players changed and the idea lapsed.

DPW works with TOFR to handle all DOE's contracting. Contracting backlog seems to be reasonable. Standard two story prototype needs to be adapted to local needs though (e.g., Leone HS principal wants moveable partitions instead of concrete walls).

Discussion of Governor meeting. He gets very upset about unfunded mandates and we need to avoid casting the OIA initiative as one. Look for where the mutual interest is but stop well short of promising additional funding. He may want to know how prospective or consensual the plan will be. Clearly, the quality of the end product will be a function of the level of ASG participation. Lydia will send a letter to governor (with a cc to the DOE director) thanking him for his support, assuming the meeting goes well.

Meeting adjourned in time for the 11 AM meeting with DOE staff.



TERRITORIAL OFFICE OF FISCAL REFORM

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799
VOICE: (684) 699-1329 FAX: (684) 699-5005

TOGIOLA T. A. TULAFONO
GOVERNOR

JACK KACHMARIK
DIRECTOR

March 23, 2010

Mark Brown, CIP Coordinator
U.S. Department of the Interior
Office of Insular Affairs
Mail Stop 4311A, 1849 C Street N.W.
Washington D.C. 20240

RE: ASG 5% Set Aside Maintenance Plan

Dear Mr. Brown:

Attached is the ASG's proposal for allocating the 2010 - 2014 CIP 5% Maintenance Set Aside Funds. The proposed allocation on an annual basis is as follows:

Program Name	Budget 2005 - 2009	Proposed budget 2010 - 2014
DOE Maintenance	305,000	290,000
Port Dock & Fleet Maintenance	100,000	91,000
Health Centers, Stand by Gen., Air conditioner maintenance	25,000	40,000
Public Works Road & Heavy Equip.	45,000	40,000
Public Safety Facilities	45,000	40,000
Parks & Rec. Fields & Park Facilities	0	20,000
	\$521,000	\$521,000

The CIP 5% Set Aside Program has been immensely successful for the past five years. The program has allowed preventative maintenance of DOI CIP built projects such as: schools, hospital, health centers, Heavy equipment to maintain roads, Parks & Public Safety Sub Stations.

Thank you for your consideration and approval of these worthwhile programs.

Sincerely, CIA 7 Sept 10

Sincerely,

Jack Kachmarik
Jack Kachmarik
CIP Chairman

Lydia Faleafine
Lydia Faleafine
Governor

Approved

Date

3/23/10

cc: Lydia Faleafine - Nomura, DOI Field Representative
Fiatuiga Cathy Faoa-Danielson, CIP Coordinator
CIP Committee

ASG 5% Set Aside Proposed Plan FY2010 - FY2014

FIVE YEAR DISTRIBUTION		DOI CIP 5%	ASG MATCH	TOTAL 5yrs SET ASIDE	Yearly Brkdown	Proposed Allocation
1	PUBLIC HEALTH	56,500	56,500	113,000	22,600	40,000
2	DEPARTMENT OF EDUCATION	548,000	548,000	1,096,000	219,200	290,000
3	TOTAL INTERNATIONAL PORTS	282,250	282,250	564,500	112,900	91,000
4	TOTAL PUBLIC WORKS	94,750	94,750	189,500	37,900	40,000
5	TOTAL PUBLIC SAFETY	114,193	114,193	228,386	45,677	40,000
6	TOTAL PARKS AND RECREATION	18,000	18,000	36,000	7,200	20,000
7	TOTAL PUBLIC FACILITIES	10,000	10,000	20,000	4,000	
O & M SET ASIDE						
GRAND TOTAL		1,123,693	1,123,693	2,247,386	426,877	521,000

YEARLY DISTRIBUTION		FISCAL YEAR				
		2010	2011	2012	2013	2014
1	PUBLIC HEALTH	40,000	40,000	40,000	40,000	40,000
2	DEPARTMENT OF EDUCATION	290,000	290,000	290,000	290,000	290,000
3	TOTAL INTERNATIONAL PORTS	91,000	91,000	91,000	91,000	91,000
4	TOTAL PUBLIC WORKS	40,000	40,000	40,000	40,000	40,000
5	TOTAL PUBLIC SAFETY	40,000	40,000	40,000	40,000	40,000
6	TOTAL PARKS AND RECREATION	20,000	20,000	20,000	20,000	20,000
O & M SET ASIDE						
GRAND TOTAL		521,000	521,000	521,000	521,000	521,000
						\$ 2,605,000.00
						Total 5 year Set Aside \$ (2,247,386.00)
						Diff. / Interest \$ 357,614.00

AMERICAN SAMOA GOVERNMENT FIVE YEAR CAPITAL IMPROVEMENT PLAN											
ASG 5% SET ASIDE PROPOSED PLAN FY2010 - FY2014											
PROJECTS BY DEPARTMENTS	2010	5%	2011	5%	2012	5%	2013	5%	2014	5%	TOTAL 5%
ASG CIP RECIPIENTS											
PUBLIC HEALTH	0		0		0		130,000	6,500	1,000,000	50,000	56,500
DEPARTMENT OF EDUCATION	2,790,000	139,500	1,840,000	92,000	2,315,000	115,750	2,315,000	115,750	1,700,000	85,000	548,000
TOTAL INTERNATIONAL PORTS	1,200,000	60,000	1,200,000	60,000	1,200,000	60,000	900,000	45,000	1,145,000	57,250	282,250
TOTAL PUBLIC WORKS	380,000	19,000	380,000	19,000	380,000	19,000	375,000	18,750	380,000	19,000	94,750
TOTAL PUBLIC SAFETY	268,850	13,443	380,000	19,000	380,000	19,000	875,000	43,750	380,000	19,000	114,193
TOTAL PARKS AND RECREATION	0	0	95,000	4,750	95,000	4,750	75,000	3,750	95,000	4,750	18,000
TOTAL PUBLIC FACILITIES	0	0	0	0	0	0	200,000	10,000	0	0	10,000
O & M SET ASIDE		231,943		194,750		218,500		243,500		235,000	1,123,693
GRAND TOTAL	4,638,850		3,895,000		4,370,000		4,870,000		4,700,000		

FY96-00

Recommended Allocation of CIP Funds: FY1996 - FY2000
Based on funding estimates provided by Department of Interior 4/96

- Recommended Allocation of CIP Funds: FY1996 - FY2000
Based on funding estimates provided by Department of Interior 4/96

Recommended Allocation of CIP Funds: FY1996 - FY2000
Based on funding estimates provided by Department of Interior 4/96

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Based on funding estimates provided by Department of Interior 4/96

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Based on funding estimates provided by Department of Interior 4/96

Recommended Allocation of CIP Funds: FY1996 - FY2000
Based on funding estimates provided by Department of Interior 4/96

FY02-06

	2002	2003	2004	2005	2006
New Roof Art Building			25,000		
Administration Building elevator			10,000		
Engineering Building					256,500
Classroom Renovations			221,500		
Toilet building renovations				150,000	
Parking Lots expansions				45,000	
Drainage of Foothill and Field				61,500	
Road Improvement					
Total Community College	0	0	256,500	256,500	256,500
High Schools					
Pagofua High School					
Leone High School					
Mamua High School					
Tafua High School, Phase III & IV	1,618,000				
Nu'uuli Poly-Tech High School					
Samoa New Classrooms					
Mamua High School					
Subtotal High Schools	1,618,000	2,000,000	0	1,600,000	450,000
Samoa's University					
Alono					
Alafua-Lua					
Alafua				300,000	
Aua					
Aunuu					
Palasao					
Fitiuta					
Laniti					
Lefele					
Leone Muli'afi (jr. High School)			450,000		
Lupulele			550,000		
Mamalele Elementary					
Masefau					
Mafafao			500,000		
Mauga Alava					
Olomosa				350,000	
Olasego/Olu					
Pago Pago					
Pae'it'i					
Sitaga					
(Tafua) Mamalele Jr. High School					
Taputapu					
Tula					
Elementary School Classroom Rehabilitation	530,000	300,000	300,000	300,000	300,000
Subtotal Elementary Schools	530,000	300,000	2,350,000	950,000	1,650,000
School Facilities Security Projects					
School Facilities Toilets (new & rehab.)					
School Site Drainage - Various locations	150,000	100,000	150,000	100,000	
School Facilities Rehabilitation					
School Buses	250,000	275,000	150,000	150,000	150,000
School Security Fences					
Ancillary Buildings (Library, Comp. Rm., Sci. Labs.)					
Education Department Offices	302,000				
Gymnasium Repairs/Additions					
New Gymnasiums					
New Playfields					
Furniture & Equipment		50,000	100,000	50,000	100,000

Source: DIM 750410

AMERICAN SAMOA GOVERNMENT
FIVE YEAR CAPITAL IMPROVEMENT PLAN
Five Year Plan - Updated August 31, 2009

PROJECTS BY CATEGORY	2006	2007	2008	2009	2010	2011	2012	2013
HEALTH								
LEJ Medical Center								
Ward Renovation Phase II, III, IV (Medical Prod. Mat. B.A.G.)	350,000							
Chamber/Coating Tower Mechanical Building	550,000							
Life Safety Improvements/Correct CMS Differences	200,000							
Medical Equipment	400,000							
Respiratory ICU Transfers & Electrical upgrade P.I.I.I.I.V	210,000	1,400,000	1,000,000	1,200,000	475,000			
Physical Building Phase 1								
Procure new hospital info sys. w/ paging system	250,000							
Upgrade A/C Diagnosis Unit								
Design and Renovation of ICU & Others								
Design & renovation of the LD and OR suite								
TOTAL LEJ MEDICAL CENTER	1,710,000	1,650,000	1,807,550	1,400,000	1,900,000	1,900,000	1,900,000	1,900,000
Public Health Center								
Construct New Health Center	180,000	150,000						
Construct New Dispensary at Leone	815,850							
Tafua Health Center Renovation & Extension Project	200,000	300,000						
Tafua Health Center Renovation & Extension Project	190,000	862,850						
TOTAL PUBLIC HEALTH	1,900,000	2,615,850	1,807,550	1,400,000	1,900,000	1,900,000	1,900,000	1,900,000
EDUCATION								
American Samoa Community College (ASCC)								
Two Computer Labs								
California								
Auditorium/Classroom	451,250	176,000						
Multipurpose Building	290,000	951,000						
TOTAL AMERICAN SAMOA COMMUNITY COLLEGE	451,250	475,000	951,000					
Department of Education								
Tafua High School V								
Leone High School								
Leone Middle Elementary								
Naua Vo Tech	823,000							
Tafua Jr. High	721,323							
Recreational Facilities								
Paralel Classrooms		100,000	900,000					
Mamalele Elementary	323,250	1,500,000						
Leone Middle	300,000							
School Office								
Lupulele Classrooms								
Sitaga								
Atafu								
Aua								
Bus Garage								
Mamalele								
Furniture and Equipment								
New Office Building	138,671	170,000						
School Buses	120,000	292,000						
School Buses	140,000	188,000						
Bus Repair & Parts								
TOTAL DEPARTMENT OF EDUCATION	2,258,250	2,850,000	1,600,000	2,150,000	2,790,000	2,790,000	2,790,000	2,790,000
TOTAL EDUCATION	2,707,500	3,325,000	2,551,000	2,150,000	2,790,000	2,790,000	2,790,000	2,790,000



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DRAFT

Date:	7 September 2010	Project #	2010130
Time:	1100 hrs	Project Name:	OIA Study (Ph 1)
Location:	DOE Office, Pago Pago	Recorded by:	T. Fee
Attendance:	See attached		
Subject:	Preliminary meeting		

Purpose was to present the OIA initiative to DOE staff, learn how DOE plans, programs and executes its school maintenance program, establish a working relationship with key staff and look for synergies between the OIA initiative and DOE business process.

AS DOE Director Poumae noted she had reviewed OIA's letter to the Governor, welcomed the study team and introduced her staff involved in school facilities and maintenance.

Ms. Faleafine-Nomura provided a very general introduction of the OIA initiative and stressed the need for local involvement – particularly from DOE.

Director Poumae noted the study is starting at a good time as it coincides with a ~\$7M AARA school renovation grant that requires a school by school facilities assessment (to meet grant requirements, USDOE will require specifics on proposed repairs: roofs, windows, screen wire, flooring, etc). Director wants to get at least four schools funded by 30 Sept '10. DOE maintenance staff have just started their assessment of the four schools. AARA funds need to be obligated by 30 Sept '11.

The AARA grant will have a significant effect in maintenance backlog (just under \$250K/school, average -- \$289K excluding Manua schools) and DOE assumes the monies would be expended by the end of FY '12 (e.g., -- 3 new roofs on the 2 sty buildings at Matatula ES will cost \$300K. Easy to do; have spec, etc.) Overall though, deferred maintenance budget is probably far in excess of \$7M. The OIA study will help in that justification and will help DOE apply for funding from other agencies.

Who came up with the \$7M budget? DOE staff did; several proposals were prepared. The \$7M proposal is just one of five or six submitted. Curtis prepared one for \$10M that didn't come through. Others for preventative maintenance also didn't come through. Manu'a's not included in the AARA money – the sum of all proposals would have been a lot more (~\$20M).

Opportunities to blend the AARA work with OIA study. Good potential for DOE to develop a joint master plan/assessment with OIA to guide funding. DOE plans to bring in 24 contract workers to implement AARA projects. Need to account for AARA funded repairs in the OIA inventory to avoid double counting. Could AARA funds mask the true problem of underfunded school maintenance in the ASG? HUD defines differences between maintenance and repairs. AARA does not fund "maintenance" projects; needs to be defined as repair, renovation or reconstruction. Definitions are very important (painting can be in both a maintenance and repair project). Don has list of AARA-covered types of projects. USDOE will require a detailed validation of how AARA funds will be spent.

Meeting Record: DOE Staff
7 September 2010
Page 2

DRAFT

Mr. Yoshimoto noted that timing-wise, results from the OIA study will lag the AARA funding obligation deadline (OIA assessment results wouldn't likely be completed in FY 11). Director Poumae noted that the fact the OIA Phase 2 condition assessment would be underway next year and would raise awareness on facility condition issues and thereby help ASG funding requests.

Mr. Yoshimoto reviewed OIA's intent for the facility condition study, the distinction between Phases 1 and 2, and what the team hoped to accomplish in this AS trip. He noted that funding was not attached to the OIA study; it would provide a helpful resource to systematically prioritize ASG DOE maintenance investment decisions.

Mr. Fee circulated a questionnaire geared at establishing a thorough understanding of ASG systems and approaches to manage its school facilities, and opportunities for OIA to leverage that information in the comprehensive study and increase utility of the OIA study to DOE facilities managers. Methodology needs to be transparent, easy to use and appropriate for each of the territories. Metric revolves around the notion of an "adequate" school facility which needs to be defined. Assessment will be driven by a check list to be developed in Phase 1. Phase 1 is a scoping and fact finding process to familiarize the planning team with current policies, procedures and facility inventory.

Philo: Are you just concerned about school buildings and facilities? What about gyms, office drainage, related utilities and campus grounds? Big problem with failing drainage systems and related school flooding because of land use changes in vicinity of schools and general lack of maintenance. Basic infrastructure and utility systems need to be upgraded and brought up to date. All things that have an impact on school facility condition should be considered in the OI study. Philo provided a one page summary of DOE school facilities (attached): 29 schools, 320 individual buildings including ECE's and DOE office facilities.

Worst schools in DOE inventory: Pavaiai, Pango, Lupulele. Overcrowding is an underlying problem. Principals make a big difference in campus quality. An example of good and bad would be Midkiff ES (two new buildings) and Lupulele ES (one new 2 story classroom under construction).

Don can get us school site plans. They have an inventory of all schools and facilities data. Maps are in ACAD format – need to get Public Works to print them.

How have maintenance budgets been allocated in the past? Don't have enough to stick to preventative maintenance program. Always trying to catch up on repairs. Problems include scarcity of labor, materials and transportation (usually have plenty of tools). Part of the problem also lies with the kids and teachers. Really going day by day responding to trouble calls due to budget limitations. Have had classroom fale shake reroofing schedule in place for the last 10 years (funded by set aside): Chemically treat shake roofs every four years @ \$180,000. – all school roofs had to be reroofed after Hurricane Val (79).

Meeting Record: DOE Staff
7 September 2010
Page 3

DRAFT

Is there an R&M plan in place that you can share with us – an annual scheduled maintenance program? No – there's no written plan. Every summer we try to come up with a schedule. Have had problems in trying to stick to a schedule. Its ad hoc and focused on trouble calls. We once had an written assessment but the computer crashed. We have standard inspection checklists (e.g., elec, plumbing). Work orders are created and archived for each project. DOE Maintenance crews use a grease board at their Tafuna warehouse to track work order requests and status (work requests from schools are called in and recorded on the board – and erased when completed).

How many people on maintenance staff? About 12 tradesmen for general maintenance and 3 vehicles (3 elec, 3 plumbers -- nobody certified). Need more staff.

DOE Business Office has information on historic general maintenance expenditures (Fa'aufono can provide). Who makes the determination of how much money is spent? Question is not related to what the requirement is so it's somewhat tangential. Need to "wipe the slate clean and start from scratch" (vs. building on an ongoing business process).

Lots of friction with DPW. Couple of years ago DOE did all their own work – hired an architect and civil engineer, etc. Now DPW arch/eng has taken over contract mgmt (no mention of TOFR). DOE staff oversee the projects. In the beginning all maintenance was done by DPW O&M staff. Functions split in the '80's (DOE assumed maintenance control over its facilities).

Do you have funding source for maintenance of non-DOI facilities? Yes, use the one percent excise tax surcharge (or fuel tax?). About \$1M/yr divided between school maintenance, school bus maintenance and bathroom monitors. Next year bathroom monitors may be transferred to another program. Monitors should be under maintenance control (should be classified as custodial staff), not local school staff. Surcharge yields about \$250K/year for DOE facilities maintenance.

Can we have an org chart to see how the various school functions are organized (Philo should have one).

Really important to talk to local school representatives to better understand school priorities. Principals and teachers are an important source of information. Do the individual schools keep a record of maintenance? Don't think so.

Ta'amu. Most of the DOE schools were predesigned without a careful assessment of site conditions. Flooding is a major problem due to high rainfall. School infrastructure was adequate when originally built. Long term changes have altered drainage patterns and resulted in current flooding. Mitigation measures are needed to protect DOE facilities.

Meeting Record: DOE Staff
7 September 2010
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DRAFT

ASG lacks adequate labor resources to implement a vigorous maintenance program. Study should provide comprehensive recommendations on facility priorities, and implementation mechanisms, (e.g., labor, capital, policies, etc.).

Director Poumae says her team can provide data inventory and enrollment data to support the OIA study. Philo provides a one page facilities inventory (attached).

Ms. Faleafine-Nomura encouraged the group to provide as much information as possible to the study team. Don't be concerned about overloading them.

Director Poumae identified John Saclua as POC for the OIA study and his team (Curtis, Don, Ta'amu).

Curtis can get us individual site plans (from Parsons in 1991). DPW has master plan/site plans.

DOE started the schools in '63. Round fates all built in early 60's. 2 stys bldgs date from the 90's.

Attendees agree to reconvene at 10AM on Thursday at the OIA office to continue the dialog



U.S. DEPARTMENT OF THE INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT:
PHASE 1

ATTENDANCE MEETING DATE 9/8/10 DOE

NAME	ORGANIZATION	TEL/EMAIL
Lydia Faleafine-Nomura	OIA	(684) 633-2800/ doioia@bluesky.net.as
Milton Yoshimoto	USACE	(808) 438-2250/ Milton.T.Yoshimoto@usace.army.mil
Tom Fee	HHF	(808) 545-2055/ tfee@hhf.com
FEMA Project mgr		685) 733-4549
Curtis J. Braniiff	DOE	Curtisbraniiff@yahoo.com
Maintenance mgr	DOE	743-1641
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FRANFONO VAITAITAU	KEDOE	franfonovaitaitau@yahoo.com
Director		
Claire Tuia Pounae	AS DOE	clairepndoe.as

31Aug10

ASG / DOE SCHOOL FACILITY INVENTORY

EASTERN DISTRICT SCHOOLS						
#	SCHOOL	2 STORY	1 STORY	FALE	BATHRM	TOTAL
1	MATATULA ELEMENTARY	3 - 6CR BLD	1-K/C/Bthrm			4
2	MASEFAU ELEMENTARY	1 - 8CR BLD	1 OFF BLD.		1B/G/F/Bthrm	3
3	AUNU'U ELEMENTARY		3CR 1ECE		1B/G/F/Bthrm	5
4	OLOMOANA ELEMENTARY			5CR 1K/C	1B/G/F/Bthrm	7
5	ALOFAU ELEMENTARY	0	1-Off 1-CAFÉ	7CR 1CR/K	1B/G/F/Bthrm	11
6	FAGAITUA HIGH SCHOOL	1 - 20CR 1L	1K/C 1AT 1SC 1OFF 1JROT	1B/G/F/Bthrm	1B/G/F/Bthrm	8
7	MT. ALAVA ELEMENTARY		5-2CR 1K/C/L/OFF/CLAB	1B/G/F/Bthrm		7
8	AFONOTELE ELEMENTARY	1 - 8CR OFF		3CR 1H 1C/K	1B/G/F/Bthrm	7
9	LAULI'I ELEMENTARY		1OFF 1CR	3CR 1C/K	1B/G/F/Bthrm	7
						59
CENTRAL DISTRICT SCHOOLS						
#	SCHOOL	2 STORY	1 STORY	FALE	BATHRM	TOTAL
1	AUA ELEMENTARY	1-6CR 1-8CR	1OFF 1C/K/L	6-2CR BLDG	1B/G/F/Bthrm	11
2	PAGO PAGO ELEMENTARY	1-8CR 1BF	3CR 1OF 1C/K	102CR 1O/CR	3 B/G/F/Bthrm	21
3	LEATELE ELEMENTARY	1 - 8CR/OFF	1ECE1/SPD	4-2CR 1 K/C	1 B/G/F/Bthrm	9
4	SAMOANA HIGH SCHOOL	4CR/46Cms	3CR/151off	1 Café/Kitchen	1 B/G/F/Bthrm	11
5	MATAFAO ELEMENTARY	1-8CR3OFF	1C/L 1-Bale	10-2CR 1-K/C	2 B/G/F/Bthrm	16
6	MANULELE ELEMENTARY	1CR5K1CR8	1CR41off1CR2	8 2CR BLDGS	2 B/G/F/Bthrm	15
7	MANULELE JR. HIGH	6CR8 (24Cm)	1C/L/Sm 1C/K		1 B/G/F/Bthrm	9
8	POLYTECH HIGH SCHOOL	2	4		1 B/G/F	7
9	TAFUNA HIGH SCHOOL	3CR61CR71B/C	11CR(350ls)	1Office Bldg.	2 B/G/FBthrm	20
		1CR102L/AO				119
WESTERN DISTRICT SCHOOLS						
#	SCHOOL	2 STORY	1 STORY	FALE	BATHRM	TOTAL
1	LUPELELE ELEMENTARY	1CR6 1CR8	2C41C31K10	7CR2 (14)	2 B/G/FBthrm	16
2	SILIAGA ELEMENTARY	1CR8	3CR2		1 B/G/FBthrm	5
3	PAPAIAI ELEMENTARY	3CR8	101C/K12CR4	8CR2 1BF6	2 B/G/FBthrm	19
4	LEONE HIGH SCHOOL	2CR8/Bthrm/OFF	1C61C41OF1C/K	3C61C51C4	2 B/G/FBthrm	14
5	LEONE MIDKIFF ELEMENTARY	2CR8	1C41C5K1C3	8CR2 1BF6	2 B/G/FBthrm	16
6	ALATAUA II ELEMENTARY	1CR6	1OFFICE/CLAB	4C2 1C/K	1 B/G/FBthrm	8
7	TAPU TAPU ELEMENTARY		1C11/O2L 1C/K		1 B/G/FBthrm	3
						81
MANU'ATELE DISTRICT SCHOOLS						
#	SCHOOL	2 STORY	1 STORY	FALE	BATHRM	TOTAL
1	MANU'A HIGH SCHOOL	1BF6C	1CR3JRC1CR2C/K	10ff/L	1 B/G/Bthrm	6
2	FALEASAO ELEMENTARY		10ff/LC2 1C/LC/K 1C3/BG/Bthrm	1C4 1C3 1PH		6
3	FITIUTA ELEMENTARY		1CR2/BG/Bthrm 1TH 10ff/LC/K/Bthrm	1C4 1TH		5
4	OLOSEGA ELEMENTARY		3C3 1SH 1K/STR 1CLAB/L	1Office 1BG5BTHRM		8
						25
SUB-TOTAL SCHOOL FACILITY COUNT						284
DOE / ECE FACILITIES						24
DOE VARIOUS OFFICE FACILITIES						12
TOTAL FACILITY COUNT						320

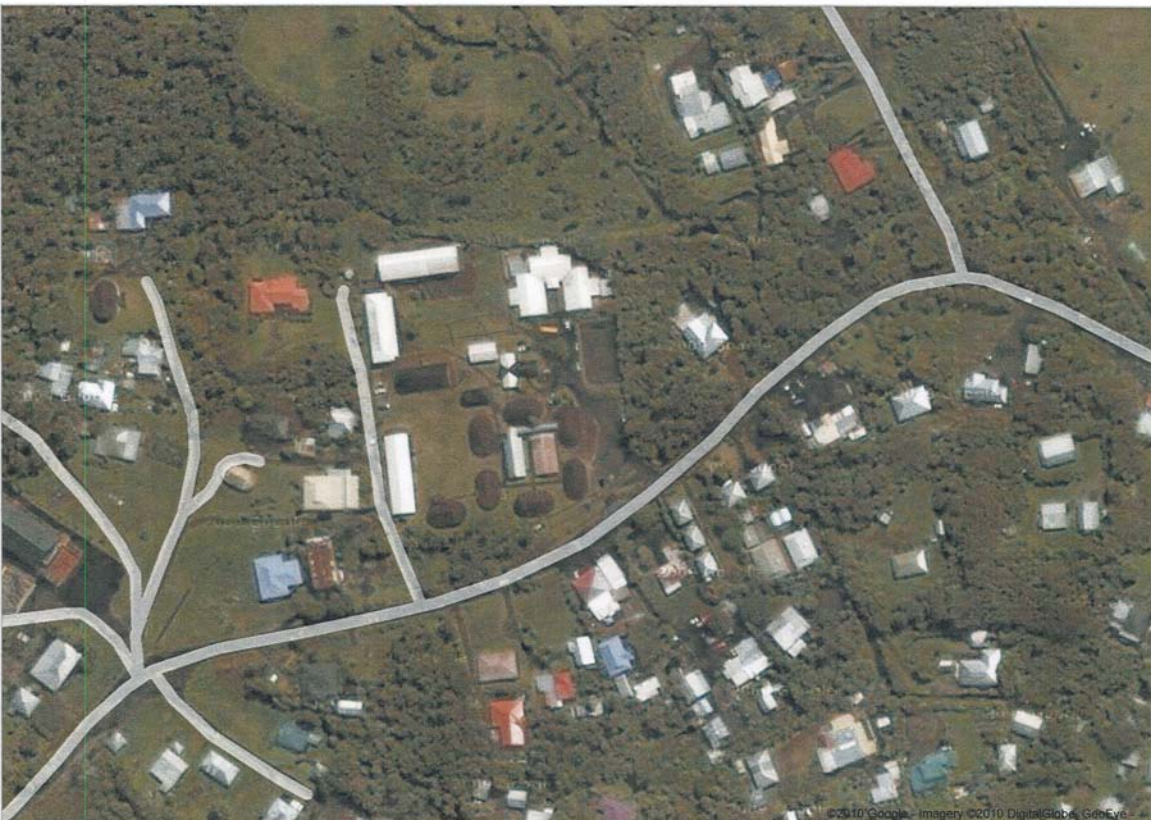
Source: ASDI DOE 8-5-04/10

Source: ASG DOE 8 Sept 10



LEONE MIDKIFF ELEMENTARY

Source: ASG DOE 8 Sept 10



LUPELELE ELEMENTARY



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DRAFT

Date:	8 September 2010	Project #	2010130
Time:	1100 hrs	Project Name:	OIA Study (Ph 1)
Location:	AP Lurali Executive Office Building, Pago Pago	Recorded by:	T. Fee
Attendance:	Governor Togioa Tulafono, Lydia Faleafine-Nomura (OIA), Milton Yoshimoto (USACE), Tom Fee (HHF)		
Subject:	Governor's Briefing		

Purpose was to present the OIA initiative to the Governor and receive his feedback and direction.

Ms. Faleafine-Nomura provided a very general introduction of the OIA initiative and noted that it is one part of the Secretary's Five Year Plan.

Mr. Yoshimoto provided a more detailed summary of the OIA scope of work. Phase 1 involves working with territorial staff to develop a facilities assessment methodology. Phase 2 includes a baseline survey of all the schools in the territories, development of a deferred maintenance budget and prioritization of projects. Once the baseline assessment is completed, updates would be scheduled on a periodic basis to track progress. Funding priority will be given to health and safety issues.

- The study would benefit ASG by providing an R&M tool to assist in planning, programming and budgeting, and a tool to seek future funds.
- The first phase should be completed by end of this calendar year. Second phase should be underway by next Spring. Every effort will be made to complete the assessment as expeditiously as possible.
- The assessment and associated budget could be attached to Secretary's Green Book which would help the Executive Branch and Congress of funding deficits.

The Governor noted maintenance is one, if not the top, issue in the territory -- with maintenance dollars less than 1% of operating budget. It would be good if the study raises awareness and helps raise maintenance dollars.

The study will confirm what we already know -- but it's better to come from OIA than ASG -- it will have greater credibility.

ASG's contract manager is DPW. TOFR serves as grants manager for DOE, Parks and FEMA projects

Governor is very appreciative of the wisdom of the mandatory set aside. He's having to reduce ASG's budget for the third year in a row and is looking at future cutbacks. ASG is building a lot of infrastructure and he's concerned that without adequate maintenance investments, recapitalization costs may be prohibitive.

Meeting Record: Governor's Briefing
8 September 2010
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DRAFT

Manpower resources are limited. Governor has been trying to get DPW to help DOE and has tasked them to take care of government facilities on Manu'a at their own expense, although apparently DOE is still sending their people over there. His intent was always to keep DOE in the driver's seat though.

Governor has tried to have DPW take over school maintenance on Tutuila but it's been difficult due to territorial issues. DOE has not been supportive because of loss of control.

General comments from the Governor: Need to shorten the time for planning designing and engineering. Time is money. Corps process has been exacerbated due to Katrina problems. Small jurisdictions have a hard time competing with the largest states -- allocations are so small that delay is especially onerous. Senator Inouye is aware of the dilemma and is trying to put a special emphasis on small island states due to their isolation.



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DRAFT

Date:	8 September 2010	Project #	2010130
Time:	1200 hrs	Project Name:	OIA Study (Ph 1)
Location:	AP Lurali Executive Office Building, Pago Pago	Recorded by:	T. Fee
Attendance:	Christin Reynolds (GIS mgr) Lydia Faleafine-Nomura (OIA) Milton Yoshimoto (USACE), Tom Fee (HHF)		
Subject:	Meeting with Dept of Commerce GIS staff		

This was a cold call to introduce the team to the ASG GIS manager and to inquire about data resources that might be available to support the OIA initiative.

Ms. Reynolds had recently joined DOC from Rhode Island. She seemed very familiar with the ASG GIS resources and provided a quick overview of online available online converges (see listing below). Apparently facilities (2004 date) have been identified in the infrastructure theme. Road theme is dated 2006.

DataSet:	Download:
Boundaries	Data (747 KB)
Census	Data (7.1MB)
Climate	Data (3.3MB)
Coastline	Data (1.7MB)
Geology	Data (833KB)
Hazards	Data (3MB)
Hydrography	Data (2.8MB)
Index	Data (2.3MB)
Infrastructure	Data (17MB)
Land Use	Data (6.2MB)
Parcel	Data (414KB)
Place Names	Data (477KB)
Public Health	Data (875KB)
Wetlands	Data (1KB)
US National Grid 50m	Data (1KB)

Source: <http://gis.doc.as/resources/data.html>

She noted ASG had purchased and was shortly going to receive a 2009 IKONOS orthophoto (pre-tsunami). She also directed us to a Google Earth tool that overlays historical time series aerial photos to evaluate land cover changes (she's informed Google that the 9/28/10 post-tsunami coverage should be recorded as 9/29/10).

Ms. Reynolds said we would be happy to provide any support she could.



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DRAFT

Date:	8 September 2010	Project #	2010130
Time:	1300 hrs	Project Name:	OIA Study (Ph 1)
Location:	DPW Compound, Tafuna	Recorded by:	T. Fee
Attendance:	See attached sheet		
Subject:	DPW Interview		

Purpose was to present and discuss the OIA initiative to DPW Director and staff and introduce the team members.

Ms. Faleafine-Nomura provided a very general introduction of the OIA initiative and noted that it is one part of the Secretary's Five Year Plan.

Mr. Yoshimoto introduced himself and provided a more detailed summary of the OIA scope of work. Phase 1 involves working with territorial staff to develop a facilities assessment methodology. Phase 2 includes a baseline survey of the all the schools in the territories, development of a deferred maintenance budget and prioritization of projects. Once the baseline assessment is completed, updates would be scheduled on a periodic basis to track progress. Funding priority will be given to health and safety issues.

- The study would benefit ASG by providing an R&M tool to assist in planning, programming and budgeting, and a tool to seek future funds.
- The first phase should be completed by end of this calendar year. Second phase should be underway by next Spring. Every effort will be made to complete the assessment as expeditiously as possible.
- The assessment and associated budget could be attached to Secretary's Green Book which would help inform Congress of funding deficits.

The Director noted that DPW has a design to replace fale classroom wood walls with concrete block. Also, open trusses in some of the old schools need to be replaced. The two story buildings were originally designed with steel trusses that are now being converted to laminated trusses. Lots of problems with reinforcing steel and railings in the tropical environment. Changing to galvanized steel or coated (using it now in highway construction). Also moving to precast components to speed up building process. Trying to improve on design.

10-15 years ago, planning/design/procurement of school facilities was taken from DPW now it's coming back. DPW prepared MPs for all schools using outside consultants. Now schools are not being planned correctly. E.g., Poly Tech is good example – why was an auto repair facility constructed in the middle of the campus? FEMA projects are managed by TOFR; DPW is only a reviewer and construction is not being overseen by engineers. DPW goal is to regain control of facilities construction and management. Do you think maintenance would best be contracted out to private companies? Yes, if appropriate oversight is provided.

How is the OIA study going to be implemented? ASG and OIA will get copies of the recommendations. It will be up to ASG to adjust its programs to implement the recommendations.

What codes will the evaluation be based on? 2006 IBCs or the uniform code? ASG will adopt the 2006 IBC suite of codes (plumbing, mechanical and building). Suggest meeting minimum life safety requirements set out in the codes. Also have an international existing building code that deals primarily with maintenance including checklists.

When DPW contracts does it specify multi-year maintenance contracts? No, one year warranties are typical though.

Lupulele ES – connecting a new 2 sty bldg to an older 2 sty bldg and having problems connecting to old work (its eroding). Need policy in place to include budget to mitigate this type of problem.

Should include maintenance and operations guidelines in OIA study.

Tom's data request: Would it include contractual information? Design detail? How far back are you going? Can you give us an example of a checklist so we can understand what kind of information you'll need?

Scope suggestions:

- Study could include discussion of best practices and policy recommendation.
- Identify standardized materials and stockpile locations for them. Look at types of metals being used and recommend less corrosive metals like zinc (coated metals will corrode from the inside).
- Include maintenance and operations guidelines.
- Good idea is to track material warranties as well – to insure against premature failure.
- Important in evaluating life cycle costs.
- Study could include recommendations for facilities maintenance training: for building managers and technical staff. Include in basic specifications.
- Recommend development of an owner's manual for buildings and equipment that gets turned over to the building manager/owner.

DOE is mostly responding to trouble calls, same situation exists at DPW for non school facilities.

Is DPW involved in DOE's AARA's project? Just a creating a plan for fale upgrades. Also provided a cost estimate.

Encroachment and drainage problems. DPW surveys school property lines which helps manage encroachment issues. Many schools are not fenced. In some areas, homes have been built encroaching into school property. Very difficult to resolve this type of problem. DPW

tries to build in drainage retention basins to minimize increased runoff. Fagaitua HS problem—may have been designed correctly but overtime, drainage conditions have deteriorated due to upstream alterations, lack of maintenance, etc.

Tom circulated a copy of interview questions and asked attendees to respond to questions in writing. What top five items that would make the biggest difference to your schools?

- Replace equipment with more energy efficient eqpt
- Missing louvers, screens and rat wire
- Screen wire needs to be cleaned
- New schools are using "emplash" screen (combines screen and rat wire)
- Vinyl tile floors never get cleaned.
- Bathrooms are in very poor condition
- Use of mildew resistant paint
- Roof fasteners – all rusted out
- Fan replacement
- Trim trees and clean out gutters

There are two basic types of fale: two classroom and larger multi purpose buildings.

Is there more light than needed in the classrooms? ASHRAE 90.1 governs lighting density. Perhaps we need to re-evaluate lighting levels.

Building grounds are in poor condition.

Why hasn't anyone tried to increase the 5% and 1% set asides if ASG needs more maintenance funds? Total comes up to about \$1.5 million/yr. Need to remove the bathroom monitors from set aside funding to increase maintenance funding.

Will DPW be involved in OIA's Phase 2? DPW should be involved as a stakeholder and technical expert.

Mr. Fee described the kind of information needed for the Phase 1 study – facilities inventory type information and requests assistance from DPW on site plans.

DPW will assemble campus site plans with building footprints and send to Tom (CAD or PDF is fine).

What kind of data should we pull? Have data from last 5-10 years ... Tom to send detailed information request. May need to develop an inventory worksheet with blanks and circulate for added detail.

Taputapu ES (Poloa Bay, at west end) was demolished by tsunami. Students temporarily moved to nearby Alataua ES while new site is found for replacement school (to be built on high ground).



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29 October 2010

Ms. Jackie Conant
Civil & Public Works Branch
U.S. Army Corps of Engineers, Honolulu District
Building 230, Room 202
Fort Shafter, Hawaii 96858-5440

Dear Ms. Conant,

CNMI - GUAM TRIP REPORT
Phase I Educational Facility Inventory and Condition Assessment for
Department of Interior, Office of Insular Affairs,
Various Locations Pacific Region and Virgin Islands
Contract No. W9128A-08-D-0008

This letter summarizes the recent CNMI - Guam trip completed between 25 and 29 October 2010. It provides a brief overview of the itinerary, summary of salient findings and implications for Phase 2. The support of Mr. Keith Aughenbaugh on Saipan was invaluable in making the trip a success.

1. ITINERARY

Date	Action
SAIPAN Monday, 25 October	Inbrief with Keith Aughenbaugh, OIA CNMI staff Inbrief with Education Commissioner Sablan, BOE CIP Chair Ada and staff. Tour northern schools, including brief principal interviews Tour central and southern schools including brief principal interviews.
Tuesday, 26 October	
Wednesday, 27 October	Follow on meeting with Commissioner, BOE member Ada and PSS staff. Tour of western school complex. Depart to Guam
GUAM	
Thursday, 28 October	Interview Governor's Chief of Staff Gumatotoa Interview GDOE Superintendent Underwood and AS Taitano Interview Doris Brooks, Guam Public Auditor Interview Sodexo representatives (conducting GDOE facility condition assessment)
Friday, 29 October	Review 10-Year Facilities Plan at GDOE ofc (now out of print) Brief follow-on discussion with Asst Supt Taitano and facilities mgr Cruz Complete windshield tour of GDOE facilities

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Ms. Jackie Conant
U.S. Army Corps of Engineers, Honolulu District
29 October 2010
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2. FINDINGS

2.1 General

The assessment team received a very different reaction in CNMI than Guam. CNMI PSS was clearly enthusiastic about supporting the OIA study as evidenced by the advanced preparation and high level of support provided during the visit. It appeared that GDOE had just become aware of the OIA initiative and appeared somewhat frustrated that it hadn't heard about the proposal earlier (the Supt noted that she had just issued a \$2.4 million contract that included a comprehensive school facilities assessment). In short, CNMI PSS looks forward to OIA's facility assessment and thinks it will fit well into its current management process. GDOE, on the other hand, will be developing its own assessment that appears as though can be adapted to serve OIA's purposes.

Another obvious difference: CNMI PSS was well into implementing its ARRA-funded school repair projects (work crews evident at most schools) while GDOE appeared to be in the preliminary stage of evaluating schools and developing project scopes.

GDOE published a Ten-Year Capital Improvement Plan in 1999 that provided a strong baseline for school facilities planning. The study included a detailed facility assessment, development of standards and conceptual plans for new schools and a Ten-Year CIP plan, and according the facilities manager, included a significant amount of community involvement. The study is now out of date and will be partially updated by the referenced GDOE contract.

In contrast, CNMI had a more up to date Seven-Year Capital Improvement Plan 2004-05 to 2011-12 (2005 – second seven year plan) which lacked some of comprehensiveness of the 1999 GDOE plan but still provided a good general inventory of schools and planned repairs and improvements (e.g. no assessment or standards for new construction). CNMI PSS maintains a working CIP program and has an ambitious \$16.5M School Facilities Development Plan. It hopes to use the information generated in the OIA Phase 2 effort to update its seven-year plan. Both plans are now out of date but nevertheless provide a good starting point for any serious review of PSS facilities.

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

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2.2 CNMI PSS

CIP staff circulated a copy of a CIP Project Status Report summarizing recently completed and planned CIP and ARRA projects for each of the 20 public schools. Combined with the 7-year CIP plan, this provides a comprehensive snapshot of school facility R&M efforts. The School Facilities Development Plan identifies \$16.5M of major school CIP improvements being pursued by the PSS.

The CNMI PSS CIP staff accompanied the OIA team on a tour of Saipan schools that included brief encounters with a number of school principals (who had been informed of the pending visits). The team did not visit five schools on Tinian and Rota. The school principals were very knowledgeable about their facilities, and R&M activities associated with ARRA projects were evident at most schools. Schools have both custodial and maintenance staff assigned to them, supposedly based on enrollment size (there appeared to be some discrepancies in the staff allocation). When a problem exceeds onsite maintenance staff capabilities, the Principal discusses the issue with the CIP staff that can provide journeyman expertise or the Principal is authorized to contract out the project.

Many of the Saipan schools maintain two types of water cisterns; those formerly connected to roof drains (and now uniformly disconnected), and storage reservoirs to protect against frequent municipal service lapses.

Emergency vehicle access was often cited as a concern by principals. A number of schools are connected to the main Highway by relatively narrow streets, without a back entry or secondary escape route.

Many of the schools were constructed in the 50's and '60's and are showing their age. Termite damage is extensive in the wooden buildings and casework. Some campuses like Dan Dan ES were never meant to be operated as permanent facilities and are in need of replacement. Localized drainage problems and ADA issues were prevalent. The only gymnasium on Saipan is at Marianas High School (several new "open air" gyms are planned). Several schools had classrooms there were closed due to poor conditions (water infiltration, structural, etc.).

The visit to Marianas High School took several hours and included a guided tour by the Principal, Mr. Garrison. The Principal reviewed problems with untrained maintenance staff and concerns about the structural integrity of several buildings. He mentioned the problems with local contractors and general lack of local

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Ms. Jackie Conant
U.S. Army Corps of Engineers, Honolulu District
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Page 4

contracting expertise (e.g., the protracted problems associated with the HS's gymnasium project), general tree maintenance problems, relations with the utility provider, ADA work-arounds, and in general, the struggle to keep his school open in the face of meager financial resources.

The three new Kagman schools looked in good shape from the very brief time allotted. The Ochoa Jr HS appeared to have a structural problem with one of the 2nd floor concrete walkway railings, but it was not possible to take a close look given general time constraints

CNMI's Seven-Year CIP plan summarizes planned capital improvements and updates the previous seven year plan. The plan provides enrollment projections for the projection period (2004-05 to 2011-12) and addresses facilities needed for projected enrollment growth as well as major repairs, replacements and other high priority upgrades. The 2005 CIP identified the need for 139 new classrooms to accommodate projected enrollment and 31 replacement classrooms at a cost of \$50M. Other projects include gymnasiums, cafeterias, playground equipment, parking, bus shelter, track and field and other high priority needs. PSS has constructed six new schools in the past ten years, 60 classroom replacements, additions to various schools and a number of other high priority recommendations. Enrollment growth envisioned in the 2005 plan did not materialize due to the significant downturn in the CNMI economy associated with the global recession and local regulatory changes. The PSS has recently prepared a \$16.5M School Facilities Development Plan to develop a number of new classrooms, several open air gymnasiums, a new cafeteria, a new Jr High School and a range of wall and window repair/hardening projects.

2.3 Guam DOE

GDOE has recently separately engaged Sodexo and Coeval Design Partners, with ARRA funds, to prepare a comprehensive school facilities assessment at 36 of GDOE's 41 schools, to prioritize projects over a five-year period, and to design, bid, contract and oversee the range of recommended projects in a multi-year engagement. The draft facilities assessment report is due to GDOE in December 2010. Although limited information was provided on the details of the Sodexo study, it appears that it's a very detailed investigation focused on identifying, budgeting and prioritizing R&M projects. Sodexo was asked to expedite recommendations for 12 high priority schools.

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Ms. Jackie Conant
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In lieu of a facilities assessment, the Superintendent suggested OIA undertake a study to determine what the need for new classrooms and schools is, and where the facilities should be located. Growth has occurred and is projected in the northern half of the island, leading to many overcapacity schools, while schools in the south end of the island are typically under capacity.

A very cursory attempt was made to drive by Guam schools, unescorted, and no attempt to engage with Guam school principals was undertaken due to the feedback received from GDOE. From the rapid drive-by survey (almost 41 schools in about seven hours), some patterns in campus layout and building design were noticed but there seemed to be a variety of configurations with no apparent standardization. Many of the schools looked to be in fair to poor condition (poor grounds condition, small box-like classrooms with window mounted AC units, etc.). All four new schools where observed, again at a cursory level, and all looked to be in very good condition.

From our interviews, there is reluctance to close/consolidate schools in the South, even in light of declining enrollment and high cost per student ratios.

3. IMPLICATIONS FOR PHASE 2

CNMI and Guam at least maintain school facility records (Guam better than CNMI) and have recent comprehensive assessments and CIP planning documents to serve as a baseline (entirely absent in American Samoa). It appears that baseline data will allow for a general estimate of buildings and associated floor area by campus that will be critical to establishing Phase 2 LOE. The typical range of issues (structural, civil, MEP, architectural) will require the engagement of a multidisciplinary inspection team.

Because of their wealth of knowledge, school principals should be engaged in the Phase 2 process, at a minimum via inbriefs and outbriefs associated with each school investigation. More robust but passive involvement via internet questionnaires and in general, via a project website should be explored. The school principals are considered “jack of all trades” and should be an important part of the QC/QA process. Put another way, its absolutely critical to maintain the support of school principals to make the OIA assessment effective. The territorial facilities maintenance staff also need to be very engaged in the execution of onsite inspectors, to the extent practical.

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Ms. Jackie Conant
U.S. Army Corps of Engineers, Honolulu District
29 October 2010
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The premise of the OIA mission – beyond improving the conditions of insular schools, is to develop local capacity and there’s no reason why Phase 2 can’t be designed to provide engagement and technology transfer to the local jurisdiction. Obviously there are efficiency limitations in the number of people that can practically be involved. One idea being considered is to engage highly regarded local AE firms in each area to act as a local focal point supported by the SME’s from the prime consultant. This would be particularly cost effective for the periodic follow on surveys. Prime SME’s would need to spend a significant amount of on-site time during the baseline survey in each jurisdiction, working closely with local counterparts, to the point where there’s a comfort level that assessment results are uniform and consistent. It would be more expedient and perhaps more uniform for the Prime Consultant to conduct all the inspections, but the trade off between local capacity building and precision may well be worth it.

The Phase 2 baseline survey will also need to round out the rudimentary facilities inventory established in Phase 1 including classification of each building into a building type (wood frame, concrete, and steel, etc.), essential to estimate building component and overall replacement value.

Considering the potential for a full scale recapitalization of insular school facilities, design guidelines setting forth standardized designs and minimum material specifications become critical for long term success. Also, perhaps more importantly, a careful mapping of the territories’ R&M “business process” development of a best practices manual together with software support and training seems to be an important programmatic objective for OIA to ensure that the recapitalization is long lasting and does not quickly erode due to poor maintenance practices.

We have continued to conduct research into different facility condition assessment (FCA) and prioritization models and have determined that the NASA model provides the most straightforward, out of the box method to follow.

Office of Insular Affairs Phase I Educational Facility Inventory and Condition Assessment

Ms. Jackie Conant
U.S. Army Corps of Engineers, Honolulu District
29 October 2010
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At this point, we have surveyed three of the four insular areas including about 75% of the estimated 125 schools included in the overall scope. The site visit planned for US Virgin Islands at the end of November will complete the data gathering phase of the Phase 1 effort. A draft report summarizing the field research and describing the Phase 2 approach will be submitted by the end of the calendar year.

Sincerely,



Thomas A. Fee, AICP, LEED AP
Principal

cc: Mr Jonathon Dunn, OIA
Mr. Keith Aughenbaugh, OIA Field Representative



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DRAFT

Date:	28 October 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	Governor's Executive Offices, Adelup	Recorded by:	T. Fee
Attendance:	Shawn Gumataotao, Derek Chow, Jackie Conant, Tom Fee		
Subject:	Governor Camacho's Deputy Chief of Staff Interview		

Purpose was to introduce the OIA initiative and get Mr. Gumataotao's input and advice (interview took place several days before the election; Gov. Camacho was leaving office due to term limits).

Guam PSS has identified 600 ARRA school projects (~\$74M). Between \$1.5M and \$3.5M for each school (with exception of JFK and the four new schools). Need to build a new JFK HS – closed now for several years; two years in procurement process. DPW issued NTP 3-4 weeks ago—school is now demolished. Legislature approved a bond – municipal 20-yr lease (DBOM) \$60M (high cost when compared to about \$5M for each of the 4 new GEFF schools).

Gov. is committed to work with DOE to fix all the schools. Windows, doors, ADA compliant walkways, railings, science labs, shovel ready. Governors' office had a UOG engineer (Sunny Perez) complete the first facility assessment for ARRA grant with DPW involvement. Then GDOE hired Sodexo to do another round of assessments. Shawn was a little confused why the second round was needed. GovGuam's bond capacity is tapped out; it will not be able float any bonds for the next ten years (other than revenue-backed bonds).

Federal law was recently changed stating that education is the responsibility of government – not the Governor specifically – so Governor is taken out of the process. BOE is now recipient of funds – almost lump sum. Third Party Fiduciary has been brought in by USDOE to manage \$40M in fed funds going to GDOE (not incl. OIA funds). Shawn expressed concerned about GDOE's ability to execute ARRA projects. GDOE recently got its procurement powers back, and recently it's saying it may not be able to execute on time. Governor may be able to step in to execute but would not be willing to relinquish execution authority again.

Mr. Chow provided an overview of the OIA project explaining OIA and USACE roles in the project including the distinction between Phases 1 (discovery, fact findings, initiate stakeholder contacts) and 2 (actual on the ground assessment of each school and compilation of condition index and deferred maintenance backlog budgets, and periodic reassessment to determine trends). He also introduced Jackie Conant who will be assisting Milton Yoshimoto in managing the OIA project. He also introduced Tom Fee as the lead consultant.

Gov. Camacho used the 1999 10-Yr CIP plan to build four new schools using DOI compact impact funds (2 ES, 1 MS 1 HS) under a 20-year DBOM agreement with a nonprofit entity Guam Education Facilities Foundation (GEFF) (the 1999 CIP plan was created in light of

the Columbine High School disaster). The Evergreen Audit (2008) recommended outsourcing maintenance, following the GEFf model, but it's not politically palatable.

The AG closed six schools in 2008 — which upset the Governor — but helped her become next US Attorney. Oceanview MS is a real problem school. The Dededo area is most densely populated area on the island and has a number of schools: M.A. Ulloa ES, Wettengel ES, and Benavente MS are clustered together and the new Liguana ES is right across the street.

The DOD build up will also impact GDOE schools, at least indirectly through increased employment growth.

It's ironic that the GDOE maintenance division is based at Southern HS that is in such poor condition. Southern HS and Machananao ES were the last schools built prior to the four GEFf schools.

The GDOE Superintendent has a lot of power — except in the JFK case (being managed by DPW).

Governor built the GEFf schools without GDOE input (used GDOE's 1999 CIP plan though).

Mr. Gumataotao is the governor's federal policy advisor and will be leaving when the governor leaves. He thought the OIA initiative would be generational; he'd never seen this scale of technical assistance ever before. Gov. Gutierrez built Machananao ES and started Southern. Gov. Camacho finished Southern and built the 4 GEFf schools. Gov. Ada started Southern and completed Truman ES. Majority of other schools built under Gov. Camacho's father's administration in the 70s.

GDOE says they need ten new schools to meet demand although Mr. Gumataotao hasn't seen any documentation of the requirement. GDOE enrollment was 31K in 1970 — the same enrollment today. Not sure where the number ten new schools number came from. There's not much available land either. Need for schools is in the north where the growth is.



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DRAFT

Date:	28 October 2010	Project #	2010130
Time:	1000 hrs	Project Name:	OIA Study (Ph 1)
Location:	Guam DOE Superintendent's Ofc	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	Guam Superintendent Interview		

Meeting purpose was to introduce Superintendent Underwood to the OIA initiative and to receive her advice and input. The Superintendent was joined by Asst Superintendent Taitano and the recently arrived representative of USDOE's Third Party Fiduciary, Mr. Pearson (Alvarez & Marsal).

Mr. Chow provided general introductions including OIA and USACE roles, objectives of the OIA initiative and then introduced Ms. Conant and Mr. Fee. Mr. Fee provided more background and distributed copies of the information request.

The DOI Secretary is interested in monitoring physical condition in insular PSS. Mr. Fee acknowledged the investment GDOE has made in its school inventory including the 10 yr CIP in 1999. The Superintendent noted that if the OIA initiative had come several months earlier, then GDOE may have saved \$2.4M it just committed for its own facility condition assessment (Sodexo/Coeval contracts).

Superintendent stated GDOE had just contracted with Sodexo using ARRA funds, to develop a five-year facilities maintenance plan setting priorities also in process of finalizing a contract with an AE firm (Coeval) to put together bid packages for the CIP projects. Ms. Taitano provided a contact list (attached) for the Sodexo team and suggested we follow up with them to learn more about the study.

Superintendent would like OIA's help in assessing what the need for new schools is and where they should be located (she didn't think they needed any help on the facility assessment side).

What is the goal of the OIA initiative? It will raise awareness of the physical condition of territorial schools and in doing so, may encourage Congress to increase funding and will also allow GPSS to be more effective in getting their share of funds from the Governor's offices.

The superintendent thanked Mr. Chow for the briefing and identified Ms. Taitano as her POC for any follow-up regarding the OIA initiative.



US DEPARTMENT OF INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT:
PHASE 1

ATTENDANCE MEETING/DATE: *GPSS - 10/28/10*
Brief

NAME	ORGANIZATION	TEL/EMAIL
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Jackie Conant	USACE	(808) 438-0881 Jacqueline.J.Conant@usace.army.mil
Tom Fee	HHF	(808) 545-2055 tfee@hhf.com
<i>Jim Pearson</i>	<i>A&M</i>	<i>(617) 777-4581</i> <i>jepearson@gdoe.net</i>
<i>Nerissa Underwood</i>	<i>DOE</i>	<i>Nunderwood@gdoe.net</i>
<i>Taling Taitano</i>	<i>DOE</i>	<i>671 300 1556</i> <i>tmaitano@gdoe.net</i>

31 Aug 10

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Crispin Bensan	Guam Department of Education	Project Manager / Engineer	cbensan@gdoe.net	671-300-1532	671-967-5226	
Billy Cruz	Guam Department of Education	Facilities and Maintenance Manager	bpcruz@gdoe.net	671-475-0614	671-777-2455	
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DRAFT

Date:	28 October 2010	Project #	2010130
Time:	1300 hrs	Project Name:	OIA Study (Ph 1)
Location:	Guam Public Auditor's Office	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	Guam Public Auditor Interview		

Christine Jackson (USDOE) recommended that we interview Ms. Brooks regarding GDOE school facilities.

Ms. Brooks noted 5 OIG reps were on Guam last week for training (Ben Priti is OIG field rep for Guam – retiring at year end). Bob Dantini, AS public auditor, Michael Pai CNMI public auditor and Nino Asaturnino Palau public auditor– were also on Guam last week.

Mr. Chow provided an overview of the OIA initiative and the scopes of Phases 1 and 2, and introduced Ms. Conant and Mr. Fee.

ARRA energy grant: GDOE not eligible for energy efficient rehab because schools too old (i.e., pre 1979); instead most of the money went to UOG and GCC. GDOE spends about \$1M/mo on utilities. Need to increase energy efficiency to free up money. Very disappointed that GDOE did not qualify for energy money – apparently it does qualify for funding under another block grant.

USDOE declared GDOE high risk in 2003 – beginning of public auditor's scrutiny.

State Fiscal Stabilization Fund (SFSF) is a type of ARRA money administered by USDOE for school projects, its different than DOI money and not always being coordinated [from ARRA website: The program will help ensure that local educational agencies (LEAs) and public institutions of higher education (IHEs) have the resources to avert cuts and retain teachers and professors. The program may also help support the modernization, renovation, and repair of school and college facilities. In addition, the law provides governors with significant resources to support education (including school modernization renovation, and repair), public safety, and other government services.]

OIG is considering an audit that would encompass education throughout the insular areas. Having a hard time dealing with multi-faceted issue (facility condition, curriculum, student teacher ratios, etc.).

Last time anyone looked at schools was GASB 34 – establishing requirement for establishing historical value of government property, including schools (governmental accounting standards board – new federal financial reporting requirements for state and local governments issued 6/99). First review of GovGuam facility costs (including schools, infra, roads, etc.) was conducted by Frank Crawford to meet GASB 34 requirements (c. 2002).

Evergreen Study (2009) is sometimes referred to as “the million dollar report.” DOE has so many priorities they don't know what to prioritize (alligators in the swamp analogy). Although the study included hundreds of recommendations, it didn't prioritize which were the most critical priorities (Guam Power Authority had a good prioritized report).

Meeting Record: Guam Public Auditor
28 October 2010
Page 2

DRAFT

Ms. Brooks inquired who at GDOE was leading the facilities condition effort. Mr. Fee circulated a copy of the staffing list proved by Ms. Taitano. Problem with GDOE is that people on the list have other collateral duties – not their regular jobs. Supt and Dep Supt are always at the top of every list. Can't manage everything.

There was a fair amount of confusion about how much and what kinds of OIA money come to Guam and we said we'd try to get a summary back to Ms. Brooks. Compact impact money goes to the Governor who decides how to allocate it. Hospital has been a big receiver of grants lately, also road work, safety and health (GWA and GPA recently spun off as autonomous entities so no longer receive funds).

Mr. Chow noted that the OIA study would raise awareness of underfunded schools and directly or indirectly help divert resources to school facility condition.

Compact Impact money. Guam gets \$15M of \$30M/yr. based on a sharing ratio established every five years according the ratio of Micronesian residents to total residents in a given territory/state. Monies are shared with FSM, Palau, Hawaii, etc. Gov biannually submits CIP requests – most recent funds going to the hospital. Four new schools were built with DOI compact impact money – about \$7M/year of \$15M/year of compact aid money Guam receives is paying for the 4 schools (summarized below with capital cost from GDOE financial statement – Deloitte March 2010)

Liguan Elementary School	\$ 13,082,080
Adacao Elementary School	14,482,938
Astumbo Middle School	18,383,500
Ukudo High School	42,581,348
Total	\$ 88,529,866

The new JFK HS project is funded with local money.

DOE got about \$14M in bond funds couple years ago for some of the schools (being administered by local AE firm Taniguchi Ruth) based on a 2008 Guam Atty General report (Dominic Terlaje, assigned as the education suruhanu, is tasked to follow up with the AG initiative and he would be a good person to interview). [excerpted from newspaper article: GDOE Health and Safety Task Force inspected all 37 of the island's public elementary, middle, and high schools between January and June 2008, which resulted in the full closure of six schools and the partial closure of several others. The schools were closed after they were deemed unsafe and unsanitary by the Task Force, which included officials from the Guam Fire Department, the Department of Public Health and Social Services, the Guam Environmental Protection Agency, GDOE and the Office of the Attorney General. The John F. Kennedy High School in upper Tumon remains closed due to structural and health and safety related issues. (July '08 MV)].

Federal Grants and Programs (from Deloitte March 2010). In Fiscal Year 2009, the following amounts were expended by GDOE through a variety of Federal grants:

Grantor	Amount
US Department of Agriculture	\$ 8,048,030
US Department of Defense	327,965
US Department of the Interior	7,191,820
US Department of Education	33,249,995
US Department of Health & Human Services	2,250,865
US Department of Homeland Security	21,007
Subtotal2	\$51,089,682
JROTC and Commodities Expenses	(919,278)
Municipal School Lease (Compact Impact)	9,734,250
Total Federal Expenditures3	\$59,904,654

This represents 23% of total expenditures for FY2009 of \$260,245,067.

Trend data is important. Population is shifting to the north where most of the jobs are—resulting in overcrowded schools in the north; need to consider consolidation in the south (all four new schools are up north). OIA study not scoped to consider capacity issues; just looking at existing school conditions.

Need to develop institutional capacity to oversee recapitalization efforts and then maintain the upgraded facilities.

OIA's discretionary economic development money is shared among all insular areas. Compact islands also get compact impact money.

Should consider cost effectiveness as a criteria in OIA assessment (e.g., students per SF/Classroom, etc.) to ensure funds are allocated in a cost effective manner. Mr. Fee noted that this should be a GovGuam requirement.

Should also consider including an energy audit in the assessment to look for cost recovery – DOE has not requested one yet.

According to Ms. Brooks, former DOI Asst Secty Cohen focused on fiscal accountability in the insular areas while it appears the new asst secty (Babauta) is focusing on school condition.

There is no annual/ongoing GovGuam funding for maintenance – it's always a special appropriation. Government budget is very tight; 90% goes to personnel, utilities, etc.

Used to have ES enrollment in the 1,200-1,500 range before the new northern schools were built. Now down in the 900 range – but still overcrowded.

Planning issues such as where new capacity is needed and where under capacity schools should be closed or consolidated are not currently addressed in the OIA scope. Primary responsibility falls back to local system to determine how new dollars will be spent. Want to put the money where it's needed most. Southern HS cost over \$100M and is under capacity (c. 900 students). GW HS and JFK HS at close to 2,000. Simon Sanchez HS is close to 1,500. Redistricting/bussing is politically impossible (Achilles heel). Sanchez ES in the south dropped from 100 to 60 students and is still kept open ("a sacred cow"). "Teacher IV's want to stay there" (highest pay grade – most expensive school in entire system on a per student basis). Historically OIA has never been involved in these types of decisions – does not want to federalize the local PSS. Nobody's willing to make the hard decisions. Sanchez ES should be the last school to get any money. BOE ratified condition not to close Sanchez (voted against the Superintendent's closure recommendation). BOE is an elected body – not appointed by Governor. BOE and Supt will change when new Gov comes in (change will not likely increase interest in school condition though).

Third party fiduciary has added a layer of stress and bureaucracy to everyone. Last material weakness indicated by USDOE is school facility inventory. Probably why Sodexo/Coeval were retained. USDOE not concerned about facility condition as much as FF&E and curriculum.

Sodexo is providing capacity to expend ARRA money, working with another GDOE contractor, Coeval Design Partners (AE firm). Because it's ARRA related, it's probably more focused on painting and repair vs. major system upgrades, etc.

AS has 5% of its OIA funds earmarked for maintenance. GovGuam's \$14M bond issue allowed some dedicated money for school facility maintenance projects (over and above the \$7M of compact impact funds dedicated to the GEFf schools). Ms. Brooks would like the OIA study to include the 4 new schools (not included in Sodexo study). The GEFf schools receive about \$0.5M/yr for maintenance. Ms Brooks would like to know how well they are being maintained. The Evergreen study complimented GEFf mntc program.

New JFK project has similar mntc agmt – although price is double what GEFf has for 4 schools, "getting a Cadillac when all you need is a Toyota." Final negotiation was with DPW. DPW is in charge of all GovGuam procurement of construction services (Andrew Leon Guerrero, director). DPW designated as JFK HS project agent, similar to GEFf schools – otherwise facility mntc brain trust is at GDOE (although sometimes DOE has believability issues). ARRA money flows through USDOE to GDOE. Not sure how new OIA money would be routed through GovGuam – probably through DPW as DOE does not have capacity for that scale of undertaking. DPW retains its own consultants to manage major projects (as GDOE has its consultants on board to manage ARRA money).

AC is always a major issue in the PSS [Ms. Brooks was purportedly the author of a public law that, among other things, required AC in all classrooms and learning environments].



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DRAFT

Date:	28 October 2010	Project #	2010130
Time:	1500 hrs	Project Name:	OIA Study (Ph 1)
Location:	Sodexo Office, GICC Bldg, 8 th Floor	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	Sodexo Interview		

Purpose was to learn about the Sodexo scope of work and timeline (meeting was impromptu, arranged two hours before by Ms. Taitano, GDOE AS).

The Sodexo team was just getting started (moving into new office space). Additional staff were enroute to Guam to support the facility capital action plan (FCAP) assessment. They are preparing a "5-yr CIP" plan for 36 public schools (not incl. the 4 new schools and the just demolished JFK HS) using a proprietary system that will utilize web based reporting. Their draft study should be available through GDOE in the January '11 timeframe. Sodexo is forwarding school-by-school assessments to GDOE's AE consultant, Coeval Design Partners, as they are completed so Coeval can immediately start to program and award construction projects (i.e., not waiting until the final FCAP study is completed).

Richard Bartley pointed to a just-completed data entry form for a building at Southern HS indicating the types of information being recorded. This room-by-room information would be compiled in a system wide (proprietary?) database. The team was expecting to receive school site plans from GDOE.

It was evident that the team was just starting up. No printed information was available about Sodexo's scope of work. Copies of the Sodexo/GovGuam Agreement (acquired subsequent to the interview) and a PDN article from that morning about the team's work at Southern HS are attached. The agreement indicates Sodexo tasks include a \$0.4M FCAP effort and two years of ARRA project management support and services at approx. \$1M/year. The agreement does not provide enough information to clearly understand what the end work products will be. For example, it does not appear to include any planning level assessment of school capacity/cost effectiveness/prioritization, opportunities for modernization and public involvement that were hallmarks of GDOE's 1999 10-yr CIP plan. It's not clear to what extent the Sodexo survey teams will evaluate ADA, wind and seismic code upgrades (assumed but not articulated in the agreement).



US DEPARTMENT OF INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT:
PHASE 1

ATTENDANCE MEETING/DATE Sodexo interview Oct 28, 2010

NAME	ORGANIZATION	TEL/EMAIL
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Tom Fee	HHF	(808) 545-2055 tfee@hhf.com
Richard Bartley	Sodexo	671-929-8891 richard.bartley@sodexo.com
Jim Hamilton	Sodexo	671-685-2659 jim.hamilton@msa.com
William T. Feece	Sodexo	671-988-5548 William.Feece@sodexo.com
Virginia Fullwood	Sodexo	virginia.fullwood@sodexo.com

31 Aug 10



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DRAFT

Date:	29 October 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	GDOE Asst Superintendent Taitano's Ofc.	Recorded by:	T. Fee
Attendance:	NA		
Subject:	Review of GDOE's 10-Yr CIP Plan (1999)		

Ms. Taitano allowed Mr. Fee to review a copy of the 10-Yr CIP plan in her office. Notes from his review are provided below accompanied by some excerpts from the document.

The study was prepared for GDOE by Earth Tech in June 1999 and covered 37 schools (25 ES, 7 MS and 4 HS). '98-99 enrollment was 32K and 2010 enrollment was projected at 45K.

Basic contents were as follows:

- Ch 1: Inventory and Assessment of Existing Schools
- Ch 2: 10-yr enrollment projections
- Ch 3: Conceptual site plans and facility standards
- Ch 4: CIP
- Ch 5: Review of GDOE reserved properties [potential new school sites]

Ch 3 includes guidance from PL 24-73 regarding school size standards:

- ES: 550 students
- MS: 700 students
- HS: 1200 students

Campus size standards were also developed in concert with two public workshops:

School Type	Urban	Suburban	Size (SF)
ES	11 ac	20 ac	65,770
MS	30 ac	35 ac	81,690
HS	43 ac	43 ac	141,150

Ch 4 identified \$94M in deferred maintenance projects and an additional \$418M for 12 new schools (12 ES at \$13M ea, 5 MS at \$20.4M ea and 4 HS at \$40M ea) (see accompanying report excerpts for details).

Ch 5 identified the top three sites as:

- Dededo Lot #10122-R18 – 20+ ac
- Asan Lot #462 – 19.2 ac
- Marbo Base Compound B-4 – 80 ac

Public Law 24-18 designates all funds provided by DOI to be used exclusively for construction of new public schools.

Three major problems:

- 80% of schools are over 25 yrs old with structural and ADA defects and the older buildings are not equipped to support new instructional methods (Doris Brooks' was instrumental in passing the law requiring AC in all classrooms and learning environments.)
- Rather than build new schools to accommodate population growth, we've added temporary facilities to existing campuses.
- Lack of an R&M program and need for dedicated source of funding – almost \$95M R&M needed over the next 5 years.

DEPARTMENT OF EDUCATION
TEN (10) YEAR CAPITAL FACILITIES PLAN
PROJECT PRIORITY

SUMMARY TABLE
CAPITAL IMPROVEMENT PROJECTS

Replacement/Renovation of Temporary Classrooms	7,230,000
General	22,570,000
ADA Compliance	15,472,720
Structural Repairs	19,081,660
Renovation of Main Buildings	4,800,000
Infrastructure	1,175,000
Recreational Facilities	10,460,000
Electrical System Upgrades	560,000
Intercom, Security and Fire Alarm	4,410,000
Airconditioning System	8,305,000
Sub-total Cost Estimate	\$ 94,064,380
12 New Elementary Schools	\$ 156,000,000
5 New Middle Schools	\$ 102,000,000
4 New High Schools	\$ 160,000,000
Sub-total Cost Estimate	\$ 418,000,000
Total Cost Estimate	\$ 512,064,380

Individual School Inventory Summary
Prepared for Guam Department of Education

School Summary																			
Name	Type	Location	School District	Date of Construction/Ag	Cost of Building	Type	General Condition P/F/G/E/N	Structural Meets Code Y/N	ADA Compliant Y/N	1987/8 Pop.	Permanent	Temporary	Floor Area	Indoor Facilities adequate	Overall acreage	Play area, Athletic Facilities	Parking	Site	
ELEMENTARY SCHOOLS																			
TOTAL: 26																			
1	Pringshan Elementary	1	Dededo	4	1972	1,732,511	CMU	G	N	N	1003	52	22	93,800	N	15	Play area		Medium
2	Uti Elementary	1	Yigo	4	1967	5,700,000	CMU	G	Y	Y	845	58	8	40,000	Y	45	Play area		Large
3	Yigo Elementary	1	Yigo	4	1968	1,288,000	CMU	F	N	Y	1182	49	16	40,435	N	15	Play area		Medium
4	M.A. Udon Elementary	1	Dededo	4	1965	962,073	CMU	G	Y	N	1073	47	16	56,636	N	10	Play area	66	Small
5	Harmon Loop Elementary	1	Dededo	4	1971	808,532	CMU	G	N	N	889	30	12	47,180	N	12	Play area		Medium
6	Autumn Elementary	1	Dededo	4	1967	7,300,000	CMU	New	Y	Y	734	36	0	51,603	Y	9	Play area		Small
7	Chief Brodie Memorial	1	Tamuning	2	1965	720,000	CMU	G	N	Y	742	28	8	14,600	N	Shared	Play area		Medium
8	L.B. Johnson Elementary	1	Tamuning	2	1974	185,000	CMU	F	N	N	433	22	3	24,691	N	3	Play area		Small
9	Tamuning Elementary	1	Tamuning	2	1966	11,280,000	CMU	New	Y	Y	830	44	0	69,217	Y	7	Play area		Medium
10	Wittering	1	Dededo	2	1968	1,685,000	CMU	R/F	N	Y	847	38	8	48,054	N	15	Play area		Medium
11	Agaña Heights	1	Agaña Heights	3	1968	962,919	CMU	R/F	N	N	527	23	6	31,502	N	9	Play area	35	Small
12	S.P. Carabido Elementary	1	Berigada	3	1965	738,192	CMU	F	N	Y	571	22	4	40,275	N	9	Play area		Small
13	Cast. H.B. Price Elementary	1	Mangilao	3	1968	672,438	CMU	FG	N/A	N	968	30	25	27,688	N	9	Play area	48	Small
14	Orot Chalan Page Elementary	1	Orot	3	1967	7,000,000	CMU	G	Y	Y	808	31	0	14,800	Y	12	Play area		Medium
15	J.O. San Miguel Elementary	1	Toto	3	1971	715,667	CMU	F	N	N	686	28	8	27,904	N	15	Play area		Medium
16	C.L. Tallano Elementary	1	Shojana	3	1968	731,698	CMU	R/F	N/A	N	774	43	5	43,548	N	8	Play area	15	Small
17	M.U. Lujan Elementary	1	Yona	3	1973	185,000	CMU	G	N	N	931	43	1	48,620	N	15	Play area		Medium
18	P.C. Lujan Elementary	1	Berigada	3	1962	300,000	CMU	F	N	N	708	43	1	43,622	N	15	Play area		Medium
19	J.P. Torres Elementary	1	Agat	1	1964	180,500	CMU	R/F	N	N	189	19	4	18,680	Y	9	Play area	19	Small
20	Marcel Sablan	1	Agat	1	1972	743,072	CMU	G	N	N	787	24	20	44,217	Y	15	Play area	19	Large
21	Talofoto Elementary	1	Talofoto	1	1965	473,347	CMU/Precast	G	Y	N	381	19	8	27,158	N	9	Play area	33	Small
22	P.D. Sanchez Elementary	1	Umaliac	1	1963	900,000	CMU	R/F	N/A	N/A	114	9	0	11,000	N	17	Play area		Medium
23	Inosion Elementary	1	Inosion	1	1967	5,700,000	CMU	G	Y	Y	421	31	0	34,160	N	11	Play area		Medium
24	Merito Elementary	1	Merito	1	1968	646,573	CMU	G	N	N	334	13	7	34,689	N	11	Play area	31	Small
25	H.B. Truman Elementary	1	Santa Rita	1	1966	726,637	CMU	FG	N	Y	341	24	8	30,677	N	18	Play area		Medium
26	Mt. Santa Rosa	1	Yigo	4	1968		Wood/Th	F	N/A	Y		0	32	24,570	N	Shared	Play area		Medium
MIDDLE SCHOOLS																			
TOTAL: 7																			
27	F.B. Leon Guerrero Middle	2	Yigo	4	1974	485,000	CMU	FG	Y	N	1348	91	28	64,496	Y	21	Gym/Open		Medium
28	Benavente (Dededo) Middle	2	Dededo	2	1966	330,000	CMU/Precast	F	Y	N	1365	71	28	57,604	Y	24	Gym/Open	128	Medium
29	L.P. Untalan Middle	2	Barrigada	3	1968	860,362	CMU	F	N	N	1068	41	13	49,145	Y	11	Gym/Open	73	Small
30	Agueda Johnson Middle	2	Chamela	3	1960	1,882,681	CMU	F	N/A	N	808	57	10	37,831	Y	20	Gym/Basket	66	Medium
31	Jose G. Rose (P.R.) Middle	2	P.R.	1	Under contract	2,700,000	CMU	N/A	N/A	N/A	878	36		33,283	Y	18	Gym/Open		Medium
32	Oceanview Middle	2	Agat	1	1969	5,505,479	CMU	F	N	N	677	62	5	57,804	Y	27	Gym/Basket	82	Large
33	Inosion Middle	2	Inosion	1	1973	3,828,702	CMU	FG	N	Y	887	8	2	82,700	Y	32	Gym/Open	864	Large
HIGH SCHOOLS																			
TOTAL: 4																			
34	Simon Sanchez High	3	Yigo	4	1974	2,335,770	CMU	FG	Y	Y	1847	87	12	131,112	Y	28	Gym/Open	287	Large
35	John F. Kennedy High	3	Tamuning	2	1969	2,262,588	CMU	R/F	N/A	N	2520	194	4	127,592	N	32	Gym/Track	168	Large
36	George Washington High	3	Mangilao	3	1965	3,485,702	CMU	FG	N	Y	2499	110	4	138,521	N	68	Gym/Track		Large
37	Southern High	3	Agat	1	1967	117,000,000	CMU	G	Y	Y	2062	147	0	610,891	Y	44	Gym/Track/Basket	864	Large

Individual School Inventory Summary
Prepared for Guam Department of Education

School Summary		Conditions		Address				
Name	Traffic Congestion	Access Problems	Drainage Problems	Views	Available services (water/sewer)	Outlet	Landscaping Buffers	
ELEMENTARY SCHOOLS								
1. Pangelinan Elementary	N	N	Y	N	Y	N	N	10125, Dededo
2. 1st Elementary	N	N	Y	Y	Y	Y	N	7116-AS, Yigo
3. Yigo Elementary	Y	Y	N	N	Septic	Y	N	7003-1, 7003-2, 7001-1, 7004-6, 7004-7, Yigo
4. M.A. Ulla Elementary	Y	Y	Y	N	Y	N	N	10114, Dededo
5. Harmon Long Elementary	Y	Y	Y	N	Y	N	N	80126, Dededo
6. Agaña Elementary	N	N	Y	N	Y	Y	N	86A, 26 & 8245, Dededo
7. Chief Brodie Memorial	Y	Y	Y	N	Y	N	N	8133-3-41, Tamuning, Dededo
8. L.B. Johnson Elementary	Y	Y	Y	N	Y	N	N	8173-NEW-2, 8173-NEW-3, Tamuning, Dededo
9. Tamuning Elementary	Y	Y	Y	N	Y	Y	Y	8173-NEW-1, Tamuning, Dededo
10. Mt. Carmel	Y	Y	Y	N	Y	Y	Y	Lot #10057, Dededo
11. Agaña Heights	Y	Y	Y	N	Y	Y	N	Lot 12, 29 & 475, Agaña Heights
12. B.P. Cerdillo Elementary	Y	Y	Y	N	Y	Y	N	Block #1, Lot 14, Barrigada
13. Capt. H.B. Price Elementary	Y	Y	N	N	Y	N	N	2286-1-2 & 1108-RA, Mangilao - Barrigada
14. Cristóbal Colon Pige Elementary	N	N	N	N	Y	N	N	3396 Cristóbal Colon Pige - Shaguna
15. J.G. San Miguel Elementary	Y	Y	N	N	Septic	Y	N	165-1, 165A, 174-1, 171-1, 175-1, Shaguna
16. C.L. Taitano Elementary	Y	Y	N	N	Y	Y	N	Block #12, Lot #3, Shaguna
17. M.U. Lujan Elementary	Y	N	Y	Y	Septic	Y	N	117, Yona
18. P.C. Lujan Elementary	Y	N	Y	N	Septic	Y	N	2162, Barrigada
19. J.P. Torres Elementary	Y	N	N	Y	Y	Y	Y	470-AD, Santa Rita, Agat
20. Manuel Sabán	Y	Y	Y	Y	Y	Y	N	Block #13, Agat
21. Taitano Elementary	N	N	N	N	Septic	Y	N	Portion of Lot #402, Taitano
22. P.D. Guzman Elementary	N	Y	N	Y	Y	Y	Y	183 & 164, Umanao
23. Iwanan Elementary	N	N	N	Y	Y	Y	Y	88 - Iwanan
24. Maitea Elementary	N	N	Y	Y	Y	Y	Y	505-R7, Maitea
25. H.B. Truman Elementary	N	N	N	Y	Y	Y	Y	454, Santa Rita
26. Mt. Santa Rosa	N	N	N	Y	Y	Y	Y	7116-AS, Yigo
MIDDLE SCHOOLS								
27. P.B. Laro Guzman Middle	Y	N	N	N	Y	Y	N	7022-1, Yigo
28. Dededo Middle	Y	N	Y	N	Y	Y	N	12114, Dededo
29. J. P. Urdan Middle	Y	N	Y	N	Septic	N	N	1023-1B, 1021-1-1-1, 1021-1-1-2, 1024-REM, Barrigada
30. Agaña Johnson Middle	N	N	N	N	Y	Y	N	3396-R1, Cristóbal Colon
31. Pige Middle	N	N	N	Y	Y	Y	N	Parcel "C", Agaña Harbor Area, PB
32. Olanillas Middle	Y	Y	N	Y	Y	Y	Y	1.6 to 4.2 Agat
33. Iwanan Middle	N	N	N	Y	Septic	Y	N	454-4 Iwanan
HIGH SCHOOLS								
34. Green Sanchez High	Y	N	N	N	Y	Y	N	7022-2, Yigo
35. John F. Kennedy High	Y	Y	N	Y	Y	N	N	5138-RO, Tamuning, Dededo
36. George Washington High	N	N	N	N	Y	Y	N	5578-NEW-R5, Mangilao, Barrigada
37. Southern High	Y	N	N	Y	Y	Y	N	455 Santa Rita Agat

Inventory and Assessment Report

June, 1999



1221 Kapiolani Boulevard
Suite 1030
Honolulu, HI 96814

733 Bishop Street
Suite 2590
Honolulu, HI 96813

DRAFT

Date: 29 October 2010
Time: 1000 hrs
Location: GDOE Asst Superintendent
Taitano's Ofc.
Attendance: Taitano, Tom Fee
Subject: Informal conversation with Ms. Taitano

Ms. Taitano responded to several questions from Mr. Fee summarized below. During the conversation, Billy Cruz, GDOE facilities manager identified as GDOE's Sodexo POC, stopped by and joined in the discussion.

Status of JPK redevelopment project. The recent Guam DPW JPK HS redevelopment award to International Bridge Corporation for \$69M was challenged by both GEFF and Core Tech International Corporation (Core Tech had been one of the unsuccessful bidders on the JPK project and was the general contractor for the four GEFF schools). As an interim measure, GovGuam has entered into a ten-year lease with Core Tech for former barracks space it owns in Tayan near the airport as a temporary JPK campus. JPK students had previously been doubled up at GW HS before moving to Core Tech's temporary facility (JPK had been shut down after the 2007-2008 SY).

Current R&M budget. GDOE rec'd \$26M in bond money for school repairs based on AG's action in 2008 [need to reconcile with \$14M bond amount Ms. Brooks referred to]. Have about \$4M left to expend (programmed, pending permits, etc.)

ARRA money. Received \$41M in ARRA SFSF funds for CIP improvements incl. updating GW and _____ for STEM (Science, Technology, Engineering, and Mathematics) programs.

Other. Southern HS (opened in 1997) has major settlement problems in its field area due to improper fill and wetland conditions.



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DRAFT

Date:	25 October 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	CNMI BOE Conference Room	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	CNMI PSS In brief		

Purpose was to brief Commissioner Sablan on the intent of the OIA study, solicit her input and advice, and review objectives and logistics for the 3-day site visit.

The Commissioner introduced BOE Vice Chair Ada and her staff. Accompanying list is

excerpted from the Commissioner's handout (included as an attachment).

Commissioner

mentioned she was trying to set up a

meeting with the Governor but, as yet,

had not been successful.

She underscored that BOE has constitutional

authority over the operation of the PSS, including physical condition, so the OIA action falls within the BOE's authority.

Mr. Chow introduced USACE, its general scope of services, ongoing relationship with OIA, and specific role in the project. Mr. Chow introduced Ms. Conant as the PM (working with colleague Milton Yoshimoto) and Mr. Fee as the lead consultant.

Mr. Aughenbaugh summarized the broad working relationship OIA has with USACE including NEPA reviews.

Mr. Fee provided a brief background on the Department of Interior Secretary's "five-year plan" and the Secretary's goal of improving the physical condition of territorial schools resulting in this project. The scope of the assessment spans four territories includes close to 130 public schools and probably close to 2,000 buildings. The focus is to track progress in improving public school condition, so in addition to the baseline survey, follow on surveys at regular intervals are critical to provide trend data. He then described the two step process being followed:

- Step 1 involves the development of the facility condition methodology, collection of building inventory data, identification and introductory meetings with stakeholders to solicit input into the methodology, and to gain familiarity with the general physical condition of territorial schools.

Meeting Record: CNMI PSS In Brief meeting
25 October 2010
Page 2

DRAFT

- Step 2 involves the initial survey of each of the public schools and then periodic, follow-on surveys. The assessment would determine the condition of school building in general terms, along with an order of magnitude estimate the dollar amount of deferred maintenance. Trend data from the surveys would provide a metric for the Secretary to track progress.

Commissioner reviewed information provided in the info package she distributed (school-by-school summary, copy of CNMI PSS's 7-year CIP (2004-05 to 2011-12 – dated July 2005, and a prioritized list of schools to visit). She noted the PSS's CIP office is responsible for improvement and repairs and that OIA's initiative was very timely and dovetails with the update of the PSS's 7-year CIP plan (CIP Office is on Capitol Hill in Bldg 1255, on Napu Street).

The Commissioner noted CNMI had received \$34 million in ARRA money, of which \$12 million was now being expended on CNMI school repair and modernization (see attached spreadsheet accounting for the \$12M expenditure). CNMI PSS staff circulated a copy of the current PSS CIP Project Status Report (attached) indicating the status of ARRA and CIP projects at each of the schools.

CNMI is experiencing continuing revenue decline and having to trade off building maintenance investments with instruction (e.g., CNMI's share of compact impact funds dropped from about \$5M to \$1.9M due to the drop in CNMI population which has hit government finances hard). The Commissioner noted the Territory has a \$50M unspent balance from prior years; the funds have been committed to projects but have not been spent yet. USDOE provides an average of about \$15 mil/yr for CNMI PSS (limited to instruction, teacher improvements, etc.).

According to Mr. Aughenbaugh, OIA contributes roughly \$10M/yr to CNMI. OIA's CIP funds go to Governor so BOE has to compete for them with other agencies (Governor comes up with prioritized list of projects). Lately, CUC and the water task force is getting most of the funds due to USDOJ and EPA stipulated orders related to the power plant. PSS has not been getting very much of the funds.

OIA funded 3 new schools in Kaganan (opened 2002), in addition to adding 60 temporary classrooms in the 1990's. The newest DOI-funded project is new classrooms at GT Camacho ES (occupied this year).

Commissioner noted that the PSS CIP office needs a planner to assist in staying on top of planning, programming and budgeting responsibilities.

Mr. Fee circulated copies of information request and touched on the role of GIS in the OIA facilities inventor. Shawn Guerrero (CIP GIS Staff) said he has "GIS ready" information that he can share. CNMI does not have hazard mapping available in GIS format. Mr. Chow volunteered services of his GIS staff to support the effort.

DRAFT

The Commissioner assigned Tom's information request response role to Tim Thornburgh (received via Mr. Chow dated 28 October 2010 – copy attached).

Mr. Aughenbaugh mentioned there's a possibility of additional OIA funding as a result of the assessment, but that would depend on Administration and Congressional priorities. The Assessment would provide the Commissioner with a solid third-party evaluation of school condition with could result in a larger share of OIA's CNMI funds spent on school repairs.

Commissioner noted that drainage can be a serious issue (Tinian ES has drainage problems). Encroachment issues are also a problem. PSS has head start (Pre K) facilities inside of the campuses (underwritten by head start quality improvement funds (USDOE funds)).

Some schools are not connected to sewer systems.

The meeting adjourned about 10AM.



US DEPARTMENT OF INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT;
PHASE 1

ATTENDANCE MEETING/DATE CNMI PSS, October 25, 2010
In Brief

NAME	ORGANIZATION	TEL/EMAIL
Keith Aughenbaugh	OIA	(670) 233-9439 keith.aughenbaugh@pticom.com
Derek Chow	USACE	(808) 438-2250 Derek.J.Chow@usace.army.mil
Jackie Conant	USACE	(808) 438-0881 Jacqueline.J.Conant@usace.army.mil
Tom Fee	HHF	(808) 545-2055 tfec@hhf.com
Rachel Fusco	PSS CIP	(670) 322-3716 rachel.fusco@cnmipss.org
ROMMEL MESTALES	PSS/CIP	(670) 322-3716 rommel.mestales@cnmipss.org
Tim Thornburgh	PSS/HHF	(670) 322-3716 tim.thornburgh@cnmipss.org
Joseph Torres	PSS/Verate	(670) 322-3056 Joseph.Torres@cnmipss.org
Ed Torres	PSS Financing	(670) 285-3305 Nonsaht@elcasprincjmail.com
Marylou Aden	Stat Bnd	boenladen@qgachoo.com (70) 257-5070
Pete Lean	ACPS	peter.lean@cnmipss.org
Rita A. Sablan	CVE	cor.vas@cnmipss.org

CNMI PSS Cabinet
minutes 25 Oct 10

Meeting between CNMI Public School System, Army Corps of Engineers,
Helber Hastert & Fee Planners, Keith Aughenbaugh – Office of Insular Affairs
October 25 - 27, 2010

Monday - October 25

9:00 a.m. Introductory meeting with PSS Officials and BOE – BOE Conference
Room, 2nd Floor, NMIRF Building Capital Hill
Purpose and setting the schedule for the next 2 days

10:30 a.m. Site Visits (Saipan Schools)

- Priority visits to school sites on first day at the following schools
- Hopwood Jr. High School – Principal Jonas Barcinas
 - Marianas High School – Principal Craig Garrison
 - William S. Reyes Elementary – Principal Naomi Nishimura
 - Dan Dan Elementary – Principal Martha Kintol
 - Oleai Elementary – Principal Glenn Muna
 - Garapan Elementary – Principal Boni Pangelina
 - Tanapag Elementary – Principal Frances Ulloa

Tuesday - October 26

- 9:00 a.m. Continue Site Visits on Saipan *recently built*
- San Antonio Elementary – Principal Marty Dalsaso
 - Koblerville Elementary – Principal Rizalina Purruangan
 - Saipan Southern High – Principal Jesse Tudela
 - San Vicente Elementary – Principal Kinai Salas
 - Kagman High – Principal Alfred Ada
 - Cha Cha Ocean View Junior High – Principal Vince Dela Cruz
 - Kagman Elementary – Principal Acha Demapan
 - Gregorio T. Camacho Elem. – Principal Charlotte Camacho
 - Connect with Tinian and Rota via VTC if needed

Wednesday - October 27

9:00 a.m. Debriefing; Board of Education Conference Room

State Board of Education and Public School System Participants

Marylou S. Ada, Chair – Capital Improvement Project Standing Committee and
Vice Chair to the State Board of Education

Rita A. Sablan, Ed.D. – Commissioner of Education
Peter Leau – Associate Commissioner for Administrative Services
Tim Thornburgh – Federal Programs Officer
Rachel Fusco – CIP Program Coordinator
Rommel Mostales – CIP Program staff
Shawn Deleon Guerrero – CIP Program staff (GIS)
Joe Torres – ERATE Program (GIS)
Ed Tenorio – PSS Financial Management Consultant

SCHOOL PROFILE



Gregorio T. Camacho Elementary School, EST. 1951
 Mascot: Home of the Binadu
 Motto: *Making Leaps and Bounds in Education*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 237 Teachers: 14
 Federal and Local Funds: \$783,266.00
 Principal: Charlotte G. Camacho Vice Principal: Martin Dalsaso



Tanapag Elementary School, EST. 1968
 Mascot: Home of the Tataga
 Motto: *Excellence Now*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 237 Teachers: 14
 Federal and Local Funds: \$734,491.00
 Principal: Frances Ulloa Vice Principal: Dominic Camacho



Garapan Elementary School, EST. 1967
 Mascot: Home of the Mighty Mallards
 Motto: *Good is not our Goal, We Strive for Excellence*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 838 Teachers: 39
 Federal and Local Funds: \$1,943,266.00
 Principal: Yvonne Reyes Vice Principal: Dale Roberts



Kaganan Elementary School, EST. 2000
 Mascot: Home of the Blue Marlins
 Motto: *Diving Deep into Excellence*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 645 Teachers: 31
 Federal and Local Funds: \$1,323,235.00
 Principal: Ignacia T. Demapan Vice Principal: Celine Romolor Route



Oleai Elementary School, EST. 1958
 Mascot: Home of the Turtles
 Motto: *Excellence in Action*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 521 Teachers: 26
 Federal and Local Funds: \$1,116,824.00
 Principal: Glenn C. Muna Vice Principal: Jack Sablan



San Vicente Elementary School, EST. 1971
 Mascot: Home of the Canaries
 Motto: *Through Positive Thinking, Anything is Possible*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 766 Teachers: 35
 Federal and Local Funds: \$1,951,303.00
 Principal: Joaquina Salas Vice Principal: Betty Miller



Dandan Elementary School, EST. 1999
 Mascot: Home of the Tottots
 Motto: *Today's Studies Create Tomorrow's Dreams*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 237 Teachers: 14
 Federal and Local Funds: \$1,000,775.00
 Principal: Jonas Barcinas Vice Principal: Martha Kintol



William S. Reyes Elementary School, EST. 1946
 Mascot: Home of the Kingfishers
 Motto: *Aim High, Fly High*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 685 Teachers: 31
 Federal and Local Funds: \$1,548,606.00
 Principal: Lynette Villagomez Vice Principal: Naomi Nishimura



San Antonio Elementary School, EST. 1966
 Mascot: Home of the Octopus
 Motto: *We Take the Challenge*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 333 Teachers: 15
 Federal and Local Funds: \$931,857.00
 Principal: Katrina Lizama Vice Principal: N/A



Koblerville Elementary School, EST. 1986
 Mascot: Home of the Hugging Umangs
 Motto: *Reach for Tomorrow Through Education*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 463 Teachers: 21
 Federal and Local Funds: \$1,081,525.00
 Principal: Rizalina Purugganan Vice Principal: Erica S. Thornburgh



Tinian Elementary School, EST. 1954
 Mascot: Home of the Colts
 Motto: *Making a Big Leap for a Brighter Future*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 295 Teachers: 17
 Federal and Local Funds: \$1,090,347.00
 Principal: Maria Rios
 Vice Principal: N/A



Sinapalo Elementary School, EST. 2001
 Mascot: Home of the Lu'ao
 Motto: *We Believe that All Children Can Learn*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 231 Teachers: 15
 Federal and Local Funds: \$785,310.00
 Principal: Vanessa Hocog
 Vice Principal: N/A



Hopwood Jr. High School, EST. 1962
 Mascot: Home of the Hilitais
 Motto: *We Make Everyday the Best*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 1106 Teachers: 45
 Federal and Local Funds: \$2,462,976.00
 Principal: Christine Masga
 Vice Principal: Nariatini Pedro & John Pialur



Chacha Oceanville Jr. High School, EST. 2002
 Mascot: Home of the Lancherus
 Motto: *Unity In Striving for EXCELLENCE... Lancheru Style!*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 522 Teachers: 21
 Federal and Local Funds: \$1,405,530.00
 Principal: Vince Dela Cruz
 Vice Principal: Ruth Bigalbal



Rota Jr. High School, EST. 2001
 Mascot: Home of the Chamorros
 Motto: *We Strive for Growth Through Quality Education to Develop Excellent Citizens*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 150 Teachers: 10
 Federal and Local Funds: \$650,951.00
 Principal: Maria Sablan
 Vice Principal: N/A



Tinian Jr. High School, EST. 1970
 Mascot: Home of the Stallions
 Motto: *Charging to the Future*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 320 Teachers: 18
 Federal and Local Funds: \$871,902.00
 Principal: Florine Hofschneider
 Vice Principal: Eric San Nicolas



Marianas High School, EST. 1970
 Mascot: Home of the Dolphins
 Motto: *Teamwork towards excellence*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 1198 Teachers: 58
 Federal and Local Funds: \$3,050,778.00
 Principal: Karen Borja
 Vice Principal: Jessica Barcinas & Lumi Bermudes



Kagan High School, EST. 2002
 Mascot: Home of the Ayuyus
 Motto: *Uniting in Spirit, Leading with Courage*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 766 Teachers: 34
 Federal and Local Funds: \$1,832,893.00
 Principal: Alfred Ada
 Vice Principal: Eric Magofna



Saipan Southern High School, EST. 2002
 Mascot: Home of the Mania Rays
 Motto: *Un Eskuela, Un Korason-One School, One Heart*
 Accredited by Western Association for Schools and Colleges for a 6 year term
 Student Enrollment: 805 Teachers: 31
 Federal and Local Funds: \$734,492.00
 Principal: Peter Leau
 Vice Principal: Craig Garrison



Rota High School, EST., 1982
 Mascot: Home of the Rota Bucks
 Motto: *Work Hard, Play Hard*
 Accredited by Western Association for Schools and Colleges for a 3 year term
 Student Enrollment: 169 Teachers: 13
 Federal and Local Funds: \$734,492.00
 Principal: Sharlene Manglona
 Vice Principal: N/A



Early Intervention Services for Infants & Toddler, EST., 1986

Mission: To promote collaborative relationships among agencies and families in order to maximize our children's potential and build respect for cultural values and family choices.

Student Enrollment: 58
Teachers: 3
Federal Fund: \$446,581.00
Related Services Personnel: 4
Director: Suzanne Lizama



Head Start Program, EST., 1967 in the CNMI

Student Enrollment: 462

Total Staff: 48

Federal and Local Funds: \$ 2,262,327.00

Director: Keiko Yamagata



Special Education Services, EST., 1975

Mission: As per CNMIF Public Law 6-10, the Special Education Program - Part B shall ensure that all students ages 3-21 with disabilities have available to them a free appropriate public education (FAPE) in the least restrictive environment

Student Enrollment: 813

Federal Fund: \$4,703,342.00

Director: Suzanne Lizama

Teachers: 36
Teacher Aides:
Related Services Personnel: 16

Repairs, Renovation and Modernization for all Schools (SF5F) Project Status

As of 10/06/2010

No.	IFB NO	DESCRIPTION	SCHOOL	Contractor Awarded	Contract Amount	NTP	Completion Date	Contract No.	Comments
1	IFB-10-029	Roof coating	Rota Jr. and Rota High	Radiocon	\$ 149,061.00	9/7/2010	1/5/2011	70398-OC	Contractor to mobilize
2	IFB-10-030	Roof coating	Tinian Elem and High	Radiocon	261,516.24	9/7/2010	1/5/2011	70392-OC	Work progress at 10%
3	IFB-10-031	Roof coating	GTC, TES, GES, QES & MHS	Northpac	261,690.67	8/23/2010	2/19/2011	70165-OC	Work progress at 13%
4	IFB-10-032	Roof coating	Dandan, SVES, Chacha, KagGS & Kagman High	Big Bell	318,024.10	8/23/2010	1/15/2011	70182-OC	Work progress at 10%
5	IFB-10-033	Roof coating	WSR, Hopwood, Kobler, SAES and SSMS	Konstrak	266,466.75	8/23/2010	2/19/2011	70183-OC	Work progress at 20%
6	IFB-10-034	Painting	Saipan and Rota High School	Misamis	64,650.30	8/23/2010	12/21/2010	70257-OC	Contractor to submit product data.
7	IFB-10-035	Painting	Tinian Elementary and High School	Radiocon	125,214.50	8/23/2010	12/21/2010	70184-OC	Work progress at 16%
8	IFB-10-036	Painting	Dandan, San Vicente, Kagman Elem, Kagman High & Chacha	3K	103,783.00	8/16/2010	12/14/2010	70204-OC	Work in progress.
9	IFB-10-037	Painting	WSR, Hopwood Jr. High, San Antonio, Koblerville, Southern High	3K	109,009.00	8/16/2010	12/14/2010	70185-OC	Work in progress.
10	IFB-10-038	Painting	GTC, Tanapag, Garapan, Olesi, MHS	3K	102,619.00	8/16/2010	12/14/2010	70186-OC	Work in progress.
11	IFB-10-040	Door and Windows	Rota Jr. and Rota High School	Pacific Coop	222,510.00	8/16/2010	12/14/2010	70205-OC	Work in progress.
12	IFB-10-041	Door and Windows	Tinian School	Tae Woo	79,800.00	8/23/2010	1/20/2011	70256-OC	Work in progress.
13	IFB-10-042	Door and Windows	TES, GES, QES, WSR, Hopwood	Kaure Glass	611,040.00	8/16/2010	1/13/2011	70258-OC	Work in progress.
14	IFB-10-043	Door and Windows	Dandan, SVES, Chacha, KagHigh	Tae Woo	235,226.00	8/23/2010	1/20/2011	70194-OC	Work in progress.
15	IFB-10-044	General Repair	GTC Elementary	Misamis	16,369.00	8/23/2010	10/2/2010	70196-OC	Work progress at 80%
16	IFB-10-045	General Repair	Dandan Elementary	Misamis	19,433.00	8/23/2010	10/22/2010	70195-OC	Product data to be submitted.
17	IFB-10-046	General Repair	Tanapag Elementary	HBR	30,825.00	8/25/2010	10/24/2010	70192-OC	Work in progress.
18	IFB-10-047	General Repair	Olesi Elementary	HBR	66,499.00	8/25/2010	10/24/2010	70195-OC	Work in progress.
19	IFB-10-048	General Repair	Garapan Elementary	HBR	46,231.00	8/25/2010	10/24/2010	70191-OC	Work in progress.
20	IFB-10-049	General Repair	Kagman Elementary	Mucung	76,164.00	8/23/2010	10/22/2010	70198-OC	Work in progress.
21	IFB-10-050	General Repair	Chacha Jr. High School	HBR	132,143.00	8/25/2010	10/24/2010	70209-OC	Work in progress.
22	IFB-10-055	Electrical Upgrade	Rota High School	DK Brothers	19,300.00	10/4/2010	12/3/2010	70336-OC	Product data approved.
23	IFB-10-056	Electrical Upgrade	Hopwood and San Jose	Poly phase	162,388.43		90 days		On hold due to protest.
24	IFB-10-058	A/C Upgrade	Saipan Es, Rota Jr. High & Rota High	Pacific Coop	696,000.00	9/7/2010	2/4/2011	99079-OC	Procurement of Materials
25	IFB-10-059	A/C Upgrade	Tinian Elementary/Tinian High School	Pacific Coop	785,421.00	9/7/2010	2/4/2011	99080-OC	Procurement of Materials
26	IFB-10-060	A/C Upgrade	San Dan, SVES, KagGS, KagHigh, Cha Cha	Advanced	1,258,000.00	9/3/2010	1/1/2011	99076-OC	Procurement of Materials
27	IFB-10-061	A/C Upgrade	GTC, Tanapag, Garapan, Olesi, MHS	Chong's	1,477,371.00	9/3/2010	3/2/2011	99078-OC	Procurement of Materials
28	IFB-10-062	A/C Upgrade	WSR, Hopwood, SAES, Kobler, SSMS	Chong's Corp.	1,143,792.00	9/3/2010	3/2/2010	99077-OC	Procurement of Materials
29	IFB-10-065	General Repair	San Vicente Elementary School	Northpac	264,700.00	9/27/2010	11/26/2010	99897-OC	Work in progress.
30	IFB-10-066	General Repair	WSR Elementary School	HBR	86,656.00	9/27/2010	11/26/2010	99899-OC	Product data approved.
31	IFB-10-067	General Repair	Koblerville Elementary School	HBR	131,611.00	9/27/2010	11/26/2010	99400-OC	Product data approved.
32	IFB-10-068	General Repair	San Antonio Elementary School	Triple J	30,679.51	9/27/2010	11/26/2010	99898-OC	Work in progress.
33	IFB-10-069	General Repair	Hopwood Jr. High School	Konstrak	235,903.20	9/27/2010	11/26/2010	99401-OC	Review of product data.
34	IFB-10-070	General Repair	Saipan Southern High School	Pacific Coop	328,141.50	9/7/2010	11/6/2010	99131-OC	Review of product data.

As of 10/06/2010

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PSS CIP Project Status Report
October 25, 2010

No.	Location	Project Name	Projected Completion Date	Comments
Tanapag Elementary School				
1	Salipan	Tanapag Elementary School Drainage		Project ongoing.
2	Salipan	Roof coating	02/19/11	Project ongoing.
3	Salipan	Painting	12/14/10	Project ongoing.
4	Salipan	Doors and windows	01/13/11	Project ongoing.
5	Salipan	General repair	10/24/10	Project ongoing.
6	Salipan	AC upgrade	03/02/11	Project ongoing.
7	Salipan	Roof replacement		Project ongoing.
William S. Reyes Elementary School				
1	Salipan	Supply, delivery, installation, repair & maint. Of AC at WSR	02/20/08	Project Completed
2	Salipan	Roof coating	02/19/11	Project ongoing.
3	Salipan	Painting	12/14/10	Project ongoing.
4	Salipan	Doors and windows	01/13/11	Project ongoing.
5	Salipan	AC upgrade	03/02/11	Project ongoing.
6	Salipan	General repair		Project ongoing.
7	Salipan	Roof replacement		Project ongoing.
Hopwood Jr. High School				
1	Salipan	Supply, delivery of collateral equipment at Hopwood Jr. High School Library	04/04/06	Project complete.
2	Salipan	Hopwood Jr. High School - Fencing	TBD	
3	Salipan	Roof coating	02/19/11	Project ongoing.
4	Salipan	Painting	12/14/10	Project ongoing.
5	Salipan	Doors and windows	01/13/11	Project ongoing.
6	Salipan	AC upgrade	03/02/11	Project ongoing.
7	Salipan	General repair	11/26/10	Project ongoing.
8	Salipan	Roof replacement		Project ongoing.
Chacha Junior High School				
1	Salipan	Roof coating	01/15/11	Project ongoing.
2	Salipan	Painting	12/14/11	Project ongoing.
3	Salipan	Doors and windows	01/20/11	Project ongoing.
4	Salipan	General repair	10/24/10	Project ongoing.
5	Salipan	AC upgrade	01/01/11	Project ongoing.
Kagman High School				
1	Salipan	Kagman High School (Burned classroom)	05/28/08	Project complete.
2	Salipan	Kagman High School Additional Classrooms	07/03/07	Project complete.
3	Salipan	Supply, Delivery and Installation of school & office furniture at Kagman High	06/08/07	Project complete.
4	Salipan	Roof coating	01/15/11	Project ongoing.
5	Salipan	Painting	12/14/11	Project ongoing.
6	Salipan	Doors and windows	01/20/11	Project ongoing.
7	Salipan	AC upgrade	01/01/11	Project ongoing.
8	Salipan	General repair	11/26/10	Project ongoing.

PSS CIP Project Status Report
October 25, 2010

No.	Location	Project Name	Projected Completion Date	Comments
Kagman Elementary School				
1	Salipan	Kagman Elementary Additional Classrooms	05/16/07	Project complete.
2	Salipan	Supply & Delivery of collateral equipment & Accessories for Kagman Elementary.	01/23/08	Project Completed
3	Salipan	Kagman Elementary School - Multi-purpose Stage	09/20/10	Project Completed
4	Salipan	Roof coating	01/15/11	Project ongoing.
5	Salipan	Painting	12/14/10	Project ongoing.
6	Salipan	General repair	10/22/10	Project ongoing.
7	Salipan	AC upgrade	01/01/11	Project ongoing.
Koblerville Elementary School				
1	Salipan	Renovation of Koblerville Elementary School Bilingual Classroom	10/11/08	Project Complete
2	Salipan	Roof coating	02/19/11	Project ongoing.
3	Salipan	Painting	12/14/10	Project ongoing.
4	Salipan	AC upgrade	03/02/11	Project ongoing.
5	Salipan	General repair	11/26/10	Project ongoing.
Olael Elementary School				
1	Salipan	Renovation of Olael Elementary School Basketball Court	10/11/08	Project complete.
2	Salipan	Construction of Walkway at Olael Elementary School	11/14/11	Project ongoing.
3	Salipan	Roof coating	02/19/11	Project ongoing.
4	Salipan	Painting	12/14/10	Project ongoing.
5	Salipan	Doors and windows	01/13/11	Project ongoing.
6	Salipan	General repair	10/24/10	Project ongoing.
7	Salipan	AC upgrade	03/02/11	Project ongoing.
8	Salipan	Roof replacement		Project ongoing.
San Antonio Elementary School				
1	Salipan	Renovation of Two (2) Classrooms at San Antonio Elementary School	01/13/07	Project complete.
2	Salipan	San Antonio Elementary School Classrooms		Project complete.
3	Salipan	Roof coating	02/19/11	Project ongoing.
4	Salipan	Painting	12/14/10	Project ongoing.
5	Salipan	AC upgrade	03/02/11	Project ongoing.
6	Salipan	General repair	11/26/10	Project ongoing.
San Vicente Elementary School				
1	Salipan	San Vicente Elementary School Drainage	10/05/10	Project complete.
2	Salipan	San Vicente Elementary School - Retaining Wall	TBD	
3	Salipan	Roof coating	01/15/11	Project ongoing.
4	Salipan	Painting	12/14/10	Project ongoing.
5	Salipan	Doors and windows	01/20/11	Project ongoing.
6	Salipan	AC upgrade	01/01/11	Project ongoing.
7	Salipan	General repair	11/26/10	Project ongoing.
8	Salipan	Roof replacement		Project ongoing.

PSS CIP Project Status Report
October 25, 2010

No.	Location	Project Name	Projected Completion Date	Comments
Rota Junior High School				
1	Rota	Rota Jr. High School Construction of Adult Classrooms at Head Start Center & Multipurpose Stage	01/31/07	Project complete.
2	Rota	Roof coating	01/05/11	Project ongoing.
3	Rota	Doors and windows	12/14/10	Project ongoing.
4	Rota	AC upgrade	02/04/11	Project ongoing.
5	Rota	Roof replacement.	11/27/10	Project ongoing.
Rota High School				
1	Rota	Rota High School JROTC Building and Drill Pad	04/20/07	Project complete.
2	Rota	Rota High School Hardening of the Rota Walkway	03/04/09	Project complete.
3	Rota	Supply, delivery and installation of 10 Type Typhoon Shutters at Rota High School Bldgs. B, D, F & JROTC	06/02/08	Project complete.
4	Rota	Installation of acoustical ceiling and new light fixtures for Rota High School Bldg. B.	12/24/08	Project complete.
5	Rota	Rota High School Gym Rehab		Project ongoing.
6	Rota	Roof coating	01/05/11	Project ongoing.
7	Rota	Painting	12/21/10	Project ongoing.
8	Rota	Doors and windows	12/14/10	Project ongoing.
9	Rota	Electrical upgrade	12/03/10	Project ongoing.
10	Rota	AC upgrade	02/04/11	Project ongoing.
11	Rota	Roof replacement.	11/27/10	Project ongoing.
Various PSS Projects				
1	All	Installation of new windows and doors at various PSS public school cafeterias on Saipan, Tinian and Rota	01/18/08	Project complete.
2	All	Installation of typhoon shutters at various PSS Public School Cafeterias on Saipan, Tinian and Rota	01/06/08	Project complete.
3	All	Supply, delivery and installation of typhoon shutters at various PSS public schools on Saipan, Tinian and Rota	03/20/08	Project complete.
4	All	Termite Treatment and Monitoring for School Facilities in Saipan, Tinian and Rota	11/17/08	Project complete.
5	All	AC Unit Supply & Installation at Various PSS Public Schools SPN, Rota, Tinian	02/27/07	Project complete.
6	All	Construction of Fences for Various Head Start Centers in the CNMI	09/18/08	Project Complete
7	Rota	Exterior/Interior Painting Rota Schools (Pongsona PW #91, 72, & 173)	05/15/05	Project complete.
8	Rota	Repair of the Rota Recreation Center and Baseball Field	05/15/07	Project complete.
9	Rota	RHS Redoing of Gymnasium	08/22/07	Project complete.
10	Saipan	Supply & Installation of PSS Fire Alarm/School Bell System	07/23/08	
11	Saipan	Supply, delivery and installation of typhoon shutters at various PSS Public Schools in Saipan	03/01/08	Project complete.
12	Saipan	Renovation of Head Start Main Office	06/19/08	Project complete.
13	Saipan	Repair & Servicing of Fire Alarm Siren Systems at Various PSS Public Schools	07/14/08	Project Complete
14	Saipan	Renovation of the WGR and Tanapag Head Start Centers	09/27/08	Project Complete except for walkway roof coating.
15	Saipan	Purchase, Delivery & Installation of Playground Equipment for Various Head Start Centers	11/14/08	Project Complete
16	Saipan	San Vicente Elementary School Kindergarten		Project Complete
17	Saipan	Marianas High School, Saipan Southern High School, Dandan Elementary School and Cha Cha Junior High School - Repair, Repaint, and Replace of Gymnasium	TBD	Project ongoing.
18	Saipan	A/E Design of Construction of PSS Lower Base Facility (Federal Transit Admin. Funds)	10/06/11	Project Complete
19	Saipan	Construction of PSS Lower Base Facility (Federal Transit Admin. Funds)	TBD	Project ongoing.
20	Saipan	Green Energy Project (10 Schools) Upgrade, Idonville ES, Kagnan High, Cha Cha Jr. High, GTC ES, Garapan ES, Tinian ES, Tinian Jr. High, Rota High & Sinapalo ES. a. (1) Schools will have (10) solar panels & (1) wind turbine. b. (1) SSMS will have (5) Wind Turbines & (140) solar panels	7/24/2011	Project ongoing.

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PSS CIP Project Status Report
October 25, 2010

No.	Location	Project Name	Projected Completion Date	Comments
Marianas High School				
1	Saipan	MHS JROTC Bldg. "S"	08/03/08	Project complete.
2	Saipan	Construction of Marianas High School Bldg. J	07/30/08	Project complete.
3	Saipan	Roof coating	02/19/11	Project ongoing.
4	Saipan	Painting	12/14/11	Project ongoing.
5	Saipan	AC upgrade	03/02/11	Project ongoing.
6	Saipan	General repair.	01/10/11	Project ongoing.
Saipan Southern High School				
1	Saipan	Saipan Southern High School Proposed Swimming Pool	TBD	
2	Saipan	Roof coating	02/19/11	Project ongoing.
3	Saipan	Painting	12/14/10	Project ongoing.
4	Saipan	AC upgrade	03/02/11	Project ongoing.
5	Saipan	General repair.	11/06/10	Project ongoing.
Tinian Head Start				
1	Tinian	Construction of Tinian Head Start Center	10/29/08	Project complete.
Tinian Elementary School				
1	Tinian	Tinian Elementary School Wastewater Disposal System	06/01/08	Project complete.
2	Tinian	Tinian Elementary School - Paving of Parking	TBD	
3	Tinian	Roof coating	01/05/11	Project ongoing.
4	Tinian	Painting	12/21/10	Project ongoing.
5	Tinian	Doors and windows	01/20/11	Project ongoing.
6	Tinian	AC upgrade	02/04/11	Project ongoing.
7	Tinian	Roof replacement	11/26/10	Project ongoing.
Tinian Junior and High School				
1	Tinian	Construction of Tinian High School Phase II	01/06/08	Project complete.
2	Tinian	Tinian HS Transformer Upgrade		Project complete.
3	Tinian	Roof coating	01/05/11	Project ongoing.
4	Tinian	Painting	12/21/10	Project ongoing.
5	Tinian	Doors and windows	01/20/11	Project ongoing.
6	Tinian	AC upgrade	02/04/11	Project ongoing.
7	Tinian	Roof replacement	11/26/10	Project ongoing.
Rota Head Start Center				
1	Rota	Construction of the Rota Head Start Center	01/05/07	Project complete.
Sinapalo Elementary School				
1	Rota	Construction of misc. repairs for Sinapalo Elementary School	04/08/08	Project complete.
2	Rota	Sinapalo Elementary School Fencing		Project complete.
3	Rota	Renovation of the Sinapalo Elementary School Public Facility (Roof and gutter repair for the library building, administration building, and 16 classrooms)	3/11/2011	Project ongoing.
4	Rota	Painting	12/21/2010	Project ongoing.
5	Rota	AC upgrade	02/04/11	Project ongoing.
6	Rota	Roof replacement.	11/26/10	Project ongoing.

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Lucia L. Blanco-Macatia
Chairperson
Marino E. Ade
Vice-Chairperson
D. Tony King
Secretary/Treasurer
Members
Helen T. Guerrero
Galen S. Dillon Guerrero
New Public School
Honolulu District
Student Representative
Teacher Representative

October 28, 2010

Mr. Derek Chow
Chief, Civil & Public Works Branch
United States Army Corps of Engineers
Bldg 230, CEPOH-PP-C
Fort Shafter, HI 96858-5440

Reference: CNMI PSS Education Facility Inventory – Interview Question Responses

Dear Derek:

Thank you for coming to Saipan for this Phase 1 review of our twenty public school facilities. Our responses to the nine questions (copy attached) are as follows:

1. The CNMI Public School System was established in 1946. We are a system of twenty public schools and ten Head Start Centers located on the three islands of Saipan, Tinian and Rota. Our annual budget (both local and federal) for the past five years have been, on average, \$65 million, as is shown in our annual audit reports which can be found on our website: www.cnmiipss.org.
2. Yes, the PSS maintains a comprehensive school facility inventory which you will find in our Seven Year CIP Plan 2005-2012, with updated repairs and renovations as listed in the E.M. Chen report that is part of our ARRA grant and the New School Facilities Plan, all of which are on the CD that our CIP Office gave to you;
3. The baseline data on our school facilities is contained in our Seven Year CIP Plan and updated in the E. M. Chen Report;
4. Our school facilities planning, programming, budgeting and implementation process could be greatly improved through a systematic plan of daily maintenance operations at each school and funds to support the required facility maintenance;
5. School maintenance and minor repairs are the responsibility of school maintenance staff. Major repairs are contracted by our CIP Office.

Board of Education
Telephone : (670) 237-3010
Fax : (670) 664-5711

www.cnmiipss.org

Commissioner of Education
Telephone : (670) 237-3001
Fax : (670) 664-5798



COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS
STATE BOARD OF EDUCATION
PUBLIC SCHOOL SYSTEM
P.O. BOX 501370
SAIPAN, MP 96950

Commissioner of Education
Rita A. Saklon, Ed.D.
csa.ra@cnmiipss.org

6. The new school construction plan is contained in our Seven Year CIP Plan and in the New School Facilities power point presentation uploaded to the CD that we gave you;
7. Yes, the PSS uses standard maintenance and repair factors as shown in the SFSF State Plan and E. M. Chen Report;
8. The scope of the ARRA-funded school improvement projects is contained in the SFSF State Plan and the E.M. Chen Report;
9. The top five school facility priorities needs to be shown two ways which are 1.) New school facilities needed, and 2. Old schools needing a major make-over:
A. New school facilities needed top five are:
 1. 20 additional classrooms for kindergarten,
 2. 8 classrooms needed at SSHS,
 3. new junior high school in Koblerville to house 600 students
 4. new cafeteria MHS
 5. 3 open air gyms for Kagman, Koblerville and Tinian.
B. Old school facilities needing a make-over or total rebuild:
 1. Hopwood Junior High School
 2. Marianas High School
 3. Dandan Elementary School classrooms
 4. San Antonio Elementary School Bldg C (3 classrooms condemned)
 5. William S. Reyes Elementary School

If there is anything else that you need, please contact us at your earliest convenience.

Thank you.

Tim Thornburgh
Federal Programs Officer

Cc: COE
BOE
Leadership



US DEPARTMENT OF INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT:
PHASE 1

GENERAL INTERVIEW QUESTIONS

1. Please provide a short overview of the Territory's Public School System (general organization, annual budgets, service areas/complexes, current funding issues, etc.). Are there any background reference documents available for review? (e.g., audits, master plans, special studies).
2. Does the Territory maintain a comprehensive school facilities inventory? How often is it updated? How is it conducted and by whom? What is the approximate annual cost to conduct/maintain it?
3. Please describe how the Territory evaluates the condition of its school facilities and prioritizes improvements (is there a baseline or annual report?) Please discuss the frequency of evaluation, method/categorization system and funding/prioritization criteria.
4. How could the Territory's school facility planning, programming, budgeting and implementation process be improved?
5. Describe which agencies and organizations are involved in the school maintenance and repairs and how the activity is coordinated and managed.
6. Describe plans for new school construction and, if applicable, plans to decommission schools.
7. Does the Territory use standard maintenance and repair cost factors for budgeting purposes (e.g., reroofing, reflooring, rescreening, re-railing, etc.) for the various standard building types? Are there recent school repair and construction budgets that we can review to assist in determining local cost factors?
8. Describe the scope of ARRA-funded school improvement projects.
9. From a school facilities condition perspective, what are the top five items that would make the most difference to the Territory?

19Oct10

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US DEPARTMENT OF INTERIOR--OFFICE OF INSULAR AFFAIRS
EDUCATION FACILITY INVENTORY AND CONDITION ASSESSMENT:
PHASE 1

Examples of the types of School Facility Inventory Data being sought

1. Basic property records:
XYZ Elementary School (one record for each building/structure)
 - Structure Number (unique to each school)
 - Structure Name (if different than Structure Number)
 - Structure Purpose (e.g., classroom, office, bathroom, etc)
 - Year Built
 - Measurements (Length, Width, Height, Stories, Gross Floor Area)
 - Design Capacity
 - Construction type (e.g., reinforced concrete, CMU, wood frame, etc.)
 - Utilization: (fully, partially or vacant)
 - Repair History (e.g., reroofed in 2004, etc.)
 - Scheduled Repairs (e.g., reroofing scheduled for 2012)
2. Scaled maps or plans for each school campus showing school boundaries, building/structure footprints, hardscapes (driveways/parking/walkways), playgrounds/playcourts, easements, etc.
3. Scaled plans (e.g., floor plan and elevations) for standard school buildings (e.g., standard large and small classroom buildings, bathroom building, early childhood education building, single-story building -if considered typical, cafeteria, standard covered/open sided high school basketball court, -- and any other standard building types (in PDF or CAD format).. Include recent bid estimates to construct new standard buildings.

19Oct10

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1221 Kapiolani Boulevard
Suite 1030
Honolulu, HI 96814

733 Bishop Street
Suite 2590
Honolulu, HI 96813

DRAFT

Date:	27 October 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	CNMI BOE Conference Room	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	CNMI PSS Outbrief		

Purpose was to provide CNMI PSS leadership and staff with a preliminary assessment from the site visit. The meeting was convened by Mr. Thornburgh. Commissioner Sablan participated via conference call from a meeting in Phoenix. Congressman Kilili attended the meeting. ASDOE Kitagawa and BOE Vice Chair Ada also participated.

Mr. Chow thanked PSS leadership, staff and Mr. Aughenbaugh for their help in arranging the productive site visits and interviews. He noted that the team had had a chance to visit a number of schools over the past day and a half with PSS staff and that additional school visits were scheduled for later today (hope was to visit all Saipan schools). He noted it was very revealing to listen to school principals discuss facility issues at their schools – particular the guided tour provided by Mr. Garrison at Marianas High School – a real eye opener about the life of a CNMI school principal having to deal with such an extensive range of important facilities problems.

Mr. Thornburgh narrated a PowerPoint overview of new schools facilities (see attached).
Selected comments included.

- New schools will have high volume ceilings for climate control and lots of windows for natural light. A planned new Jr. High School between Koblerville ES and Saipan Southern HS will be 2-3 stories with a compressed footprint—everything in one building to reduce construction cost (to relieve crowding at Hopwood Jr. High).
- Need several open air gymnasiums at Chacha, Koblerville and Tinian (\$1.2 M ea) more sustainable design; could add solar panels and wind turbines.
- Looking at \$16.5M worth of new school construction. Hoping OIA can help out with funding as “Phase 3” of the Secretary’s initiative. It’s not cost effective to keep repairing old schools. Both Hopwood (original HS built in 1944 – second school after WSR) and Dan Dan (built in two months in 1998 as a temporary campus) need to be replaced.

Commissioner Sablan pledged to continue work with the congressional delegate and pursue OIA’s initiative. Mr. Aughenbaugh thanked the Commissioner for her support and expressed his hope that the OIA study would free up more money for PSS facilities.

Congressman Kilili expressed his hope that the CNMI government would take advantage of the \$15M in interest free ARRA bonds to help with school construction projects. A big issue to him is to keep funding going to education and not lost in the general fund.

BOE Vice Chair Ada asked Mr. Aughenbaugh how committed OIA is to fund school improvements. Mr. Aughenbaugh reiterated his hope that additional funds would become

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available once the overall need is documented in Phase 2. OIA currently provides CNMI with about \$10M/yr for water, wastewater, solid waste, education and power CIP projects and the Governor is the expenditure authority (e.g., he decides how the OIA money is spent). Ms. Ada asked if OIA could earmark funds specifically for PSS. Mr. Aughenbaugh noted that the Phase 2 Assessment will help in making the Governor and other CNMI policy makers of more aware of the significant deficit in school facility condition. Ms. Ada expressed frustration that education gets short shift in CNMI expenditures; she would really like a dedicated stream of funding. Congressman Kilili noted that with a strong Phase 2 report, he could get language included in the Congressional Committee Report authorizing the Secretary to earmark funds for education (not a sense of Congress).

Mr. Fee noted that some territories are more effective than others in maintaining their schools. Should the Phase 2 assessment be successful in raising funding for schools, an important follow on issue will be to ensure the recapitalized schools will be properly maintained and not allowed to fall into disrepair again. Perhaps CIP funds need to have maintenance earmarks to ensure maintenance efforts are well funded.

Congressman Kilili noted he intended to visit Mr. Chow in Honolulu to discuss this and other projects.

BOE Vice Chair Ada thanked the OIA team and PSS staff for their hard work and said she looked forward to supporting the OIA initiative.

Mr. Guerrero noted that he is preparing a folder of files for use in the study. Commissioner Sablan noted that Tinian and Rota weren’t visited on this trip and says PSS staff will be able to provide info for those island schools.

Members of the media were present and interviewed members of the OIA study team after the meeting (several newspaper articles about the briefing appeared following the briefing).



11/29/2010

School Facilities Development



PSS has determined that twenty (20) additional classrooms will be needed at the following schools: (Gripstein Elementary School - 4, San Francisco Elementary School - 4, Grand Canyon Elementary School - 4, Grand Canyon Elementary School - 3, Oso Elementary School - 2, Kagan Elementary School - 2, GTC - 2) so that 900 five year old children can have the benefit of full day kindergarten. Currently, we can only offer half day kindergarten services to 600 children. As a result, every year 250-300 students enter first grade without the benefit of kindergarten. The lack of the early learning opportunities that kindergarten provides places the se children at a tremendous disadvantage compared to their classmates who have completed kindergarten. The writing and numeracy skills needed for kindergarten attendance at other public or private schools.



Garapan Head Start Center



**+ Saipan Southern
High School
Classrooms**

PSS has determined that eight (8) additional classrooms are needed at Salpan Southern High School which has a design capacity of 600 but has a current enrollment of 836 students. The result is classrooms are loaded at 32 students per classroom. The additional eight classrooms would enable would enable the SSHA to lower the teacher/student ratio from the current 32/1 to 23/1. The 23/1 is still high compared to the national average of 16/1 but is within the CNMI Board of Education maximum ratio of 25/1.

The cost of these classrooms is **\$120,000 X 8 classrooms = \$960,000**.

The classroom cost is based upon the latest estimate for pre-fabricated portable classrooms with freight costs from the states and inclusive of collateral equipment.



+ MHS Cafeteria Project

PSS plans to utilize the design of the **San Vicente Cafeteria** for a new cafeteria to be located at MHS. The vast majority of students at MHS (over 75%) do not have the opportunity to participate in the school meal program because the facility and the abbreviated lunch period (30 minutes) limits participation. A new cafeteria is needed at MHS as the old cafeteria was constructed in 1970 when the school population was 300 students, whereas the population today is 1,225 students.

The old cafeteria will be converted into two (2) classrooms. Total cost **\$1.1 million**. The cost is based upon the cost of the San Vicente Cafeteria Project.



+ Koblerville Junior High School

PSS will build a third junior high school at the Koblenstein school site to alleviate the overcrowding at Hopwood Junior High School. The end result will be three junior high schools with each school serving 500-600 students. We will use a two-story single school building and locate Mount Carmel High School building and locate the school in the field between the elementary and high school campuses. This junior high school will have 24 classrooms, a cafeteria, library, a central office, PE, reading resource and SPED classrooms as well as a teacher's lounge and both student and teacher bathrooms on both floors.

Total cost is \$4 million.



Unoccupied space between
Saipan Southern High School &
Koblerville Elementary School

+ Gymnasium Projects

PSS has plans for open-air outdoor covered gymnasiums for use at the Saipan High School and the Tinian High School. Placing a gymnasium at these three locations will provide a community asset in two of the most populated areas of Saipan and Tinian. We have decided on an outdoor gym to decrease the energy costs of running the facility. There will still be a need for an indoor area for storage of equipment, offices and for a weight room. We intend to make this facility as green as possible with the use of Solar and Wind energy to power the facilities.

Estimated Cost - \$1.2 million each
x 3 = \$3.6 million



A photograph of the exterior of GTC Elementary School. The building is a two-story structure with a light yellow or cream-colored facade. It features several windows with dark frames. A prominent green horizontal band runs across the middle of the building. A sign on the building reads "MILANO G". The building is surrounded by a green lawn and some trees in the background. The sky is blue with some light clouds.



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8 November 2010

Ms. Jackie Conant
Civil & Public Works Branch
U.S. Army Corps of Engineers, Honolulu District
Building 230, Room 202
Fort Shafter, Hawaii 96858-5440

Dear Ms. Conant,

US VIRGIN ISLANDS TRIP REPORT
Phase I Educational Facility Inventory and Condition Assessment for
Department of Interior, Office of Insular Affairs,
Various Locations Pacific Region and Virgin Islands
Contract No. W9128A-08-D-0008

This letter summarizes the recent USVI trip completed between 29 November and 6 December 2010. It provides a brief overview of the itinerary, summary of salient findings and implications for Phase 2. The support of SAJ PM Forward Mr. Jose Mendez and USVI OIA field representative Mr. Basil Ortley was invaluable in making the trip a success.

1. ITINERARY

Date	Action
St Thomas/St John	
Tuesday, 30 November	Interview with University of the Virgin Islands Eastern Caribbean Center GIS staff (Stevie Harry)
Wednesday, 1 December	Inbrief with VI DOE and VI DPW leadership and Governor's representative Tour St John Schools with VI DOE facilities staff (including brief interviews with respective Principals)
Thursday, 2 December	Tour St Thomas schools with VI DOE facilities staff (including brief interviews with a number of respective Principals)
St Croix	
Friday, 3 December	Tour St Croix schools with VI DOE facilities staff (including brief interviews with a number of respective Principals)
St Thomas	
Saturday, 4 December	Outbrief with VI DOE and VI DPW leadership and Governor's representative
Monday, 6 December	Interview with VI Energy Office (Miguel Quinones)

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2. FINDINGS

Basic VI public school data is as follows:

District	Schools
St Thomas/St John	16/2
St Croix	15
Total	33

Total student enrollment is 15,500 students with 8,000 students in STC schools and the balance of 7,500 students in STI/J schools. Enrollment trends are in slight decline following modest population decline. Annual DOE budget is \$196 (down from recent high). Annual maintenance budget is \$3M/yr --- with the bulk expended during the summer months while the schools are closed.

The USVI school system is headed by a Superintendent overseeing two District Commissioners for St Thomas/St John and St Croix. School facility maintenance is managed under the two district offices with separate staff (there is now a small centralized facilities staff headed by a registered architect (Mr. Pinney)). The DPW is charged with managing CIP-level projects and seems to collaborate well with DOE facilities staff. The Board of Education is purported to be somewhat dysfunctional but nonetheless is considered a stakeholder in the overall system (no meetings were scheduled with BOE). Early education/pre-K programs are not managed by VI DOE.

USVI schools are facing the same general set of problems facing the other insular areas including an aging physical plant with functional obsolescence, aging infrastructure and accelerated wear from the corrosive coastal environment and lack of preventative maintenance. Most schools are not compliant with current codes and federal policies (e.g., seismic and high wind standards, ADA, ACM/LBP issues, etc.). Many of the St Thomas schools are constructed on small parcels and often on relatively steep terrain (both St Thomas and St John are characterized by their steep central area and narrow coastal plain -- as compared to St Croix that is much flatter and spread out). Some schools include historic buildings built during the Danish period and have their own set of historic preservation regulations to contend with. In general, the facilities maintenance staff are working in crisis mode dealing with a constant stream of trouble calls.

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USVI's utility provider (Water and Power Authority or WAPA) has problems providing reliable service that poses another layer of problems for school facilities managers. Most of the public schools maintain onsite cisterns for potable water as well as backup power generators. Most of the cisterns are no longer in use due to costs associated with roof and roof drain maintenance and DOH inspection requirements. This is problematic because roof drains are routed to the cisterns. The same holds true with back up power generators (several principals noted they were unable to start them up). One school principal indicated his school was considered a secondary civil defense evacuation facility that warranted emergency backup power to keep food in freezers cold. On St Croix, cisterns have been known to overflow and flood adjacent school classrooms when sump pumps cease working.

Based on brief interactions with many of the School Principals, it is clear that many of them spend a lot of time dealing with facility issues (rather than curriculum and teacher-student issues). This underscores the double-edged sword of poor school facility conditions: they act as a disincentive to student attendance and performance and also distract school administrators and teachers from their primary tasks of teaching and fostering a productive learning environment.

A general observation shared by VI facilities managers was that many of the older schools made of reinforced concrete are lasting better than the newer schools made of concrete and steel, or steel framed. The general wisdom was that the school system had traded off more expensive construction types for less expensive construction types (to reduce cost or gain larger floor area). A extrapolation of this involves the vestiges of the Danish-era buildings being used by the schools; the two-foot thick concrete walls, high ceilings and recessed window openings associated with buildings of that era create more hospitable indoor air quality conditions than the modern, dropped ceiling boxes (importantly, these older buildings were not constructed with reinforcing steel and would not meet modern seismic or electrical code standards).

Several schools experience periodic flooding from offsite drainageways (referred to locally as "guts") or from adjacent streets, and/or are constructed in low-lying areas. A part of the localized flooding problem is from lack of maintenance of the onsite and offsite drainage systems and perhaps poor design.

Structural issues ranged from widespread spalling to what appeared to be imminent column or beam failures. Facilities personnel regular repair cracks with

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plaster and paint so the full extent of structural problems may not be readily evident. The territory has closed two schools in the recent past due to structural concerns.

USVI maintains some school facility records and has conducted some recent school facility assessments. There are no comprehensive CIP plans like those maintained by CNMI and Guam. Facilities data was not consistent between the two school districts. Site plans for seven of 18 schools in the STT/STJ district were provided while site plans for all 15 STC schools were provided. Age of schools was provided for all STT/J schools but not for STC schools (note, "age of schools" is a problematic variable because inevitably, each campus has experienced demolitions and or new construction so the buildings likely have different ages). A request for GIS parcel and footprint data was made at the inbrief although this was still pending post outbrief.

Standardization. STC schools have some standardization (e.g., 9 of the 15 schools share 4 similar designs). No standardization was evident in the STT/J schools (Cancryn Jr HS on STT and Central HS on STC share the same general design).

VI DOE would like to replace the two STJ schools with a new school located near the middle of the island on NPS land. The eastern most school has a low enrollment (120) and is located in a small rural campus (former Danish dispensary) and the other school is also located in a very cramped campus in the Cruz Bay urban area, heavily dominated by tourist venues and automobiles.

3. IMPLICATIONS FOR PHASE 2

Facilities data for each school building (e.g., date and type of construction, comprehensive site and floor plans, utility plans, condition assessments, etc) is lacking, which makes it more difficult to estimate Phase 2 survey effort. Like other jurisdictions lacking comprehensive site plans, staff generally rely on Google satellite images as a substitute. Because they lack a preventative maintenance program, there is also no consolidated inventory of equipment and related warranties to review.

The range of facility problems and the complexity in building types underscores the need for a multidisciplinary inspection team.

The standardization in some of the schools will expedite the condition evaluations under the assumption that they will experience similar wear and tear. The STT/J

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schools all appear to be of unique construction types – indeed there is a large variation of construction types within many of the campuses which will require additional Phase 2 survey time.

Common themes discussed with VI staff and highly recommended by the VI Commissioner include the need to develop comprehensive CIP plans for each of the schools –and for the entire public school system, and develop a preventative maintenance program.

These two areas will be critical to the success of the OIA initiative and are recognized to be beyond the present scope of the Phase 2 condition assessment. Should the OIA initiative result in a focused investment in school recapitalization (either through additional federal funds or allocation of an increased percentage of existing federal funds – or both), it is absolutely essential that the investments be made as part of a comprehensive CIP plan and not allocated on a piecemeal or per school basis. Furthermore, a focus on sustainable design/high performance buildings and standardization of building types and systems will reduce long term O&M costs. The CIP plans could be accompanied by system wide planning and programming standards for ES, MS and HS facilities which seem to be lacking (e.g., basic facility requirements for ES, MS and HS facilities, dimensions and types of recreational spaces, student and teacher support spaces, building support areas, classroom and admin spaces, HVAC standards, etc.)

This trip report represents the final fact finding effort in Phase 1. All four territories have been visited and consultations with cognizant stakeholders have been completed and documented. Several follow-on information requests are outstanding. One of the important objectives of the Phase 1 effort was to develop a basic, comprehensive facilities inventory of school facilities based largely on information acquired from each of the territories. We are currently in the process of compiling the information for inclusion in the final report. As has been noted in this and previous trip reports, the territories do not maintain detailed, comprehensive facility inventories (e.g., site plans of all campuses indicating building locations, gross floor area, construction type use and year built). The information is available for some campuses within a territory and not others, making it impractical to use in a comprehensive application. The most comprehensive data set achievable for Phase 1 consists of aerial photo-derived building footprint data, cross checked to the extent possible with site plan and other types of data collected during Phase 1. The building and cruder floor area data will

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be sufficient to determine the on-the-ground level of effort needed by the inspection teams which is a key objective of Phase 1.

The building type (to be identified as part of Phase 2) and floor area will be associated with industry-derived parametric cost factors, adjusted for the relevant locations, to determine current replacement values and deferred maintenance costs associated with the building systems being analyzed (e.g., structure, roof, exterior, interior finishes, electrical, mechanical and plumbing systems). Additional checklists and cost factors will be created to address deficiencies in site conditions (e.g., drainage, pavements, walkways, etc.) as well ADA compliance issues.

Phase 2 will need to include additional data collection on building types as part of the site visit, to calibrate the cost model (picked onsite from a predefined list), and will also act as a cross check on the building and floor area data compiled in Phase 1.

The Phase 1 report will also discuss a number of related issues identified during Phase 1 including:

- Phase 2 reinspection methodology/procedures
- Phase 2 opportunities for technology transfer/inspection skill development for local participants (assessment of the risks/rewards of local involvement in the inspection process)
- Phase 2 communications strategy
- The need to create and maintain long range CIP plans for each of the territories that should include the overall vision, programmatic objectives, idealized campus layouts, design guidelines and outline material specifications for insular environments, plans for each individual campus, and system wide recommendations regarding organization and business process.
- The urgent need to establish and operate industry-standard school maintenance programs and Technical Assistance opportunities to provide the training and support to build these programs within each of the territories.

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Ms. Jackie Conant
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8 December 2010
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Sincerely,



Thomas A. Fee, AICP, LEED AP
Principal

cc: Mr. Jonathon Dunn, OIA
Mr. Basil Ortley, OIA Field Representative
Mr. Jose Mendez, USACE (SAJ PM Forward)



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DRAFT

Date:	1 December 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	STT Conference Room	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	USVI In brief		

Purpose was to brief USVI stakeholders on the intent of the OIA study, solicit input and advice, and review objectives and logistics for the 3-day site visit.

Luis Sylvester, Governors Representative for Schools convened the meeting also attended by the DOE and PW Commissioners and staff.

Mr. Mendez introduced the role of USACE as OIA's representative and HHF/Tom Fee's role as the lead consultant.

DOE Commissioner said it was a wonderful opportunity for technical assistance for the territory.

Mr. Ortley summarized the general need for the study as part of the Secretary of Interiors 5 year plan which includes a goal to improvement the condition of territorial schools.

Mr. Fee described the two phases and the broad scope of the assessment (125 schools stretched across the Pacific and the Caribbean). Phase 2 is a top down study designed to provide broad estimates of deferred maintenance costs and will rank buildings according to a 1-5 scoring system (poor to excellent). It will not provide work-order level of detail (e.g., how does it translate into specific repair and construction projects) as that would be best done by the local school districts

Mr. Fee provided some broad characterization of results from other territories. Each territory seems to be different in the way they approach the management of their schools. CNMI stands out as a progressive PSS with strong esprit de corps, and CIP process that will be updated in part by the OIA study. Guam has a CIP planning history and is embarking on an update of its plan. All schools systems seem to operating in emergency mode though with some closer to the edge than others. ARRA monies seemed to be taking care of the gaps but far from taking on the serious deficiencies.

The team is evaluating different methodologies to follow for the Phase 2 effort from the very detailed to very high level approaches.

The OIA initiative could result in more money being allocated by Congress or simply provide the territorial DOE's a valuable tool to more effectively compete for a fair share of funding already allocated, or a combination of both.

Will the study include adjustment for the unique conditions associated with the insular areas? Yes, local cost adjustments are needed. Local costs are 20-30% higher. Most building products are not available locally and need to be shipped in.

How have ARRA monies been used elsewhere? Guam has \$74M in ARRA school money. Have retained private contractors to help scope and execute the funding to the tune of \$1.5 to \$3.5M/school. CNMI has something in the order of 12 – 15 M and they are now repainting and reroofing. AS was hoping to get \$7M for school improvements but are late in getting started.

What is average age of structures in VI? Over 40 years old.

Will you also be looking at site and drainage issues? Yes, we want to look broadly during the school assessment to record relevant information. Drainage and flooding problems are key issues that need to be accounted for. Note that these issues are very complicated and the study team can only flag them and attach cursory budgets. Can also flag overall grounds condition, fencing, encroachment, etc with local assistance. Only have on the order of a day or two per campus in Phase 2.

A big problem is the disconnectedness of major projects. A track may need resurfacing but it may also have offsite flooding problems and lack important ancillary facilities like bleachers and concessions. Projects need to be looked at comprehensively.

The school principals should be a key part of the Phase 2 work because of their knowledge of the interconnectedness of the problems (as well as the centralized facilities staff). Also, in advance of Phase 2 there will need to be coordination on logistics and advance notice to key stakeholders, as well as sharing of new information that may be available on each of the campuses (changes the survey team needs to be aware of).

What is time line for Phase 2? Supposed to start next year and be completed within a year.

Two key areas that need attention: structural and electrical engineering. Most schools built in 60s and 70s. Schools were originally developed with a couple light fixtures in each room; now things have changed with a combination of mechanical systems and technology-based power demands. Have attached a lot of mechanical systems to roofs causing water infiltration problems (structural problems too). Extremely complex design issues that the OIA study will not resolve.

Cost benefit of whether to repair or reconstruct. Drainage, soils and floodplain issues will need to be considered in the cost benefit equation. Local administrators will ultimately need to make these important choices.

Will survey include ACM issues? Are there any surveys? DPNR conducted ACM surveys but sporadic and on newer schools slated for major projects (8-10 schools). LBP issues – are encapsulated – good until major revitalization triggers remediation. Phase 2 will only

deal with ACM and LPB at a very general level. Will also touch on ADA and life safety codes.

How do you manage expectations? The Phase 2 team comes in, talks to a lot of people, rates the schools, etc. People are going to expect something is going to happen. “If we could make the changes, we’d have done it already.” Need to push the expectations to the DOI; it’s a DOI initiative; a survey conducted by the federal government. Will also help local government due the stature of the initiator. A lot of money is spent on ad hoc basis; it might help legislature be more consistent in its budgeting. Certainly we can’t address all the problems of all the schools. This provides us with an opportunity to address very serious problems from a comprehensive perspective.

Will we get immediate feedback on serious life safety issues observed by inspectors? Yes, any obvious and imminent life safety issues would be flagged to VI DOE leadership right away. Speaking with principals is good but findings need to come back through different channels. Principals will want to accompany the teams and will need to be advised to step back and let the team do its thing. Need to have someone from the central offices accompany the team. Need good communications with all stakeholders.

How does standardization fit into the program. Phase 1 will recommend standardization and implementation of best practices adopted programmatically. A mass recapitalization of infrastructure needs to be done in an orderly manner focusing on life cycle cost.

Standardization is an important and problematic with historic buildings. Bathrooms and classrooms are straightforward sense.

Should we call this a planning document? It will be for OIA as it will help inform policy and funding decisions.

The USACE FUDS (formerly used defense sites) program uses a standard prioritization system analogous to what is being contemplated for Phase 2. Method is driven by parametric cost estimates based on floor area (so sound floor area estimates are important).

Is the scope limited to just schools or activity support facilities, administrative support facilities, etc? At this point we are collecting as much info as we can. Will probably focus on classroom setting. Support facilities are also critical to support the classrooms.

Most of the school repair work is done during the summer months; this would be a good time to have the Phase 2 team on the ground.

It’s important to understand the current maintenance business process and structure. It’s a critical area as everything is done on an emergency basis. After storms there’s a rush to replace schools. We can get a better product after a major disaster if a good process is in place – and it’s critical for the annual/periodic reinspections. Need to be able to document improvements.

VI DOE has looked at work order systems. Current team has worked it out but are all term limited. Have to have written process and procedures for meaningful effect otherwise we are doomed to relearn with each new administration. These processes and systems are as important as standardization and design guidelines. Absent these procedures the risk is that the recapitalization initiative will be for naught. Building local capacity that is robust and meaningful is critical.

American Samoa has a mandatory maintenance set aside to assure a funding stream. Reality is that OM funding should be in the range of 2.4% of current replacement value. VI need is in the range between 8-10% (actual funding is way less) -- need to get it down to a baseline level.

Need GIS parcels and footprints. STC has pdf data, not GIS data. Lt Governor has data that we'll need Mr. Sylvester's help to get released. He will follow up.

Responses to questionnaire.

The Commissioner of Education leads the system working with two district superintendents. Budget maxed out at \$220 mil; this year at \$196 mil. We are a K-12 system with adult ed plus one career tech bldg on STC attached to a school plus alt pgm at each district. Current enrollment is 15,500 students (K 12) with about 8,000 on STC. The STT/J district has 18 facilities on (2 STJ) including a skills center housing technical and adult ed pgm. STC district has 15 schools plus career and technical ed and adult ed facilities. Have 2 HS in each district and 3 MS/Jr HS. STT has 4 very small schools (<250 enrollment), smallest is about 115 students.

Do not have a comprehensive school inventory. Do you have comprehensive campus maps? Have five -- six STT district schools plans (supposed to be done for all schools but never completed). Mr. Pinney "has survey maps for all schools except two on STC" that he will provide later. STC has mapped all the schools. Mr. Sibdy provided a listing of all VI schools organized by the two districts (attached)

How do you prioritize projects? We do an annual survey that's somewhat crisis driven, compiled with assistance of DPW staff. We have an engineering division that is bearing an increasing responsibility. STT has a centralized yard. Allocate maintenance personnel to key schools to service schools in their vicinity. Principals do not have their own maintenance staff. Chain of reporting on STT/J goes through the principal to the STT/J engineering office. It receives and track all calls on an excel spreadsheet. There are onsite custodial staff and contracted janitorial staff under the principal. STC has work order form and keep daily logs, and calls don't necessarily get routed through the principal. Each principal has limited ability to procure services on their own (e.g., call in a contractor to address an emergent problem). STC has some school-based staff with limited skills.

Annual maintenance budget is between \$1.5 - \$3M, plus special appropriations (recently rec'd \$650K plus \$2M bond bill for specific maintenance projects). Can provide historic info on past projects (mostly bathrooms, electrical upgrades, roof projects that DPW has managed). Each district prioritizes its own list.

According to the Commissioner, an overall plan is really needed to provide a systematic and comprehensive basis for CIP funding (i.e., it shouldn't matter what school a legislator attended). There's a legislative paralysis when it comes to major school closure/consolidation projects that would be ameliorated with a comprehensive plan (takes the pressure of the individual legislator). Need to be able to allocate resources based on a high level consideration of need. Redistricting as a facilities management tool is problematic as parents use all the loopholes to get to the schools they want to.

Big challenge is swing space while schools or classrooms are out of service. Have gone to double track to compensate but that's not desirable. STT/J district just doesn't have available space to house swing space.

Other agencies involved in facilities planning include DOH (kitchen vents/grease traps), DPNR (ACM/LBP, water quality testing) and DPW. DPNR is supposed to coordinate all CIP to maximize efficiency (e.g., ensure that road projects are combined to reduce the number of times pavements are torn up).

Corroded CI pipes result in poor water quality. Have plan to gradually replace with PVC. Looking for alt source of water. STC recently had airborne contaminants that effected surface water. WAPA has RO plant. Schools use cisterns that are effected by particulate matter (via roof catchment systems).

Have legislative approval for new STC HS (replacement for Central HS) on adjacent site. New school on STJ (replacement/consolidation). Hoping to relocate Cancryn Jr. HS (on fill land with soil problems). Looking at consolidating some of the really small schools.

Would like to move to standardization where possible but have along way to go.

DOE Facilities managers have a \$1.05M operating budget plus \$1.5M to spend during the summer months. Recently have had additional funds to work with.

US Dept of Energy project will replace plumbing and electrical fixtures. They have developed an inventory of systems that will be replaced, plus detailed floor area measurements. Can provide copy of energy audit and related assessments.

Are local cost factors available? Shouldn't use historical cost as a benchmark. Cost history is problematic because they may have downsized scope to meet available funds. Better to start with standard cost factors.

Structural problem with short column effect. During an earthquake, in the long direction the column becomes a short column. Many schools in PR are undergoing seismic retrofit to address this problem.

Need to assume that every school will be different.

Only two basic school types in the territory: Addelia Cancryn and our modern school types. Site conditions change from flat to hilly plus various changes to bldg codes

Need to look at idealized school types (ES, MS and HS) to provide a basis for future CIP efforts. If you don't know what you want, you'll never get there.

How will you approach revitalization/rebuild decisions. STT/STJ is land strapped. Need to go to multi story, denser facilities. Not the same issue on STC. Spread out campuses have more security issues, technology issues are key considerations, AC is now standard in all classrooms – especially after hurricane Marilyn in 1995. Scores and attendance both went up in the AC'd classrooms. Lockwood and other schools reengineered to include AC. Energy consumption and construction cost saw steep increases.

Standardized AC units. Can't remove competition/go to a sole supplier or prices will rise. Maybe look at three manufacturers to maintain competition.

Bldg materials. Newer schools went to post and beam steel which is more subject to corrosion. Less up front cost but higher OM cost. Elayna Christian in STC has problems with metal window systems.

ARRA dollars were spent on science lab upgrades (cabinets, etc.) and security cameras (across the territory).

The E-RATE program (FCC program providing discounts to assist most schools and libraries in the US and territories to obtain affordable telecommunications and internet access – with 90-10 matching funds) is backbone of schools IT infrastructure, and is constantly upgrading. Will piggy back on territory's new broadband initiative to be implemented over the next 24-36 months.

Problem with wiring upgrades is that it results in a myriad of conduits and abandoned lines. No common conduit systems.

Top five issues: Lack of a comprehensive plan (Commissioner's top issue)

Corrosion, seismic, structural, upgrading plumbing and electrical, termities, recreational facilities.

Concern about energy audit project and proposed upgrades installing new fixtures on top of outmoded systems. General problem with working on old buildings. Opened up an old

ceiling and found original light fixtures were still on. Layers and layers of piled and wires that no one knows what their original purpose was or whether they're hot or not.

Manpower/human resource problems. Can't attract trained maintenance staff at the pay scales DOE offers (\$21K/yr). If DOE trains them, they'll leave to better paying jobs. Skill set just isn't there.

Hope the study will recommend best practices from outside the territories. What are standards, maintenance cost per square foot, etc.

Avg building cost in the territory is \$400 - \$450/sf. Have adequate general contractor capability in the territory, although they are reluctant to bid on repair projects due to the underfunded budgets and uncertainty involved. Bond requirements can make it difficult unless projects are phased. Haven't had any large projects for some time (other than the Diago project (STC rum distillery)).

Material costs are high. Material are landed on STT and barged to STJ. Drastic terrain issues on the STT/J. Concrete on STC \$135/cy; STT \$170-18 up to \$200/cy. STJ is \$225-\$250. PR is about \$100/sf. Not including freight. STC has lowest bldg cost, followed by STT and then STJ.

GIS data is available but controlled due MOA with Lt Governors office. There are sensitivity issues and Governor's office is needed to secure the school related information.

Codes. Virgin Islands construction code in place prior to '89 (based on earlier NY code). UBC then became standard for public bldgs but wasn't always followed. After hurricane Meryl in '95, IBC (most recent edition) was adopted. Triggered at 50% threshold. Biggest issue in the territory is seismic, it's in zone 4 like SoCal (PR is Zone 3) plus wind speed (155 mph), only place with similar code problems under the American flag is the Aleutian Islands. Key reason why it's very expensive to construct. DPW doing \$2M renovation at Kean gym (roof repairs and interiors); doesn't involve structural or electrical upgrades "so no bldg permit required." Not considered in the basic 50% calculation of the code.

US VJ Kickoff meeting 12/1/10
VJ Public Finance Authority Conference Room
+ telephone

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DOE Commissioner Laverne Terry

St Thomas/St John School District Commissioner

Tannette Barry

Basil Ottley, OIA Field Representative

St. Thomas -St. John Public Schools

SCHOOLS	APROX. YEAR CONSTRUCTED	CONSTRUCTION TYPE	UTILIZATION	PARCEL NUMBER	LEGAL DESCRIPTION	AREA IN SQ. FT
Addelita Cancryn Jr. High (Wayne Aspinal School)	Approx. 1966	Reinforce Concrete/CMU	Fully	1-05303-0716-00	Crown Bay Fill PCL 1	46,094
Adult Continuing Education (Commandant Gade School)	Approx. 1800	Reinforce Concrete/CMU	Fully			
Bertha C. Boschulte Middle	Approx. 2004 (New Building)	Reinforce Concrete/CMU	Fully	1-07503-0302-00	#9-1-12A Bovoni-West Por	102,581
Charlotte Amalie High	Approx. 1953	Reinforce Concrete/CMU	Fully	1-05402-1201-00	#8 Estate Thomas	127,197
E. Benjamin Oliver Elementary	Approx. 1973	Reinforce Concrete/CMU	Fully	1-05604-0316-00	148-325 Annas Retreat	22,508
Edith Williams Alternative (James Madiso Madison)	Approx. Late 1930's	Reinforce Concrete/CMU	Fully			
Evelyn Marcelli Elementary	Approx. 1800	Reinforce Concrete/CMU	Fully	1-05302-1517-00	Hassel Harve 1,2A,2B,3&4	16,944
Gladys A. Abraham Elementary	Approx. Late 1960's	Reinforce Concrete/CMU	Fully	1-5102-0102-00	Linberg Bay 68A	10,076
Guy H. Benjamin Elementary	Approx. Late 1960's	Reinforce Concrete/CMU	Fully	3-04203-0302-00	#1 & #2 Emmanus	3,728
Ivanna Eudora Kean High	Approx. 1970's	Reinforce Concrete/CMU	Fully	1-07702-0126-00	1 & 2 Nazareth	185,106
Jane E. Tuitt Elementary	Approx. Late 1930's	Reinforce Concrete/CMU	Fully	1-05302-3209-00	#19 Street Levoki	11,794
Joseph Gomez Elementary	Approx. Late 1960's	Reinforce Concrete/CMU	Fully	1-05602-0601-00	#142 Annas Retreat	41,878
Joseph Sibilly Elementary	Aprox. 1930's	Reinforce Concrete/CMU	Fully	1-02903-0207-00	#24 Elizabeth	10,199
Julius E. Sprauve Annex	Approx. Mid 1900's	Reinforce Concrete/CMU	Fully	3-02101-1611-00	Morisette Bldg.	4,721
Julius E. Sprauve Elementary	Approx. Late 1930's	Reinforce Concrete/CMU	Fully	3-08101-1312-00	Estate Enighed	1,918
Leonard Dober Elementary	Approx. Late 1930's	Reinforce Concrete/CMU	Fully	1-05302-4519-00	#9A Kronprindsens Gade	5,632
Lockhart Elementary	Approx. 2004 (New Building)	Reinforce Concrete/CMU	Fully	1-05402-1203-00	#41 Estate Thomas	44,144

St. Thomas -St. John Public Schools

Ulla F. Muller Elementary	Approx. 1950's	Reinforce Concrete/CMU	Fully	1-05204-0107-00	#110 Contant	11,424
Yvonne Milliner-Bowsky Elementary	Approx. 2004 (New Building)	Reinforce Concrete/CMU	Fully	1-03103-0201-00	#16 Mandahl	22,847

St. Croix Public Schools

SCHOOLS	APROX. YEAR CONSTRUCTED	CONSTRUCTION TYPE	UTILIZATION	PARCEL NUMBER	LEGAL DESCRIPTION	AREA IN SQ. FT
Adult Continuing Education		Reinforce Concrete/CMU	Fully			
Alexander Henderson Elementary		Reinforce Concrete/CMU	Fully	4-07600-0479-02	#73 Concordia	57,347
Alfredo Andrews Elementary		Reinforce Concrete/CMU	Fully	2-04500-0301-00	#11-A Vicorp Land	76,038
Alternative Education		Reinforce Concrete/CMU	Fully	2-04900-0106-00	Rem Penitentiary Land	71,119
Arthur A. Richards Jr. High		Reinforce Concrete/CMU	Fully	4-09205-0201-00	#20 Stoney Ground	77,366
Career & Technical Education		Reinforce Concrete/CMU	Fully			
Central High		Reinforce Concrete/CMU	Fully	2-06500-0101-00	Tract 3 Upper Bethlehem	82,705
Charles H. Emanuel Elementary		Reinforce Concrete/CMU	Fully	2-06400-0202-00	#3 Upper Bethlehem	27,479
Claude O. Markoe Elementary		Reinforce Concrete/CMU	Fully	4-07610-0106-00	#6 Wheel of Fortune	54,347
Educational Complex High		Reinforce Concrete/CMU	Fully	2-06405-0143-00	#5-A & 5-C VICORP Land	220,787
Elena Christian Jr. High		Reinforce Concrete/CMU	Fully	2-02603-0106-00	#65 La Grande Princess	54,422
Eulalie Rivera Elementary		Reinforce Concrete/CMU	Fully	4-06200-0409-00	#3 Plessen	50,007
Evelyn M. Williams Elementary		Reinforce Concrete/CMU	Fully	4-08000-0118-00	#13 Mount Pleasant	59,946
John H. Woodson Jr. High		Reinforce Concrete/CMU	Fully	2-04500-0154-00	#11-B VICORP Land	74,644
Juanita Gardine Elementary		Reinforce Concrete/CMU	Fully	2-04900-0106-01	Rem Penitentiary Land	40,177
Lew Muckle Elementary		Reinforce Concrete/CMU	Fully	2-04714-0135-00	#317 Sion Farm	21,207

Pearl B. Larsen Elementary		Reinforce Concrete/CMU	Fully	2-05000-0288-00	#7 St. Peters	87,549
St. Croix Public Schools						
Ricardo Richards Elementary		Reinforce Concrete/CMU	Fully	2-06600-0108-00	#491 Strawberry Hill	38,905
Theodora Dunbavin		Reinforce Concrete/CMU	Fully			



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Date:	4 December 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	Governor's Conference Room	Recorded by:	T. Fee
Attendance:	See Attached		
Subject:	USVI Outbrief		

Purpose was to provide USVI leadership and staff with a preliminary assessment from the site visit and to solicit further input and feedback.

Mr. Otley briefly summarized the objectives of OIA study and the accomplishments of the last 2.5 days of school site visits. He recognized the DOE facilities staff for their skill, subject matter knowledge and close working relationships with school principals.

Mr. Fee provided a very brief summary of observations from the world wind tour of VI School facilities. He seconded Mr. Otley's comment about dedicated and professional staff and also added that the school principals he engaged with were extremely knowledgeable and it was readily apparent that there was a strong team spirit and shared commitment to improve the educational experience.

He noted that the site visits essentially validated to comments made at the Wednesday inbrief: water infiltration, structural issues and back-bone plumbing and electrical concerns seem to be the most prevalent concerns. The newer schools seemed to have as many problems as the older schools that were more solidly built. ADA challenges in the STT schools are significant given the terrain involved and cramped campuses. Mr. Fee pointed out the apparent structural condition of the STJ Sprauve MS library (pointed out by the school principal) with cracks in the concrete columns and beams, rusted metal joists and ample signs of water infiltration. He underscored it was anecdotal but probably should get looked at by a structural engineer given Mr. Mendez's comments about the short column effects in seismic events.

The group discussed maintenance software and how industry manages the trouble call process. Mr. Otley stressed the importance of identifying the core process before looking for a software program.

Comment was made that every department needs to have grant writers to compete for the range of federal programs available. Staffing is so limited that they can't support grant writing – can't compete with mainland jurisdictions.

The Commissioner again raised her concern about getting beat up for having low scoring schools. It will be extremely important for OIA to present the results of the study in a way that doesn't unduly penalize or single out school administrators.

There was some discussion about how the initiative should be presented to the Board of Education. There is a set of meetings planned for January where senior OIA reps will be in town that might be the appropriate venue to brief BOE members.

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Mr. Pinney provided copies of the five STT campus assessments including site plans (Gomez, Marcelli, Kean, Amalie and Oliver), and a set of survey drawings delineating parcel boundaries for several schools (including three additional school site plans – Spruave, Miller and Cancryn). Mr. Sibily provided a listing of “Maintenance Repair Projects” for STT/J schools between 2007 and 2010 (attached)

Commissioner Terry said she looked forward to supporting the OIA initiative and adjourned the meeting

Meeting Attendance:

Commissioner Terry – VI DOE
Vance Pinney – VI DOE
Luis Sylvester – Governors Office
James Bernier – DPW CIP
Joseph Sibily – VI DOE STT/J District
Gary Molloy -- VI DOE STC District (via telephone)
William Mathew – VI DOE STC District (via telephone)
Basil Ottely – OIA Field Representative
Tom Fee – USACE Contractor

from J. Sibily 4 Dec 10
STT DOE

VIDOE 2010 MAINTENANCE RENOVATION PROJECTS		
School	Cost	Project
Charlotte Amalie	\$105,000.00	Roofing repairs
	\$69,405.00	Auditorium Stage renovation
	\$163,625.00	Security Fencing
	\$70,000.00	A/C installation/Maintenance
	\$27,000.00	Electrical upgrades
	\$15,000.00	Cafeteria Renovations
	\$110,000.00	Welding projects
	\$12,000.00	Plumbing repairs/renovations
	\$60,000.00	Landscaping
	\$30,000.00	Janitorial services
Total	\$662,030.00	
VIDOE 2009		
School	Cost	Project
Charlotte Amalie	\$73,419.00	Bathroom renovation
	\$34,995.42	Electrical upgrades
	\$41,479.00	Gates/Fence
	\$31,069.50	Floor Tiling
	\$60,000.00	Landscaping
	\$30,000.00	Janitorial services
Total	\$270,962.92	
VIDOE 2008		
School	Cost	Project
Charlotte Amalie	\$13,725.00	Ceiling tile replacement
	\$35,790.00	Electrical fixture replacement
	\$38,570.00	Classroom Renovation
	\$40,780.00	Roofing repairs
	\$60,000.00	Landscaping
	\$30,000.00	Janitorial services
Total	\$218,865.00	
VIDOE 2007		
School	Cost	Project
Charlotte Amalie	\$21,650.00	Water line replacement
	\$33,000.00	Bathroom renovation
	\$45,000.00	Exterior wall Painting
	\$30,000.00	AC installation / Maintenance
	\$60,000.00	Landscaping
	\$30,000.00	Janitorial services
Total	\$219,650.00	
Grand Total		\$1,371,507.92

MAINTENANCE / RENOVATION PROJECTS

VIDOE 2010			
School	Cost	Project	
Ivanna Eudora Kean	\$90,000.00	Exterior Wall Repair	
	\$44,000.00	Emergency Exit Stairs	
	\$72,000.00	Bathroom renovation (4)	
	\$48,998.00	New Potable Water Line	
	\$11,040.00	Walkway Repairs	
	\$42,000.00	AC installation/Maintenance	
	\$98,000.00	Facility/Classroom renovations	
	\$12,280.00	Welding projects	
	\$10,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$453,318.00		
VIDOE 2009			
School	Cost	Project	
Ivanna Eudora Kean	\$55,500.00	Bathroom renovation	
	\$32,046.00	Walkway	
	\$37,018.00	Cafeteria Ceiling/Roofing	
	\$10,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$104,064.00		
VIDOE 2008			
School	Cost	Project	
Ivanna Eudora Kean	\$19,528.00	New Security Guard Booths	
	\$11,168.00	Exterior Wall Painting	
	\$49,680.00	Classroom renovations	
	\$49,680.00	Electrical renovations	
	\$10,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$165,056.00		
VIDOE 2007			
School	Cost	Project	
Ivanna Eudora Kean	\$36,350.00	AC installation/Maintenance	
	\$11,040.00	Floor Tiling	
	\$10,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$82,390.00		
Grand Total	\$804,828.00		

MAINTENANCE / RENOVATION

VIDOE 2010			
School	Cost	Project	
Bertha C. Boschulte	\$70,000.00	Exterior wall repair	
	\$180,000.00	AC installation/Maintenance	
	\$17,000.00	Exterior wall painting	
	\$20,500.00	Landscaping	
	\$25,000.00	Janitorial	
Total	\$312,500.00		
VIDOE 2009			
School	Cost	Project	
Bertha C. Boschulte	\$10,850.00	AC Installation	
	\$21,000.00	Electrical upgrades	
	\$18,500.00	Landscaping	
	\$25,000.00	Janitorial	
Total	\$75,350.00		
VIDOE 2008			
School	Cost	Project	
Bertha C. Boschulte	\$49,490.00	Bathroom Renovation	
	\$18,500.00	Landscaping	
	\$25,000.00	Janitorial	
Total	\$92,990.00		
VIDOE 2007			
School	Cost	Project	
Bertha C. Boschulte	\$35,000.00	Window Replacement	
	\$18,500.00	Landscaping	
	\$25,000.00	Janitorial	
Total	\$78,500.00		
Grand Total	\$559,340.00		

MAINTENANCE / RENOVATION

VIDOE 2010			
School	Cost	Project	
Addelita Cancryn	\$82,000.00	Covered walkway	
	\$131,000.00	Bathroom renovation	
	\$30,000.00	Electrical	
	\$85,000.00	Classroom Renovations	
	\$12,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$328,000.00		
VIDOE 2009			
School	Cost	Project	
Addelita Cancryn	\$23,571.80	Electrical upgrades	
	\$21,500.00	Roofing	
	\$25,296.00	Walkway	
	\$15,858.50	Grills	
	\$12,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$86,226.30		
VIDOE 2008			
School	Cost	Project	
Addelita Cancryn	\$49,868.00	Electrical upgrades	
	\$50,000.00	Roofing	
	\$49,850.00	AC installation/Maintenance	
	\$47,400.00	Classroom Renovations	
	\$12,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$234,118.00		
VIDOE 2007			
School	Cost	Project	
Addelita Cancryn	\$44,515.00	Exterior wall repair	
	\$40,900.00	Electrical upgrades	
	\$12,000.00	Landscaping	
	\$25,000.00	Janitorial services	
Total	\$85,415.00		
	\$733,759.30		



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Date:	30 November 2010	Project #	2010130
Time:	1600 hrs	Project Name:	OIA Study (Ph 1)
Location:	University of the VI Eastern Caribbean Center (ECC)	Recorded by:	T. Fee
Attendance:	Stevie Henry, Basil Ottley (OIA), Tom Fee		
Subject:	USVI GIS resources		

The interview with Mr. Henry was conducted to learn about GIS resources for the OIA study.

The territory maintains GIS mapping resources (under the control of the Governors office). There is concern about unauthorized use so the Gov' Ofc only authorizes use under fairly tight agreements. Mr. Henry's office is permitted to use resources and develop new coverages, but is not allowed to release them to third parties.

Mr. Henry mentioned that a number of schools are in poor condition (worst condition is Cancryn Jr HS on STT). Many schools are also located in floodplains (eg., John Woodson on STC) or in high water table areas that results in mold infestation through leaky roofs or floors. His staff had prepared point coverages for all VI schools which he [somewhat reluctantly] shared with us [mostly because he hadn't had a chance to develop metadata for the coverage].

The entire territory is covered in LiDAR through a collaboration with USGS and DHS (as an add-on to Puerto Rico's cov'g). The territory has parcel data (tied to tax ID information) and building footprints in geodatabase format that should be available from the Gov's ofc. (Mr. Harvey showed us the coverages).

Mr. Harvey is currently assisting in the development of the National Hydrography Dataset (NHD) identifying place names for various stream reaches.



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Date:	6 December 2010	Project #	2010130
Time:	0900 hrs	Project Name:	OIA Study (Ph 1)
Location:	Windward Passage Hotel, STT	Recorded by:	T. Fee
Attendance:	Miguel Quinones, Tom Fee		
Subject:	VI Energy Office Interview		

Mr. Quinones is a Program Specialist with VIEO in charge of the \$7.5 million US Dept of Energy grant to the "VI Energy Alliance" covering all rate payers. The program includes the award of Energy Saving Performance Contracts (ESPC) to two contractors: Energy Systems Group (government facilities, including schools) and Florida Power & Light Energy Services (industry, residential, etc.). Note, ESPC is different than Purchase Power Agreements (PPA). The entities are being engaged in a cumbersome, multi-tiered contract that is not yet fully executed, and may lose funding if funds are not fully encumbered soon (apparently an EOY deadline was recently missed).

VI facilities have faster depreciation due the salt spray and other conditions. 75% of USVT's power bill is for oil and 50% of that oil comes from Venezuela. USVI has a policy to have a 60% reduction in power consumption by 2025 (similar to Hawaii's Clean Energy Initiative). USVI has experienced a small decrease in population and public school enrollment in recent years. VI has very energy intensive schools (with a wide range of energy use/student). Plumbing code is UPC current and building code is IBC current. Electrical code is IECC.

The school retrofit program will install more efficient electrical fixtures and upgrade systems back "to the junction box." It will also replace plumbing fixtures with low flow fixtures "to the wall." It is understood that there are significant issues between the J-box and the main panel, and further upstream, that would not be addressed in this upgrade. Mr. Quinones has seen many overloaded main panels and realizes that the energy project falls far short of addressing significant deferred maintenance problems. Mr. Quinones commented that classroom plugloads far exceed capacity (many classrooms only have a couple of floor plugs and the addition of AC units and other electrical fixtures in the schools has led to an overloaded backbone system). The USVI teacher's union has a clause in its agreement that allows teachers to leave the classrooms when temperatures exceed a certain amount.

The program does not include installation of alternative energy technologies, (solar, wind, etc).

The school retrofit program starts with 11 "pilot" schools that Mr. Quinones thinks will take about 4 months to upgrade (from NTP). He hopes that work will be completed by the time the OIA phase 2 effort commences (likely 2nd Q '11) – assuming USVI is able to execute the ESPC agreements in a timely manner.

Mr. Quinones will forward the following information for VI PSS this week:

- Energy and water consumption rate history
- Floor area calculations

Appendix F

OIA staff comments on December 2010 Pre-Final Report

1. Jonathan Dunn, Washington DC
2. Lydia Faleafine-Nomura, American Samoa
3. Keith Aughenbaugh, Commonwealth of Northern Marianas
4. Basil Ottley, U.S. Virgin Islands

Jonathon Dunn, 11 February 2011
Office of Insular Affairs, Washington DC

I've reviewed the report and most of the appendices. First off, I feel the Phase I report is great given the time and budget. The content, organization and recommendations were thoughtful and solid. The attached copy of the report has sticky notes calling out a few typos and a couple of questions [accompanying matrix summarizes text comments].

Page	Comment	Response
Various	Several typographic errors	Corrected
31	Was GDOE's FCAP study completed?	The FCAP report is currently being reviewed by GDOE (PDN article dated 8 January 2011). A link to the study was provided by GDOE on 17 February 2011 and the contents were being reviewed at the time of publication.
41	Could you expand on what additional tools could be integrated in to the IMS for local use? IMS economies of scale could be a leadership selling point (versus funding ad hoc requests for maintenance plans.) Would the modules track inventory, DM items and actions, host maintenance plans and be used in capital planning? What would the costs be? Cost effective access to these tools could be a selling point to the Governors/ Congressional Delegates... maybe to the point they might be willing to not only participate but also to cost share?"	Text was revised to include an expanded discussion. Budget for local school district modules is estimated in the range of \$300K (not included in Phase 2 cost estimate).

From: [Lydia Nomura](#)
To: [Tom Fee](#)
Cc: ["Dunn, Jonathan P"](#); ["Brown, Mark"](#); ["Tapuitea McMullin"](#); ["Pula, Nikolao"](#); ["Fink, Wendy"](#)
Subject: Condition Assessment Study
Date: Monday, February 07, 2011 1:06:58 PM

Dear Tom,

Thank you for the comprehensive draft report and the opportunity to comment. Although the report does not reveal anything that is not already known, at best it formally documents the common issues and the systemic problems that exist in all the insular areas with regard to school facilities, school maintenance, and school replacement planning. In particular, it discusses the very basic problem of "limited institutional capacity to maintain school facilities," and the lack of expertise to develop long term school facility plans.

I agree that a standardized approach for school facility maintenance needs to be developed and implemented. In general, maintenance is performed on an "as needed basis" or when a crisis occurs. A standardized approach would result in substantial savings in human and financial resources. A comprehensive and functional school facilities inventory is a must but it should also include the details (room by room). This is a problem that has contributed to facilities' deterioration.

I also agree that some effort should be put into long range planning and that new facilities should not be built based on over population or a general need for additional classrooms, but also on innovative approaches to teaching or to the environment. Stakeholders should get together and plan for the "classroom of the future" or "school of the future." Also, a standard prototype may not be the best type of building for a particular school. Planners should be flexible and consider other elements or factors before deciding on a new school facility.

Training and certification is a must and should be done on a continual basis.

Of course, the bottom line is, are there sufficient financial resources to accomplish all this? I do not believe OIA should shoulder the financial responsibility completely. The insular areas must be committed to this effort. I would not recommend implementing Phase 2 in an insular area if the area does not formally and fully commit to providing the financial and manpower resources to complete the work.

And finally there is the question of political will which is why OIA should play a more active role in the planning and implementation process to ensure that the insular areas stay the course.

Again thank you for the opportunity to comment. Please contact me if you have any questions.

Lydia Faleafine-Nomura
American Samoa Field Representative
Office of Insular Affairs
Department of the Interior
Phone: (684) 633-2800
Fax: (684) 633-2415

From: [Keith Aughenbaugh](#)
To: [Tom Fee](#); [Chow, Derek J POH](#); [Yoshimoto, Milton T POH](#)
Cc: [jonathan_dunn@ios.doi.gov](#); [Kraft, Faride A](#); [Tom Bussanich@ios.doi.gov](#)
Subject: Re: OIA School Condition Study Pre Final Report
Date: Thursday, January 27, 2011 7:07:35 PM

A very good draft report on your efforts along with ACOE. Very detailed, informative and well organized for easy reading and understanding.

I found the info on CNMI's PSS school inventory very useful in both the body of the report and the appendices.

It's certainly a good start for DOI/OIA to move forward on Phase 2. Today in Congressman Kilili Sablan's ceremonial swearing in here, he emphasized again the need to improve on the education and the schools here in the CNMI. And its very important that the insular governments buy into this plan and are involved as much as possible during Phase 2. Ultimately, DOI must come up with additional funding over and above existing CIP levels for new school facilities to make this exercise worthwhile.

Finally in the Executive Summary, I was initially surprised at the estimated budget of \$2.5M for Phase 2A and \$325K/year for periodic school reinspections. But considering its insular area wide and covers a 14 month period, the cost seems reasonable.

Keith

From: [Ottley, Basil](#)
To: [Tom Fee](#)
Cc: [Yoshimoto, Milton POH](#)
Subject: RE: OIA School Condition Study Pre Final Report
Date: Monday, January 31, 2011 11:58:20 AM

Greetings Tom,

I apologize for being a bit tardy. I reviewed report and you did a great job identifying and concisely detailing what we observed in the Virgin Islands. I greatly appreciate your emphasizing the need for OIA to manage expectations and to have important internal discussions with regard to "what is next". You also properly highlighted the need to invest in building the capacity of local facilities management assets in order for OIAs effort to have long term sustainability and impact. The strategy you outlined for Phase 2 makes sense even to an untrained observer like me. I, of course, lean on the strategy of incorporating local talent into the effort.

I haven't reviewed the supporting documents, but I will attempt to do so later in the week. The report covers all of bases and I have nothing substantial to offer. Well done.

I look forward to supporting you and the project in Phase 2.

Regards,

Basil

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