

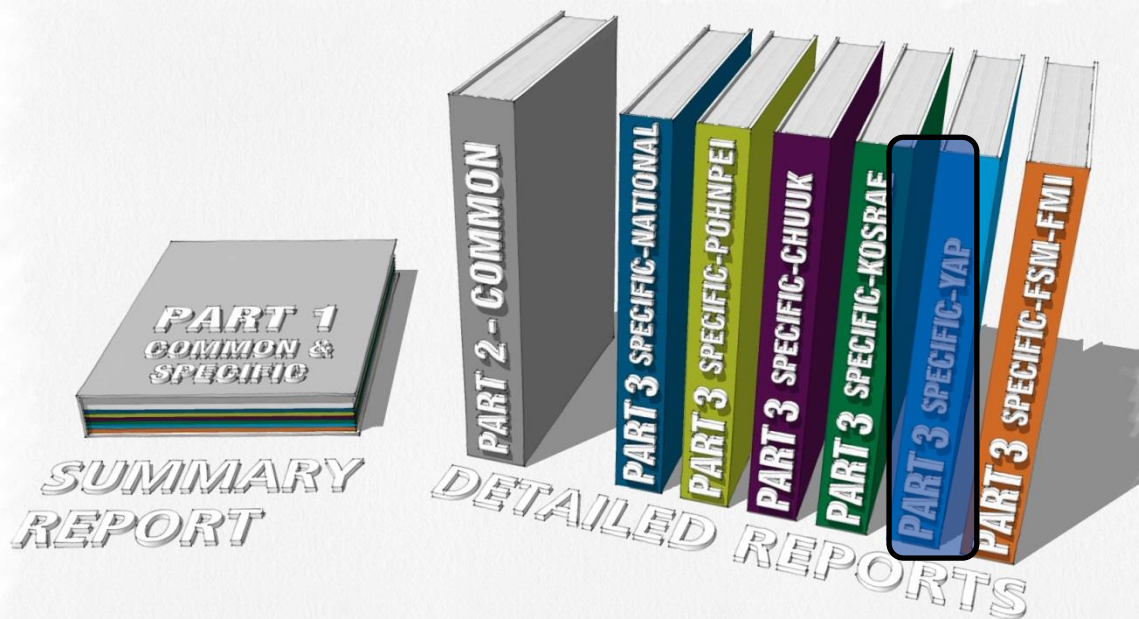
Report

College of Micronesia - FSM Space Utilization and Facilities Master Plan Study, Part 3 - Detailed Report for the Yap Campus

Prepared for the College of Micronesia - FSM

Prepared by Beca International Consultants Ltd (Beca)





28 February 2014



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Action	Name	Signed	Date
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1 Yap Campus Development

1.1 Yap Campus 2013



The Yap campus is located on 7 acres adjacent to the Yap High School. The campus incorporates CRE-Research and extension as well as Gear Up initiatives.

The Fall 2013 Yap campus enrolment (headcount) is 195. The maximum number enrolled occurred in Fall 2009 and Fall 2011 at 228 with this figure not reached since then.

A headcount of 263 has been provided by the space utilization study as the projected headcount in 2018. This 5 year projection figure has been used as the basis for the design figure for assessing future facilities requirements.

No.	Building Description	Remarks
A	Administration building	
-	Classrooms	
-	Bookstore	
B	Computer Lab	

No.	Building Description	Remarks
C	CRE Building	
D	Science Laboratory	
-	Library	
-	Science Lab	
E	Student Building	New building - opened after completion of the study
F	Classroom Building	New building - opened after completion of the study
G	Vocational Building	On leasehold land
H	Student Open Lounge	
J	Restrooms	On leasehold land

1.2 Long Term Vision

The Yap campus will have facilities to support the following:

- A recognisable campus center through the implementation of a structured campus landscape plan
- A strengthened community interface and use of the main entry buildings (LRC, computer lab)
- Renewable energy and incorporate sustainability measures
- Buildings that have a reduced maintenance and operational cost through design and selection of materials

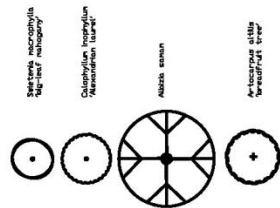
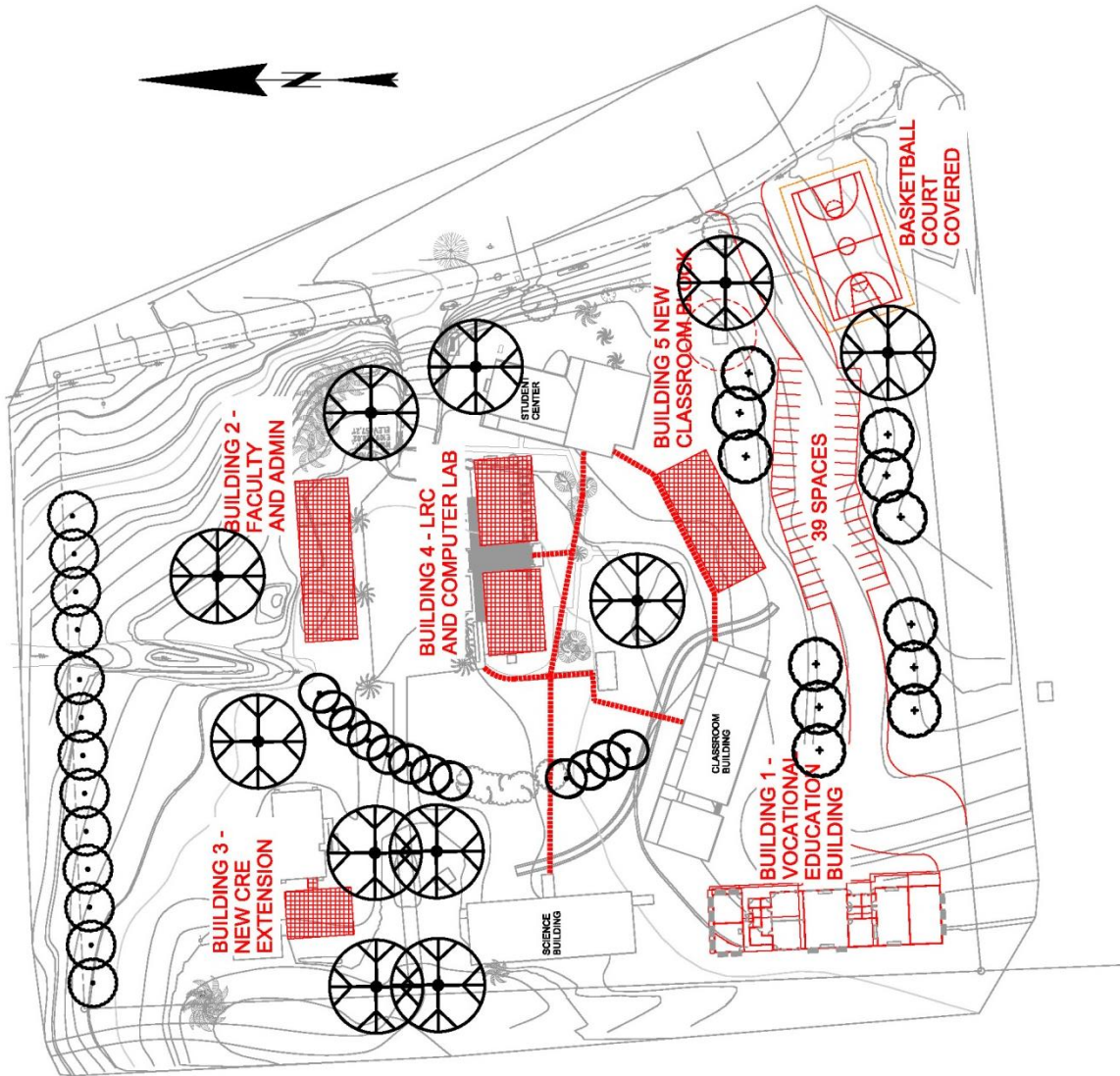


Key moves to achieve this vision

1. New VOCED building including shops, classrooms and including the site maintenance facility. This facility will be designed with multipurpose classrooms that allow for future educational or curriculum changes. It will also incorporate design measures that minimise the use of mechanical cooling. Allow for new entry onto the site and sealed road access to the new VOCED building
2. Provide a defined space for a volleyball/ basketball court adjacent to the Student Center. Small study huts interspersed with trees to provide shaded study areas creating an edge to the central campus area
3. Adjacent to the recreation area provide a student car parking area
4. Pave the desire lines between main building access points
5. Implement a coordinated landscape plan with feature trees to reinforce the center of the campus, the boundaries and highlight entry points
6. Provide for dedicated faculty space on site with the ability for one on one discussions to provide the feedback required to achieve positive student learning outcomes.
7. Provide a dedicated administration building on the edge of the campus and in close proximity to the main entry
8. New Learning Resource Center with a separate computer lab building.
9. Extension to the CRE-Research for CRE – Extension or the provision of space within the existing Yap campus building envelope for CRE – Extension.

The following plan depicts the proposed layout with the new buildings identified in red. The accommodation schedules listing the functions and areas for the spaces within these buildings are contained in Chapter 3.4.2.

The stages to reach this long term vision are described in the staging plans and the program at the end of this chapter



1.3 5 year period – to 2018

5 year period to 2018

- 01 Formed paths providing direct connection between buildings through the centre of the campus
- 02 Refit computer classroom for combined upward bound and computer lab
- 03 Access to boundary carpark - southern boundary
- 04 Fence around German tower
- 05 New VOCED building and maintenance facility
- 06 Create hard court area near Student Services building, 2 study huts and landscaping and/or upgrade in the current location
- 07 Implement a landscape plan across the campus

Further projects:

- Solar power generation



1.4 10 year period – to 2023

10 year period to 2023

- 08 Review condition of computer lab and demolish based on condition assessment
- 09 New administration and faculty building on computer lab site
- 10 Demolish administration building
- 11 New LRC and computer lab on previous administration site
- 12 New CRE extension to CRE building (or repurpose existing available space onsite)



1.5 Long Term Vision – beyond 2023

Beyond 2023

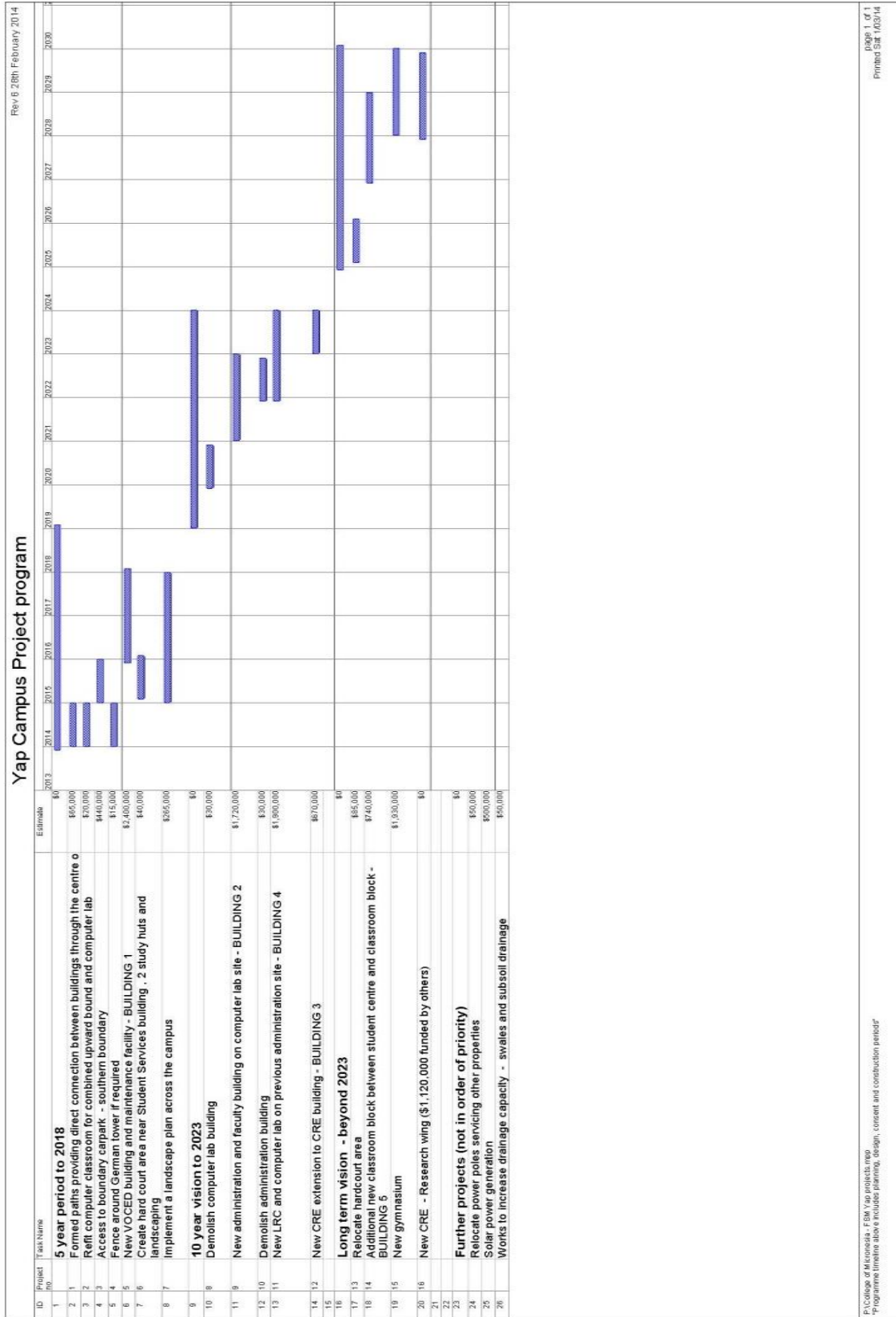
- 13 Relocate hardcourt area
- 14 Additional new classroom block between student centre and classroom block
- 15 New gymnasium
- 16 New CRE - Research wing (funded by others)

Further projects (not in order of priority)

- Relocate power poles servicing other properties
- Works to increase drainage capacity - swales and subsoil drainage



1.6 Development Staging and Program - Implementation



2 Educational Component

2.1 Key Considerations

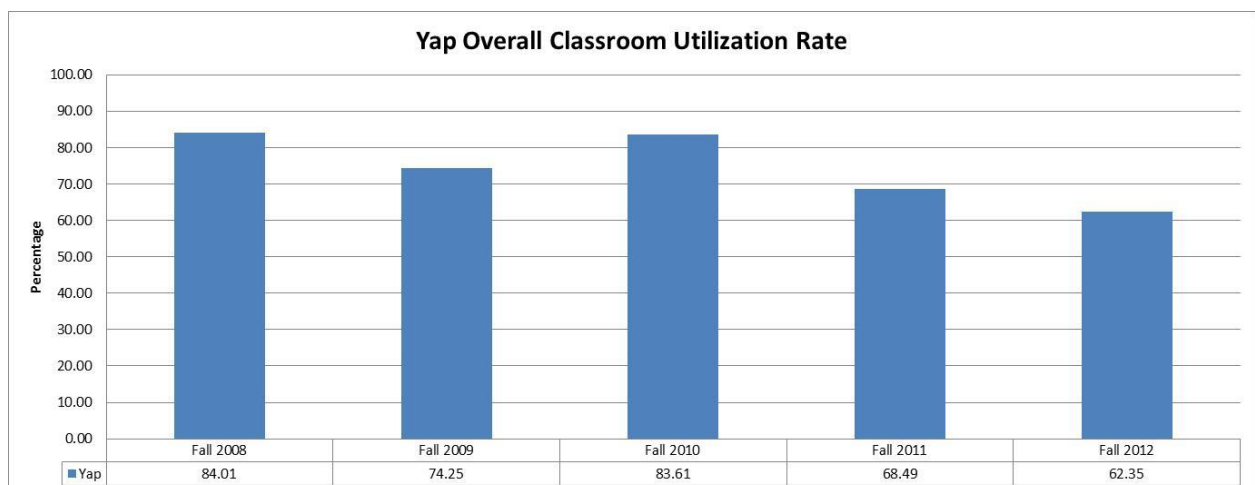
- Yap shows the greatest variability between classroom utilization levels (low-to-moderate) and utilization rates (high-to-low) among the six campuses. This is in part due to use of temporary classroom space and the construction of new classroom space within the study period. Classroom use is best described as moderate throughout the study period (see Tables 2.2.1 and 2.2.2).
- These data indicate an effective utilization of existing capacity. Additional construction now coming on line positions the Yap campus well throughout the ten year planning horizon.
- Enrolment projections suggest a trend of continued growth through 2023 (see Chart 2.2.3). Enrolment could quickly return to the peak levels of 2011. Recent construction will mitigate the effect of sustained growth through 2023 and should not result in high classroom utilization.

2.2 Space Utilisation

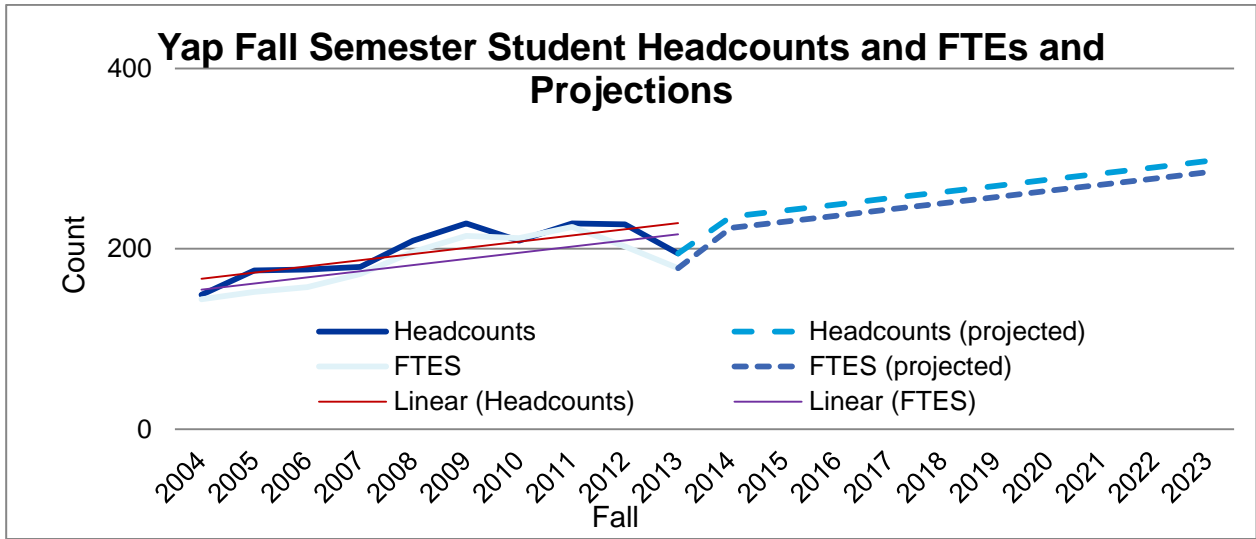
2.2.1 Yap Campus Utilization Levels (2008-2012)

High (>75%)	25%
Moderate (>66%)	25%
Low (>50%)	25%
Underutilized (<=50%)	25%
Total	100%

2.2.2 Yap Overall Classroom Utilization Rate



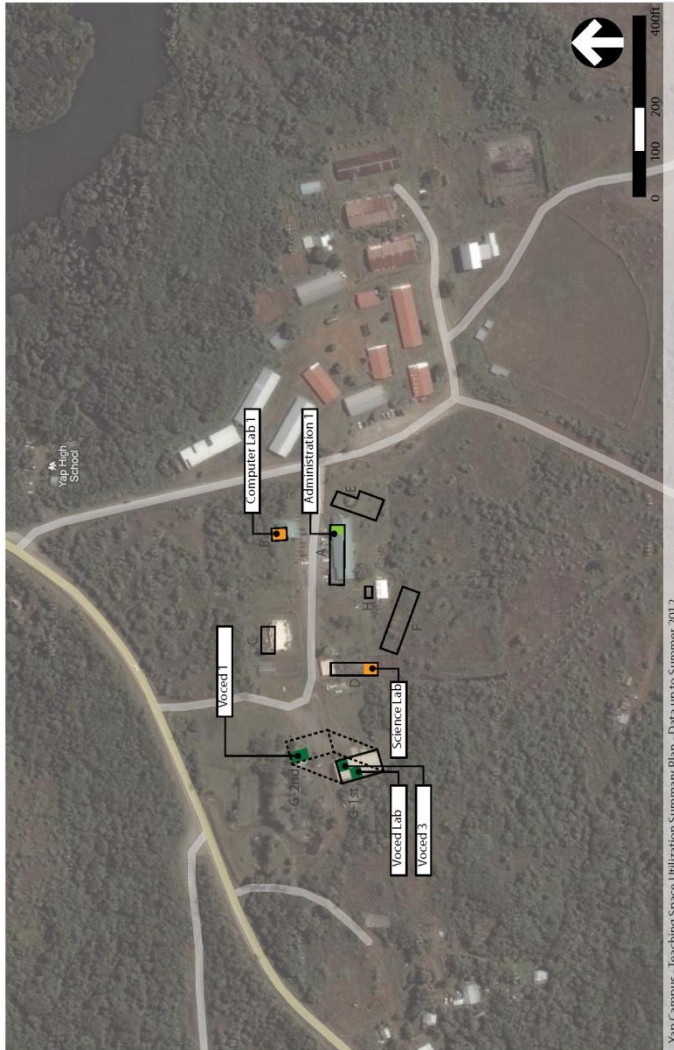
2.2.3 Yap Campus Historic and Projected Enrolment Trends



Actual Values										
Semester	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Headcount	149	176	177	180	209	228	209	228	227	195
FTE	144	152	158	172	197	214	212	224	203	178
Projections										
Semester	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023
Headcount	236	242	249	256	263	270	277	284	290	297
FTE	223	230	237	244	251	257	264	271	278	285

2.2.4 Space Utilisation Summary Plan

Yap Campus



LEGEND
(As per utilization based on room capacities)

- High (> 75%)
- Moderate (> 66%)
- Low (> 50%)
- Underutilized (<=50%)
- Not timetable

No.	Building Description
A	Administration Building
B	Computer Lab
C	CRE Building
D	Science Laboratory
E	Student Center Building
F	Classroom Building
G	Vocational Building
H	Student Open Lounge

Yap Campus - Teaching Space Utilization Summary Plan - Data up to Summer 2012

3 Spatial Review

Key Points for the Long Term Plan

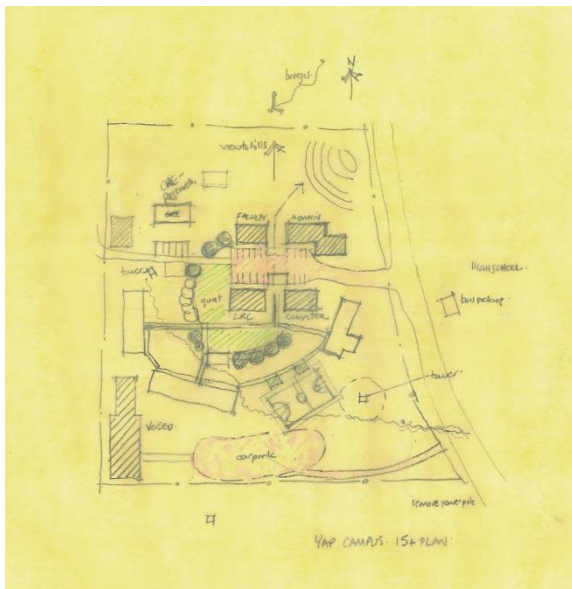
1. Make the best of the natural setting in the future placement of buildings and planting
2. Provide spaces that enable study beyond the classroom particularly sheltered outdoor areas
3. Consolidate similar activities into activity zones on the campus
4. Provide for active recreation areas

3.1 Design Concept Plans

The design concept plans prepared during the site visit in August/September illustrate the option developed. They have been derived from a combination of the input received from students, faculty and staff, the site visit observation and key messages from the utilization study. These broad concepts show the design moves prior to project costing and evaluation against projects identified for all other campuses. Refer to Part 2 – Common Report for the full schedule of projects across all campuses.

The concept drawing considers the following inputs from the spatial review:

- Activity zones
- Range of people spaces on campus
- Circulation - pedestrian and vehicular
- Building and landscape character
- Infrastructure including energy efficiency



3.2 Focus Group Summary

3.2.1 Student focus group

A student focus group was held between 12pm and 1pm on Wednesday the 21st of August. This session provided an opportunity for students to discuss positive features of the campus and any issues with regard to facilities on site.

A one page question outline was provided as a prompt for discussion. This sheet provided an opportunity for students to leave any further comments.

Positive attributes commented on was the cleanliness of the campus.

Issues raised in order of priority were;

1. Need covered walkways “When it rains it is hard to walk between buildings especially with laptops”
2. Need more covered outdoor space of different sizes “When it rains everyone crowds into the covered administration area” There was a comment that there are no quiet outdoor covered areas where small groups or individuals can study.
3. The library gets crowded especially when it is also used for classroom research groups
4. Need for quiet study space where can do individual study and also for small groups
5. Need for a basketball court could be outdoor – commented that this would be used by both male and female students, need a gymnasium in the long term with volleyball and tennis
6. Need for clearly designated areas where students can gather - areas where you can make more noise and areas that are clearly for quiet activities
7. Need to be able to access bathrooms (note this comment was made prior to the new classroom building and student center opening) so issue is likely to be resolved once these are in use.
8. Student car parking area

Feedback directly gleaned from the questionnaires had the following comments:

- Places to sit and study including huts
- A room or building for tutors only
- The buildings are not well organised, especially how the buildings are arranged
- Transport to and from the campus is poor, a bus would solve most of the issues related to this
- More space for tutoring
- More computers
- More cashiers at the snack shop
- More places to hang-out
- More parking – with staff/faculty and student parking separated
- Covered concrete path connections between all buildings
- “The Voc-ed building makes me feel like I’m in a mechanic shop or dumpster”.
- *Minimise the inside chewing and spitting*
- A cafeteria

- The 'veranda' is too small. Need large student lounge
- Fences to keep public outside the campus
- Fulltime snack shop cashier
- Pave parking areas all the way down to the main road.
- More seating
- Walk between classes is too long
- Outdoor areas for study when it rains
- *Shoes get taken from outside the library*
- The road up to the Voc-Ed building is very uneven and hard to traverse on foot
- Rubbish bins with lids in every class and two blackboards
- Power point for the veranda area
- More seats and tables for outdoor study
- Quiet spaces needed for study
- More parking
- Bigger library
- Basketball court
- More computers
- Covered walkway from the car park
- Gym
- Muddy footpaths
- Student area near the building
- Shower room needed
- Outdoor shaded areas
- Cafeteria

3.2.2 Faculty Staff focus group

A faculty staff focus group meeting was held between 4pm and 5pm on Wednesday the 21st of August. A similar format was followed to the student focus group. Six full time faculty staff attended.

Positive attributes commented on was the new classroom buildings that would resolve issues with quality of teaching spaces.

Issues raised in order of priority were;

1. Quality of the teaching space for VOCED
2. Lack of covered walkways - comment was made on the National campus walkways and how these have changed the campus
3. Lack of a faculty building where students could come and have one on one meetings with faculty staff. Also missing out on the collegial environment by being spread across the campus. Faculty located in VOCED are remote from the rest of the campus and hard for the students to access easily
4. Desire for dedicated car parks
5. Nowhere students could recreate - need for a basketball court
6. Library is not large enough to hold students studying as well as visiting class groups.
7. Need to be able to take groups out on site visits - could be two mini vans for flexibility

8. Not enough seats provided for students to sit on outside

3.2.3 Staff focus group

Two half hour focus groups were held on Thursday 22nd of August. A similar format was followed to the student focus group. The total number of staff attending the session was ten.

Three issues raised in order of priority were;

1. Disabled access to all buildings
2. Provision of a basketball court/ volleyball court to enable students to participate in leagues and to foster campus belonging and representation of the College in public. Assist in encouraging students to stay on site if there was opportunity for recreation.
3. Replacement of the VOCED building – perceived as substandard learning environment

Other items raised not listed in order of priority were;

- Covered access
- Parking for staff and students currently a “free for all”
- No alternative shade areas to the Kuyong
- Ability to recharge laptops outside
- The standard of the second entry from the main road
- Security on site - fences to the perimeter
- Provide a place for the security guards to shelter sometimes – “provide for them as they look after us”
- Language laboratory required
- Centralised timing and bell system so all the campus runs to the same timeline
- Centralised library with opportunity to be made available to the public after hours – outreach to the community
- Provide facilities for P.E. classes – could be a covered roof

Staff questionnaire feedback:

- Covered concrete paths
- Playing area away from Learning Resource Center (LRC) and classrooms
- LRC needs work room and storage room, space for group work and quiet individual study
- Bigger reading and shelving areas
- Teaching room to use when class is in the library
- Shaded areas for students to sit between classes
- Cafeteria
- Fences – for perimeter security
- Main road to campus Voc-Ed building is very bad, pedestrian route needed
- More parking
- The grounds to provide for student outside activities
- Linking paths between buildings
- Gym
- Bigger offices
- Separate parking into staff and student
- Buildings too small for all – offices and classes
- Air-conditioning not working that well in all classrooms
- Lighting and windows/ventilation not working so well in all rooms/buildings

- Meeting facilities for all campus users to meet in one place, particularly on rainy days
- Sport facilities
- Study hall building
- Locker rooms

Key issues raised in the Focus Groups to inform the development strategy

1. Facility issue – the quality of the VOCED building was an issue particularly the use of the upper level as a faculty area and the health and safety issue of access to classrooms through the shop area
2. Spatial issue - common to more than one group was the lack of space for small groups to study, quiet study space, the ability to have one on one counselling with faculty.
2. Infrastructure issue – the need for additional parking stalls and a place where students could park their cars.
3. Site layout issue - making the most of the current setting of the campus with the continued use of landscaping planted in the right locations was another important point. Providing concrete paths on the access routes walked between buildings (ideally covered) was raised by more than one group
4. Recreation issue – no area on site for active recreation was raised by more than one group – this is important as it is part of a whole campus life experience

3.3 Spatial Analysis

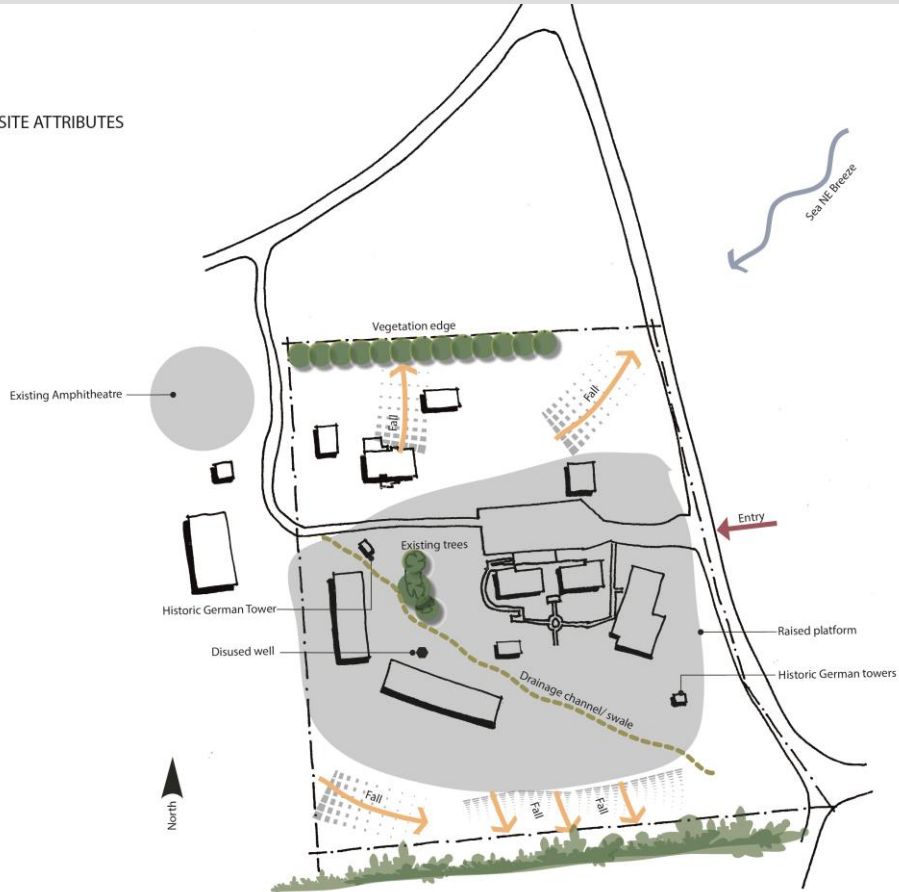
A review of the existing components that contribute to the physical environment and the look and feel of the campus are outlined in the following tables. Divided into different aspects these include the contextual response to the site, activity zones, building function and form, open space and circulation. This analysis forms one of the inputs into the concept development and project identification.

Context and response – Identifying the existing site features

Key attributes

- Two entries onto site
- Generally flat with a feature amphitheatre area in the north western corner
- Drainage channel through the center of the site
- Landscaped areas especially at the entry are actively cared for
- Two historic German towers on site (these will require structural review and to be fenced off if identified as a hazard)

SITE ATTRIBUTES



Generally level site - an asset in the Center of a campus



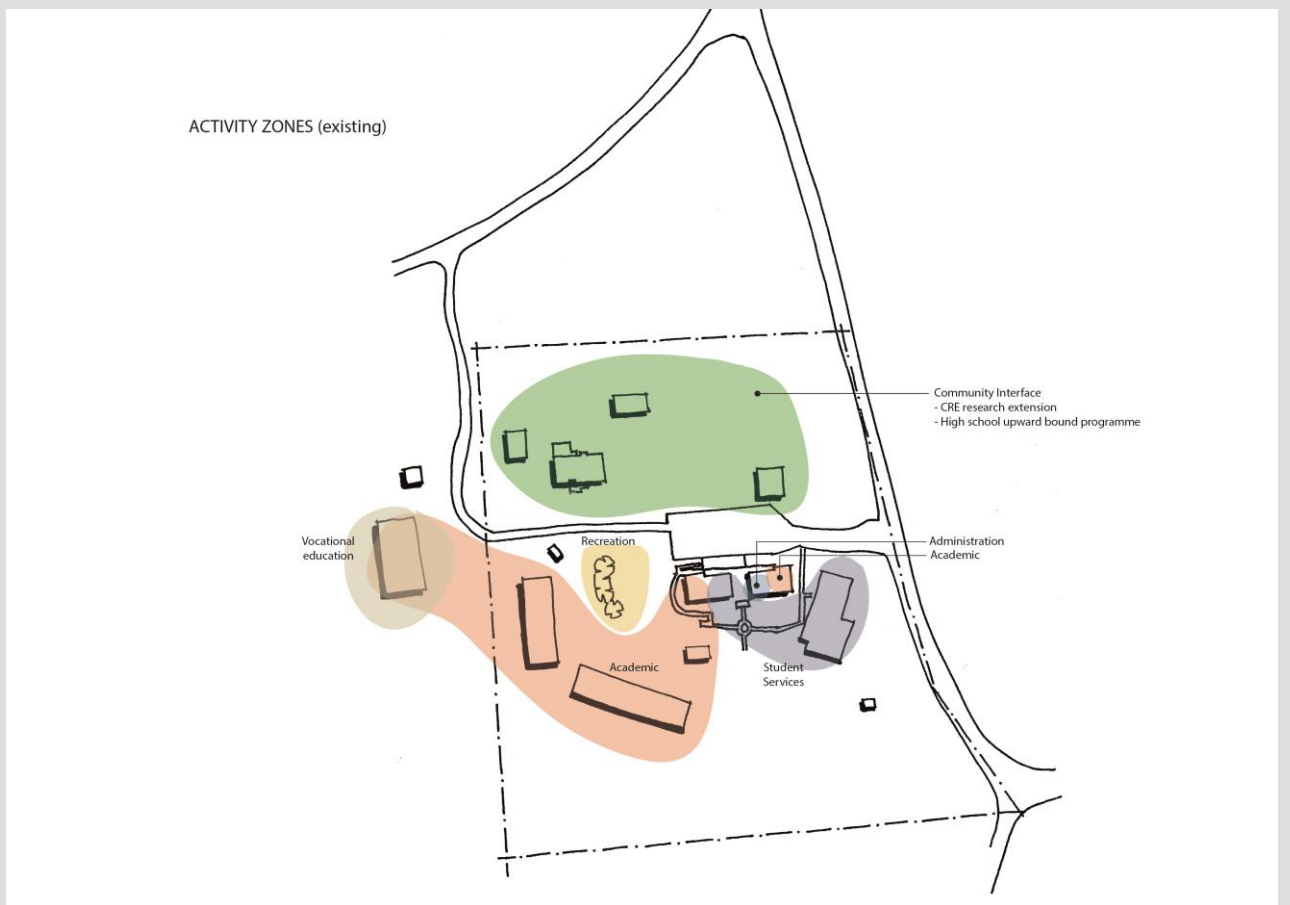
Drainage channel through the Center of the campus - landscape treatment and pedestrian access across needs to be considered

		
<p>Historical German tower concrete support</p>		<p>Existing feature planting are an asset areas futher to the administration entry area</p>

Activity zones – grouping areas with common functions together

Existing (refer to diagram)

- Academic area is in the center of the campus (coloured red)
- Community accessed buildings are located together at the eastern end of the site (coloured green)
- Student services are spread throughout the campus (purple)



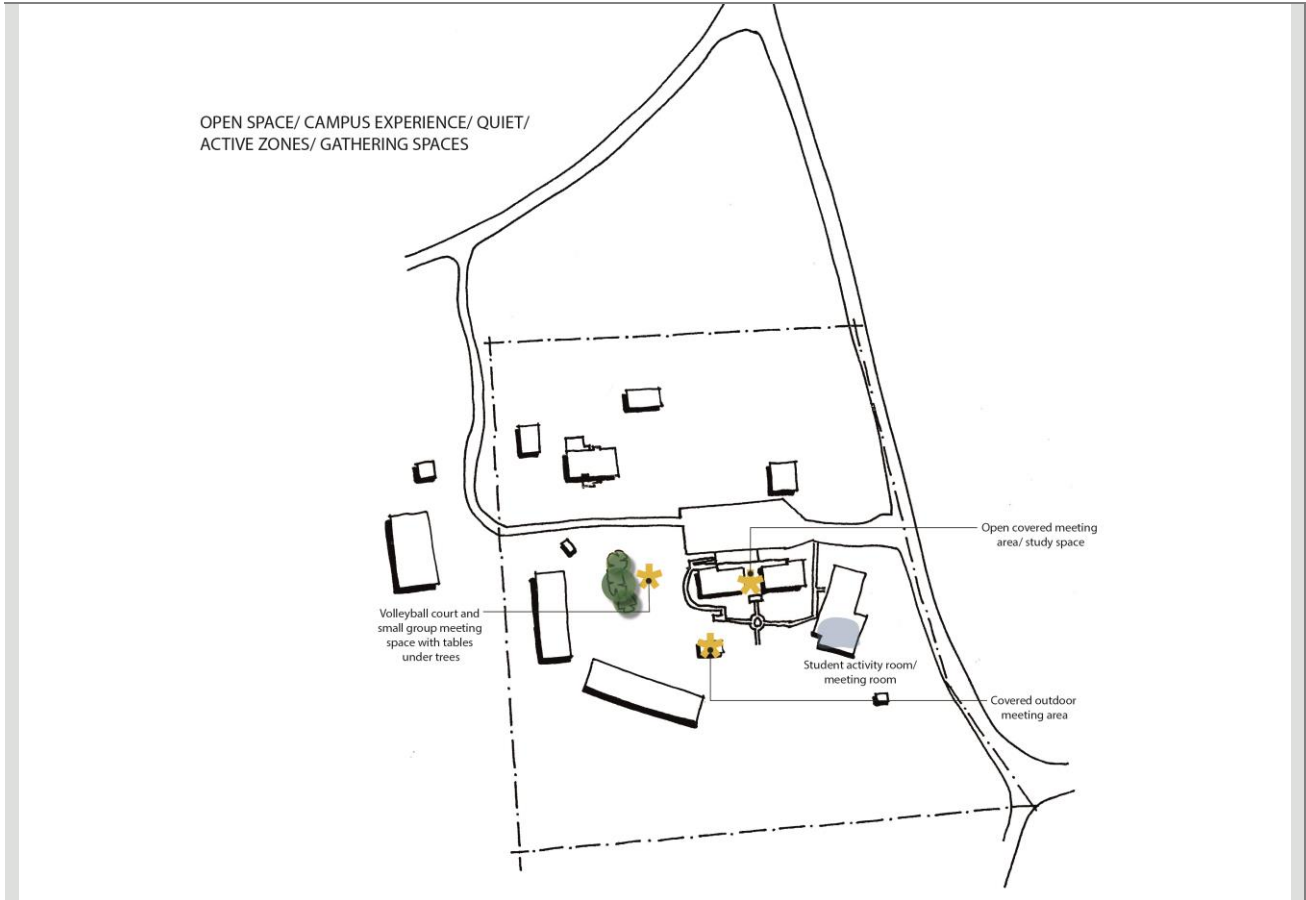
Points to consider in future planning

- Co locate student services - outdoor recreation, car park and indoor services
- Create a quiet zones and active zones on site



Types of people spaces – individual, small groups or communal gathering spaces

- There are a range of spaces to meet with small group areas being one area where more spaces could be provided
- Student services space provides a new amenity for the campus



Points to consider in future planning

- Increase number of outdoor study areas
- Co locate quiet areas with Learning Resource Center in the long term
- Replicate the successful outdoor covered space in the administration building to future building design



The covered area in the middle of the administration area captures cooling north-eastern breezes



High school bus shelter could be replicated on site for study huts adjacent to recreation areas



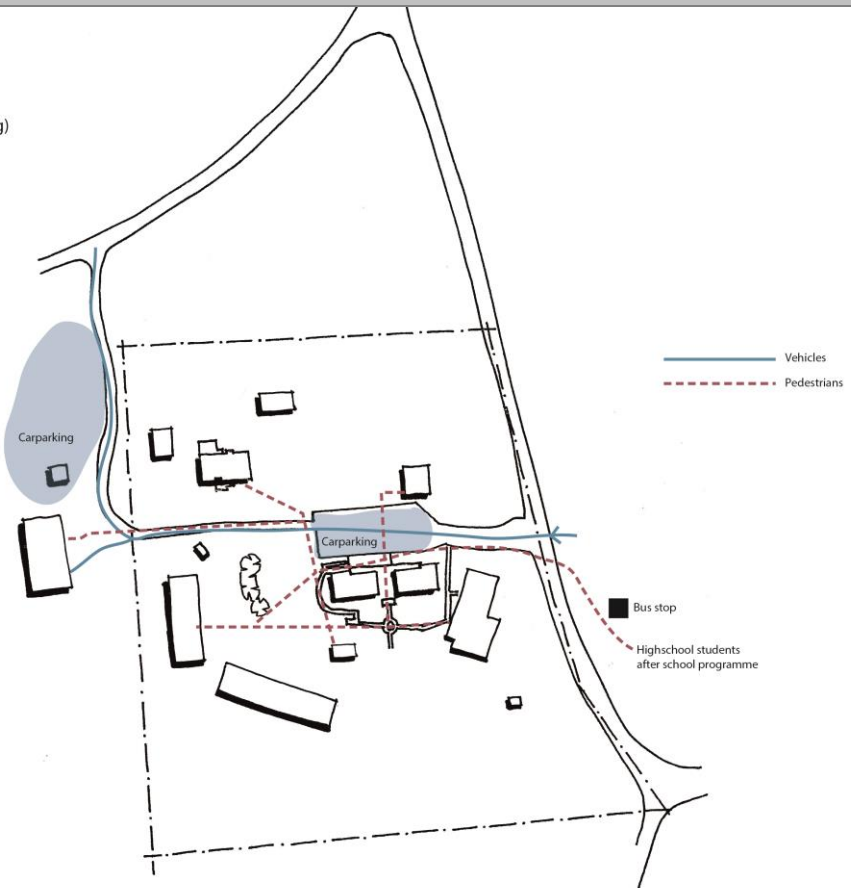
Provide further trees - areas for small groups to meet on site



Potential for volleyball areas with surrounding trees for spectators – example from the National campus

Circulation – the way vehicles access the site and how pedestrians move around the site

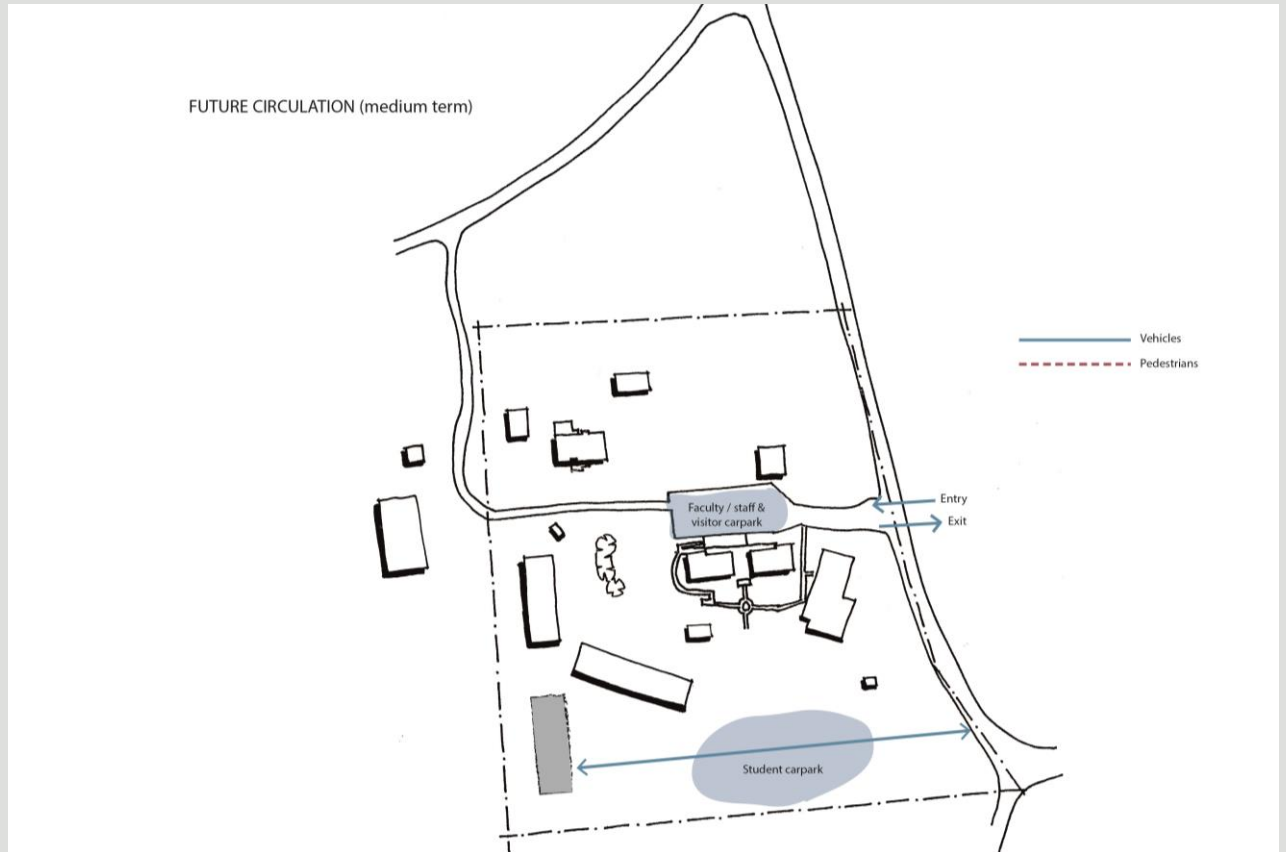
CIRCULATION (existing)



- Gaps in paths and pedestrian connections between buildings
- One main car park area with overflow parking on leased land area

Points to consider in future planning

- Provide a dedicated student car park
- Provide pedestrian paths on direct lines between buildings
- Consider covered pedestrian paths in the long term – connect the northern face of the classroom buildings with covered walkways



Provide pedestrian connection across this car park and designated car parks



Extend covered access in the long term when all perimeter classroom buildings are completed

Building and landscape character – look and feel of the campus

- Simple building forms around a flat central campus area
- Clear layout with academic buildings located in a radial layout forming an edge to the open space



Existing landscaping provides a positive outdoor space between buildings



Landscaping can be extended across the site to new building areas working to a structured landscape plan

Points to consider in future planning

- Provide a clear landscape and open space structure plan to define the campus edges and tie the spaces and buildings together as a whole
- Consider a two storey building form at the entry to provide hierarchy across the campus

Infrastructure - the services that enable the campus to operate

Points to consider in future planning

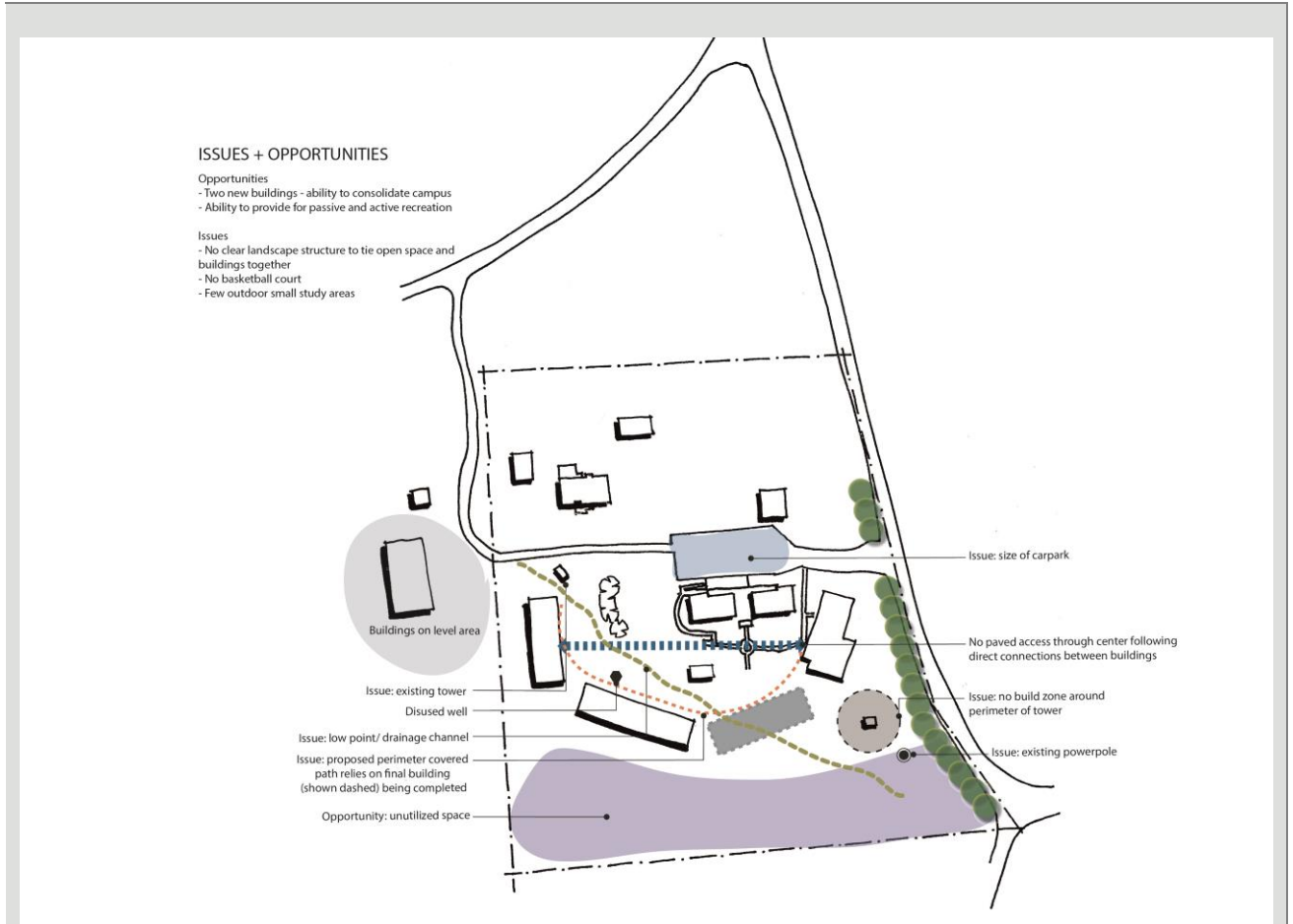
- Review services on site - relocate power supply to others in the location of the proposed secondary access road onto the campus



Existing power pole in the proposed path of the access road





Use existing roof areas on new buildings for addition solar power





3.3.1 Existing building profile and future planning considerations

Building	Outline
<p>A – Administration building</p>  <p>Points to consider in future planning</p> <p>Administration services could be moved out of the Center of the campus as long as it is close to main entry and visitor car parks</p> <p>This building has a very high renewal & maintenance cost over the next 30 years (27% of Yr. 1-10 renewal budget & 100% of full replacement cost over 30 years) making it uneconomic to renew/maintain.</p>	<p>Building A is located at the entry to the campus on the southern side of the car park.</p> <p>It is the first building that visitors approach and contains administration and library as the main functions. These functions are separated by a covered elevated entryway which acts as a gathering place for students, location of maintenance and security staff. This area catches the breezes and allows students an area for students to wait for pick up drop off. The opportunity for staff faculty and students to all be in this space appears to suit the campus of this smaller size and may assist in the collaborative feeling on campus noted on the site visit.</p> <p>Location for its function – proximity to entry is valued</p> <p>Quality and suitability of spaces for its function – Contains some small and larger spaces and has potential to retrofit for other uses</p> <p>Disabled access - side access ramp provided</p> <p>Teaching spaces – One teaching space identified - Administration 1 – 440ft²</p> <p>Amenities, toilets - 2 mens WC , urinals; 2 womens, 1 unisex disabled WC</p> <p>Building condition points :</p> <p>Building age – 15 years, late 1990s</p> <p>General floor subsidence issues required replacement of steel foundations - medium term fix, long term this function could be located elsewhere.</p>
<p>B- Computer lab</p>  <p>Points to consider in future planning</p> <p>Consider removing this building to enable a future building to be located in this key entrance location</p>	<p>Building B is currently a computer lab with rows of computer desks and an IT office. The current server looks to be located in this building – to be relocated move to the new classroom building.</p> <p>Location for its function – Redundant use as this function is now located in the new classroom building completed in 2013</p> <p>Quality and suitability of spaces for its function – The building could be utilized as a classroom or computer study space. It has been identified as a potential Gear Up room for use outside of school hours</p> <p>Disabled access - ramp access into the building - require disabled connection to the car park however</p> <p>Teaching spaces – At the time of the study utilised as a teaching space</p> <p>Amenities, toilets - Nil</p> <p>Building condition points - Repair corroded reinforcing steel and concrete spalling immediately. Treat insect damage and replace decayed soffit as required.</p> <p>Building age -13 years, 2000</p>

Building	Outline
<p>C - CRE Building</p> 	<p>Building C is the CRE Research building with two laboratories and associated offices.</p> <p>Location for its function – Well located on the edge of the campus with space around for outdoor research</p> <p>Quality and suitability of spaces for its function – Follows required template</p> <p>Disabled access - Ramp access at the rear of the building</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - 1 men's and women's WC provided</p> <p>Building condition points - Targeted regular maintenance and cleaning. Replace roof immediately.</p> <p>Building age -12 years , early 2000s</p>
<p>D - Science Laboratory</p>  <p>Points to consider in future planning</p> <p>Future location of the Learning Resource Center could move to a location closer to the public entry area for more access by the community</p>	<p>Building D is a building with the science laboratory and the Learning Resource Center</p> <p>Location for its function – Well located on the edge of the academic zone</p> <p>Quality and suitability of spaces for its function – The learning resource Center is small for the size of the campus roll</p> <p>Disabled access - ramp access to the building but require a path beyond this to connect to other buildings</p> <p>Teaching spaces – one science classroom 810sqft</p> <p>Amenities, toilets - 1 men's WC, 1 urinal; 2 women's WC</p> <p>Building condition points - Targeted regular maintenance and cleaning. Review paint on metal balustrades and repaint if corroded.</p> <p>Building age – 4 years, mid 2000's</p>
<p>E – Student Center Building</p>	<p>Building E is a newly completed building with a large student area, bookstore, nurses area and counsellors spaces</p> <p>Location for its function – Well located on the edge of the academic zone</p> <p>Quality and suitability of spaces for its function – Well designed spaces and adjacencies – feedback and use as a basis for design of student services facilities on other campuses</p> <p>Disabled access - Disabled access and facilities within the building - require a path beyond the</p>

Building	Outline
 <p>Points to consider in future planning</p> <p>Solicit feedback on energy use and functional layout to inform the design of student services facilities on other campuses</p> <p>Provide covered pedestrian access between buildings in the long term</p>	<p>building outline to connect to other buildings</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - 2 women's WC (one disabled access), 2 men's WC (one disabled access)</p> <p>Building condition points - Targeted regular maintenance and cleaning.</p> <p>Building age - 2013</p>
<p>F – Classroom building</p>  <p>Points to consider in future planning</p> <p>Solicit feedback on energy use and functional layout to inform the design of classroom facilities on other campuses</p> <p>Provide covered pedestrian access between buildings in the long term</p>	<p>Building F is a classroom building with 2 computer labs and 2 classrooms each 860sqft in size</p> <p>Location for its function – Well located creating and edge to the academic zone</p> <p>Quality and suitability of spaces for its function - Well designed spaces and adjacencies , feedback and use as a basis for design of student services facilities on other campuses</p> <p>Disabled access - Disabled access and facilities within the building - require a path beyond the edge of the building to connect to other buildings</p> <p>Teaching spaces – two classrooms, one computer lab</p> <p>Amenities, toilets - 1 women's WC (one disabled access), 1 men's WC (one disabled access)</p> <p>Building condition points - Targeted regular maintenance and cleaning.</p> <p>Building age - 2013</p>
<p>G – Vocational building</p>	<p>Building G is an existing vocational building with teaching spaces on the ground floor and faculty accommodation on the upper floor</p> <p>Location for its function – located on the edge of</p>

Building	Outline
 <p>Points to consider in future planning</p> <p>Provide external access to other spaces - no need to walk through the workshop to access classroom spaces Relocate the function onto the campus site in the short term</p>	<p>the campus on leased land</p> <p>Quality and suitability of spaces for its function – Access to classrooms is through the workshop area, access should be restricted to workshop users</p> <p>Disabled access - nil</p> <p>Teaching spaces – three classrooms - move to new classroom block in 2013</p> <p>Building condition points - This building has a very high renewal & maintenance cost over the next 30 years (40% of Yr. 1-10 renewal budget & 96% of full replacement cost over 30 years) making it uneconomic to renew/maintain. Carry out minimal maintenance (to protect against health & safety issues), run down and replace circa 2018 or before</p> <p>Building age – 40+ years</p>
<p>H – Student Open Lounge</p>  <p>Points to consider in future planning</p> <p>Rebuild when required in a location to suit the structured landscape plan</p>	<p>Building H is an open meeting area in the Center of the open campus area</p> <p>Location for its function – Well located in the Center of the open campus area</p> <p>Quality and suitability of spaces for its function – Allows for a range of uses</p> <p>Disabled access - nil</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - nil</p> <p>Building condition points - Targeted regular maintenance and cleaning. Treat rust and spot prime roof. Replace roof by 2023.</p> <p>Building age – 3 years, late 2000's</p>

3.4 Accommodation Review

A review of the COM-FSM standard spatial target has been completed. Where this COM-FSM target figure differs from the American Institute of Architects standard this is noted.

The spatial assessment summary in the shaded box at the end of the table outlines the additional space required. This area is incorporated into the new building accommodation schedules at the end of the chapter.

3.4.1 Facilities ratios

Item	Number
Number of students - Fall 2013	195
Number of faculty and staff (from general catalogue 2013 - 2014)	33
2018 design figure (informed by the projected headcount in the space utilization review – Chapter 2 of this report)	263

Item	COM-FSM standard target	Provided on Yap campus
Parking stalls	1 stall for each faculty, 1 stall for each staff member and 10% of students	<p>Aim is up to 39 faculty and staff parks and 26 student parks.</p> <p>67 stalls are shown on the layout – This is above the target figure of 65 spaces</p> <p>Adequate car parking provided</p>
Toilets	<p>Two indicators</p> <p>Aim is for toilet block at each teaching building</p> <p>From 2006 – 2012 strategic plan – 1 female toilet for every 30 students, 1 male toilet for every 40 students. Reference taken from American Institute of Architects 10th edition.</p>	<p>Assumption: no dedicated staff facilities so toilets are considered for staff and student use</p> <p>Target is based on higher than current number (230 staff and students). Assume 300 staff and students require 5 women's toilets and 4 men's toilets</p> <p>Number currently provided: 9 men, 10 women, 1 unisex accessible including the restroom building. Even with removal of the standalone restroom building adjacent to the Voc-Ed building will provide for 530 student headcount</p> <p>Adequate toilet facilities provided</p>

Item	COM-FSM standard target	Provided on Yap campus
Drinking water	Accessible drinking water	Provided as bottled water
Teaching space per person	25ft ² per student (AIA is 30ft ²) Refer to findings of the space utilization study	Four large classrooms at 800sqft Medium classroom 500sqft
Computer Laboratory	25ft ² per student (AIA is 40ft ²) (2.4msq)	Computer lab is approximately 875ft ² (room for 35 students) adequate space for 1:10 ratio Adequate space provided
Small group study / study carrells	25ft ² per student (AIA is 50ft ² for reading rooms)	LRC is approximately 1200ft ² .Assume 50% area for stacks = 600ft ² (room for 24 students), require space for at least 30 students to study (1:10 ratio) Require a further 150sqft
Shops/ vocational rooms	50ft ² per student (4.7msq)	
Private office	100ft ² per person (9.3msq)	Individual offices in the administration building are 100sqft Adequate sized space currently provided for current uses
Private office with meeting area	150ft ² per person (14msq)	Deans office is currently around 150sqft , Adequate space provided
Work station	60ft ² per person (5.6msq) Common filing area 60ft ² per person (5.6msq)	A schedule of faculty requiring workstations needs to be completed to ascertain parity across faculties. Occupy current spaces or spaces vacated by functions moving to new buildings.
Faculty work station with side chair	80ft ² per person (7.43msq)	Literature faculty area in the administration building is 200sqft, currently three work stations. Require space for seven faculty in the long term. Space is less that target figure - Require additional 400sqft for all faculty to be accommodated
IT space, server	Require 500sqft for a state campus -	250sqft provide in the 2013 completed

Item	COM-FSM standard target	Provided on Yap campus
room and area to fix machines	separate secure server room, IT office and area to fix computer equipment. Ideally an additional storage area adjacent if space allows	classroom building, need to identify further space for storage
Spatial assessment summary		Resource area in the administration area (600sqft) will provide for space for seven faculty is – proposed relocation in 2013 IT services - require storage space LRC require an additional 150sqft

3.4.2 Accommodation schedules – new buildings

Building 1 – Vocational education building		
No	Room name	Area (sqft)
1.01	Maintenance facility	1700
1.03	Furniture/ storage	80
1.04	Tool storage	80
1.05	Tool storage	80
1.06	Office	80
1.07	Office	80
1.08	Multi-purpose shop	1200
1.09	Electronic workshop	440
1.10	Electronic lab	440
1.11	Store	160
1.12	Office	160
1.13	Male Toilet	50
1.14	Female Toilet	50
1.15	Electrical cpd	40
1.16	Store	200
1.17	Cleaners cpd	40
1.18	Small classroom	440
1.19	Small classroom	440
	Subtotal - rounded	5760
	Circulation and wall thickness @15% due to access from covered walkway	860
	TOTAL (rounded)	6600

Building 2 – New administration and faculty building		
No	Room name	Area
2.1	Dean's Office	150
2.2	Administration	200
2.3	Conference room	300
2.4	Business Office	300
2.5	Financial Aid Office	300
2.6	Student Services Coordinator	200
2.7	Instructional Coordinator	200
2.8	Meeting room – one on one discussions	150
2.9	Faculty Offices (six faculty cubicals) 3@400	1200
2.10	Conference Room	300
	Subtotal	3300
	Circulation and wall thickness @20%	800
	TOTAL (rounded)	4100

Building 3 – New CRE Extension building		
No	Room name	Area
3.1	Extension area	500
3.2	Storage area for extension equipment	500
3.3	Offices (2 of)	200
	Subtotal	1200
	Circulation and wall thickness @25%approx	300
	TOTAL	1500

Building 4 – New LRC building and computer lab		
No	Room name	Area
4.1	Learning Resource Center - library including circulation counter	1500
4.2	Librarian office	200
4.3	Computer lab including AV viewing	1500
4.4	Male and Female Toilets	300
4.5	Disabled Restroom	40
4.6	Cleaners cpd	60
4.7	Electrical cpd	40
4.8	Storage	100
	Subtotal	3740
	Circulation and wall thickness @25%	900
	TOTAL (rounded)	4600

Building 5 – New classroom building		
No	Room name	Area
5.1	Classroom	300
5.2	Classroom	300
5.3	Classroom	300

Building 5 – New classroom building		
No	Room name	Area
6.4	Disabled Restroom	40
6.5	Utility Electrical Room	40
	Subtotal	980
	Circulation and wall thickness @20%approx	200
	TOTAL	1200

3.4.3 Building area changes over five year periods

Existing square feet (Fall 2013)	Remove buildings to 2018 (sqft)	Add buildings to 2018 (sqft)	Area in 2018
23,213	Voc-Ed building(5086) Restrooms (271)	Voc-Ed building 1 (6600)	24,456

square feet (Fall 2018)	Remove buildings 2018 – 2023 (sqft)	Add buildings 2018 – 2023 (sqft)	Area in 2023
24,456	Computer lab (1302) Administration (3180)	Admin and faculty (4100) LRC and computer lab (4600) CRE extension (1500)	30,174

square feet (Fall 2023)	Remove buildings post 2023 (sqft)	Add buildings post 2023 (sqft)	Area beyond 2023
30,174	CRE – research (1976)	New classroom block (1200)	29,398

4 Condition Assessment

4.1 Yap Campus Building Condition Review

4.1.1 Introduction

Beca International Consultants Limited (Beca) carried out an Asset Condition Assessment of the existing buildings and site infrastructure located on the Yap campus for COM in June 2013.

The purpose of this Asset Condition Assessment Report is to record the existing condition of the COM-FSM assets (buildings and site infrastructure) so that:

1. The indicative cost of operating the COM-FSM assets through a 10, 20 and 30 year life cycle is identified and,
2. Decisions to either renew/upgrade or to demolish/replace the existing assets can be made.

This Asset Condition Assessment chapter gives each asset an indicative condition grade, identifies the asset replacement cost, and the cost of operating (renewing and maintaining) them. This chapter read as part of the overall Facilities Study is intended for use as the base reference for campus planning decisions. It should be noted that the costs presented in this Asset Condition Assessment chapter assume that the existing assets will be renewed, refurbished and maintained (with the exception of some buildings which are demolished). Any buildings which are replaced by the current campus planning process (and subsequent changes in annual operating costs) are not included in this Asset Condition Assessment Report

The findings of this report are based on the on-site Condition Assessment conducted by Beca in June 2013. It should be noted that a visual assessment only has been carried out and that no in-depth investigations have been possible. No detailed structural or seismic strength investigations have been undertaken.

4.1.2 Scope of Condition Assessment and Key Outputs

The scope of the Condition Assessment covers 9 No. existing buildings (excluding minor support structures and buildings) and site infrastructure located within the Yap COM-FSM campus. The key tasks undertaken to complete this report include:

- The Yap campus was visited in June 2013 to photograph and record visual defects in the buildings and site infrastructure.
- Data gathering and making observations.
- Grading the condition of each building asset (against a pre-determined set of criteria) and collating this to establish an overall condition grade for each asset.
- Assess the physical condition of the built assets (i.e. buildings and site infrastructure). Establish baseline condition to enable Life Cycle cost analysis.

The key outputs of this report include:

- A general overview of the current condition of the assets.
- A condition appraisal of each building (with the exception of minor structures) and the site wide infrastructure – Refer Appendix 'B' – Asset Condition Assessment Dashboard.
- Site observations and records of the existing site infrastructure
- Estimate of the potential replacement cost of each asset.

- Estimate the Operational Cost (Asset Renewals plus maintenance) of the assets as they currently exist. NOTE: the Operational Cost contained in this Condition Assessment assumes that all current assets are retained and maintained. Alternative Operational Costs for the proposed campus re-development are noted separately in this overall report
- Provision of an indicative Maintenance and Asset Renewal Plan. This gives indicative regular maintenance activities, timeframes for asset renewals and estimated costs (Note: costs indicated for maintenance and asset renewals exclude escalation and should not be used for budgeting purposes). Refer to Appendix 'C' for details on the Indicative Maintenance and Asset Renewal plans.

4.1.3 Reference to Part 2 Detailed Report – Common to all campuses

Additional (and more general) information pertaining to the Yap Campus Asset Condition is contained in the “College of Micronesia – FSM Space Utilization and Facilities Master Plan Study, Part 2 Detailed Report – Common to all Campuses”. This report contains (but is not limited) to the following information;

- Scope of condition assessment and key outputs,
- Definitions,
- Methodology of condition assessment and information collection,
- Condition grading system and building elements assessed,
- Forecast operational costs,
- Escalation and economic assessment
- Results/findings and conclusions/recommendations.

4.1.4 Forecast of Operational Costs

The forecast Operational Costs have been prepared as follows;

1. Develop the Maintenance Cost Plan. This is the cost of annual routine maintenance and includes building washing, painting, repairs and maintaining building services (mechanical, electrical fire etc.). This cost has been established by multiplying quantities (e.g. wall area) by an appropriate \$/ft² rate for washing or painting. To this an allowance for general overheads (e.g. supervision, vehicle running expenses etc.) has been added.
2. Develop the cost of periodic element Renewals. From the condition grade assessment and amount of remaining life in the building element the date and cost of renewal is determined (e.g. a roof with 10 years life remaining has been budgeted for replacement in 2023). For the COM-FSM campuses the cost of renewals has been viewed over 10, 20 and 30 year periods.
3. The forecast Operational Cost is established (by adding annual maintenance and periodic element renewal costs). This is annualised or averaged over a 30 year period (i.e. the total operational cost over 30 years divided by 30. It should be recognized that for cash-flow purposes actual operational costs will vary from year to year (depending on the amount of actual renewals required in that specific year). Detailed monitoring and management of the operational cost cash flow on an annual basis will be required by COM-FSM.

4.1.5 Escalation

Escalation over a 30 year period of asset renewals and maintenance is a significant cost. Because of the significant impact of escalation two sets of cost, one which excludes escalation (i.e. present day 2013 costs) and the other which includes escalation have been presented at the main summary

level. Escalation has been assumed to be 3.4% per annum for the next 30 years. This is based on an assessment of historical data provided by Mundi (refer web-site address below);

http://www.indexmundi.com/federated_states_of_micronesia/#Economy

It is critical for long term funding purposes that the allowances for escalation are included in all budgets and funding applications.

4.1.6 Results/Findings, Conclusions and Recommendations

4.1.6.1 Condition Grade Assessment Results

The following is a summary of the condition grade of the building assets across the Yap campus.

Asset	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A - Administration Building			✓		
B- Computer Lab			✓		
C – CRE Building				✓	
D – Science Laboratory		✓			
E – Student Center	✓				
F – Classroom Buildings (New)	✓				
G – Vocational Building				✓	
H – Student Open Lounge		✓			
J – Restrooms			✓		
Site Infrastructure	N/A	N/A	N/A	N/A	N/A
Total	2	2	3	2	0

4.1.6.2 Campus condition grading summary plans

Yap Campus



LEGEND
(Summary of Building and Element Condition Grades)

- Very Good (0-20%)
- Good (20-50%)
- Average (40-60%)
- Poor (50-80%)
- Very Poor (>80%)
- Buildings shown crossed have a poor structural condition grade

No.	Building Description
A	Administration Building
B	Computer Lab
C	CRE Building
D	Science Laboratory
E	Student Center Building
F	Classroom Building
G	Vocational Building
H	Student Open Lounge

From our condition assessment of the Yap campus we observe the following:

1. Building A – Administration Building. The severe corrosion of the steel substructure and decay in the timber flooring makes this building, in our opinion, uneconomic to renew and maintain. We consider that minimum operational costs should be spent on this asset (i.e. carry out protection /health and safety remedial works only) and that the asset should be run-down and replaced in 2018 or before.
2. Building G – Vocational Building has very high renewal and maintenance costs over the next 30 years (40% of Yap Year 1-10 renewal budget and 96% of full replacement cost over 30 years). In our view this building is uneconomic to renew and maintain. We consider that minimum operational costs should be spent on this asset (with the exception of any protection /health and safety remedial works) and that the asset should be run-down and replaced in 2018 or before.
3. Refer to Appendix B – Asset Condition Assessment Dashboards for a summary of the asset renewal costs and the top five items, on each building or site infrastructure element, needing urgent maintenance, renewal or replacement
4. Targeted regular maintenance on all of the assets is required to extend their life. This applies to both the new (e.g. Student Center and Classrooms) and older buildings. A clear, well organised asset renewal and routine maintenance plan needs to be developed and this needs to be implemented. An indicative maintenance plan has been included in Appendix C.
5. Maintenance is being carried out but the current Operational budget (\$150,000 per annum for all of the six COM-FSM campuses) is insufficient to meet both maintenance and the periodic renewal of building element requirements. There is a significant amount of deferred asset renewals and maintenance which is increasing the amount of deterioration in the assets.
6. Unless the current Operational budget is increased the condition of the assets will continue to deteriorate and the number of buildings requiring replacement (and consequently additional capital replacement funding) will increase.
7. The Operational budget for Years 1-10 for the Yap campus is recommended to be in the order of \$US2.14M (\$214,000 average per annum). This equates to 3.7% of the estimated 2013 replacement value which we consider to be an appropriate allowance for operational costs
8. Regular monitoring and review of the asset renewal and routine maintenance plan needs to be carried out

4.1.6.3 Forecast Operational Costs Results

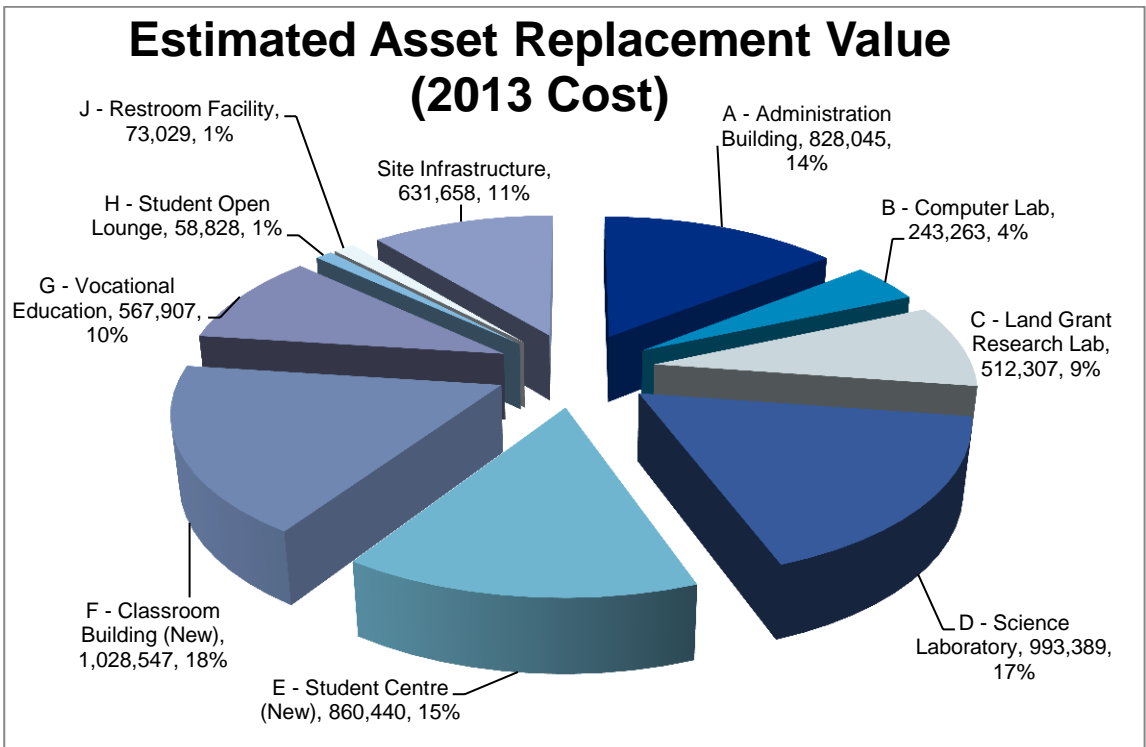
Outlined below are forecast operational costs split into 10 year sections over a 30 year period. Note that costs including and excluding escalation are identified. Funding of the operational costs should be based on the costs that include escalation.

Forecast Operational Costs

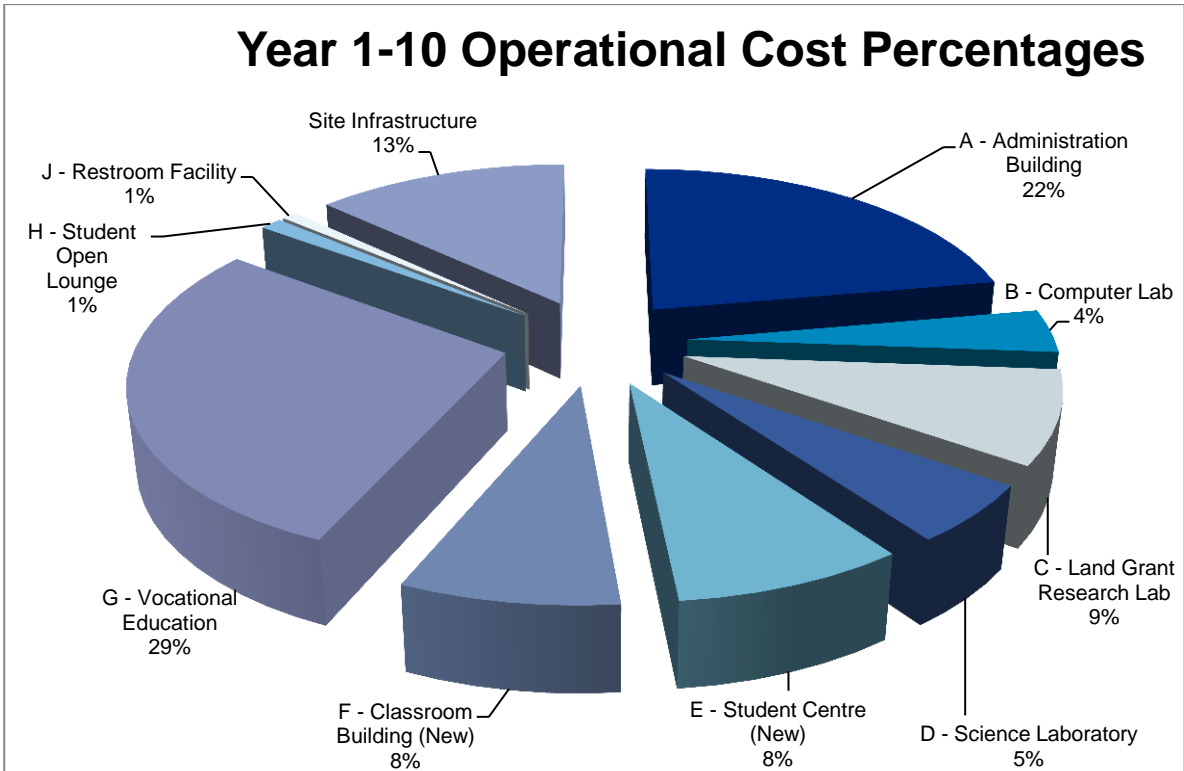
YAP CAMPUS			Year 1 - 10	Year 11 - 20	Year 21 - 30	Total 30 Year	Annualised	Total Year 1-10	Total Year 11-20	Total Year 21-30
Ref	Asset Description	Replacement Cost (\$ USD)	Asset Renewal Cost (\$ USD)	Asset Renewal Cost (\$ USD)	Asset Renewal Cost (\$ USD)	Asset Renewal Cost (\$ USD)	Total Operational Cost	Operational Cost (\$USD)	Operational Cost (\$USD)	Operational Cost (\$USD)
1.00	A - Administration Building	828,045	207,441	285,778	341,074	834,293	33,410	263,441	341,778	397,075
2.00	B - Computer Lab	243,263	25,019	58,879	95,128	179,027	8,182	47,166	81,026	117,275
3.00	C - Land Grant Research Lab	512,307	68,038	220,204	106,747	394,990	16,457	100,943	253,109	139,652
4.00	D - Science Laboratory	993,389	17,976	54,962	335,484	408,422	18,102	62,855	99,841	380,363
5.00	E - Student Centre (New)	860,440	38,987	93,982	260,182	393,151	19,293	100,872	155,867	322,066
6.00	F - Classroom Building (New)	1,028,547	29,487	94,755	260,207	384,449	19,338	94,716	159,984	325,436
7.00	G - Vocational Education	567,907	300,416	120,962	126,437	547,815	22,065	338,463	159,010	164,484
8.00	H - Student Open Lounge	58,828	10,204	316	0	10,520	696	13,654	3,766	3,450
9.00	J - Restroom Facility	73,029	2,391	40,072	14,779	57,242	2,614	9,447	47,128	21,835
10.00	Site Infrastructure	631,658	35,420	182,070	263,700	481,190	28,010	155,126	301,776	383,406
TOTALS EXCLUDING ESCALATION		5,797,414	735,379	1,151,982	1,803,738	3,691,099	168,167	1,186,683	1,603,286	2,255,042
Escalation Allowance			161,327	808,293	2,477,490	3,447,111	193,894	951,229	1,598,195	3,267,392
TOTALS INCLUDING ESCALATION (3.4% per annum assumed)			896,706	1,960,275	4,281,228	7,138,210	362,061	2,137,912	3,201,481	5,522,434

The forecast Operational Costs (including escalation) as outlined in the above table are suggested for funding and budgeting purposes. Annualised costs are the total operational costs spent over a 30 year period (divided by 30).

The estimated replacement cost (2013 costs) of the COM-FSM assets on the Yap campus is approximately \$US5.80M (excluding land, loose furniture and equipment). Outlined below is the breakdown of the estimated asset replacement cost for the campus.



The Operational Cost and Percentages table (below) highlights where COM-FSM needs to invest in asset renewal and routine maintenance to maximise the life of the existing capital assets, to prevent deterioration and to avoid additional capital replacement expenditure.



The Operational Cost percentages diagram above that the A- Administration building (22%) and G- Vocational Building (29%) take up a total of 51% of the Yap Operational cost budget, but together they only amount to 24% of the estimated replacement value of the Yap assets. The operational cost to estimated replacement value ratio highlights that these two buildings are uneconomic and should be replaced as soon as possible to reduce high on-going operational costs.

The forecast operational costs (\$US2, 137,912 for Years 1-10 equates to approximately \$US214, 000 per year average) identified above are significantly higher than what is currently being budgeted for maintenance by COM-FSM (\$150,000 per annum total for all 6 campuses). We consider that the forecast operational costs as outlined above are necessary to operate and maintain the capital investment already made by the COM-FSM on the Yap campus.

4.1.7 Limitations of the Condition Assessment

The life cycle and renewal/replacement projections used in our report are indicative only as they are predictions of future circumstances, which cannot be assured. Actual results may vary from the projections and these variations may be significantly more or less favorable than assumed herein. The findings in this report are current as at the date of inspection (June 2013) and not as the date of this report.

All estimated asset/capital replacement costs are high-level and indicative with an accuracy range of +/- 30%. Please note that these costs exclude all Government Goods and Services Taxes, Import/Customs Duties, Design/Procurement Costs, etc.

All estimated operational costs reflect capital replacement and maintenance works only of the buildings and site infrastructure.

All costs are detailed in the data sheets and spreadsheets (refer appendices) are current as at June 2013. Escalation of the Operational Costs have been added to the overall cost summaries. Escalation is assumed to be 3.4% per annum.

This assessment is not a health and safety audit. Beca does not accept liability for any client health and safety issues whether reported or not. Any issues arising from the possible presence of contaminated or potentially toxic materials onsite, (i.e. asbestos) are excluded from this report. This report does not constitute an environmental audit and no allowance has been made for the presence of any such materials should they exist at the subject property.

Our building condition audit is based on a visual assessment of the buildings and site infrastructure only. Furthermore the visual assessment was not a detailed engineering survey of the assets. cursory observations have been made of the following specialist elements however our report will not include for detailed investigation reports such as:

- Building Code of Compliance issues
- Building structures (e.g. Structural integrity, building subsidence, structural decay, etc.)
- Health and safety issues (e.g. asbestos, contaminated fill, leaky buildings, etc.)
- Mechanical services such as heating and ventilation
- Electrical services such as power, lighting and building management systems
- Information & technology and communication systems
- Sanitary plumbing and drainage
- Water reticulation
- Fire services
- Vertical transportation such as lifts and escalators

■ Security

Whilst each building's structure was inspected for defects such as settlement, spalling, cracking and bowing, etc. it should be noted that this was an exterior visual assessment of the exposed parts of the building structures for the purpose of assigning condition grades and was not a structural engineering assessment of the buildings.

The building condition audit does not include for the inspection of sub-floor voids, roof/ceiling voids, plenum spaces or other areas that are difficult to access or could trigger health and safety issues. Our report will include a condition assessment of the roof surfaces, however these will be observed from ground level. No underground services have been able to be assessed, No detailed inspections (e.g. removal of wall linings etc.) have been carried out.

The building condition audit will not include for destructive testing of building elements which is normally associated with identifying extensive damage as a result of weather tightness issues. Problems potentially relating to leaky buildings and weather tightness will be flagged for further investigation.

The preparation of this report does not imply in any way that Beca has audited the financial statements, management accounts, engineering or other records of the COM-FSM Where another party has supplied information for use in this report, it is assumed to be reliable.

This report should not be reproduced or used for any other purpose without Beca's prior written permission in each instance.

Beca reserves the right, but not the obligation, to review all calculations included or referred to in this report and, if considered necessary, to revise its opinion in the light of any information existing at the site visit which becomes known after

4.1.8 Assumptions Made in the Condition Assessment

It has been assumed that:

- The rate of escalation over the next 30 years will be an average of 3.4% per annum.
- The existing buildings will be retained (this ignores the possible re-development of buildings as proposed by the current Facilities Development Plan)

4.1.9 Exclusions from the Condition Assessment and Forecast Operational Costs

The following has been excluded from the Condition Assessment and forecast Operational Costs:

- Replacement of loose furniture, fittings and equipment has been excluded.
- The cost of renewal or maintenance of buildings that are leased is excluded (it is assumed that the building owners will carry out renewals and maintenance)
- This assessment excludes all other College operating costs such as energy bills, teaching & administration staff salaries and expenses, disposables, vehicles, tools, machinery, rental equipment, property/building leasing costs, travel costs, insurances etc.
- Taxes, duties and government charges.

5 Energy Audit

Key Points

The Yap campus is using slightly more energy than average across the sites, based on the energy readings from 2011 /12 provided. It is not possible to see a long term trend in annual usage from this data, but it is noted that the computer lab and faculty office account for almost 50% of the electricity usage on site. Energy saving measures should begin with these areas.

5.1 Energy Efficiency Recommendations

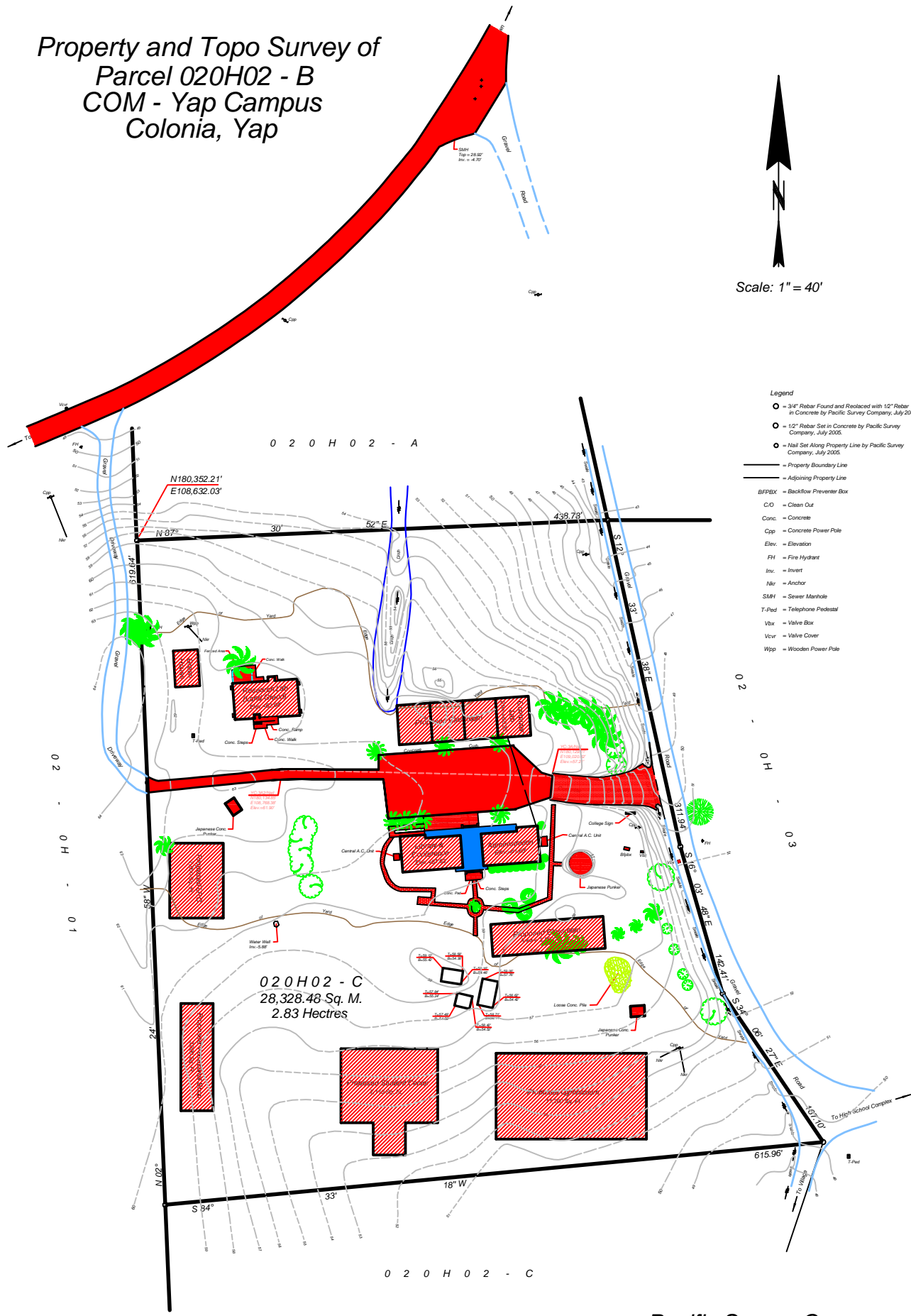
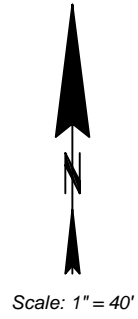
1. Adjust the set point control of the AC units to 24 or 25°C
2. Turn units off when spaces are un-occupied
3. Ensure units are free from obstructions, filters are clean, and pipework runs are straight to reduce loads on units
4. Close windows when systems are operating
5. Seal holes and penetrations from conditioned areas to outside or non-air conditioned areas
6. Keep doors leading to AC spaces closed
7. Turn off lights when leaving a room - consider installing occupancy sensors
8. Replace ceiling insulation where missing

Appendix A

Topographical Survey Plan & Title Information



Property and Topo Survey of
Parcel 020H02 - B
COM - Yap Campus
Colonia, Yap



- Legend
- - 3/4" Rebar Found and Replaced with 1/2" Rebar in Concrete by Pacific Survey Company, July 2005.
 - - 1/2" Rebar Set in Concrete by Pacific Survey Company, July 2005.
 - - Nail Set Along Property Line by Pacific Survey Company, July 2005.
 - Property Boundary Line
 - Adjoining Property Line
 - BFPBX - Backflow Preventer Box
 - C/O - Clean Out
 - Conc. - Concrete
 - Ccp - Concrete Power Pole
 - Elev. - Elevation
 - FH - Fire Hydrant
 - Invt. - Invert
 - Nbr - Anchor
 - SMH - Sewer Manhole
 - T-Pad - Telephone Pedestal
 - Vbr - Valve Box
 - Vcvr - Valve Cover
 - Wpp - Wooden Power Pole

Pacific Survey Company
P. O. Box 1212, Pohnpei, FM 96941
Tel: 691-320-6264, Fax: 691-320-5159
Tim McVey - RLS#20
Briner T. Sam - Party Chief
Date: 27 July, 2005
I Certify that this Survey was Performed by me or under my
Supervision in Accordance with Existing Laws and Regulations.

Appendix B

Building Condition Assessments



YAP CAMPUS, RUUL, YAP STATE

A – ADMINISTRATION BUILDING



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %						
1.00	Total Sub-Structure	5	90%						75,110	0	40,628	115,738	115,738	100.0%
2.00	Total Frame	3	50%						0	0	0	0	92,502	0.0%
3.00	Total Structural Walls	3	50%						0	0	23,920	23,920	23,920	100.0%
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%
5.00	Total Roof	3	50%						7,894	73,989	0	81,883	81,883	100.0%
6.00	Total External Walls & Finishes	5	90%						36,532	0	0	36,532	36,532	100.0%
7.00	Total Windows & Doors	3	50%						0	0	85,729	85,729	85,729	100.0%
A	TOTAL STRUCTURE	4	70%						119,536	73,989	150,277	343,802	436,304	78.8%
8.00	Total Stairs Balustrades & Handrails	3	50%						0	3,036	0	3,036	14,421	21.1%
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	18,946	0.0%
10.00	Total Internal Doors	2	30%						0	0	0	0	13,662	0.0%
11.00	Total Floor Finishes	4	70%						27,065	4,250	27,065	58,380	31,315	186.4%
12.00	Total Wall Finishes	2	30%						0	60,506	0	60,506	60,506	100.0%
13.00	Total Ceiling Finishes	2	30%						0	0	57,201	57,201	57,201	100.0%
14.00	Total Fixed Joinery Units	3	50%						4,491	2,467	17,798	24,756	19,822	124.9%
B	TOTAL INTERNAL FIT-OUT	3	50%						31,556	70,260	102,064	203,880	215,874	94.4%
15.00	Total Sanitary Plumbing	2	30%						0	0	32,384	32,384	32,384	100.0%
16.00	Total Mechanical Services	3	50%						39,531	59,265	39,531	138,328	44,402	311.5%
17.00	Total Fire Services	3	50%						5,606	0	5,606	11,212	5,606	200.0%
18.00	Total Electrical Services	3	50%						0	82,264	0	82,264	82,264	100.0%
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%
20.00	Total Special Services	3	50%						11,212	0	11,212	22,424	11,212	200.0%
C	TOTAL BUILDING SERVICES	3	50%						56,349	141,529	88,733	286,612	175,867	163.0%
	TOTAL BUILDING	3	50%						207,441	285,778	341,074	834,293	828,045	100.8%

TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT	
Element	Observed Deterioration/Recommendations
Steel Framed Floor on Steel Pile Foundations	Severe corrosion present – Health and Safety issue. Replacement of substructure would be difficult & expensive (circa \$115K)
Timber Floor Boards	Severe decay of timber flooring present – Health and Safety issue.
Metal Gutters	Evidence corrosion
Fibre Cement Cladding with Painted Finishes	Evidence cracks and flaked paint. CoM advised 27-08-2013 cladding is warped from Hurricane damage (from 2004)
Vinyl Floor Finishes	Evidence of lifting, marks, tears, worn through, poor workmanship
Overall Recommendation/Action	This building has a very high renewal & maintenance cost over the next 30 years (27% of Yr 1-10 renewal budget & 100% of full replacement cost over 30 years) making it uneconomic to renew/maintain. Carry out minimal maintenance (to protect against health & safety issues), run down and replace circa 2018.or before

YAP CAMPUS, RUUL, YAP STATE

B - COMPUTER LAB



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT														
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace															
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																					
1.00	Total Sub-Structure	3	50%						0	0	0	0	36,875	0.0%	<table border="1"> <thead> <tr> <th>Element</th> <th>Observed Deterioration/Recommendations</th> </tr> </thead> <tbody> <tr> <td>Insitu Reinforced Concrete Stairs</td> <td>Damaged, broken corners</td> </tr> <tr> <td>Plywood Soffit Lining with Painted Finish</td> <td>Evidence of decay, insect attack, replace and treat timber</td> </tr> <tr> <td>Reinforced Concrete Block Masonry Walls</td> <td>Exposed steel rods – remove corrosion and repair concrete</td> </tr> <tr> <td>Timber Doors (Solid/No Glazing)</td> <td>Metal door frames rusting and twisted. Seal coming away</td> </tr> <tr> <td>Built-in Joinery - Shelving Unit</td> <td>Evidence of impact damage and water damage</td> </tr> <tr> <td>Overall Recommendation/Action</td> <td>Targeted regular maintenance and cleaning. Repair corroded reinforcing steel and concrete spalling immediately. Treat insect damage and replace decayed soffit as required. Review condition in 2018</td> </tr> </tbody> </table>	Element	Observed Deterioration/Recommendations	Insitu Reinforced Concrete Stairs	Damaged, broken corners	Plywood Soffit Lining with Painted Finish	Evidence of decay, insect attack, replace and treat timber	Reinforced Concrete Block Masonry Walls	Exposed steel rods – remove corrosion and repair concrete	Timber Doors (Solid/No Glazing)	Metal door frames rusting and twisted. Seal coming away	Built-in Joinery - Shelving Unit	Evidence of impact damage and water damage	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Repair corroded reinforcing steel and concrete spalling immediately. Treat insect damage and replace decayed soffit as required. Review condition in 2018
Element	Observed Deterioration/Recommendations																												
Insitu Reinforced Concrete Stairs	Damaged, broken corners																												
Plywood Soffit Lining with Painted Finish	Evidence of decay, insect attack, replace and treat timber																												
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Timber Doors (Solid/No Glazing)	Metal door frames rusting and twisted. Seal coming away																												
Built-in Joinery - Shelving Unit	Evidence of impact damage and water damage																												
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Repair corroded reinforcing steel and concrete spalling immediately. Treat insect damage and replace decayed soffit as required. Review condition in 2018																												
2.00	Total Frame	1	10%						0	0	0	0	28,211	0.0%															
3.00	Total Structural Walls	3	50%						0	0	0	0	20,351	0.0%															
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%															
5.00	Total Roof	1	10%						0	0	26,508	26,508	26,508	100.0%															
6.00	Total External Walls & Finishes	3	50%						0	0	23,429	23,429	23,429	100.0%															
7.00	Total Windows & Doors	3	50%						455	0	6,148	6,603	23,067	28.6%															
A	TOTAL STRUCTURE	3	50%						455	0	56,085	56,541	158,441	35.7%															
8.00	Total Stairs Balustrades & Handrails	4	70%						0	0	949	949	3,099	30.6%															
9.00	Total Internal Walls/Partitions	3	50%						0	0	0	0	2,459	0.0%															
10.00	Total Internal Doors	3	50%						0	0	1,518	1,518	1,518	100.0%															
11.00	Total Floor Finishes	3	50%						612	0	12,245	12,857	12,245	105.0%															
12.00	Total Wall Finishes	3	50%						15,097	0	15,097	30,193	15,097	200.0%															
13.00	Total Ceiling Finishes	3	50%						0	12,745	0	12,745	12,745	100.0%															
14.00	Total Fixed Joinery Units	3	50%						0	1,265	380	1,645	1,645	100.0%															
B	TOTAL INTERNAL FIT-OUT	3	50%						15,709	14,010	30,188	59,907	48,807	122.7%															
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%															
16.00	Total Mechanical Services	3	50%						8,855	17,710	8,855	35,420	8,855	400.0%															
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%															
18.00	Total Electrical Services	3	50%						0	27,160	0	27,160	27,160	100.0%															
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%															
20.00	Total Special Services	3	50%						0	0	0	0	0	0.0%															
C	TOTAL BUILDING SERVICES	3	50%						8,855	44,870	8,855	62,580	36,015	173.8%															
	TOTAL BUILDING	3	50%						25,019	58,879	95,128	179,027	243,263	73.6%															

YAP CAMPUS, RUUL, YAP STATE

C – CRE BUILDING



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT		
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace			% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	3	50%						0	0	0	0	76,664	0.0%	Element	Observed Deterioration/Recommendations
2.00	Total Frame	3	50%						0	0	0	0	47,842	0.0%		
3.00	Total Structural Walls	3	50%						0	0	0	0	65,543	0.0%	Membrane Roof Covering	Protective membrane faded. Ponding of water on roof. Replace roof
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%	Air-Conditioning - DX/Split System	Tired by appearance. Functionality not tested
5.00	Total Roof	5	90%						23,415	1,619	23,415	48,450	25,034	193.5%	Solid Plaster Cladding with Painted Finishes	Evidence of shrinkage/crazed cracking
6.00	Total External Walls & Finishes	4	70%						0	17,979	4,111	22,090	22,090	100.0%	Smoke Detection	Various smoke detectors missing. Functionality not tested
7.00	Total Windows & Doors	3	50%						0	0	29,411	29,411	29,411	100.0%	Reinforced Concrete Block Foundation Walls	Evidence of shrinkage/crazed cracking
A	TOTAL STRUCTURE	4	70%						23,415	19,598	56,938	99,951	266,585	37.5%	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Replace roof immediately. Refurbish floor finishes by 2023. Regularly maintain and replace mechanical, fire and special services by 2023.
8.00	Total Stairs Balustrades & Handrails	3	50%						0	0	0	0	18,153	0.0%		
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%		
10.00	Total Internal Doors	3	50%						0	0	18,469	18,469	18,469	100.0%		
11.00	Total Floor Finishes	3	50%						7,432	25,083	7,432	39,948	32,516	122.9%		
12.00	Total Wall Finishes	3	50%						0	58,821	0	58,821	58,821	100.0%		
13.00	Total Ceiling Finishes	3	50%						0	22,064	0	22,064	22,064	100.0%		
14.00	Total Fixed Joinery Units	3	50%						708	24,617	708	26,034	24,617	105.8%		
B	TOTAL INTERNAL FIT-OUT	3	50%						8,141	130,585	26,610	165,335	174,639	94.7%		
15.00	Total Sanitary Plumbing	3	50%						0	11,385	0	11,385	11,385	100.0%		
16.00	Total Mechanical Services	3	50%						30,993	22,138	17,710	70,840	17,710	400.0%		
17.00	Total Fire Services	4	70%						2,328	0	2,328	4,655	2,328	200.0%		
18.00	Total Electrical Services	3	50%						0	36,498	0	36,498	36,498	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	3	50%						3,163	0	3,163	6,325	3,163	200.0%		
C	TOTAL BUILDING SERVICES	4	70%						36,483	70,020	23,200	129,703	71,083	182.5%		
	TOTAL BUILDING	4	70%						68,038	220,204	106,747	394,990	512,307	77.1%		

YAP CAMPUS, RUUL, YAP STATE

D - SCIENCE LABORATORY



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					Full Replace		% Full Replace		TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT	
		Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total							
		VG	G	A	P	VP													
1.00	Total Sub-Structure	1	10%						0	0	0	0	90,492	0.0%	Element Metal Doors (Security Gate) Reinforced Concrete Slab on Grade Insitu Reinforced Concrete Ramp Metal Framed Balustrades Tiled Floor Finishes Overall Recommendation/Action	Observed Deterioration/Recommendations Evidence of corrosion on hinge and lock. Evidence of crazed/shrinkage cracking on walkway Evidence of crazed/shrinkage cracking on walkway Evidence of flaking protective coating or corrosion Evidence of lifting, marks, tears, worn through Targeted regular maintenance and cleaning. Review paint on metal balustrades and repaint if corroded. Regularly maintain and replace mechanical and fire services by 2023.			
2.00	Total Frame	1	10%						0	0	0	0	193,651	0.0%					
3.00	Total Structural Walls	1	10%						0	0	0	0	58,443	0.0%					
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%					
5.00	Total Roof	1	10%						0	0	81,112	81,112	81,112	100.0%					
6.00	Total External Walls & Finishes	1	10%						0	0	0	0	22,694	0.0%					
7.00	Total Windows & Doors	2	30%						0	0	0	0	150,788	0.0%					
A	TOTAL STRUCTURE	2	30%						0	0	81,112	81,112	597,180	13.6%					
8.00	Total Stairs Balustrades & Handrails	1	10%						0	0	0	0	39,057	0.0%					
9.00	Total Internal Walls/Partitions	1	10%						0	0	0	0	3,757	0.0%					
10.00	Total Internal Doors	1	10%						0	0	0	0	7,274	0.0%					
11.00	Total Floor Finishes	1	10%						0	0	61,934	61,934	61,934	100.0%					
12.00	Total Wall Finishes	1	10%						0	14,875	36,829	51,704	51,704	100.0%					
13.00	Total Ceiling Finishes	1	10%						0	0	38,084	38,084	38,084	100.0%					
14.00	Total Fixed Joinery Units	1	10%						0	0	22,138	22,138	22,138	100.0%					
B	TOTAL INTERNAL FIT-OUT	1	10%						0	14,875	158,985	173,860	223,947	77.6%					
15.00	Total Sanitary Plumbing	1	10%						0	0	58,570	58,570	58,570	100.0%					
16.00	Total Mechanical Services	1	10%						17,710	26,059	35,420	79,189	26,059	303.9%					
17.00	Total Fire Services	1	10%						266	266	1,398	1,929	1,398	138.0%					
18.00	Total Electrical Services	1	10%						0	0	0	0	72,472	0.0%					
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%					
20.00	Total Special Services	1	10%						0	13,763	0	13,763	13,763	100.0%					
C	TOTAL BUILDING SERVICES	1	10%						17,976	40,088	95,387	153,451	172,261	89.1%					
	TOTAL BUILDING	2	30%						17,976	54,962	335,484	408,422	993,389	41.1%					

YAP CAMPUS, RUUL, YAP STATE

E - STUDENT CENTER BUILDING (NEW)



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		Element	Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	1	10%						0	0	0	0	115,097	0.0%	None	None
2.00	Total Frame	1	10%						0	0	0	0	71,633	0.0%		
3.00	Total Structural Walls	1	10%						0	0	0	0	171,305	0.0%		
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%		
5.00	Total Roof	1	10%						0	0	62,192	62,192	62,192	100.0%		
6.00	Total External Walls & Finishes	0	0%						0	0	0	0	0	0.0%		
7.00	Total Windows & Doors	1	10%						0	0	0	0	152,899	0.0%		
A	TOTAL STRUCTURE	1	10%						0	0	62,192	62,192	573,125	10.9%		
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%		
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%		
10.00	Total Internal Doors	1	10%						0	0	0	0	19,734	0.0%		
11.00	Total Floor Finishes	1	10%						0	30,452	0	30,452	30,452	100.0%		
12.00	Total Wall Finishes	0	0%						0	0	0	0	0	0.0%		
13.00	Total Ceiling Finishes	1	10%						0	0	66,214	66,214	66,214	100.0%		
14.00	Total Fixed Joinery Units	1	10%						2,302	5,217	30,259	37,778	30,259	124.8%		
B	TOTAL INTERNAL FIT-OUT	1	10%						2,302	35,669	96,474	134,445	146,660	91.7%		
15.00	Total Sanitary Plumbing	1	10%						0	0	30,044	30,044	30,044	100.0%		
16.00	Total Mechanical Services	1	10%						35,420	41,239	70,840	147,499	41,239	357.7%		
17.00	Total Fire Services	1	10%						1,265	9,169	633	11,067	9,549	115.9%		
18.00	Total Electrical Services	1	10%						0	0	0	0	51,919	0.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	1	10%						0	7,904	0	7,904	7,904	100.0%		
C	TOTAL BUILDING SERVICES	1	10%						36,685	58,313	101,516	196,514	140,656	139.7%		
	TOTAL BUILDING	1	10%						38,987	93,982	260,182	393,151	860,440	45.7%	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Review condition in 2018. Regularly maintain and replace mechanical and fire services by 2023.

YAP CAMPUS, RUUL, YAP STATE

F - CLASSROOM BUILDING (NEW)



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		Element	Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
1.00	Total Sub-Structure	1	10%						0	0	0	0	145,983	0.0%	None	None
2.00	Total Frame	1	10%						0	0	0	0	113,836	0.0%		
3.00	Total Structural Walls	1	10%						0	0	0	0	185,837	0.0%		
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%		
5.00	Total Roof	1	10%						0	0	69,638	69,638	69,638	100.0%		
6.00	Total External Walls & Finishes	0	0%						0	0	0	0	0	0.0%		
7.00	Total Windows & Doors	1	10%						0	0	0	0	217,827	0.0%		
A	TOTAL STRUCTURE	1	10%						0	0	69,638	69,638	733,121	9.5%		
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%		
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%		
10.00	Total Internal Doors	0	0%						0	0	0	0	0	0.0%		
11.00	Total Floor Finishes	1	10%						0	34,119	0	34,119	34,119	100.0%		
12.00	Total Wall Finishes	0	0%						0	0	0	0	0	0.0%		
13.00	Total Ceiling Finishes	1	10%						0	0	85,682	85,682	85,682	100.0%		
14.00	Total Fixed Joinery Units	1	10%						1,025	3,939	33,414	38,378	33,414	114.9%		
B	TOTAL INTERNAL FIT-OUT	1	10%						1,025	38,058	119,096	158,179	153,215	103.2%		
15.00	Total Sanitary Plumbing	1	10%						0	0	19,291	19,291	19,291	100.0%		
16.00	Total Mechanical Services	1	10%						25,300	33,902	50,600	109,802	33,902	323.9%		
17.00	Total Fire Services	1	10%						3,163	12,979	1,581	17,723	12,410	142.8%		
18.00	Total Electrical Services	1	10%						0	0	0	0	66,792	0.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	1	10%						0	9,816	0	9,816	9,816	100.0%		
C	TOTAL BUILDING SERVICES	1	10%						28,463	56,697	71,473	156,632	142,211	110.1%		
	TOTAL BUILDING	1	10%						29,487	94,755	260,207	384,449	1,028,547	37.4%	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Review condition in 2018. Refurbish joinery fittings by 2023. Regularly maintain and replace mechanical and fire services by 2023.

YAP CAMPUS, RUUL, YAP STATE

G - VOCATIONAL BUILDING



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE/RENEWAL OR REPLACEMENT		
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace			% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	3	50%						0	0	0	0	94,559	0.0%	Element	Observed Deterioration/Recommendations
2.00	Total Frame	5	90%						94,875	0	0	94,875	94,875	100.0%		
3.00	Total Structural Walls	3	50%						0	0	0	0	13,662	0.0%	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Evidence of leaks internally (daylight visible through cladding); severely corroded; Hurricane damage, etc.
4.00	Total Upper Floors	3	50%						0	0	50,600	50,600	50,600	100.0%	Profiled Metal Sheet Wall Cladding (Pre-Finished)	Evidence of leaks internally (daylight visible through cladding); severely corroded; Hurricane damage, etc.
5.00	Total Roof	5	90%						55,360	0	0	55,360	55,360	100.0%	Timber Framed Windows & Doors	Evidence of decay, corroded fixings/hardware, poor workmanship (sealing), etc.
6.00	Total External Walls & Finishes	5	90%						54,850	0	0	54,850	54,850	100.0%	Vinyl Floor Finishes	Evidence of lifting, marks, tears, worn through
7.00	Total Windows & Doors	5	90%						46,060	908	0	46,968	46,060	102.0%	Overall Recommendation/Action	This building has a very high renewal & maintenance cost over the next 30 years (40% of Yr 1-10 renewal budget & 96% of full replacement cost over 30 years) making it uneconomic to renew/maintain. Carry out minimal maintenance (to protect against health & safety issues), run down and replace circa 2018 or before
A	TOTAL STRUCTURE	5	90%						251,144	908	50,600	302,652	409,965	73.8%		
8.00	Total Stairs Balustrades & Handrails	3	50%						0	0	26,565	26,565	26,565	100.0%		
9.00	Total Internal Walls/Partitions	3	50%						0	0	0	0	6,325	0.0%		
10.00	Total Internal Doors	4	70%						0	9,108	0	9,108	9,108	100.0%		
11.00	Total Floor Finishes	5	90%						19,734	0	19,734	39,468	19,734	200.0%		
12.00	Total Wall Finishes	4	70%						0	15,028	0	15,028	15,028	100.0%		
13.00	Total Ceiling Finishes	4	70%						0	11,100	0	11,100	11,100	100.0%		
14.00	Total Fixed Joinery Units	3	50%						0	14,421	0	14,421	14,421	100.0%		
B	TOTAL INTERNAL FIT-OUT	4	70%						19,734	49,658	46,299	115,691	102,282	113.1%		
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%		
16.00	Total Mechanical Services	3	50%						22,138	44,275	22,138	88,550	22,138	400.0%		
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%		
18.00	Total Electrical Services	4	70%						0	26,122	0	26,122	26,122	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	3	50%						7,400	0	7,400	14,801	7,400	200.0%		
C	TOTAL BUILDING SERVICES	4	70%						29,538	70,397	29,538	129,473	55,660	232.6%		
	TOTAL BUILDING	4	70%						300,416	120,962	126,437	547,815	567,907	96.5%		

YAP CAMPUS, RUUL, YAP STATE

H - STUDENT OPEN LOUNGE



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		Observed Deterioration/Recommendations												
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace													
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																			
1.00	Total Sub-Structure	3	50%						0	0	0	0	19,309	0.0%	<p>TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT</p> <table border="1"> <thead> <tr> <th>Element</th> <th>Observed Deterioration/Recommendations</th> </tr> </thead> <tbody> <tr> <td>Profiled Metal Sheet Roof Cladding (Pre-Finished)</td> <td>Rust present on underside of roof cladding</td> </tr> <tr> <td>Lighting (External) - Incandescent</td> <td>Light bulb missing. Unsure if working</td> </tr> <tr> <td>Reinforced Concrete Slab on Grade</td> <td>Shrinkage cracks present</td> </tr> <tr> <td>Timber Frame (Truss)</td> <td>Needs repainting</td> </tr> <tr> <td>Overall Recommendation/Action</td> <td>Targeted regular maintenance and cleaning. Treat rust and spot prime roof. Replace roof by 2023 and install ventilating ridge.</td> </tr> </tbody> </table>	Element	Observed Deterioration/Recommendations	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Rust present on underside of roof cladding	Lighting (External) - Incandescent	Light bulb missing. Unsure if working	Reinforced Concrete Slab on Grade	Shrinkage cracks present	Timber Frame (Truss)	Needs repainting	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Treat rust and spot prime roof. Replace roof by 2023 and install ventilating ridge.
Element	Observed Deterioration/Recommendations																										
Profiled Metal Sheet Roof Cladding (Pre-Finished)	Rust present on underside of roof cladding																										
Lighting (External) - Incandescent	Light bulb missing. Unsure if working																										
Reinforced Concrete Slab on Grade	Shrinkage cracks present																										
Timber Frame (Truss)	Needs repainting																										
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Treat rust and spot prime roof. Replace roof by 2023 and install ventilating ridge.																										
2.00	Total Frame	3	50%						0	0	0	0	28,999	0.0%													
3.00	Total Structural Walls	0	0%						0	0	0	0	0	0.0%													
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%													
5.00	Total Roof	4	70%						10,204	0	0	10,204	10,204	100.0%													
6.00	Total External Walls & Finishes	0	0%						0	0	0	0	0	0.0%													
7.00	Total Windows & Doors	0	0%						0	0	0	0	0	0.0%													
A	TOTAL STRUCTURE	4	70%						10,204	0	0	10,204	58,512	17.4%													
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%													
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%													
10.00	Total Internal Doors	0	0%						0	0	0	0	0	0.0%													
11.00	Total Floor Finishes	0	0%						0	0	0	0	0	0.0%													
12.00	Total Wall Finishes	0	0%						0	0	0	0	0	0.0%													
13.00	Total Ceiling Finishes	0	0%						0	0	0	0	0	0.0%													
14.00	Total Fixed Joinery Units	0	0%						0	0	0	0	0	0.0%													
B	TOTAL INTERNAL FIT-OUT	0	0%						0	0	0	0	0	0.0%													
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%													
16.00	Total Mechanical Services	0	0%						0	0	0	0	0	0.0%													
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%													
18.00	Total Electrical Services	4	70%						0	316	0	316	316	100.0%													
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%													
20.00	Total Special Services	0	0%						0	0	0	0	0	0.0%													
C	TOTAL BUILDING SERVICES	4	70%						0	316	0	316	316	100.0%													
	TOTAL BUILDING	2	30%						10,204	316	0	10,520	58,828	17.9%													

YAP CAMPUS, RUUL, YAP STATE

J - RESTROOMS



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT															
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	Element	Observed Deterioration/Recommendations													
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																					
1.00	Total Sub-Structure	4	70%						0	0	3,507	3,507	3,507	100.0%	<table border="1"> <tr> <th>Element</th> <th>Observed Deterioration/Recommendations</th> </tr> <tr> <td>Urinal (Stall)</td> <td>Not in operation (Plastic cover installed)</td> </tr> <tr> <td>Reinforced Concrete Slab on Grade</td> <td>Ground has scoured out beneath slab. Unsure of integrity of slab itself. No foundations evident (i.e. slab on ground)</td> </tr> <tr> <td>Timber Doors (Solid/No Glazing)</td> <td>Doors are in contact with ground moisture and are deteriorating</td> </tr> <tr> <td>Tiled Floor Finishes</td> <td>OK</td> </tr> <tr> <td>MDF Ceiling Lining with Painted Finishes</td> <td>OK. MDF needs re-fixing to framing</td> </tr> <tr> <td>Overall Recommendation/Action</td> <td>Targeted regular maintenance and cleaning. Replace sanitary fittings before 2023.</td> </tr> </table>	Element	Observed Deterioration/Recommendations	Urinal (Stall)	Not in operation (Plastic cover installed)	Reinforced Concrete Slab on Grade	Ground has scoured out beneath slab. Unsure of integrity of slab itself. No foundations evident (i.e. slab on ground)	Timber Doors (Solid/No Glazing)	Doors are in contact with ground moisture and are deteriorating	Tiled Floor Finishes	OK	MDF Ceiling Lining with Painted Finishes	OK. MDF needs re-fixing to framing	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Replace sanitary fittings before 2023.
Element	Observed Deterioration/Recommendations																												
Urinal (Stall)	Not in operation (Plastic cover installed)																												
Reinforced Concrete Slab on Grade	Ground has scoured out beneath slab. Unsure of integrity of slab itself. No foundations evident (i.e. slab on ground)																												
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Tiled Floor Finishes	OK																												
MDF Ceiling Lining with Painted Finishes	OK. MDF needs re-fixing to framing																												
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Replace sanitary fittings before 2023.																												
2.00	Total Frame	1	10%						0	0	0	0	1,989	0.0%															
3.00	Total Structural Walls	3	50%						0	0	0	0	14,026	0.0%															
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%															
5.00	Total Roof	1	10%						0	0	3,315	3,315	3,315	100.0%															
6.00	Total External Walls & Finishes	0	0%						0	0	0	0	0	0.0%															
7.00	Total Windows & Doors	4	70%						0	3,795	4,807	8,602	8,602	100.0%															
A	TOTAL STRUCTURE	3	50%						0	3,795	11,629	15,424	31,439	49.1%															
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%															
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%															
10.00	Total Internal Doors	3	50%						0	0	3,036	3,036	3,036	100.0%															
11.00	Total Floor Finishes	3	50%						0	5,738	0	5,738	5,738	100.0%															
12.00	Total Wall Finishes	3	50%						0	11,903	0	11,903	11,903	100.0%															
13.00	Total Ceiling Finishes	3	50%						0	2,710	0	2,710	2,710	100.0%															
14.00	Total Fixed Joinery Units	3	50%						114	114	114	342	114	300.0%															
B	TOTAL INTERNAL FIT-OUT	3	50%						114	20,464	3,150	23,728	23,500	101.0%															
15.00	Total Sanitary Plumbing	4	70%						2,277	15,180	0	17,457	17,457	100.0%															
16.00	Total Mechanical Services	0	0%						0	0	0	0	0	0.0%															
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%															
18.00	Total Electrical Services	3	50%						0	633	0	633	633	100.0%															
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%															
20.00	Total Special Services	0	0%						0	0	0	0	0	0.0%															
C	TOTAL BUILDING SERVICES	4	70%						2,277	15,813	0	18,090	18,090	100.0%															
	TOTAL BUILDING	3	50%						2,391	40,072	14,779	57,242	73,029	78.4%															

YAP CAMPUS, RUUL, YAP STATE	SITE INFRASTRUCTURE
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														TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT		
ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace	% Full Replace	Element	Observed Deterioration/Recommendations
		Grade	% Deter.	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Total				
1.00	Total Roading	3	50%						2,530	8,892	1,265	12,687	41,685	30.4%	Gravel roads	Trim and grade gravel roads to falls, fill pot holes and ruts
2.00	Total Car Parks	3	50%						1,265	23,908	4,375	29,548	58,718	50.3%		
3.00	Total Foot Paths & Collection Areas	2	30%						0	0	0	0	20,537	0.0%	Drainage	Monitor and clean swales, sumps and septic tanks. Underground pipework not assessed.
4.00	Total Fences & Gates	2	30%						0	0	0	0	4,592	0.0%		
5.00	Total Structures	3	50%						0	0	44,275	44,275	149,397	29.6%	Structures	Maintain all structures. Consider repair or replacement of Work Shed
6.00	Total Retaining Walls	0	0%						0	0	0	0	0	0.0%		
7.00	Site Drainage	3	50%						18,975	12,650	117,645	149,270	123,970	120.4%		
8.00	Total Electrical Infrastructure	3	50%						0	130,295	0	130,295	130,295	100.0%		
9.00	Total Water Services	3	50%						12,650	0	96,140	108,790	96,140	113.2%		
10.00	Total Site Furniture	3	50%						0	6,325	0	6,325	6,325	100.0%		
TOTAL SITE INFRASTRUCTURE									35,420	182,070	263,700	481,190	631,658	76.2%		
															Overall Recommendation/Action	Targeted regular maintenance and cleaning to extend asset life.

Appendix C

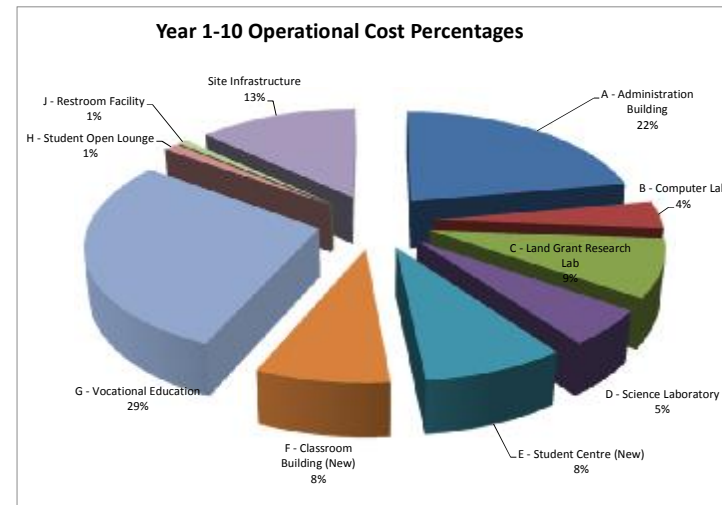
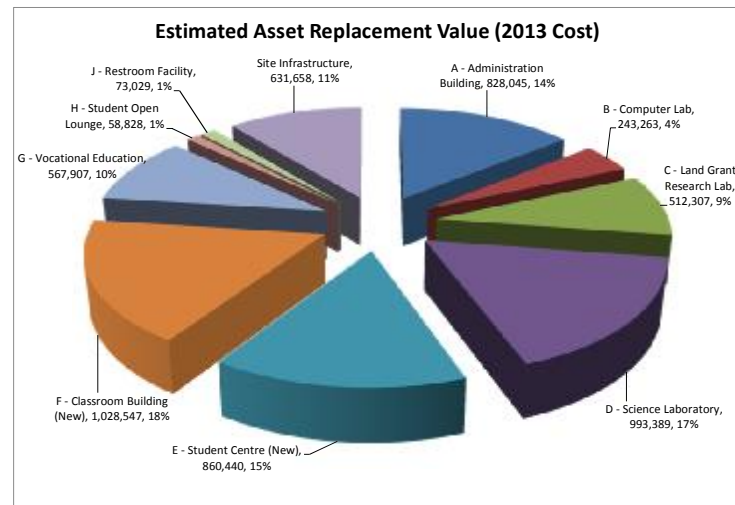
Indicative Maintenance & Asset Renewal Cost Plan





Audit Date: October 2013
 Revision: Final

Ref	Asset Description	Condition Grade	Key Metric Data		Replacement Cost			Year 1 - 10 Asset Renewal Cost vs Full Replacement Cost		Year 11 - 20 Asset Renewal Cost vs Full Replacement Cost		Year 21 - 30 Asset Renewal Cost vs Full Replacement Cost		Total 30 Year Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Operational Cost (Cost of Renewal and Maintenance)					
			Rank 1 - 5	GFA (ft2)	GFA (m2)	Build Rate (ft2)	Build Rate (m2)	Cost (\$ USD)	Year 1 - 10 Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Year 11 - 20 Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Year 21 - 30 Asset Renewal Cost (\$ USD)			% of Full Replacement Cost	Annualised Asset Renewal Cost	Annualised Maintenance Cost	Annualised Total Operational Cost	Total Year 1-10 Operational Cost (\$USD)	Total Year 11-20 Operational Cost (\$USD)
1.00	A - Administration Building	3	3,180	295	260	2,803	828,045	207,441	25%	285,778	35%	341,074	41%	834,293	101%	27,810	5,600	33,410	263,441	341,778	397,075
2.00	B - Computer Lab	3	1,302	121	187	2,010	243,263	25,019	10%	58,879	24%	95,128	39%	179,027	74%	5,968	2,215	8,182	47,166	81,026	117,275
3.00	C - Land Grant Research Lab	4	1,976	184	259	2,790	512,307	68,038	13%	220,204	43%	106,747	21%	394,990	77%	13,166	3,291	16,457	100,943	253,109	139,652
4.00	D - Science Laboratory	2	2,928	272	339	3,652	993,389	17,976	2%	54,962	6%	335,484	34%	408,422	41%	13,614	4,488	18,102	62,855	99,841	380,363
5.00	E - Student Centre (New)	1	3,363	312	256	2,754	860,440	38,987	5%	93,982	11%	260,182	30%	393,151	46%	13,105	6,188	19,293	100,872	155,867	322,066
6.00	F - Classroom Building (New)	1	4,176	388	246	2,651	1,028,547	29,487	3%	94,755	9%	260,207	25%	384,449	37%	12,815	6,523	19,338	94,716	159,984	325,436
7.00	G - Vocational Education	4	5,086	473	112	1,202	567,907	300,416	53%	120,962	21%	126,437	22%	547,815	96%	18,261	3,805	22,065	338,463	159,010	164,484
8.00	H - Student Open Lounge	2	930	86	63	681	58,828	10,204	17%	316	1%	0	0%	10,520	18%	351	345	696	13,654	3,766	3,450
9.00	J - Restroom Facility	3	271	25	269	2,898	73,029	2,391	3%	40,072	55%	14,779	20%	57,242	78%	1,908	706	2,614	9,447	47,128	21,835
10.00	Site Infrastructure						631,658	35,420	6%	182,070	29%	263,700	42%	481,190	76%	16,040	11,971	28,010	155,126	301,776	383,406
TOTALS EXCLUDING ESCALATION				23,213	2,157		5,797,414	735,379	13%	1,151,982	20%	1,803,738	31%	3,691,099	64%	123,037	45,130	168,167	1,186,683	1,603,286	2,255,042
Escalation Allowance								161,327		808,293		2,477,490		3,447,111		114,904	78,990	193,894	951,229	1,598,195	3,267,392
TOTALS INCLUDING ESCALATION (3.4% per annum assumed)								896,706		1,960,275		4,281,228		7,138,210		237,940	124,121	362,061	2,137,912	3,201,481	5,522,434



Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 Document: SUMMARY OF BUILDING & ELEMENT RENEWAL COSTS
 CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013
 Revision: Final



Ref	Building	Cost Period	Sub-Structure	Frame	Structural Walls	Upper Floors	Roof	External Walls & Finishes	Windows & Doors	Structure	Stairs Balus. & Handrails	Internal Walls & Partitions	Internal Doors	Floor Finishes	Wall Finishes	Ceiling Finishes	Fixed Joinery Units	Internal Fit-Out	Sanitary Plumbing	Mech. Services	Fire Services	Electrical Services	Vertical Transport	Special Services	Building Services	Building	
9.00	J - Restroom Facility	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	114	2,277	0	0	0	0	0	0	2,277	2,391
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	0	3,795	3,795	0	0	0	5,738	11,903	2,710	114	20,464	15,180	0	0	633	0	0	0	0	15,813	40,072
		Year 21 - 30 Asset Renewal Cost (\$ USD)	3,507	0	0	0	3,315	0	4,807	11,629	0	0	3,036	0	0	0	114	3,150	0	0	0	0	0	0	0	0	14,779
		Total (\$ USD)	3,507	0	0	0	3,315	0	8,602	15,424	0	0	3,036	5,738	11,903	2,710	342	23,728	17,457	0	0	633	0	0	0	18,090	57,242
Total - Year 1 - 10 Asset Renewal Cost (\$ USD)			75,110	94,875	0	0	96,872	91,382	46,516	404,755	0	0	0	54,843	15,097	0	8,640	78,580	2,277	179,946	12,627	0	0	21,775	216,625	699,959	
Total - Year 11 - 20 Asset Renewal Cost (\$ USD)			0	0	0	0	75,608	17,979	4,703	98,290	3,036	0	9,108	99,643	161,133	48,619	52,040	373,578	26,565	244,588	22,414	172,992	0	31,484	498,043	969,912	
Total - Year 21 - 30 Asset Renewal Cost (\$ USD)			44,134	0	23,920	50,600	266,180	27,541	126,095	538,470	27,514	0	23,023	128,411	51,926	247,182	104,810	582,866	140,289	245,094	11,545	0	0	21,775	418,702	1,540,038	
Grand Total (\$ USD)			119,244	94,875	23,920	50,600	438,660	136,902	177,313	1,041,515	30,550	0	32,131	282,897	228,155	295,801	165,490	1,035,024	169,131	669,628	46,586	172,992	0	75,033	1,133,370	3,209,909	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
SUMMARY OF SITE INFRASTRUCTURE RENEWAL COSTS
 Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**

Audit Date: October 2013
 Revision: Final



Ref	Building	Cost Period	Roading	Car Parks	Foot Paths & Circulation Areas	Fences & Gates	Structures	Retaining Walls	Site Drainage	Electrical Infrastructure	Water Services	Site Furniture	Total
1.00	Site Infrastructure	Year 1 - 10 Asset Renewal Cost (\$ USD)	2,530	1,265	0	0	0	0	18,975	0	12,650	0	35,420
		Year 11 - 20 Asset Renewal Cost (\$ USD)	8,892	23,908	0	0	0	0	12,650	130,295	0	6,325	182,070
		Year 21 - 30 Asset Renewal Cost (\$ USD)	1,265	4,375	0	0	44,275	0	117,645	0	96,140	0	263,700
		Total (\$ USD)	12,687	29,548	0	0	44,275	0	149,270	130,295	108,790	6,325	481,190

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 Document: SUMMARY OF BUILDING & ELEMENT CONDITION GRADES
 CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013
 Revision: Final



Ref	Building	Sub-Structure	Frame	Structural Walls	Upper Floors	Roof	External Walls & Finishes	Windows & Doors	Structure	Stairs Balus. & Handrails	Internal Walls & Partitions	Internal Doors	Floor Finishes	Wall Finishes	Ceiling Finishes	Fixed Joinery Units	Internal Fit-Out	Sanitary Plumbing	Mech. Services	Fire Services	Electrical Services	Vertical Transport	Special Services	Building Services	Building
1.00	A - Administration Building	5	3	3	0	3	5	3	4	3	2	2	4	2	2	3	3	2	3	3	3	0	3	3	3
2.00	B - Computer Lab	3	1	3	0	1	3	3	3	4	3	3	3	3	3	3	3	0	3	0	3	0	3	3	3
3.00	C - Land Grant Research Lab	3	3	3	0	5	4	3	4	3	0	3	3	3	3	3	3	3	3	4	3	0	3	4	4
4.00	D - Science Laboratory	1	1	1	0	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2
5.00	E - Student Centre (New)	1	1	1	0	1	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1
6.00	F - Classroom Building (New)	1	1	1	0	1	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	0	1	1	1
7.00	G - Vocational Education	3	5	3	3	5	5	5	5	3	3	4	5	4	4	3	4	0	3	0	4	0	3	4	4
8.00	H - Student Open Lounge	3	3	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	2
9.00	J - Restroom Facility	4	1	3	0	1	0	4	3	0	0	3	3	3	3	3	3	4	0	0	3	0	0	4	3

Condition Grade 0 = N/A	Not present or not applicable
Condition Grade 1 = Very Good	The building/element is new and is functioning as required.
Condition Grade 2 = Good	The building/element is functioning as required.
Condition Grade 3 = Average	The building element is approaching the end of its serviceable life but is still functioning as required. Maintenance is required to extend serviceable life.
Condition Grade 4 = Poor	The building element is showing signs of failure and deterioration. Extensive maintenance is required or the item should be considered for replacement.
Condition Grade 5 = Very Poor	The building element has failed and has deteriorated significantly beyond the point of repair. The item must be replaced

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Ref	Building	Gross Floor Area (GFA)				External Wall Area (EWA)				Roof Area (RA)		Door & Window Area (DWA)		Internal Wall Area (IWA)		Element	Structure							Internal Fit-Out					Services								Total	
		ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2		ft2	m2	ft2	ft2	ft2	ft2	No.	LS Allow	ft2	LS Allow	No.	LS Allow	ft2	No.	LS Allow	LS Allow	LS Allow	LS Allow				
1.00	A - Administration Building	3,180	295	3,701	344	6,055	562	977	91	2,480	230	Quantity	9,755	3,701	6,055	3,701	6,055	977	1	3,180	8,661	3,180	9	1	3,180	1	5	1	3,180	13	0	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	98	2,407	5,625	185	303	244	250	95	4,828	2,068	225	250	159	100	250	500	159	325	0	0	250					
												Annualised Maint.	195	481	804	185	303	244	250	95	402	172	225	250	159	100	500	500	159	325	0	0	250	5,600				
												Budget (\$ USD)	2,462							1,145					1,993								16.9%					
2.00	B - Computer Lab	1,302	121	1,598	149	1,847	172	296	28	349	32	Quantity	3,445	1,598	1,847	1,598	1,847	296	1	1,302	2,296	1,302	1	1	1,302	0	2	0	1,302	0	1	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	34	1,040	1,715	80	92	74	250	39	1,280	847	25	125	65	0	100	0	65	0	250	0	250	0	250			
												Annualised Maint.	69	208	245	80	92	74	250	39	107	71	25	125	65	0	200	0	65	0	250	0	250					
												Budget (\$ USD)	1,018							366					830								6.7%					
3.00	C - Land Grant Research Lab	1,976	184	1,821	169	1,992	185	390	36	1,897	176	Quantity	3,814	1,821	1,992	1,821	1,992	390	1	1,976	5,615	1,976	12	1	1,976	0	4	0	1,976	4	1	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	38	1,184	1,851	91	100	97	250	59	3,130	1,285	300	250	99	0	200	0	99	100	250	0	250					
												Annualised Maint.	76	237	264	91	100	97	250	59	261	107	300	250	99	0	400	0	99	100	250	0	250					
												Budget (\$ USD)	1,116							977					1,198								9.9%					
4.00	D - Science Laboratory	2,928	272	2,799	260	5,025	467	1,163	108	533	50	Quantity	7,823	2,799	5,025	2,799	5,025	1,163	1	2,928	3,864	2,928	3	1	2,928	0	4	0	2,928	17	1	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	78	1,820	4,668	140	251	291	250	88	2,154	1,904	75	250	146	0	200	0	146	425	250	0	250					
												Annualised Maint.	156	364	667	140	251	291	250	88	180	159	75	250	146	0	400	0	146	425	250	0	250					
												Budget (\$ USD)	2,119							751					1,618								13.5%					
5.00	E - Student Centre (New)	3,363	312	2,874	267	5,975	555	772	72	3,388	315	Quantity	8,849	2,874	5,975	2,874	5,975	772	1	3,363	6,776	3,363	13	1	3,363	5	7	1	3,363	10	1	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	88	1,869	5,551	144	299	193	250	101	3,777	2,187	325	250	168	500	350	500	168	250	250	0	250					
												Annualised Maint.	177	374	793	144	299	193	250	101	315	182	325	250	168	500	700	500	168	250	250	0	250					
												Budget (\$ USD)	2,229							1,173					2,786								18.7%					
6.00	F - Classroom Building (New)	4,176	388	3,671	341	7,901	734	1,258	117	2,771	257	Quantity	11,572	3,671	7,901	3,671	7,901	1,258	1	4,176	9,213	4,176	0	1	4,176	8	5	1	4,176	5	1	0	0	Total				
												Total Cost Per Occurrence (\$ USD)	116	2,387	7,340	184	395	315	250	125	5,136	2,716	0	250	209	800	250	500	209	125	250	0	0					
												Annualised Maint.	231	477	1,049	184	395	315	250	125	428	226	0	250	209	800	500	500	209	125	250	0	0					
												Budget (\$ USD)	2,901							1,030					2,593								19.7%					
7.00	G - Vocational Education	5,086	473	3,862	359	4,711	438	408	38	1,658	154	Quantity	8,572	3,862	4,711	3,862	4,711	408	1	1,271	3,315	1,049	6	1	0	0	5	0	1,526	0	1	0	1	Total				
												Total Cost Per Occurrence (\$ USD)	86	2,511	4,376	193	236	102	250	38	1,848	683	150	250	0	0	250	0	76	0	250	0	250					
												Annualised Maint.	171	502	625	193	236	102	250	38	154	57	150	250	0	0	500	0	76	0	250	0	250					
												Budget (\$ USD)	2,079							649					1,076								11.5%					

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Ref	Building	Gross Floor Area (GFA)		External Wall Area (EWA)		Roof Area (RA)		Door & Window Area (DWA)		Internal Wall Area (IWA)		Element	Structure							Internal Fit-Out					Services						Total							
		ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2		ft2	m2	Building Wash	External Wall Painting	Protective Coatings to Roof	Wall Cladding Repairs	Roof Cladding Repairs	Door & Window Repairs	Misc Repairs	Floor Finishes Cleaning & Repairs	Internal Wall Painting	Ceiling & Soffit Painting	Internal Door Repairs	Misc Repairs	Fire Suppress. Detection & Alarm Systems	Mechanical Ventilation	A/C Systems	Hot Water Generation		Electrical Services	Hydraulic Services	Comm. Systems	Vertical Transport	Misc Repairs		
8.00	H - Student Open Lounge	930	86	0	0	1,085	101	0	0	0	0		ft2	ft2	ft2	ft2	ft2	ft2	LS Allow	ft2	ft2	ft2	No.	LS Allow	ft2	LS Allow	No.	LS Allow	ft2	No.	LS Allow	LS Allow	LS Allow					
												Rate/Cost (\$ USD)	0.01	0.65	0.93	0.05	0.05	0.25	250.00	0.03	0.56	0.65	25.00	250.00	0.05	100.00	50.00	500.00	0.05	25.00	250.00	2,500.00	250.00					
												Frequency (Years)	0.50	5.00	7.00	1.00	1.00	1.00	1.00	1.00	12.00	12.00	1.00	1.00	1.00	1.00	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
												Quantity	1,085	0	1,085	0	1,085	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
												Total Cost Per Occurrence (\$ USD)	11	0	1,008	0	54	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63			
												Annualised Maint. Budget (\$ USD)	22	0	144	0	54	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63				
													283							0					63						345							
													283							0					63						1.0%							
9.00	J - Restroom Facility	271	25	502	47	282	26	86	8	180	17		ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2	ft2				
												Quantity	784	502	282	502	282	86	0	271	862	502	3	0	0	0	0	0	0	271	7	0	0	0	0			
												Total Cost Per Occurrence (\$ USD)	8	326	262	25	14	22	63	8	480	326	75	63	0	0	0	14	175	0	0	63						
												Annualised Maint. Budget (\$ USD)	16	65	37	25	14	22	63	8	40	27	75	63	0	0	0	14	175	0	0	63						
													242							213					251						706							
													242							213					251						2.1%							
	Total	23,213	2,157	20,827	1,935	34,873	3,240	5,349	497	13,256	1,231	Total Quantity	55,700	20,827	34,873	20,827	34,873	5,349	8	18,469	40,603	18,478	47	7	16,926	14	32	3	18,723	56	6	0	7					
												Total Annualised Maint. Budget (\$ USD)	1,114	2,709	4,628	1,041	1,744	1,337	1,875	554	1,886	1,001	1,175	1,688	846	1,400	3,200	1,500	936	1,400	1,500	0	1,625					
													14,448							6,304					12,407						33,160							
													14,448							6,304					12,407						100.0%							
												Labour Portion (%)	80%	50%	50%	60%	60%	50%	50%	80%	60%	60%	50%	50%	50%	70%	70%	70%	70%	70%	70%	40%	50%					
												Labour Cost (\$ USD)	891	1,354	2,314	625	1,046	669	938	443	1,132	601	588	844	423	980	2,240	1,050	655	980	1,050	0	813					
												Labour Hours (Based on \$3/Hour)	297	451	771	208	349	223	313	148	377	200	196	281	141	327	747	350	218	327	350	0	271					
													Number Maintenance Staff Required (Based on 1,800 Hours/PA)																								3.6	
												Plant Portion (%)	10%	10%	10%	10%	10%	0%	0%	10%	10%	10%	0%	0%	0%	10%	10%	10%	10%	10%	0%	20%	0%					
												Material Cost (\$ USD)	111	271	463	104	174	0	0	55	189	100	0	0	0	140	320	150	94	140	0	0	0					
													Material Portion (%)																									
												Material Cost (\$ USD)	111	1,084	1,851	312	523	669	938	55	566	300	588	844	423	280	640	300	187	280	450	0	813					
													Material Portion (%)																								11,214	

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Ref	Location	Total Buildings No.	Total Building Area		Total Hard Surface Areas		Total Green Surface Areas		Site Area	
			ft2	m2	ft2	m2	ft2	m2	ft2	m2
1.00	Yap Campus, Ruul, Yap State	9	23,213	2,157	15,426	1,433	266,283	24,738	304,923	28,328

Element	Grounds Keeping				Car Parks, Roads & Pavements			Fences & Gates		Structures			Site Drainage			Electrical Infrastructure		Water Services	Site Furniture	Telecom Services	
	Mowing	Spraying	General Grounds Keeping	Pruning & General Tree Maint.	Regrade, Relevel & Compact Gravel Surface	Pot/Crack Fill Asphalt Surface	Pot/Crack Fill Concrete Surface	Repaint Fences & Gates	Fence & Gate Repairs	Minor Building Structures Wash	Minor Building Structures General Repairs	Minor Building Structures Repaint	Site Stormwater Drainage Maint.	Building Stormwater Drainage Maint.	Building Sewer Drainage Maint.	General Electrical Maint.	General Electrical Servicing	General Water Services Maint.	General Site Furniture Maint.	General Telecom Services	
Unit	LS Allow / Green Area	LS Allow / Green Area	LS Allow / Green Area	LS Allow.	LS Allow / Area	LS Allow / Area	LS Allow / Area	LS Allow.	LS Allow.	LS Allow / GFA	LS Allow / Building No	LS Allow / GFA	LS Allow.	LS Allow / Building	LS Allow / Building	LS Allow / Building	LS Allow	LS Allow / Building	LS Allow.	LS Allow / Building	
Rate/Cost (\$ USD)	0.00023	0.00012	0.00046	2,500.00	0.28	0.05	0.05	2,000.00	500.00	0.01	100.00	0.65	1,000.00	50.00	50.00	100.00	1,000.00	25.00	1,000.00	25.00	
Frequency (Years)	0.08	0.50	0.25	1.00	1.00	1.00	1.00	5.00	1.00	0.50	1.00	5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Quantity	266,283	266,283	266,283	1	2,460	9,872	5,554	1	1	1,765	3	1,765	1	9	9	9	1	9	1	9	
Total Cost Per Occurrence (\$ USD)	62	31	124	2,500	686	494	278	2,000	500	18	300	1,148	1,000	450	450	900	1,000	225	1,000	225	
Annualised Maint. Budget (\$ USD)	742	62	495	2,500	686	494	278	400	500	35	300	230	1,000	450	450	900	1,000	225	1,000	225	
	3,799				1,457			900		565			1,900			1,900		1,450			
Labour Portion (%)	70%	35%	50%	70%	30%	30%	30%	70%	80%	70%	50%	60%	50%	50%	50%	50%	50%	50%	50%	50%	
Labour Cost (\$ USD)	520	22	247	1,750	206	148	83	280	400	25	150	138	500	225	225	450	500	113	500	113	
Labour Hours (Based on \$3/Hour)	173	7	82	583	69	49	28	93	133	8	50	46	167	75	75	150	167	38	167	38	
																				Number Maintenance Staff Required (Based on 1,800 Hours/PA)	1.2
Plant Portion (%)	30%	30%	25%	30%	50%	50%	50%	0%	0%	20%	20%	10%	30%	30%	30%	30%	30%	30%	0%	30%	
Material Cost (\$ USD)	223	19	124	750	343	247	139	0	0	7	60	23	300	135	135	270	300	68	0	68	
Material Portion (%)	0%	35%	25%	0%	20%	20%	20%	30%	20%	10%	30%	30%	20%	20%	20%	20%	20%	20%	50%	20%	
Material Cost (\$ USD)	0	22	124	0	137	99	56	120	100	4	90	69	200	90	90	180	200	45	500	45	
																				Total	11,971
																				Total	6,593
																				Total	2,198
																				Total	3,208
																				Total	2,169

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ID Code	Element	Condition Assessment	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost															
					Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Asset Renewal Cost				
							0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)		Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace
8.03	Metal Framed Balustrades	Evidence of flaking protective coating and corrosion (i.e. at base of posts)	Rust treat, repaint and clean regularly	4	70%														3,036	0	3,036	0	3,036	3,036	3,036	100.0%	
8.00	Total Stairs Balustrades & Handrails			3	50%														3,036	0	3,036	0	3,036	14,421	21.1%		
9.00	Internal Walls/Partitions																		0	0	0	0	0	0	0.0%		
9.01	Steel Framed Partition Walls	Not inspected. Assumed OK	None	2	30%														0	0	0	0	0	18,946	0.0%		
9.00	Total Internal Walls/Partitions			2	30%														0	0	0	0	0	18,946	0.0%		
10.00	Internal Doors																		0	0	0	0	0	0	0.0%		
10.01	Timber Door - Single	OK	Clean regularly	2	30%														0	0	0	0	0	13,662	0.0%		
10.00	Total Internal Doors			2	30%														0	0	0	0	0	13,662	0.0%		
11.00	Floor Finishes																		0	0	0	0	0	0	0.0%		
11.01	Vinyl Floor Finishes	Evidence of lifting, marks, tears, worn through, poor workmanship	Replace	5	90%														0	27,065	0	0	0	54,130	27,065	200.0%	
11.02	Tiled Floor Finishes (Vinyl Tile)	Evidence lifting tiles, loose grout, marks, stains, etc	Repair and clean regularly	3	50%														0	0	0	0	0	4,250	4,250	100.0%	
11.00	Total Floor Finishes			4	70%														0	27,065	0	0	0	58,380	31,315	186.4%	
12.00	Wall Finishes																		0	0	0	0	0	0	0.0%		
12.01	Plasterboard Wall Linings with Painted Finishes	Evidence of impact damage and cracks to some areas	Patch fill and repair wall lining; repaint	2	30%														0	0	0	0	0	60,506	60,506	100.0%	
12.00	Total Wall Finishes			2	30%														0	0	0	0	0	60,506	60,506	100.0%	
13.00	Ceiling Finishes																		0	0	0	0	0	0	0.0%		
13.01	Fibre Cement Soffit Lining with Painted Finishes	Evidence of impact damage and cracks to some areas	Patch fill and repair wall lining; repaint	2	30%														0	0	0	0	0	32,909	32,909	100.0%	
13.02	Plasterboard Ceiling Lining with Painted Finishes	Evidence of impact damage and cracks to some areas	Patch fill and repair wall lining; repaint	2	30%														0	0	0	0	0	24,293	24,293	100.0%	
13.00	Total Ceiling Finishes			2	30%														0	0	0	0	0	57,201	57,201	100.0%	
14.00	Fixed Joinery Units																		0	0	0	0	0	0	0.0%		
14.01	Toilet Partitions - Walls	OK	Clean regularly	2	30%														0	0	0	0	0	2,694	2,694	100.0%	
14.02	Toilet Partitions - Doors	Evidence of water damage, delaminating panels, marks	Replace	5	90%														0	0	2,024	0	0	2,024	2,024	100.0%	
14.03	White Boards	OK	Clean regularly	2	30%														0	0	0	0	0	759	759	100.0%	
14.04	Built-in Joinery - Reception Joinery	OK	Clean regularly	2	30%														0	0	0	0	0	2,846	2,846	100.0%	
14.05	Built-in Joinery - Shelving Unit	OK	Clean regularly	2	30%														0	0	0	0	0	683	683	100.0%	
14.06	Built-in Joinery - Kitchen (Small)	OK	Clean regularly	2	30%														0	0	0	0	0	4,428	4,428	100.0%	
14.07	Mirrors	OK	Clean regularly	2	30%														0	0	0	0	0	759	759	100.0%	
14.08	Disabled Grab Rail	OK	None	2	30%														0	0	0	0	0	2,530	2,530	100.0%	
14.09	Toilet Roll Holder	OK	None	2	30%											190	0	0	0	569	190	190	190	569	190	300.0%	
14.10	Paper Towel Dispenser	OK	None	2	30%										0	949	0	0	2,846	949	949	949	2,846	949	300.0%		
14.11	Waste Receptacle	OK	None	2	30%										0	0	127	0	380	127	127	127	380	127	300.0%		
14.12	Liquid Soap Dispenser	OK	None	2	30%										0	0	0	253	759	253	253	253	759	253	300.0%		
14.13	Sanitary Napkin Disposal Unit	OK	None	2	30%										0	0	0	949	2,846	949	949	949	2,846	949	300.0%		
14.14	Signage	OK	None	2	30%										0	0	0	0	633	0	0	633	633	633	100.0%		

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ID Code	Element	Condition Assessment		Condition Gauge					Asset Renewal Cost																			
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG 0-20%	G 20-40%	A 40-60%	P 60-80%	VP 80-100%	1 2013 (\$ USD)	2 2014 (\$ USD)	3 2015 (\$ USD)	4 2016 (\$ USD)	5 2017 (\$ USD)	6 2018 (\$ USD)	7 2019 (\$ USD)	8 2020 (\$ USD)	9 2021 (\$ USD)	10 2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			3	50%					0	0	0	0	0	0	0	0	0	0	11,212	22,424	11,212	0	11,212	22,424	11,212	200.0%	
C	TOTAL BUILDING SERVICES			3	50%					0	0	0	17,710	18,975	0	0	0	0	0	19,664	286,612	56,349	141,529	88,733	286,612	175,867	163.0%	
	TOTAL BUILDING			3	50%					0	27,065	38,556	17,710	94,085	0	2,467	0	7,894	19,664	834,293	207,441	285,778	341,074	834,293	828,045	100.8%		
										207,441																		
										Year 1 - 10 Consolidated Capital Replacement Cost																		



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)
1.00	Sub-Structure									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1.01	Reinforced Concrete Foundations Wall	OK	None	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,481	0.0%
1.02	Reinforced Concrete Slab on Grade	Not inspected. Assumed OK	None	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,394	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1.00	Total Sub-Structure			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36,875	0.0%
2.00	Frame									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2.01	Structural Steel Frame (Truss)	Good Condition. Appears New	None	1	10%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,211	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2.00	Total Frame			1	10%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28,211	0.0%
3.00	Structural Walls									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
3.01	Reinforced Concrete Block Masonry Walls	OK. Exposed steel rods (HS issue)	Remove exposed steel rods	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,351	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
3.00	Total Structural Walls			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,351	0.0%
4.00	Upper Floors									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4.03	None	-	-	0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4.00	Total Upper Floors			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5.00	Roof									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5.01	Profiled Metal Sheet Roof Cladding (Pre-Finished)	OK. Requires wash	Regularly wash	1	10%					0	0	0	0	0	0	0	0	0	0	0	21,701	0	0	21,701	21,701	21,701	100.0%
5.02	Metal Gutters	OK	Clean out regularly	1	10%					0	0	0	0	0	0	0	0	0	0	0	2,783	0	0	2,783	2,783	2,783	100.0%
5.03	Metal Down Pipes	OK	Clean out regularly	1	10%					0	0	0	0	0	0	0	0	0	0	0	2,024	0	0	2,024	2,024	2,024	100.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5.00	Total Roof			1	10%					0	0	0	0	0	0	0	0	0	0	0	26,508	0	0	26,508	26,508	26,508	100.0%
6.00	External Walls & Finishes									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
6.01	Solid Plaster Cladding with Painted Finishes	OK	Regularly wash	3	50%					0	0	0	0	0	0	0	0	0	0	0	15,602	0	0	15,602	15,602	15,602	100.0%
6.02	Profiled Metal Sheet Wall Cladding (Pre-Finished)	OK. Requires wash and/or paint to old corrugated section	Partial repaint and regularly wash	2	30%					0	0	0	0	0	0	0	0	0	0	0	7,827	0	0	7,827	7,827	7,827	100.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
6.00	Total External Walls & Finishes			3	50%					0	0	0	0	0	0	0	0	0	0	0	23,429	0	0	23,429	23,429	23,429	100.0%
7.00	Windows & Doors									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
7.02	Timber Doors (Solid/No Glazing)	OK. Metal door frames rusting and twisted. Seal coming away	Reset frame, rust treat and repaint.	3	50%					0	0	0	0	0	0	0	0	0	0	0	5,693	0	0	5,693	5,693	5,693	100.0%
7.06	Aluminium Framed Windows & Doors	OK. Sealing around windows is untidy	Regularly wash	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,654	0.0%
7.10	Metal Vents	OK. Needs cleaning	Clean out regularly	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,265	0.0%
7.11	Plywood Infill Panels	OK. Requires painting for weather protection	Paint	3	50%					0	0	0	0	0	0	0	455	0	0	0	911	455	0	455	911	455	200.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
7.00	Total Windows & Doors			3	50%					0	0	0	0	0	0	0	455	0	0	0	6,603	455	0	6,148	6,603	23,067	28.6%
A	TOTAL STRUCTURE			3	50%					0	0	0	0	0	0	0	455	0	0	0	56,541	455	0	56,085	56,541	158,441	35.7%
8.00	Stairs, Balustrades & Handrails									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
8.01	Insitu Reinforced Concrete Stairs	Damaged, broken corners	Repair, clean regularly	4	70%					0	0	0	0	0	0	0	0	0	0	0	949	0	0	949	949	949	100.0%
8.02	Insitu Reinforced Concrete Steps	OK	Clean regularly	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	886	0.0%

Project: COLLEGE OF MICRONESIA - FSM

Campus: YAP CAMPUS, RUUL, YAP STATE

B - COMPUTER LAB

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Assessment		Condition Gauge					Asset Renewal Cost																															
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Asset Renewal Cost																					
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace															
8.03	Insitu Reinforced Concrete Ramp	OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,265	0.0%
8.00	Total Stairs Balustrades & Handrails			4	70%																	0	0	0	0	0	0	0	0	0	0	0	0	949	0	0	949	949	3,099	30.6%		
9.00	Internal Walls/Partitions																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
9.01	Timber Framed Partition Walls	Not inspected. Assumed OK	None	3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,459	0.0%			
9.00	Total Internal Walls/Partitions			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,459	0.0%			
10.00	Internal Doors																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
10.01	Timber Door - Single	OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	0	1,518	0	0	1,518	1,518	1,518	100.0%				
10.00	Total Internal Doors			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	1,518	0	0	1,518	1,518	1,518	100.0%		
11.00	Floor Finishes																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
11.02	Vinyl Floor Finishes	Marked but appears OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	0	612	1,225	612	0	612	1,225	612	200.0%			
11.03	Carpet Floor Finishes	Marked but appears OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	11,633	0	0	11,633	11,633	11,633	100.0%		
11.00	Total Floor Finishes			3	50%																	0	0	0	0	0	0	0	0	0	0	612	12,857	612	0	12,245	12,857	12,245	105.0%			
12.00	Wall Finishes																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
12.01	Plasterboard Wall Linings with Painted Finishes	OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	15,097	30,193	15,097	0	15,097	30,193	15,097	200.0%				
12.00	Total Wall Finishes			3	50%																	0	0	0	0	0	0	0	0	0	0	15,097	30,193	15,097	0	15,097	30,193	15,097	200.0%			
13.00	Ceiling Finishes																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
13.01	Plywood Soffit Lining with Painted Finish	Evidence of decay, insect attack	Repair, Wash, Paint	4	70%																	0	0	0	0	0	0	0	0	0	0	0	0	2,796	0	2,796	0	2,796	2,796	100.0%		
13.02	Plasterboard Ceiling Lining with Painted Finishes	OK	Clean regularly	3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	9,949	0	9,949	0	9,949	9,949	100.0%		
13.00	Total Ceiling Finishes			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	12,745	0	12,745	0	12,745	12,745	100.0%		
14.00	Fixed Joinery Units																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
14.01	White Boards	Evidence of general wear & tear Comments:	Repair, Replace	2	30%																	0	0	0	0	0	0	0	0	0	0	0	380	0	0	380	380	380	100.0%			
14.03	Built-in Joinery - Shelving Unit	Evidence of impact damage, water damage, marks, poor workmanship, etc	Repair, Replace Comments:	3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	1,265	0	1,265	0	1,265	1,265	100.0%		
14.00	Total Fixed Joinery Units			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	1,645	0	1,265	380	1,645	1,645	100.0%		
B	TOTAL INTERNAL FIT-OUT			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	15,709	59,907	15,709	14,010	30,188	59,907	48,807	122.7%	
15.00	Sanitary Plumbing																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
15.01	None	-	-	0	0%																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
15.00	Total Sanitary Plumbing			0	0%																	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
16.00	Mechanical Services																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
16.01	Air-Conditioning - DX/Split System	Operating	Service and clean regularly	3	50%																	0	0	0	0	8,855	0	0	0	0	0	0	0	35,420	8,855	17,710	8,855	35,420	8,855	400.0%		
16.00	Total Mechanical Services			3	50%																	0	0	0	0	0	0	0	0	0	0	0	0	35,420	8,855	17,710	8,855	35,420	8,855	400.0%		
17.00	Fire Services																					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																	
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)								
17.01	None	-	-	0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.00	Total Fire Services			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.01	Main Distribution Boards	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%	
18.03	Electrical Wiring/Reticulation	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	4,592	0	4,592	0	4,592	4,592	100.0%	
18.04	General Power Outlet	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	6,123	0	6,123	0	6,123	6,123	100.0%	
18.06	Lighting (External) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%	
18.09	Lighting (Internal) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%	
18.10	Lighting (Internal) - Fluorescant - Twin Tube	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	5,693	0	5,693	0	5,693	5,693	100.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	0	27,160	0	27,160	0	27,160	27,160	100.0%	
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.03	None	-	-	0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	Telecommunication/Data Network	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
C	TOTAL BUILDING SERVICES			3	50%						0	0	0	8,855	0	0	0	0	0	0	62,580	8,855	44,870	8,855	62,580	36,015	173.8%	
	TOTAL BUILDING			3	50%						0	0	0	8,855	0	0	0	455	0	15,709	179,027	25,019	58,879	95,128	179,027	243,263	73.6%	

25,019
 Year 1 - 10 Consolidated Capital Replacement Cost



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					1	2	3	4	5	6	7	8	9	10	Asset Renewal Cost							
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Year 1-10	Year 11-20	Year 21-30	Grand	Full	% Full	
						0-20%	20-40%	40-60%	60-80%	80-100%	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	Total	Total	Total	Renewal
8.02	Insitu Reinforced Concrete Ramp	OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,855	0.0%
8.03	Metal Framed Balustrades	OK	Clean regularly	2	30%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,238	0.0%
8.00	Total Stairs Balustrades & Handrails			3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,153	0.0%
9.00	Internal Walls/Partitions										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.05	None	-	-	0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.00	Total Internal Walls/Partitions			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.00	Internal Doors										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.01	Timber Door - Single	Aged but OK	Paint	3	50%						0	0	0	0	0	0	0	0	0	0	0	16,698	0	0	16,698	16,698	16,698	100.0%
10.02	Timber Door - Folding	Aged but OK	Paint	3	50%						0	0	0	0	0	0	0	0	0	0	0	1,771	0	0	1,771	1,771	1,771	100.0%
10.00	Total Internal Doors			3	50%						0	0	0	0	0	0	0	0	0	0	0	18,469	0	0	18,469	18,469	18,469	100.0%
11.00	Floor Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
11.02	Vinyl Floor Finishes	Aged but OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	7,432	14,864	7,432	0	7,432	14,864	7,432	200.0%		
11.05	Tiled Floor Finishes	Aged but OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	25,083	0	25,083	0	25,083	25,083	100.0%		
11.00	Total Floor Finishes			3	50%						0	0	0	0	0	0	0	0	7,432	39,948	7,432	25,083	7,432	39,948	32,516	122.9%		
12.00	Wall Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
12.03	Solid Plaster Wall Lining with Painted Finishes	Evidence of shrinkage cracking	Patch, fill and repaint	3	50%						0	0	0	0	0	0	0	0	0	56,089	0	56,089	0	56,089	56,089	100.0%		
12.04	Tiled Wall Finishes	OK	Paint	3	50%						0	0	0	0	0	0	0	0	0	2,732	0	2,732	0	2,732	2,732	100.0%		
12.00	Total Wall Finishes			3	50%						0	0	0	0	0	0	0	0	0	58,821	0	58,821	0	58,821	58,821	100.0%		
13.00	Ceiling Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
13.02	Solid Plaster Ceiling Lining with Painted Finishes	Some cracks	Patch, fill and repaint	3	50%						0	0	0	0	0	0	0	0	0	22,064	0	22,064	0	22,064	22,064	100.0%		
13.00	Total Ceiling Finishes			3	50%						0	0	0	0	0	0	0	0	0	22,064	0	22,064	0	22,064	22,064	100.0%		
14.00	Fixed Joinery Units										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
14.01	Mirrors	Not inspected. Assumed OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	759	0	759	0	759	759	100.0%		
14.02	Built-in Joinery - Vanity Unit	Not inspected. Assumed OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%		
14.03	Built-in Joinery - Bench Unit	Not inspected. Assumed OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	18,975	0	18,975	0	18,975	18,975	100.0%		
14.04	Built-in Joinery - Shelving Unit	Not inspected. Assumed OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	380	0	380	0	380	380	100.0%		
14.05	Disabled Grab Rail	Not inspected. Assumed OK	None	3	50%						0	0	0	0	0	0	0	0	0	1,265	0	1,265	0	1,265	1,265	100.0%		
14.06	Toilet Roll Holder	Not inspected. Assumed OK	None	3	50%						0	0	0	0	76	0	0	0	0	228	76	76	76	228	76	300.0%		
14.07	Paper Towel Dispensor	Not inspected. Assumed OK	None	3	50%						0	0	0	0	190	0	0	0	0	569	190	190	190	569	190	300.0%		
14.08	Waste Receptacle	Not inspected. Assumed OK	None	3	50%						0	0	0	0	63	0	0	0	0	190	63	63	63	190	63	300.0%		
14.09	Liquid Soap Dispenser	Not inspected. Assumed OK	None	3	50%						0	0	0	0	63	0	0	0	0	190	63	63	63	190	63	300.0%		
14.10	Sanitary Napkin Disposal Unit	Not inspected. Assumed OK	None	3	50%						0	0	0	0	316	0	0	0	0	949	316	316	316	949	316	300.0%		
14.11	Signage	Not inspected. Assumed OK	None	3	50%						0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%		
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		



Audit Date: October 2013
 Revision: Final



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					1	2	3	4	5	6	7	8	9	10	Asset Renewal Cost						
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						VG	G	A	P	VP	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %												
14.00	Total Fixed Joinery Units			3	50%						0	0	0	0	708	0	0	0	0	0	26,034	708	24,617	708	26,034	24,617	105.8%
B	TOTAL INTERNAL FIT-OUT			3	50%						0	0	0	0	708	0	0	0	0	7,432	165,335	8,141	130,585	26,610	165,335	174,639	94.7%
15.00	Sanitary Plumbing										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15.01	WC	OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
15.02	WHB (Single)	OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%
15.03	Shower	OK	Clean regularly	3	50%						0	0	0	0	0	0	0	0	0	0	3,163	0	3,163	0	3,163	3,163	100.0%
15.00	Total Sanitary Plumbing			3	50%						0	0	0	0	0	0	0	0	0	0	11,385	0	11,385	0	11,385	11,385	100.0%
16.00	Mechanical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
16.01	Air-Conditioning - DX/Split System	Tired by appearance. Functionality not tested	Service, overhaul or consider replacement	4	70%						0	0	13,283	0	0	0	0	0	0	13,283	53,130	26,565	13,283	13,283	53,130	13,283	400.0%
16.02	Air-Conditioning - DX/Split System	OK	Service and clean regularly	2	30%						0	0	0	0	4,428	0	0	0	0	0	17,710	4,428	8,855	4,428	17,710	4,428	400.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
16.00	Total Mechanical Services			3	50%						0	0	13,283	0	4,428	0	0	0	0	13,283	70,840	30,993	22,138	17,710	70,840	17,710	400.0%
17.00	Fire Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
17.01	Smoke Detection	Various smoke detectors missing. Functionality not tested	Repair or consider replacement/upgrade	4	70%						0	0	0	0	0	2,328	0	0	0	0	4,655	2,328	0	2,328	4,655	2,328	200.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
17.00	Total Fire Services			4	70%						0	0	0	0	0	2,328	0	0	0	0	4,655	2,328	0	2,328	4,655	2,328	200.0%
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.01	Main Distribution Boards	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	3,163	0	3,163	0	3,163	3,163	100.0%
18.02	Sub-Main Distribution Boards	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%
18.03	Electrical Wiring/Reticulation	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	6,968	0	6,968	0	6,968	6,968	100.0%
18.04	General Power Outlet	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	9,290	0	9,290	0	9,290	9,290	100.0%
18.05	Lighting (External) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	949	0	949	0	949	949	100.0%
18.06	Lighting (Internal) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	949	0	949	0	949	949	100.0%
18.07	Lighting (Internal) - Fluorescant - Double	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	13,283	0	13,283	0	13,283	13,283	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	0	36,498	0	36,498	0	36,498	36,498	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.01	None	-	-	0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	Telecommunication/Data Network	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	3,163	6,325	3,163	0	3,163	6,325	3,163	200.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Total Special Services			3	50%						0	0	0	0	0	0	0	0	0	3,163	6,325	3,163	0	3,163	6,325	3,163	200.0%
C	TOTAL BUILDING SERVICES			4	70%						0	0	13,283	0	4,428	2,328	0	0	0	16,445	129,703	36,483	70,020	23,200	129,703	71,083	182.5%
	TOTAL BUILDING			4	70%						0	23,415	13,283	0	5,136	2,328	0	0	0	23,877	394,990	68,038	220,204	106,747	394,990	512,307	77.1%

68,038
 Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM

Campus: YAP CAMPUS, RUUL, YAP STATE

D - SCIENCE LABORATORY

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Assessment		Condition Grading					Condition Gauge										Asset Renewal Cost								
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total	Year 1-30 Total			Full Replace	% Full Replace	
		2013 (\$ USD)	2014 (\$ USD)								2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total					
Condition Observations	Recommended Course of Action & Maintenance	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																					
8.02	Metal Framed Balustrades	Evidence of flaking protective coating or corrosion,	Rust treat and repaint; maintain with regular washing programme	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,672	0.0%
8.00	Total Stairs Balustrades & Handrails			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39,057	0.0%
9.00	Internal Walls/Partitions					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.01	Timber Framed Partition Walls	Assumed in place. Not inspected	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,757	0.0%
9.00	Total Internal Walls/Partitions			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,757	0.0%
10.00	Internal Doors					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.01	Metal Door - Single	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,060	0.0%
10.01	Timber Cupboard Doors (Double)	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,214	0.0%
10.00	Total Internal Doors			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,274	0.0%
11.00	Floor Finishes					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
11.01	Tiled Floor Finishes	Evidence of impact damage at edges	Install edge protection	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	61,934	0	0	61,934	61,934	61,934	100.0%
11.00	Total Floor Finishes			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	61,934	0	0	61,934	61,934	61,934	100.0%
12.00	Wall Finishes					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
12.01	Plasterboard Wall Linings with Painted Finishes	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	14,875	0	14,875	0	14,875	14,875	100.0%
12.02	Solid Plaster Wall Lining with Painted Finishes	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	26,709	0	0	26,709	26,709	26,709	100.0%
12.03	Tiled Wall Finishes	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	10,120	0	0	10,120	10,120	10,120	100.0%
12.00	Total Wall Finishes			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	51,704	0	14,875	36,829	51,704	51,704	100.0%
13.00	Ceiling Finishes					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
13.01	Fibre Cement Soffit Lining with Painted Finishes	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	15,719	0	0	15,719	15,719	15,719	100.0%
13.03	Plasterboard Ceiling Lining with Painted Finishes	OK	Maintain with regular wash and programmed repainting	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	22,365	0	0	22,365	22,365	22,365	100.0%
13.00	Total Ceiling Finishes			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	38,084	0	0	38,084	38,084	38,084	100.0%
14.00	Fixed Joinery Units					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14.04	White Boards	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	380	0	0	380	380	380	100.0%
14.05	Mirrors	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	633	0	0	633	633	633	100.0%
14.06	Built-in Joinery - Vanity Unit	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	2,151	0	0	2,151	2,151	2,151	100.0%
14.07	Built-in Joinery - Bench Unit	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	18,975	0	0	18,975	18,975	18,975	100.0%
14.08	Built-in Joinery - Shelving Unit	OK	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
14.00	Total Fixed Joinery Units			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	22,138	0	0	22,138	22,138	22,138	100.0%
B	TOTAL INTERNAL FIT-OUT			1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	173,860	0	14,875	158,985	173,860	223,947	77.8%
15.00	Sanitary Plumbing					█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15.01	WC	Operating	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	6,325	0	0	6,325	6,325	6,325	100.0%
15.02	Urinal (Stall)	Operating	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	2,277	0	0	2,277	2,277	2,277	100.0%
15.03	WHB (Single)	Operating	Clean regularly	1	10%	█	█	█	█	█	0	0	0	0	0	0	0	0	0	0	22,770	0	0	22,770	22,770	22,770	100.0%

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 D - SCIENCE LABORATORY
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Assessment	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
					Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
							0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)						
15.04	Janitors Sink	Operating	Clean regularly	1	10%															2,530	0	0	2,530	2,530	2,530	100.0%		
15.05	Shower	Operating	Clean regularly	1	10%															3,163	0	0	3,163	3,163	3,163	100.0%		
15.06	Cold Water	Operating	None	1	10%															21,505	0	0	21,505	21,505	21,505	100.0%		
15.00	Total Sanitary Plumbing			1	10%															58,570	0	0	58,570	58,570	58,570	100.0%		
16.00	Mechanical Services																			0	0	0	0	0	0	0.0%		
16.01	Air-Conditioning - DX/Split System	Operating	Maintain units and clean filters on programmed cycle.	1	10%															70,840	17,710	17,710	35,420	70,840	17,710	400.0%		
16.02	Ceiling Mounted Fan	Operating	None	1	10%															8,349	0	8,349	0	8,349	8,349	100.0%		
16.00	Total Mechanical Services			1	10%															79,189	17,710	26,059	35,420	79,189	26,059	303.9%		
17.00	Fire Services																			0	0	0	0	0	0	0.0%		
17.01	Smoke Detection	Operating	Replace batteries annually	1	10%															664	266	266	133	664	133	500.0%		
17.06	Fire Hose Reel	Operating	None	1	10%															1,265	0	0	1,265	1,265	1,265	100.0%		
17.00	Total Fire Services			1	10%															1,929	266	266	1,398	1,929	1,398	138.0%		
18.00	Electrical Services																			0	0	0	0	0	0	0.0%		
18.01	Main Distribution Boards	Operating		1	10%															0	0	0	0	0	9,488	0.0%		
18.02	Sub-Main Distribution Boards	Operating		1	10%															0	0	0	0	0	13,283	0.0%		
18.03	Electrical Wiring/Reticulation	Operating		1	10%															0	0	0	0	0	10,322	0.0%		
18.04	General Power Outlet	Operating		1	10%															0	0	0	0	0	13,763	0.0%		
18.06	Lighting (External) - Compact Fluorescent	Operating		1	10%															0	0	0	0	0	1,898	0.0%		
18.08	Lighting (Internal) - Compact Fluorescent	Operating		1	10%															0	0	0	0	0	1,581	0.0%		
18.10	Lighting (Internal) - Fluorescent	Operating		1	10%															0	0	0	0	0	22,138	0.0%		
18.00	Total Electrical Services			1	10%															0	0	0	0	0	72,472	0.0%		
19.00	Vertical Transportation																			0	0	0	0	0	0	0.0%		
19.01	Not Applicable			0	0%															0	0	0	0	0	0	0.0%		
19.00	Total Vertical Transportation			0	0%															0	0	0	0	0	0	0.0%		
20.00	Special Services																			0	0	0	0	0	0	0.0%		
20.01	Telecommunication/Data Network	Operating	None	1	10%															13,763	0	13,763	0	13,763	13,763	100.0%		
20.00	Total Special Services			1	10%															13,763	0	13,763	0	13,763	13,763	100.0%		
C	TOTAL BUILDING SERVICES			1	10%															153,451	17,976	40,088	95,387	153,451	172,261	89.1%		
	TOTAL BUILDING			2	30%															408,422	17,976	54,962	335,484	408,422	993,389	41.1%		

17,976
 Year 1 - 10 Consolidated Capital Replacement Cost



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																										
				Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace										
8.00	Stairs, Balustrades & Handrails					VG	G	A	P	VP																											
8.01	None			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8.00	Total Stairs Balustrades & Handrails			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9.00	Internal Walls/Partitions					VG	G	A	P	VP																											
9.01	None			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9.00	Total Internal Walls/Partitions			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10.00	Internal Doors					VG	G	A	P	VP																											
10.01	Timber Door - Single			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,734	0.0%	
10.00	Total Internal Doors			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19,734	0.0%	
11.00	Floor Finishes					VG	G	A	P	VP																											
11.02	Vinyl Floor Finishes			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,452	100.0%	
11.00	Total Floor Finishes			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,452	100.0%	
12.00	Wall Finishes					VG	G	A	P	VP																											
12.01	See Structural Walls			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12.00	Total Wall Finishes			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.00	Ceiling Finishes					VG	G	A	P	VP																											
13.02	Fibre Cement Soffit Lining with Painted Finishes			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,921	100.0%	
13.04	Fibre Cement Ceiling Lining with Painted Finishes			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37,390	100.0%
13.05	Ceiling Insulation			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,904	100.0%
13.00	Total Ceiling Finishes			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66,214	100.0%
14.00	Fixed Joinery Units					VG	G	A	P	VP																											
14.01	Toilet Partitions			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,554	100.0%	
14.02	Shelving (Tiered)			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,570	100.0%	
14.03	Pin Board			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,829	200.0%
14.04	White Boards			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,328	100.0%
14.05	Mirrors			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,898	100.0%
14.06	L Shaped Disabled Grab Rail			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,265	100.0%
14.07	Toilet Roll Holder			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	152	0	455	152	152	152	152	152	152	152	152	455	300.0%	
14.08	Paper Towel Dispenser			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	949	0	2,846	949	949	949	949	949	949	949	949	2,846	949	300.0%
14.09	Waste Receptacle			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	253	0	759	253	253	253	253	253	253	253	253	759	253	300.0%
14.10	Liquid Soap Dispenser			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	316	0	949	316	316	316	316	316	316	316	316	949	316	300.0%
14.11	Sanitary Napkin Disposal Unit			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	633	0	1,898	633	633	633	633	633	633	633	633	1,898	633	300.0%
14.12	Signage			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633	100.0%
14.13	Master Clock			1	10%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,795	100.0%

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 E - STUDENT CENTRE (NEW)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																							
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace							
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)					
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	Telecommunication/Data Network			1	10%						0	0	0	0	0	0	0	0	0	0	0	7,904	0	7,904	0	7,904	7,904	7,904	7,904	100.0%				
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
20.00	Total Special Services			1	10%						0	0	0	0	0	0	0	0	0	0	0	7,904	0	7,904	0	7,904	7,904	7,904	100.0%					
C	TOTAL BUILDING SERVICES			1	10%						0	0	0	0	633	0	35,420	0	0	633	196,514	36,685	58,313	101,516	196,514	140,656	139.7%							
	TOTAL BUILDING			1	10%						0	0	0	0	633	0	35,420	0	2,302	633	393,151	38,987	93,982	260,182	393,151	860,440	45.7%							
										38,987																								
										Year 1 - 10 Consolidated Capital Replacement Cost																								

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 F - CLASSROOM BUILDING (NEW)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Assessment		Condition Gauge					Condition Grading										Asset Renewal Cost						
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
1.00	Sub-Structure					0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																	
1.01	Reinforced Concrete Foundations Beams			1	10%																					0	0.0%
1.02	Reinforced Concrete Slab on Grade with Painted Finish			1	10%																					89,617	0.0%
1.03	Reinforced Concrete Mowing Strip			1	10%																					5,021	0.0%
1.04	Reinforced Concrete A/C Plinths			1	10%																					1,594	0.0%
																										0	0.0%
1.00	Total Sub-Structure			1	10%																					145,983	0.0%
2.00	Frame																									0	0.0%
2.01	Structural Steel Frame (Columns & Roof)			1	10%																					113,836	0.0%
																										0	0.0%
2.00	Total Frame			1	10%																					113,836	0.0%
3.00	Structural Walls																									0	0.0%
3.01	Reinforced Concrete Block Masonry Walls with Painted Finishes			1	10%																					13,726	0.0%
3.02	Pre-cast/Instu Reinforced Concrete Walls with Painted Finishes			1	10%																					172,110	0.0%
																										0	0.0%
3.00	Total Structural Walls			1	10%																					185,837	0.0%
4.00	Upper Floors																									0	0.0%
4.01	Not Applicable			0	0%																					0	0.0%
																										0	0.0%
4.00	Total Upper Floors			0	0%																					0	0.0%
5.00	Roof																									0	0.0%
5.01	Profiled Metal Sheet Roof Cladding (Pre-Finished)			1	10%																				54,126	100.0%	
5.01	Translucent Roof Cladding			1	10%																				5,782	100.0%	
5.06	PVC Gutters			1	10%																				6,641	100.0%	
5.07	PVC Downpipes			1	10%																				3,089	100.0%	
																										0	0.0%
5.00	Total Roof			1	10%																					69,638	100.0%
6.00	External Walls & Finishes																									0	0.0%
6.01	See Structural Walls			0	0%																					0	0.0%
																										0	0.0%
6.00	Total External Walls & Finishes			0	0%																					0	0.0%
7.00	Windows & Doors																									0	0.0%
7.01	Aluminium Framed Windows & Doors			1	10%																					85,293	0.0%
7.02	Metal Louvre Screens - 4/34" Airfoil Louvre System			1	10%																					25,300	0.0%
7.03	Metal Louvre Screens - 8" Airfoil Louvre System			1	10%																					24,668	0.0%
7.04	Metal Hurricane Shutters			1	10%																					49,171	0.0%
7.05	Timber Framed Doors - Single			1	10%																					29,601	0.0%
7.06	Timber Framed Doors - Double			1	10%																					3,795	0.0%
																										0	0.0%

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 F - CLASSROOM BUILDING (NEW)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
7.00	Total Windows & Doors			1	10%																0	0	0	0	0	217,827	0.0%
A	TOTAL STRUCTURE			1	10%																69,638	0	0	69,638	69,638	733,121	9.5%
8.00	Stairs, Balustrades & Handrails																				0	0	0	0	0	0	0.0%
8.01	None			0	0%																0	0	0	0	0	0	0.0%
8.00	Total Stairs Balustrades & Handrails			0	0%																0	0	0	0	0	0	0.0%
9.00	Internal Walls/Partitions																				0	0	0	0	0	0	0.0%
9.01	None			0	0%																0	0	0	0	0	0	0.0%
9.00	Total Internal Walls/Partitions			0	0%																0	0	0	0	0	0	0.0%
10.00	Internal Doors																				0	0	0	0	0	0	0.0%
10.01	None			0	0%																0	0	0	0	0	0	0.0%
10.00	Total Internal Doors			0	0%																0	0	0	0	0	0	0.0%
11.00	Floor Finishes																				0	0	0	0	0	0	0.0%
11.01	Vinyl Floor Finishes			1	10%																34,119	0	34,119	0	34,119	34,119	100.0%
11.00	Total Floor Finishes			1	10%																0	34,119	0	34,119	34,119	100.0%	
12.00	Wall Finishes																				0	0	0	0	0	0	0.0%
12.01	See Structural Walls			0	0%																0	0	0	0	0	0	0.0%
12.00	Total Wall Finishes			0	0%																0	0	0	0	0	0	0.0%
13.00	Ceiling Finishes																				0	0	0	0	0	0	0.0%
13.01	Fibre Cement Soffit Lining with Painted Finishes			1	10%																42,537	0	0	42,537	42,537	42,537	100.0%
13.02	Fibre Cement Ceiling Lining with Painted Finishes			1	10%																24,964	0	0	24,964	24,964	24,964	100.0%
13.03	Proprietary Suspended Ceilings (Exposed Grid Suspension System)			1	10%																11,465	0	0	11,465	11,465	11,465	100.0%
13.04	Ceiling Insulation			1	10%																6,716	0	0	6,716	6,716	6,716	100.0%
13.00	Total Ceiling Finishes			1	10%																0	0	0	85,682	85,682	85,682	100.0%
14.00	Fixed Joinery Units																				0	0	0	0	0	0	0.0%
14.01	Sliding Partition Walls (Slimline Acoustic)			1	10%																19,734	0	0	19,734	19,734	19,734	100.0%
14.02	Pin Board			1	10%																5,829	0	2,915	2,915	5,829	2,915	200.0%
14.03	White Boards			1	10%																1,771	0	0	1,771	1,771	1,771	100.0%
14.04	Recessed Projector Screens			1	10%																1,518	0	0	1,518	1,518	1,518	100.0%
14.05	Mirrors			1	10%																759	0	0	759	759	759	100.0%
14.06	L Shaped Disabled Grab Rail			1	10%																1,265	0	0	1,265	1,265	1,265	100.0%
14.07	Toilet Roll Holder			1	10%																228	76	76	76	228	76	300.0%
14.08	Paper Towel Dispenser			1	10%																1,139	380	380	380	1,139	380	300.0%
14.09	Waste Receptacle			1	10%																380	127	127	127	380	127	300.0%
14.10	Liquid Soap Dispenser			1	10%																380	127	127	127	380	127	300.0%



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Assessment		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)
14.11	Sanitary Napkin Disposal Unit			1	10%													316	0	949	316	316	316	949	316	300.0%	
14.12	Signage			1	10%													0	0	633	0	0	633	633	633	100.0%	
14.13	Master Clock			1	10%													0	0	3,795	0	0	3,795	3,795	3,795	100.0%	
																		0	0	0	0	0	0	0	0	0.0%	
14.00	Total Fixed Joinery Units			1	10%												1,025	0	0	1,025	3,939	33,414	38,378	33,414	114.9%		
B	TOTAL INTERNAL FIT-OUT			1	10%												1,025	0	158,179	1,025	38,058	119,096	158,179	153,215	103.2%		
15.00	Sanitary Plumbing																	0	0	0	0	0	0	0	0.0%		
15.01	WC			1	10%													5,060	0	5,060	0	5,060	5,060	5,060	100.0%		
15.02	WHB (Single)			1	10%													3,795	0	3,795	0	3,795	3,795	3,795	100.0%		
15.03	Hose Tap			1	10%													316	0	316	0	316	316	316	100.0%		
15.04	Solar Hot Water Including Pump and Storage			1	10%													10,120	0	10,120	0	10,120	10,120	10,120	100.0%		
																		0	0	0	0	0	0	0	0.0%		
15.00	Total Sanitary Plumbing			1	10%													0	0	19,291	0	19,291	19,291	19,291	100.0%		
16.00	Mechanical Services																	0	0	0	0	0	0	0	0.0%		
16.01	Air-Conditioning - DX/Split System			1	10%													25,300	101,200	25,300	25,300	50,600	101,200	25,300	400.0%		
16.06	Ventilation - Wall Mounted Blower Fan			1	10%													6,072	0	6,072	0	6,072	6,072	6,072	100.0%		
16.07	Ventilation - W/C Extract			1	10%													2,530	0	2,530	0	2,530	2,530	2,530	100.0%		
																		0	0	0	0	0	0	0	0.0%		
16.00	Total Mechanical Services			1	10%													25,300	0	25,300	33,902	50,600	109,802	33,902	323.9%		
17.00	Fire Services																	0	0	0	0	0	0	0	0.0%		
17.01	Smoke Detection & Alarm Systems			1	10%													4,908	0	4,908	0	4,908	4,908	4,908	100.0%		
17.02	Fire Detection & Alarm Systems			1	10%													4,908	0	4,908	0	4,908	4,908	4,908	100.0%		
17.03	Fire Hose Reel			1	10%													0	0	0	0	0	0	1,012	0.0%		
17.04	9lb Carbon Dioxide Fire Extinguisher			1	10%													1,581	7,906	3,163	3,163	1,581	7,906	1,581	500.0%		
																		0	0	0	0	0	0	0	0.0%		
17.00	Total Fire Services			1	10%													1,581	0	3,163	12,979	1,581	17,723	12,410	142.8%		
18.00	Electrical Services																	0	0	0	0	0	0	0	0.0%		
18.01	Distribution Boards			1	10%													0	0	0	0	0	0	4,428	0.0%		
18.02	Panel Boards			1	10%													0	0	0	0	0	0	3,795	0.0%		
18.03	Electrical Wiring/Reticulation			1	10%													0	0	0	0	0	0	14,725	0.0%		
18.04	General Power Outlet - Single			1	10%													0	0	0	0	0	0	354	0.0%		
18.05	General Power Outlet - Double			1	10%													0	0	0	0	0	0	6,780	0.0%		
18.06	Power Supply - Hardwired			1	10%													0	0	0	0	0	0	1,164	0.0%		
18.07	Lighting (Internal) - Incandescent			1	10%													0	0	0	0	0	0	633	0.0%		
18.08	Lighting (Internal) - Fluorescent - Single			1	10%													0	0	0	0	0	0	27,830	0.0%		
18.09	Lighting (External) - Incandescent			1	10%													0	0	0	0	0	0	1,265	0.0%		
18.10	Lighting (External) - Fluorescent - Single			1	10%													0	0	0	0	0	0	5,060	0.0%		
18.11	Daylight Sensor Switch			1	10%													0	0	0	0	0	0	759	0.0%		
																		0	0	0	0	0	0	0	0.0%		
18.00	Total Electrical Services			1	10%													0	0	0	0	0	0	66,792	0.0%		

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 F - CLASSROOM BUILDING (NEW)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
19.00	Vertical Transportation																										
19.03	None			0	0%																						
19.00	Total Vertical Transportation			0	0%																						
20.00	Special Services																										
20.01	Telecommunication/Data Network			1	10%																9,816	0	9,816	0	9,816	9,816	100.0%
																					0	0	0	0	0	0	0.0%
20.00	Total Special Services			1	10%																0	9,816	0	9,816	9,816	100.0%	
C	TOTAL BUILDING SERVICES			1	10%									1,581	0	25,300	0	0	1,581	156,632	28,463	56,697	71,473	156,632	142,211	110.1%	
	TOTAL BUILDING			1	10%									1,581	0	25,300	0	1,025	1,581	384,449	29,487	94,755	260,207	384,449	1,028,547	37.4%	
										29,487																	
										Year 1 - 10 Consolidated Capital Replacement Cost																	

Project: **COLLEGE OF MICRONESIA - FSM**
 Campus: **YAP CAMPUS, RUUL, YAP STATE**
G - VOCATIONAL EDUCATION
 Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**

Audit Date: October 2013
 Revision: Final



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Assessment		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20%	20-40%	40-60%	60-80%	80-100%	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)							
1.00	Sub-Structure																		0	0	0	0	0	0	0	0.0%	
1.01	Reinforced Concrete Foundations Beams	Not inspected	None	3	50%														0	0	0	0	0	0	37,634	0.0%	
1.02	Reinforced Concrete Slab on Grade	Evidence of cracking,	Review by Structural Engineer; crack injection fill repair	3	50%														0	0	0	0	0	0	56,925	0.0%	
1.00	Total Sub-Structure			3	50%														0	0	0	0	0	0	94,559	0.0%	
2.00	Frame																		0	0	0	0	0	0	0	0.0%	
2.01	Structural Steel Frame (Portal/Truss/Columns/Beams, etc)	Evidence of corrosion	Review by Structural Engineer; rust treat and repaint	5	90%														94,875	94,875	94,875	0	0	94,875	94,875	100.0%	
2.00	Total Frame			5	90%														94,875	94,875	94,875	0	0	94,875	94,875	100.0%	
3.00	Structural Walls																		0	0	0	0	0	0	0	0.0%	
3.01	Reinforced Concrete Brick/Block Masonry Walls	OK	None	3	50%														0	0	0	0	0	0	13,662	0.0%	
3.00	Total Structural Walls			3	50%														0	0	0	0	0	0	13,662	0.0%	
4.00	Upper Floors																		0	0	0	0	0	0	0	0.0%	
4.01	Timber Framed Upper Floor - Office	Evidence of decay	Review by Structural Engineer; repair locally	3	50%														30,834	0	0	30,834	30,834	30,834	100.0%		
4.02	Timber Framed Upper Floor - Mezzanine	Evidence of decay	Review by Structural Engineer; repair locally	3	50%														19,766	0	0	19,766	19,766	19,766	100.0%		
4.00	Total Upper Floors			3	50%														50,600	0	0	50,600	50,600	50,600	100.0%		
5.00	Roof																		0	0	0	0	0	0	0	0.0%	
5.01	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Evidence of leaks internally (daylight visible through cladding); severely corroded; Hurricane damage, etc	Replace	5	90%														55,360	55,360	0	0	55,360	55,360	100.0%		
5.00	Total Roof			5	90%														55,360	55,360	0	0	55,360	55,360	100.0%		
6.00	External Walls & Finishes																		0	0	0	0	0	0	0	0.0%	
6.01	Profiled Metal Sheet Wall Cladding (Pre-Finished)	Evidence of leaks internally (daylight visible through cladding); severely corroded; Hurricane damage, etc	Replace	5	90%														51,055	51,055	0	0	51,055	51,055	100.0%		
6.02	Profiled Metal Sheet Wall Cladding (Pre-Finished) - Canopies	Severely corroded; Hurricane damage, etc	Replace	5	90%														3,795	3,795	0	0	3,795	3,795	100.0%		
6.00	Total External Walls & Finishes			5	90%														54,850	54,850	0	0	54,850	54,850	100.0%		
7.00	Windows & Doors																		0	0	0	0	0	0	0	0.0%	
7.01	Timber Framed Windows & Doors	Evidence of decay, corroded fixings/hardware, poor workmanship (sealing), etc	Replace	5	90%														38,575	38,575	0	0	38,575	38,575	100.0%		
7.02	Timber Doors (Solid/No Glazing)	Evidence of decay, corroded fixings/hardware, poor workmanship (sealing), etc	Replace	5	90%														1,898	1,898	0	0	1,898	1,898	100.0%		
7.03	Timber Window Shutters	Evidence of decay, corroded fixings/hardware	Replace	5	90%														253	253	0	0	253	253	100.0%		
7.04	Metal Garage Door (Awning)	Severely corroded	Replace	5	90%														4,428	4,428	0	0	4,428	4,428	100.0%		
7.05	Window Glazing Treatments	Evidence of delamination, peeling, tearing, general damage	Replace	5	90%														1,815	908	908	0	0	1,815	908	200.0%	
7.00	Total Windows & Doors			5	90%														46,968	46,060	908	0	0	46,968	46,060	102.0%	
A	TOTAL STRUCTURE			5	90%														94,875	302,652	251,144	908	50,600	302,652	409,965	73.8%	
8.00	Stairs, Balustrades & Handrails																		0	0	0	0	0	0	0	0.0%	
8.01	Timber Framed Stairs	OK	Check fixings and repaint	3	50%														18,975	0	0	18,975	18,975	18,975	100.0%		
8.02	Timber Framed Balustrades	OK	Check fixings and repaint	3	50%														7,590	0	0	7,590	7,590	7,590	100.0%		

Project: COLLEGE OF MICRONESIA - FSM

Campus: YAP CAMPUS, RUUL, YAP STATE

G - VOCATIONAL EDUCATION

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																	
						Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	1	2	3	4	5	6	7	8	9	10	Asset Renewal Cost					
								2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace				
17.01	None			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.00	Total Fire Services			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.00	Electrical Services			4	70%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.01	Sub-Main Distribution Boards	Operating - Note: Graded 4 in keeping with age of building and general appearance.	Review by Specialist Electrical Services Engineer in terms of functionality and H&S.	4	70%						0	0	0	0	0	0	0	0	0	0	0	4,428	0	4,428	0	4,428	4,428	100.0%
18.02	Electrical Wiring/Reticulation	Operating - Note: Graded 4 in keeping with age of building and general appearance.	Review by Specialist Electrical Services Engineer in terms of functionality and H&S.	4	70%						0	0	0	0	0	0	0	0	0	0	0	7,400	0	7,400	0	7,400	7,400	100.0%
18.03	General Power Outlets	Operating - Note: Graded 4 in keeping with age of building and general appearance.	Review by Specialist Electrical Services Engineer in terms of functionality and H&S.	4	70%						0	0	0	0	0	0	0	0	0	0	0	9,867	0	9,867	0	9,867	9,867	100.0%
18.04	Lighting (Internal) - Incandescent	Operating - Note: Graded 4 in keeping with age of building and general appearance.	Review by Specialist Electrical Services Engineer in terms of functionality and H&S.	4	70%						0	0	0	0	0	0	0	0	0	0	0	4,428	0	4,428	0	4,428	4,428	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.00	Total Electrical Services			4	70%						0	0	0	0	0	0	0	0	0	0	0	26,122	0	26,122	0	26,122	26,122	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.01	None			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	Telecommunication/Data Network	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	7,400	14,801	7,400	0	7,400	14,801	7,400	200.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			3	50%						0	0	0	0	0	0	0	0	0	7,400	14,801	7,400	0	7,400	14,801	7,400	200.0%	
C	TOTAL BUILDING SERVICES			4	70%						0	0	0	13,283	8,855	0	0	0	0	7,400	129,473	29,538	70,397	29,538	129,473	55,660	232.6%	
	TOTAL BUILDING			4	70%						0	20,642	110,209	13,283	54,008	0	0	0	0	102,275	547,815	300,416	120,962	126,437	547,815	567,907	96.5%	

300,416

Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 H - STUDENT OPEN LOUNGE
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					1	2	3	4	5	6	7	8	9	10	Asset Renewal Cost							
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	0-20	20-40	40-60	60-80	80-100	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Year 1-10	Year 11-20	Year 21-30	Grand	Full	% Full	
						%	%	%	%	%	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	Total	Total	Total	Renewal	Replace
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	None	-	-	0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
C	TOTAL BUILDING SERVICES			4	70%						0	0	0	0	0	0	0	0	0	0	316	0	316	0	316	316	316	100.0%
	TOTAL BUILDING			2	30%						0	0	0	0	0	0	0	0	10,204	0	10,520	10,204	316	0	10,520	58,828	17.9%	
											10,204																	
											Year 1 - 10 Consolidated Capital Replacement Cost																	

Project: COLLEGE OF MICRONESIA - FSM

Campus: YAP CAMPUS, RUUL, YAP STATE

J - RESTROOM FACILITY

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																		
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG 0-20%	G 20-40%	A 40-60%	P 60-80%	VP 80-100%	1 (\$ USD)	2 (\$ USD)	3 (\$ USD)	4 (\$ USD)	5 (\$ USD)	6 (\$ USD)	7 (\$ USD)	8 (\$ USD)	9 (\$ USD)	10 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
10.00	Internal Doors																			0	0	0	0	0	0	0.0%			
10.01	Timber Door - Single	OK	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,036	0	0	3,036	3,036	3,036	100.0%
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
10.00	Total Internal Doors			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	3,036	0	0	3,036	3,036	3,036	100.0%	
11.00	Floor Finishes																			0	0	0	0	0	0	0.0%			
11.05	Tiled Floor Finishes	OK but need thorough clean. Grout is dirty	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,738	0	5,738	0	5,738	5,738	100.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
11.00	Total Floor Finishes			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	5,738	0	5,738	0	5,738	5,738	100.0%	
12.00	Wall Finishes																			0	0	0	0	0	0	0.0%			
12.03	Solid Plaster Wall Lining with Painted Finishes	Marked but OK	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,305	0	4,305	0	4,305	4,305	100.0%	
12.04	Tiled Wall Finishes	OK but need thorough clean. Grout is dirty	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,598	0	7,598	0	7,598	7,598	100.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
12.00	Total Wall Finishes			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	11,903	0	11,903	0	11,903	11,903	100.0%	
13.00	Ceiling Finishes																			0	0	0	0	0	0	0.0%			
13.01	MDF Ceiling Lining with Painted Finishes	OK. MDF needs refixing to framing	Repair, repaint and clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,710	0	2,710	0	2,710	2,710	100.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
13.00	Total Ceiling Finishes			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	2,710	0	2,710	0	2,710	2,710	100.0%	
14.00	Fixed Joinery Units																			0	0	0	0	0	0	0.0%			
14.01	Toilet Roll Holder	OK	None	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	342	114	114	114	342	114	300.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
14.00	Total Fixed Joinery Units			3	50%					0	0	0	0	114	0	0	0	0	0	0	0	342	114	114	114	342	114	300.0%	
B	TOTAL INTERNAL FIT-OUT			3	50%					0	0	0	0	114	0	0	0	0	0	0	0	23,728	114	20,464	3,150	23,728	23,500	101.0%	
15.00	Sanitary Plumbing																			0	0	0	0	0	0	0.0%			
15.01	WC	OK	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%	
15.02	Urinal (Stall)	Not in operation (Plastic cover installed)	Replace	5	90%	0	0	0	0	0	2,277	0	0	0	0	0	0	0	0	0	0	2,277	2,277	0	0	2,277	2,277	100.0%	
15.03	WHB (Single)	OK	Clean regularly	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,693	0	5,693	0	5,693	5,693	100.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%			
15.00	Total Sanitary Plumbing			4	70%					0	0	2,277	0	0	0	0	0	0	0	0	0	17,457	2,277	15,180	0	17,457	17,457	100.0%	
16.00	Mechanical Services																			0	0	0	0	0	0	0.0%			
16.01	None	-	-	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
16.00	Total Mechanical Services			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
17.00	Fire Services																			0	0	0	0	0	0	0.0%			
17.01	None	-	-	0	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
17.00	Total Fire Services			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.00	Electrical Services																			0	0	0	0	0	0	0.0%			
18.01	Lighting (Internal) - Incandescent	Light bulbs missing	Replace	3	50%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%	
						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
18.00	Total Electrical Services			3	50%					0	0	0	0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: YAP CAMPUS, RUUL, YAP STATE
 J - RESTROOM FACILITY
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	Asset Renewal Cost																
											1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
19.00	Vertical Transportation									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.01	None	-	-	0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.00	Total Vertical Transportation			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	None	-	-	0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
C	TOTAL BUILDING SERVICES			4	70%					0	0	2,277	0	0	0	0	0	0	0	0	18,090	2,277	15,813	0	18,090	18,090	100.0%
	TOTAL BUILDING			3	50%					0	0	2,277	0	114	0	0	0	0	0	0	57,242	2,391	40,072	14,779	57,242	73,029	78.4%
										2,391																	
										Year 1 - 10 Consolidated Capital Replacement Cost																	

Project: COLLEGE OF MICRONESIA - FSM
Campus: YAP CAMPUS, RUUL, YAP STATE
Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
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ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost															
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deter.	VG	G	A	P	VP	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Asset Renewal Cost			Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %												Year 1-10 Total	Year 11-20 Total	Year 21-30 Total		
1.00	Roading									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.01	Gravel Roads	Poor	Import, spread and compact new gravel	4	70%					0	1,265	0	0	0	0	1,265	0	0	0	6,325	2,530	2,530	1,265	6,325	1,265	500.0%
1.02	Asphalt Concrete Roads - resurfacing	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	6,362	0	6,362	0	6,362	6,362	100.0%	
1.03	Asphalt Concrete Roads - rebuild pavement	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,907	0.0%
1.04	Reinforced Concrete Roads	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,150	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1.00	Total Roading			3	50%					0	1,265	0	0	0	0	1,265	0	0	0	12,687	2,530	8,892	1,265	12,687	41,685	30.4%
2.00	Car Parks									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2.01	Gravel Car Parks	Poor	Import, spread and compact new gravel	4	70%					0	633	0	0	0	0	633	0	0	0	3,163	1,265	1,265	633	3,163	633	500.0%
2.02	Asphalt Concrete Car Parks - resurface	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	22,643	0	22,643	0	22,643	22,643	100.0%	
2.02	Asphalt Concrete Car Parks - rebuild pavement	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31,700	0.0%
2.03	Reinforced Concrete Kerbs & Channels	Damaged	Repair or consider replacement	4	70%					0	0	0	0	0	0	0	0	0	3,743	0	0	3,743	3,743	3,743	100.0%	
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2.00	Total Car Parks			3	50%					0	633	0	0	0	0	633	0	0	0	29,548	1,265	23,908	4,375	29,548	58,718	50.3%
3.00	Foot Paths & Circulation Areas									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
3.01	Reinforced Concrete Foot Paths & Circulation Areas	OK	Maintain	2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,537	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
3.00	Total Foot Paths & Circulation Areas			2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,537	0.0%
4.00	Fences & Gates									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4.01	Chain Link Fences / Gate	OK	Maintain	1	10%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,746	0.0%
4.02	Reinforced Block Masonry Fences	OK	Maintain	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,846	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4.00	Total Fences & Gates			2	30%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,592	0.0%
5.00	Structures									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5.01	Green House (Local Unseen Timber Framed with Green House Roof)	OK	Maintain	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,396	0.0%
5.02	Work Shed (Masonry Construction on RC Slab with Timber Roof & Metal Roof Cladding)	Poor	Repair or consider replacement	4	70%					0	0	0	0	0	0	0	0	0	44,275	0	0	44,275	44,275	44,275	100.0%	
5.03	Storage Shed (Container Building on RC Slab with Timber Trusses & Metal Roof Cladding)	Good (new)	Maintain	1	10%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71,726	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5.00	Total Structures			3	50%					0	0	0	0	0	0	0	0	0	44,275	0	0	44,275	44,275	149,397	29.6%	
6.00	Retaining Walls									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
6.06	None			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
6.00	Total Retaining Walls			0	0%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
7.00	Site Drainage									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
7.01	Swales	Assumed operating satisfactorily	Maintain	3	50%					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,325	0.0%
7.02	Soak Pits	Assumed operating satisfactorily	Maintain	3	50%					0	0	0	0	12,650	0	0	0	0	0	37,950	12,650	12,650	12,650	37,950	12,650	300.0%
7.03	Manholes	Assumed operating satisfactorily	Maintain	3	50%					0	0	0	0	0	0	0	0	0	25,300	0	0	25,300	25,300	25,300	100.0%	
7.05	Inground Piped Sewer Drainage	Assumed operating satisfactorily	Maintain	3	50%					0	0	0	0	0	0	0	0	0	50,600	0	0	50,600	50,600	50,600	100.0%	
7.06	Sceptic Tanks	Assumed operating satisfactorily	Maintain	3	50%					0	0	0	0	0	0	0	0	0	22,770	0	0	22,770	22,770	22,770	100.0%	



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deter.	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)
7.07	Pumps	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	6,325	12,650	6,325	0	6,325	12,650	6,325	200.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
7.00	Site Drainage			3	50%						0	0	0	0	12,650	0	0	0	0	6,325	149,270	18,975	12,650	117,645	149,270	123,970	120.4%
8.00	Electrical Infrastructure										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
8.01	Transformers	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	44,275	0	44,275	0	44,275	44,275	100.0%
8.02	HV/LV Electrical Reticulation	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	75,900	0	75,900	0	75,900	75,900	100.0%
8.03	Lighting Poles	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	10,120	0	10,120	0	10,120	10,120	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
8.00	Total Electrical Infrastructure			3	50%						0	0	0	0	0	0	0	0	0	0	130,295	0	130,295	0	130,295	130,295	100.0%
9.00	Water Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.01	Incoming Water Mains	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	25,300	0	0	25,300	25,300	25,300	100.0%
9.02	Water Reticulation	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	20,240	0	0	20,240	20,240	20,240	100.0%
9.03	Meters	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	12,650	0	0	12,650	12,650	12,650	100.0%
9.04	Water Storage Tanks	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	18,975	0	0	18,975	18,975	18,975	100.0%
9.05	Pumps	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	12,650	25,300	12,650	0	12,650	25,300	12,650	200.0%
9.06	Hydrants	Assumed operating satisfactorily	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	0	6,325	6,325	6,325	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.00	Total Water Services			3	50%						0	0	0	0	0	0	0	0	0	12,650	108,790	12,650	0	96,140	108,790	96,140	113.2%
10.00	Site Furniture										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.01	Site Furniture Generally	OK	Maintain	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.00	Total Site Furniture			3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
	TOTAL SITE INFRASTRUCTURE										0	1,898	0	0	12,650	0	1,898	0	0	18,975	481,190	35,420	182,070	263,700	481,190	631,658	76.2%

35,420
 Year 1 - 10 Consolidated Capital Replacement Cost

Appendix D

Energy Use Analysis





Building System Descriptions

HVAC System

AC Split-Units to provide cooling. No extract or supply system. Natural ventilation by open windows/spaces.

Plumbing System

Metered connection to town water main, cold water only with few buildings using solar hot water heating.

Electrical System

Over head and underground metered connection to town main. 3 Phase and single phase.

Plant Item	Description	Location	Operation	Condition	Current maintenance	Recommendations	Current Operational Status
Mechanical Systems							
AC Unit	Split-type units	Internal	Manual operation	Varied	Monthly cleaning, weekly leak checking. Upcoming planned upgrades to replace old units with more efficient ones.	Replace damaged units with higher efficiency units.	
AC Unit	Split-type units	Internal	Manual operation	Varied	Monthly cleaning, weekly leak checking. Upcoming planned upgrades to replace old units with more efficient ones.	. Set all units to 24degC.	
General AC Units	Some outdoor units have debris in their filters.	External		Poor		These units require immediate filter cleaning.	
General AC Units	Some outdoor units are heavily rusting.	"		Poor		Consider replacing old/damaged units with more efficient ones.	
General AC Units	Dirty outdoor units	External		Poor		Wipe down to avoid excess dirt getting into filters.	
Lighting	Internal lighting	Internal		Good		Turn off lights when not required or room not in use.	
General	Room infiltration	All areas		Poor		Properly seal all holes into the building.	
General	Louvered windows left open or have louvers missing completely.			Poor		Ensure that these are not near AC units. If they are they should be closed/fixed	
General	Roof Insulation			Average		Replace where missing	
General	Closed curtains/blinds during daylight hours.	Internal		Average		Open curtains to increase natural lighting.	
General	Air circulation	Internal		Good		Arrange furniture and storage to promote better airflow	

Recommendation Key



Plant operating efficiently



Improvements possible with minimal capital expenditure



Capital investment recommended to improve system within 2-5years



Plant requires significant maintenance or replacement



Potential Health and Safety Hazard

Potential for Future Improvement

An opportunity to improve the standard of servicing in the site - for consideration in future stages.



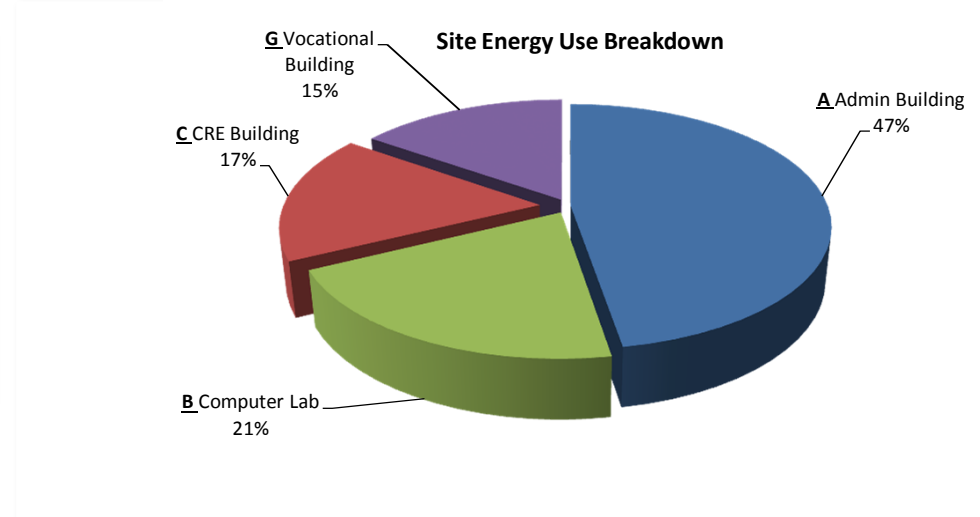
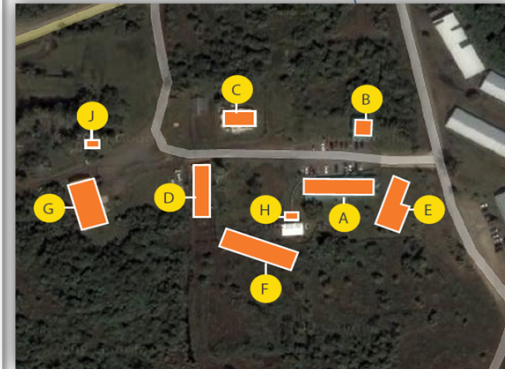
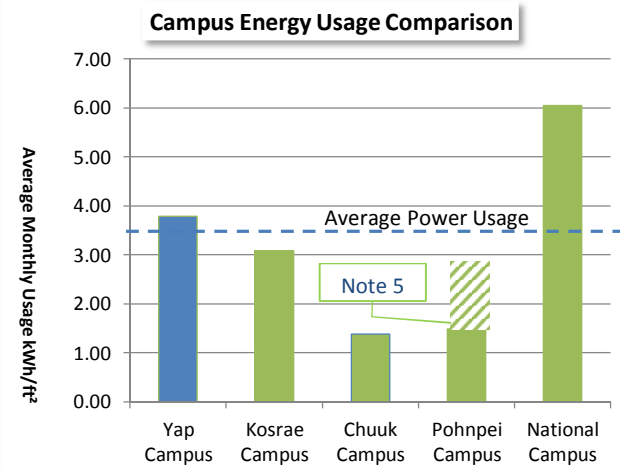
Building System Descriptions	HVAC System	AC Split-Units to provide cooling. No extract or supply system. Natural ventilation by open windows/spaces.
	Plumbing System	Metered connection to town water main, cold water only with few buildings using solar hot water heating.
	Electrical System	Over head and underground metered connection to town main. 3 Phase and single phase.

Plant Item	Description	Location	Operation	Condition	Current maintenance	Recommendations	Current Operational Status
A (both Admin buildings)							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation, Daylight sensors.	Good	To replace magnetic ballast fluorescent fixtures with electronic	Turn off lights when not in use.	
General	Roof insulation	Internal	-	Good	-	Add insulation where missing.	
General	Room infiltration	Internal	-	Average	-	Repair Gaps in walls	
B Computer Lab							
AC Units	Split-units	Internal	Manual Operation	Good	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Good	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use.	
General	Roof insulation	Internal	-	Average	-	Add insulation where missing.	
General	Room infiltration	Internal	-	Poor	-	Install self closing mechanism on doors to AC spaces	
C Land Grant Research Lab							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Average	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use	
General	Roof insulation	Internal	-	Average	-	Add insulation where missing.	
General	Room infiltration	Internal	-	Poor	-	Repair door frame and install self closing mechanism on doors to AC spaces	
Electrical	Exposed wiring	Internal	-	Poor	-	Replace or fix wiring.	
D Science Lab							
AC Units	Split-units	Internal	Manual Operation	Good	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Average	To replace magnetic ballast fluorescent fixtures with electronic	Turn off lights when not in use	
General	Roof insulation	Internal	-	Good	-	Add insulation where missing.	
Electrical	Appliance standby	Internal	manual operation	Average	-	Replace office equipment with low standby power requirement and switch off after hours	
General	Room infiltration	Internal	-	Average	-	Install self closing mechanism on doors	
E Student Centre							
AC Units	Split-units	-	-	Good	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Good	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use.	
General	Roof insulation	Internal	-	Good	-	Replace insulation where missing	
F New Student Centre							
AC Units	Split-units	Internal	Manual Operation	Good	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units to 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Average	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use.	
G Vocational Education							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Average	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use. Consider Sun-Tube	
General	Roof insulation	Internal	-	Poor	-	Install and replace insulation as needed	
Electrical	Exposed wiring	Internal	-	Poor	-	Replace or fix wiring.	
H Student Lounge							
Lighting	Fluorescent tubes & compact fluorescent bulbs	All areas	Manual operation	Average	To replace magnetic ballast fluorescent fixtures with electronic	Turn lights off when not in use.	

Recommendation Key	
	Plant operating efficiently
	Improvements possible with minimal capital expenditure
	Capital investment recommended to improve system within 2-5years
	Plant requires significant maintenance or replacement
	Potential Health and Safety Hazard
	Potential for Future Improvement

an opportunity to improve the standard of servicing in the site - for consideration in future stages.

Campus Summary

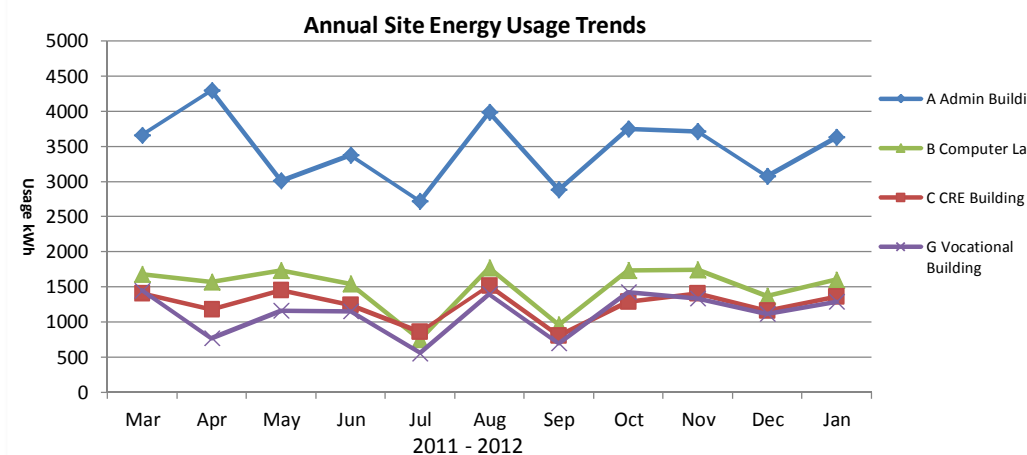


Campus Summary:

The Yap campus is using slightly more energy than average across the sites based on the energy readings from 2011 /12 provided. It is not possible to see a long term trend in annual usage from this data, but it is noted that the computer lab and faculty office account for almost 50% of the electricity usage on site. Energy saving measures should begin with these areas.

Energy Efficiency Recommendations:

- a) Adjust the set point control of the AC units to 24 or 25°C
- b) Turn units off when spaces are un-occupied
- c) Ensure units are free from obstructions, filters are clean, and pipework runs are straight to reduce loads on units
- d) Close windows when systems are operating
- e) Seal holes and penetrations from conditioned areas to outside or non-air conditioned areas
- f) Keep doors leading to AC spaces closed
- g) Turn off lights when leaving a room - consider installing occupancy sensors
- h) Replace ceiling insulation where missing

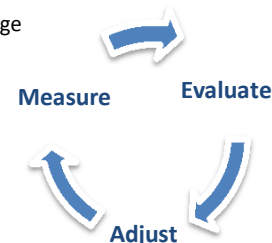


Energy measurement

Being able to measure and record energy usage is a key step in improving energy efficiency. It has several benefits:

- Highlighting areas of high energy usage to enable targeting of specific areas for improvement
- Tracking effectiveness of efficiency measures
- Engage staff and students in the process to reduce energy usage between buildings / campuses e.g. competitions

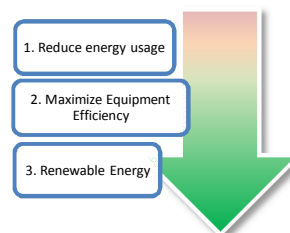
A range of various types of electricity meters are available which can be selected to best meet the College's needs.



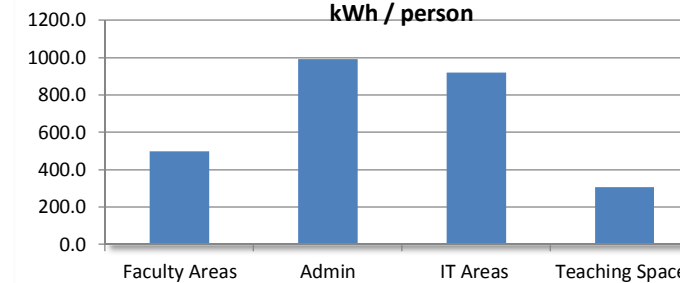
Reducing Your Energy Usage

There are many energy efficiency measures that can be undertaken with minimal capital cost. The following procedure will help to ensure that the most cost efficient measures are undertaken first.

- 1- Reduce how much energy you use: e.g. (a), (b), (c), (d) above. Use of available energy saving resources to engage and educate staff and students.
- 2 - Maximize Equipment Efficiency e.g. Replacing air conditioning units with more efficient models when appropriate, provide high efficiency lighting when replacing fittings(see note 4)
- 3 - Consider using renewable energy resources where appropriate, e.g. solar hot water, photovoltaic cells



Energy Usage per Person - Yap Campus kWh / person



- Notes:
- 1: The figures contained in this report are based on power consumption data provided by CoM (See attached Energy Usage Data Summary). Data provided was limited for some campuses and hence may not be representative of average energy use.
 2. Site Energy Usage Breakdowns are estimated where insufficient background data is available.
 3. Occupancy Data based on Sandy Pond Associates room capacities and occupancy rates
 4. Note that if installation of high efficiency lighting is to be considered, power conditioning to the relevant lighting circuit may be required to prolong the life of the fixtures.
 - 5: Refer to Pohnpei Campus summary for details of energy usage

Moving forward:

This energy audit is a "snapshot" of how the campus is currently operating.

The findings of this study are to be fed forward into the future master planning of the college.

There are several items identified in this study which we have the ability to improve with redevelopment works or future new buildings.

Building Physics:

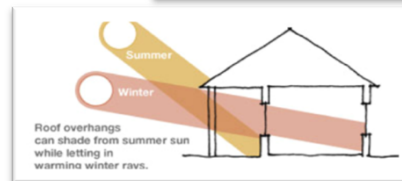
- Consideration of solar shading to windows to prevent solar gains
- Colour of buildings (Darker colors absorb more heat)
- Promotion of cross-flow natural ventilation
- Selection of glazing to minimize solar gain
- Consideration of requirement for cooling to equipment areas only

Renewable Energies:

Review of potentially suitable renewable energies for various sites

User engagement

- Education of users on energy consumption, and engaging of staff and students to take responsibility for energy costs
- Record keeping and metering of resource consumption
- PPM (Planned Preventative Maintenance) programmed and



Appendix E

Planting Palette



The 'Planting Palette' information below has been kindly compiled by:

Krishnapillai, Murukesan

Researcher, CRE, Yap

B.S., University of Kerala, India

M.S., Mahatma Ghandi University, India

Ph.D., M.S. University of Baroda, India

B.S., University of Hyderabad, India

P.G. Diploma, Professional Career Dev Institute, USA

	Botanical name	Commonly known as
Feature trees	1. <i>Calophyllum inophyllum</i>	Beach Mahogany
	2. <i>Albizia saman</i>	Monkey pod
	3. <i>Sweetenia macrophylla</i>	Mahogany
Secondary trees	1. <i>Artocarpus altilis</i>	Breadfruit
	2. <i>Areca catechu</i>	Betelnut
	3. <i>Cocos nucifera</i>	Coconut
	4. <i>Citrus</i> spp	Tangerines, Limes, Oranges
Hedge planting	1. <i>Codiaeum variegatum</i>	Croton
	2. <i>Gardenia jasminoides</i>	Gardenia
	3. <i>Hibiscus rosa sinensis</i>	Hibiscus
Garden planting	1. <i>Caladium</i> spp.	Caladium
	2. <i>Rosa</i> sp.	Rose
	3. <i>Ixora</i> spp.	Ixora

A.1 Feature Trees

1. *Calophyllum inophyllum*:

<http://selectree.calpoly.edu/treedetail.lasso?rid=246&-session=selectree:77FC78BA1b52927E63TTu187642E>



2. *Albizia saman*

<http://worldagroforestryCenter.org/sea/Products/AFDbases/af/asp/SpeciesInfo.asp?SpID=180>



3. *Sweetenia macrophylla*

<http://www.worldagroforestry.org/treedb2/speciesprofile.php?Spid=1566>



A.2 Secondary Trees

1. *Artocarpus altilis*

http://www.agroforestry.net/scps/Breadfruit_specialty_crop.pdf



2. *Areca catechu*

<http://www.agroforestry.net/tti/Areca-catechu-betel-nut.pdf>

<http://university.uog.edu/cals/people/>



3. *Cocos nucifera*

<http://selectree.calpoly.edu/treedetail.lasso?rid=380&-session=selectree:77FC78BA1b52927E63TTu187642E>

http://www.agroforestry.net/scps/Coconut_specialty_crop.pdf



4. Citrus spp.

<http://www.agroforestry.net/tti/Citrus-citrus.pdf>



A.3 Hedge planting

1. Codiaeum variegatum

http://www.floridata.com/ref/c/codi_var.cfm

http://hort.ufl.edu/database/documents/pdf/shrub_fact_sheets/codvara.pdf



2. Gardenia jasminoides

<http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b555>

http://www.desert-tropicals.com/Plants/Rubiaceae/Gardenia_jasminoides.html

http://www.backyardgardener.com/plantname/pd_d8c4.html



3. Hibiscus rosa sinensis

http://www.floridata.com/ref/h/hibisc_r.cfm

<http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b557>



A.4 Garden Planting

1. Caladium spp.

<http://www.botany.com/caladium.htm>

<http://www.southernliving.com/home-garden/gardens/how-to-grow-caladiums-00417000073783/>



2. Rosa sp. (Family Rosaceae)

<http://www.botany.com/rose.html>

<http://www.theflowerexpert.com/content/mostpopularflowers/rose>



3. Ixora spp

http://www.floridata.com/ref/i/ixor_coc.cfm

<http://www.south-florida-plant-guide.com/ixora.html>



A.5 College of Micronesia-FSM, Yap Campus Soil Information (from NRCS Study)

Soil Name: Gitam Series

Classification: Very-fine, mixed, isohyperthermicAquollicHapludalfs

A.5.1 General description:

1 to 15 centimetres; dark brown, interior very gravelly silty clay loam; strong very fine granular structure; friable, slightly sticky, slightly plastic; many very fine and fine roots and common medium and coarse roots; many very fine interstitial pores; moderately acid, pH 6.0, clear smooth boundary.

15 to 36 centimetres; yellowish brown, interior silty clay; 30 per cent fine distinct reddish yellow, 30 per cent fine prominent greenish grey, strong medium sub angular blocky structure; firm, moderately sticky, moderately plastic; many very fine and fine roots and few medium and coarse roots; many very fine and fine tubular and few very fine and fine interstitial pores; moderately acid, pH 5.8, clear irregular boundary.

36 to 89 centimetres; greenish grey, interior silty clay; 11 per cent medium prominent strong brown, strong medium and coarse sub angular blocky structure; firm, slightly sticky, moderately plastic; common very fine and fine roots and few coarse roots; common fine tubular and many very fine interstitial and tubular pores; 15 per cent faint, moist, manganese or iron-manganese stains and 55 per cent, moist, pressure faces; moderately acid, pH 5.8, abrupt irregular boundary.

89 to 109 centimetres; greenish grey, interior silty clay; firm, slightly sticky, slightly plastic; strongly acid, pH 5.2

Moist bulk density (g/cm³) – 0.90 – 1.10 (0-15 cm); 1.00 – 1.20 (15-36 cm); 1.10 – 1.30 (36-89 cm)

Permeability (cm/hr.) – 0.2 – 0.5 (0-15 cm); <0.2 (15-36 cm); <0.2 (36-89 cm)

A.5.2 Description of the soil map unit based on NRCS study

Map Unit Number: 509 – Gitam very gravelly silty clay loam, 2 to 6 per cent slopes

This moderately deep, somewhat poorly drained soil on the toe slopes and upland plains. It formed in residuum derived dominantly from green, chlorite and talc schist. Slopes are plane or slightly concave. Areas are irregular in shape. Typically 80 per cent of the surface is covered with gravel. The surface layer is dark brown, very gravelly silty clay loam 15 cm thick. The subsoil is mottled, yellowish brown silty clay, 21 cm thick. The substratum to a depth of 89 cm is greenish grey silty clay. Soft, weathered schist is at a depth of 60 to 100 cm. Permeability of Gitam soil is very low. Effective rooting depth is 60 to 100 cm for water tolerant plants but is limited to depths between 30 and 60 cm, for plants that are not tolerant. Runoff is slow. Water is perched above the bedrock year-round during most years.