UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

Project Management Plan for the Construction of the National Museum of Belize

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DEDICATION

This Project is dedicated to my parents Alejandro and Teresita, for instilling in me the value of hard work and for encouraging me during the many months of preparation for the completion of this project. To my new friends and old friends who encouraged me throughout this journey.

ACKNOWLEDGMENTS

Special thanks to the staff of the National Institute of Culture and History for their support during this project. I would like to thank the administrator Mr. Marconi Sosa for allowing me to do the course while still working and the past and current Presidents of NICH who assisted throughout this Project.

I would also like to thank the two tutors who assisted in the preparation of this document, Mr. Carlos Brenes and Mr Roger Valverde.

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ABBREVIATIONS AND ACRONYMS

Central Building Authority (CBA)

Final Graduation Project (FGP)

General Sales Tax (GST)

House of Culture (HOC)

Institute of Archaeology (IA)

Institute of Creative Arts (ICA)

Institute for Research and Management of Material Culture (IRMAC)

Institute for Social and Cultural Research (ISCR)

Museum of Belize (MOB)

National Institute of Culture and History (NICH)

National Museum of Belize (NMB)

Project Management Institute (PMI)

Work Breakdown Structure (WBS)

EXECUTIVE SUMMARY (ABSTRACT)

A national museum for the country of Belize has been in the making since the nineteen eighties. A few terms of references for a national museum has been written as well as the feasibility report as recent as the year two thousand and fifteen. In the past general elections, a manifesto promise of the current government is to build a national museum for Belize. The statutory board that is responsible for the construction of a national museum is the National Institute of Culture and History (NICH).

NICH is the primary stakeholder as well as the department responsible for development of a national museum. There are three phases of a feasibility report completed, that outlines the size of the national museum and the exhibits that are needed to develop the National Museum of Belize. All previous attempts at getting the national museum built has been through feasibility reports or terms of references.

NICH through, the Museum of Belize and Houses of Culture, has jurisdiction of the current Museum of Belize. The current museum was converted from a Victorian Era Prison to a space that is used for exhibitions. The Current museum (Museum of Belize) sits on the grounds of the Central bank of Belize. This museum cannot be converted into the national museum because of the amount of space available and the limitations it has due to it falling under the Central Bank security regulations. There is also concern that the building was not constructed for housing exhibits, hindering the opportunities for Belize to repatriate artefacts taken out of the country. The location of the current museum is also near to the sea and creates problems logistically when Belize is threatened by hurricanes.

There is a need for the development of a National Museum in the Capital, Belmopan, to aid in the repatriation of artefacts, foster national pride and proper storage of the artefacts that make up the patrimony of Belize. The execution of the development and construction of a national museum for Belize has never been looked at as a project. Developing a project management plan for the construction of the national museum of Belize, is a new approach to the construction of a national museum.

The general objective of this project is to create a project management plan for the construction of the National Museum of Belize. The objectives are: to Create a Integration Managemnt Plan which will combine various processes within the project management plan, to construct a Scope Management Plan for the construction of a national museum which includes cost planning, resource planning and stakeholder engagement, Create a Cost Magement Plan to estimate the budget, financing, funding and control cost for the

project, Create a Project Quality Management Plan to meet stakeholder expectations, Create a stakeholder management plan to ensure that all stakeholders are accounted for and that they be placed in the correct categories, Create a time management plan to ensure that the different phases of the project are done on time,Create a communications management plan to ensure that information pertaining to the phases of the project are sent to NMB stake21olders,Create a Project Risk Management Plan to manage risk, Create a Procurement Management Plan to acquire products and services and determine if the resoureces are within the organization or are needed from outside and Create a Project Resource mangement Plan to identify the resource needed for completion of a project mangement plan.

The Methodologies used in the FGP are based on Literature reviews of previous feasibilty reports and terms of refference for a national museum project. There is also literature on small states that built national museums which are comparitive to Belize in size and population. The FGP also used qualitative and quantitatve research methods. The main guide for the development of the Project Management plan was the PMBOK 6th edition. This along with the literature reviews mentioned above were compiled to create the Project management Plan for the Construction of the National Museum of Belize

The Project Management Plan, developed using the PMBOK 6th edition, gave a new method for NICH to approach the National Museum Construction Project. It is recommended that NICH uses the Project Management Plan to construct the National Museum of Belize. This would greatly aid NICH in its strategic objective of constructing a national museum by the year two thousand and twenty three (2023).

INTRODUCTION

1.1. Background

The National Institute of Culture and History (NICH) is a statutory board that falls under the jurisdiction of the Ministry of Education Youth Sports and Culture in Belize. It was passed into legislation under the NICH act in August two thousand and three (2003). NICH is Comprised of four departments which include, The Institute of Archaeology (IA), Museum of Belize and Houses of Culture (MOB/HOC), Institute of Creative Arts (ICA) and the Institute for Social and Cultural Research (ISCR). Its mandate is"… encourage Belizeans and persons interested in Belize to better understand our historic and ethnic roots and instil pride in ourselves about our country's unique heritage and shared national identity "

Previous Attempt

Having a national museum for the country of Belize started from the early nineteen eighties (1980's). The first proposed building was placed in Belmopan, the capital of Belize, from nineteen ninety-four (1994). This building was repurposed and is currently being used as an administrative office for NICH. It currently houses offices belonging to three of the four departments that make up NICH. One Terms of Reference for the initial planning of a national museum was drafted in February two thousand eleven (2011). Since then little has been done to see the project to fruition.

Location and Rational

The location for the national museum has always been in Belmopan, due to the proximity from the sea and its central location. The Antiquities Act was passed in nineteen fifty (1950), prior to that numerous artefacts were taken from Belize and the IA has made numerous attempts to repatriate artefacts. Some of the responses include, not having adequate storage facilities and a proper venue to display artefacts. Some agencies such as the Royal Ontario Museum have agreed to repatriate artefact from Belize when Proper storage facilities are built.

The construction of a national museum is one of the strategic goals of NICH, construction of a national museum would mean that proper storage facilities would also need to be constructed and artefacts can then be repatriated to Belize .

NICH is the only institution in Belize that is given the responsibility of examining and showcasing culture and heritage to the Belizean public. A national museum would greatly increase the public discourse on the history and culture of Belize. Given the multi ethnic society of Belize, there is a great need to have a venue where Belizeans can come and experience the different ethnicities that make up Belize. The student proposes the development of a Project Management Plan for the construction of the National Museum of Belize to address the need of a venue to showcase the culture and history of Belize.

1.2. Statement of the problem

There is currently no national museum in Belize. NICH does have one museum, the Museum of Belize (MOB) that is under the administration of MOB/HOC. This museum was repurposed from Her Majesties Prison, which served as the country's only prison from eighteen fifty four (1854) up until nineteen ninety six (1996).

At present MOB is limited in what programs can be offered after five pm due to its location on the grounds of the Central Bank of Belize and their security protocol. The space of MOB is an estimated two thousand square feet and so limits the size of exhibits that can be placed inside. The building is a repurposes prison and functions as a museum; this creates problems with renovation and building integrity and limits the number of people that can be in the building at any one time. The project management plan intends to add structure to the plans for a national museum and create a restructuring of staff with the intent of having them placed in the new museum. The management plan should create interest in the actual construction of a national museum and

renew the one of the goals of NICH, which is the construction of a national museum

Opportunity to be seized

The projects aim is to aid in the development and see the eventuality of the construction of The National Museum of Belize. This will aid in the training and alignment of staff, which is currently needed by MOB. There is opportunity to reorganize staff and offer training prepare staff to operate a national museum.

By implementing the Final Graduation Project, NICH will have a better understanding of the feasibility of constructing a national museum and will have an outline of the planning needed for construction of a national museum.

1.3. Purpose

The proposed Management plan will create subsidiary plans such as the scope management plan, stakeholder management plan, time management plan and communication management plan for the construction of a national museum. The plan will then look at the different process needed to construct a national museum.

The construction of a national museum will benefit the people of Belize in numerous ways. It will allow for the repatriation of artifacts taken from Belize pre nineteen fifty (1950). It will also greatly enhance the tourism product that Belize currently has by serving as a focal point from which tours can be given. It will also have added economic benefit to the capital, Belmopan. The construction of a New Museum building will also allow for storage of Archaeological and colonial artifacts in a controlled environment.

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1.4. General objective

To develop a Project Management Plan for the construction of the National Museum of Belize(NMB)

1.5. Specific objectives

- To create a Integration Managemnt Plan that combine various processes within the project management plan

- To construct a Scope Management Plan for the construction of a national museum that includes cost planning, resource planning and stakeholder engagement

- To create a Cost Magement Plan to estimate the budget, financing, funding and control cost for the project

- To create a Project Quality Management Plan to meet stakeholder expectations

- To create a Stakeholder Management Plan to ensure that all stakeholders are identified and to ensure effective stakeholder engagement.

- To create a Schedule Management Plan to ensure that the all phases of the project are completed on time.

- To create a Communications Management Plan to ensure that information pertaining to the phases of the project are sent to NMB stakeholders.

- To create a Project Risk Management Plan to Mange risk

- To create a Procurement Management Plan to acquire products and services and determine if the resoureces are within the organization or are needed from outside

- To develop a Project Resource Mangement Plan to identify the resource needed for completion of a project mangement plan

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

The NICH act passed into the laws of Belize and was in force as of December 31, in the year two thousand (2000). Belize is the only country in Central America that uses English as its official language. It is the last country in the western hemisphere to gain independence. Before its independence in nineteen eighty-one (1981) it was formally recognized by the British Government as a colony in eighteen ninety-two (1892) under its former name British Honduras. Today Belize has a land mass of 22,806 square kilometres.

Figure 1 Map of Belize (Source: https://www.cia.gov/library/publications/the-world-factbook/geos/bh.htm)

The NICH act revised in two thousand and three (2003) to include an administrator and amend the Institute for the Research and Management of Material Culture (IRMAC) to the IA. The NICH act established the objectives of NICH that are:

(a) to encourage creativity by promoting the full freedom of expression within the law;

(b) to foster cross-cultural understanding and mutual respect, given Belize's multi-cultural, multi-ethnic, and multi-lingual nature;

(c) to apply the principle of decentralization in order to ensure that the several districts of Belize are beneficiaries of an contributors to cultural policies and programmes;

(d) to promote the effective integration of culture and art as curricular subjects in primary and secondary schools;

(e) to ensure the greatest possible participation of civil society in the making and execution of policies and programmes, particularly from cultural workers, artists and organized groups;

(f) to ensure the participation of youth and proper handling of gender issues;

(g) to take full advantage of the latest technological advances, particularly in ensuring that the mass media contribute effectively to cultural development;

(h) to ensure that cultural promotions stress the values of national and regional community while locating Belizean culture as part of universal culture and insisting on striving for excellence and a strong ethical foundation;

(i) to so conduct international relations and exchanges as to safeguard and enhance national sovereignty and dignity; and

(j) to allow free and democratic access to information within the framework of the law.

(Source: National Institute of Culture and History ACT chapter 331 Pages 11 and 12)

The act states the function of each department under NICH, IA,MOB/HOC, ICA and ISCR. The main function of each department is to supervise the policies of the NICH act. The act also gives NICH the power to:

Transfer property

Borrow money from the Government

Borrow money from commercial banks or international lending agencies

2.1 Company/Enterprise background

Mission and vision statements

NICH revises its strategic objectives every five years. The last strategic plan formulated at the end of two thousand fifteen (2015) for the period two thousand sixteen (2016) to two thousand twenty one (2021). The previous plan oversaw the growth of NICH from two thousand ten (2010) to two thousand fifteen (2015). The current strategic objectives saw the revision of the mission and vision statements.

The Mission and Vision of the National Institute of Culture and History is as follows:
Mission:
NICH is Belize's premier cultural institution dedicated to safeguarding, promotion expression, conservation and sustainable development of culture in all its diversity in collaboration with the people of Belize.

Vision: A Belize that Embraces and promotes Our Culture, Our Values, Our Identity, Our prosperity in a global community.

Under the Strategic objectives for NICH 2016-2021, strategic objective 3.4.6.2.1 and 3.4.6.2.2 call for NICH to build a National Museum and build a storage facility for the national collection, antiquities and monuments. The proposed Project management plan would be the first project to endeavor into the actuality of constructing a national museum for Belize.

2.1.1 Organizational structure

The Departments of NICH under the NICH act. The current organogram shows the current structure of the Institute with four sub institutes. The Statutory board is ran by a board of managers along with the president of NICH and the heads of department as non-voting members. IA has the largest Department followed by MOB/HOC which has the MOB and six houses of culture.

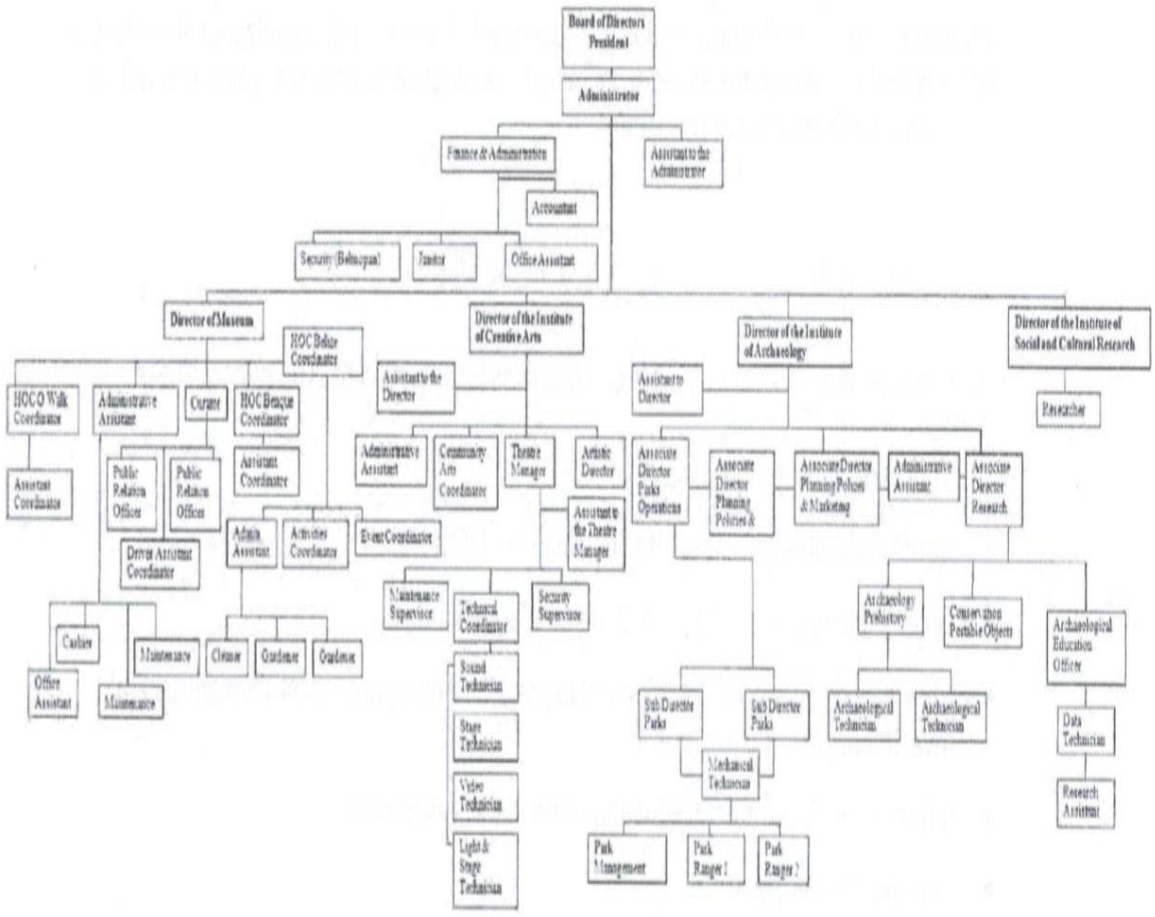

Figure 2 Organizational structure (Source: National Institute of Culture and History Phase 1 report Page 3)

When the national museum starts, that department would have the following organogram.

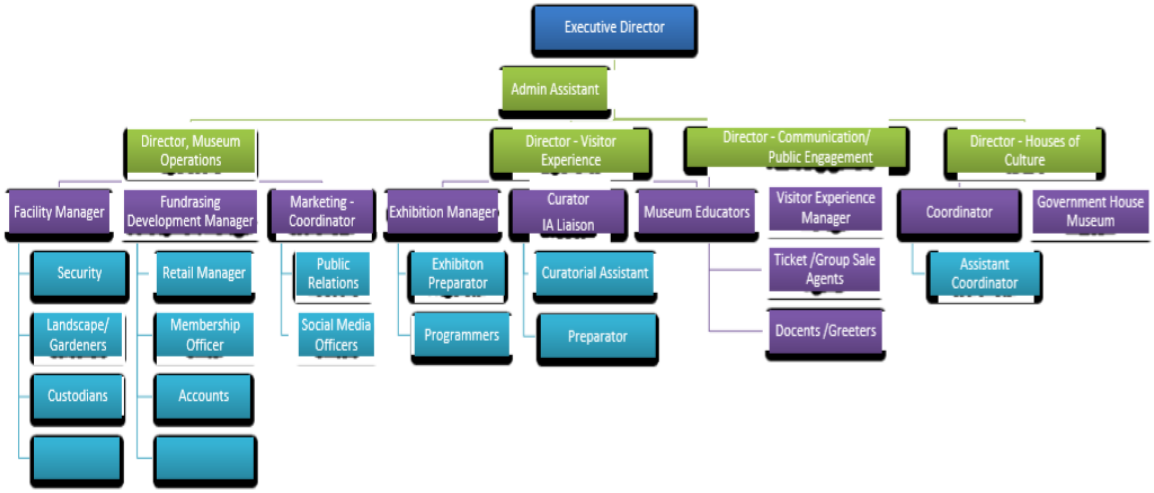

Figure 3 Organizational structure of NMB (Source: National Institute of Culture and History Technical Director Report Document)

2.1.2

Products offered

NICH has the responsibility of guiding the proliferation of culture for the country of Belize. Through the departments of IA, ICA, ISCR and MOBHOC there are a number of different projects done through NICH. The main activities include, planning and execution of national celebrations such as Independence Day activities and Carnival is spearheaded by NICH. IA is responsible for the management of archaeological sites opened to the public, issuing of excavation permits and archaeological surveys done throughout the country.

ICA is responsible for the creative arts and runs national festivals promotion of filming in Belize, the national film festival, Festival of the Arts, Belize Music week and production of shows at the national centre for the performing arts.

ISCR is responsible for social and cultural research done throughout Belize. It catalogues and researches festivals, ethnic/cultural celebrations and traditions. ISCR also issues permits for studies and surveys conducted in Belize.

MOBHOC is responsible for the cataloguing of artifacts in Belize, development of exhibits to display history and culture, community outreach through the Houses of Culture and educational campaigns concerned with the history and culture of Belize.

NICH does not offer a product but safeguards tangible and intangible cultural heritage. The development of a project management plan for a national museum

for Belize will be the first attempt for NICH to approach this task as a project rather than a feasibility report.

2.2 Project Management concepts

2.2.1Project

The PMBOK 6th edition defines a project as "… a temporary endeavour undertaken to create a unique product, service, or result" (Project Management Institute, 2017). For the Final Graduation Project (FGP) the students' project is to develop a project management plan for the construction of a national museum in Belize.

NICH has initiated two reports that discuss the size and the programing of a national museum. NICH has initiated the feasibility study and that report details the institutional context, existing and potential markets, the concept of programming a museum, institutional plan, interpretive plan operations and staff planning and space and facilities plan. NICH has never followed a project structure to develop a national museum. The project management seeks to put in place a project structure that will serve as a guide to construct a national museum.

2.2.2 Project management

The PMBOK 6th edition defines project management as "… the Application of Knowledge, skills, tools and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the project management processes identifies for the project." (Project Management Institute, 2017). Project management is important to achieving the strategic objectives and goals of any institution. To set up the project management plan, the project manager will have to use the processes outlined in the inputs and tools and techniques to develop project management plan. This will include the project charter, examining the enterprise environmental factors and the organizational process assets.

The project manager seeks to identify stakeholders and engage them in the intended outcomes of the FGP. The development of the project management plan will aid all stakeholders in describing how the NMB construction project will be executed, monitored, controlled and closed.

2.2.3 Project life cycle

Figure 4 Project Life Cycle (Source: http://www.method123.com/project-lifecycle.php)

According to the PMBOK sixth edition, “A project life cycle is the series of phases that a project passes through from its start to its completion. It provides the basic framework for managing the project. The basic framework app lies regardless of the specific project work involved.” (PMBOK sixth edition, 2017).

The previous paragraph describes all projects as having the same framework. The PMBOK sixth edition goes further to indicate, “The Phases may be sequential, iterative, or overlapping.” (PMBOK sixth edition, 2017). The phases referred to in the PMBOK are initiation, planning, execution and project closure. These phases are to develop the project management plan. The project management plan consist of the following:

Scope management plan

Requirements management plan

Schedule management plan

Cost management Plan

Quality management plan

Resource management plan

Communications management plan

Risk management plan

Procurement management plan

Stakeholder management plan

The project management plan for this project consist of one or more of the plans listed above.

2.2.4 Project management processes

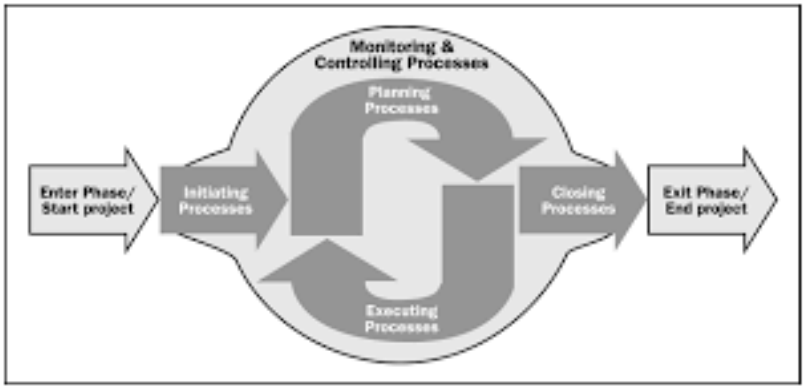

Figure 5 Monitoring and Controlling Process (Source: http://blog.sukad.com/how-plausible-is-the-idea-of-recurring-project-management-processes/)

According to the PMBOK sixth edition the project management process has five process groups. These process groups are initiating, planning, execution, monitoring and control, and closing. These process groups applied to knowledge areas in project management make up forty-seven processes. To successfully complete this project and to develop the project management plan for the national museum these processes will be applied to the different subsidiary plans that comprise the project management plan.

2.3 Project management knowledge areas

PMBOK sixth edition defines the knowledge areas as "… Fields or areas of specialization that are commonly employed when managing projects. A knowledge area is a set of processes associated with a particular topic in project management." (PMBOK Sixth Edition, 2017). The ten knowledge areas are:

Project Integration Management

Project Scope Management

Project Schedule Management

Project Cost Management

Project Quality Management

Project Resource Management

Project Communications Management

Project Risk Management

Project Procurement Management

Project Stakeholder Management

The Project knowledge Areas is used to fulfil the specific objectives of the Project management plan. This includes the development of subsidiary plans listed in the project charter. The project management plan developed will incorporate the ten knowledge areas to be used for the development of a national museum.

METHODOLOGICAL FRAMEWORK

3.1 Information sources

According to karibouconnections.net, "an information source is where you got your information from…" (karibouconnect.net, 2018) the source goes on to say "Information Sources are the various means by which information is recorded for use by an individual or an organization…the means by which a person is informed

about something or knowledge available to someone…" (karibouconnect.net, 2018)

3.1.1 Primary sources

"A primary source provides direct or first-hand evidence about an event, object, person, or work of art." (Ithaca College Library, 2018)

These primary sources include but are not limited to:

Legal document

Eye witness account

Results of experiments

Statistical data

Audio and video recordings

Speeches

Interview

Surveys

Fieldwork

Internet communications

The primary sources for the FGP include, interviews with the Directors of NICH, Feasibility study document for the National Museum of Belize, The NICH act of 2000 amended 2003 and the project management processes from the PMBOK sixth edition.

3.1.2 Secondary sources

"Secondary sources describe, discuss, interpret, comment upon, analyse, evaluate, summarize, and process primary sources." (Ithaca College Library, 2018)

The secondary sources include but are not limited to:

Newspapers

Magazines

Books

Articles

The secondary sources for the FGP include the NICH website and articles written by stakeholders.

Chart 1 Information sources (Source: Author of Study)

Objectives	Information sources	
	Primary	**Secondary**
Create a Integration Managemnt Plan	PMBOK Sixth Edition	Lord Cultural Report National Museum of Belize, Phase 3 report
To construct a Scope Management Plan for the construction of a national museum	PMBOK Sixth Edition, TOR for National Museum Project	Lord Cultural Report National Museum of Belize , Phase 1 Report
Create a Cost Magement Plan	PMBOK Sixth Edition, TOR for National Museum Project	Lord Cultural Report National Museum of Belize , Phase 1,2 and Report
Create a Project Quality Management Plan	PMBOK Sixth Edition, Interviews with stakeholders	Work Plan report, Museum Development specialist
Create a stakeholder management plan	Interviews with stakeholders	NICH act 2002, Lord Cultural Report National Museum of Belize , Phase 1 and 2
Create a time management plan	PMBOK Six Edition,	NICH act 2002, Lord Cultural Report National Museum of Belize , Phase 1 and 2
Create a communications	PMBOK Sixth Edition	Work Plan report, Museum Development specialist

management plan		
Create a Project Risk Management Plan	PMBOK Sixth Edition	NICH act 2002, Lord Cultural Report National Museum of Belize , Phase 1 and 2
Create a Procurement Management Plan	PMBOK Sixth Edition	NICH act 2002
Create a Project Resource mangement Plan	PMBOK Sixth Edition, Interviews with the different directors of NICH	Work Plan report, Museum Development specialist, NICH act 2002,

3.2 Research methods

Research Method is defined as “a particular way of studying something in order to discover new information about it or understand it better…” (Cambridge Dictionary, 2018)

While there are a number of different ways to carry out research and different types of research depending on the field of study, the methods used for the FGP are Literature reviews, analytical research, observational research, qualitative and quantitative research.

Analytical Research

Analytical research allows the researcher to “…use facts or information already available, and analyze them to make a critical evaluation of the material.” (SCRIBD, 2018) This includes the study of the available information, including the terms of references for the national museum as well as feasibility studies available/

Observational Research

Observational research essentially describe situations, they “do not make accurate predictions … and do not determine cause and effect” (SCRIBD, 2018). There are three types of methods under observational research. This includes observation method, case study and survey method. Survey methods include interviewing people to get responses.

Qualitative Research

Qualitative research “involves emerging questions and procedures, data typically collected in the participant’s setting, data analysis inductively building from particulars to general themes and the researcher making interpretations of the meaning of the data” (Creswell, 2013)

Quantitative Research

Quantitative research is Defined as “Testing objects theories by examining the relationship among variables. These variables, in turn, can be measures, typically on instruments, so that numbered data can be analyzed using statistical procedures” (Creswell, 2013)

Chart 2 Research methods (Source: Author of the Study)

Objectives	**Research methods**			
	Analytical	Observational	Quantitative	Qualitative
Create a Integration Managemnt Plan	The functions of creating a project management plan are outlined in	Working within MOB/HOC and deciding what departments can assist		

	readings			
To construct a Scope Management Plan for the construction of a national museum	Construction of a scope management plan are found in readings		Looking at similar documents for construction of museums in small countries like Belize	
Create a Cost Magement Plan	Cost management plans and how to go about making them are found in corresponding readings		Looking at similar documents for costing of museums similar in size to this project.	
Create a Project Quality Management Plan	The Quality management plan will be done by looking at similar projects done in other countries			
Create a stakeholder management plan	Stakeholder management plans is found in readings and for similar projects.	Interview with different stakeholders	Use materials (stakeholder managemen t plan) that the Museum	Collecting surveys from stakeholders to determine the amount of data

			had when they developed the first museum under NICH	needed to be communicate
Create a time management plan	Time management plans are outlined in readings. Similar projects have been done and will be used to create a time management plan			
Create a communications management plan	Communications plans will be assessed from the one created at NICH and in readings	Interview with associated director for communications		
Create a Project Risk Management Plan	Risk management plan will be created using similar management plans from museums in the		Use of development plans for museums in small states	

	region			
Create a Procurement Management Plan	Procurement management plan will be used using a specifications outlined by the Caribbean Development Bank and other lending agencies	Look over previous projects done in collaboration with NICH and determine how they set up procurement		
Create a Project Resource mangement Plan	Resource management plan will be creating using management plan outlined in readings			

3.3 Tools

Tools is defined as "… the intent of what needs to be done …. represent different methods to accomplish the intent."(PMBOK, 2017) Tools vary in project management and range from brainstorming, interviews, research and so on.

Chart 3 Tools (Source: Author of Study)

Objectives	Tools
Create a Integration Managemnt Plan	Expert judgement Organizational strategy Brainstorming Interviews
To construct a Scope Management Plan for the construction of a national museum	Expert judgement Brainstorming
Create a Cost Magement Plan	Cost benefit analysis Brainstorming Meetings
Create a Project Quality Management Plan	Data analysis Expert judgement
Create a Stakeholder management plan	Interviews Expert judgement Data analysis
Create a Time Management plan	Benchmarking Expert judgement Data analysis
Create a Communications Management Plan	Meetings Interviews Expert judgement Marketing plan Policies and procedures
Create a Project Risk Management Plan	Regulatory documentation Expert judgement Interviews
Create a Procurement Management Plan	Regulatory documents Policies and procedures

Create a Project Resource Mangement Plan	Previous cases Policies and procedures Expert Judgement

3.4 Assumptions and constraints

Assumptions is defined as “ factors expected to be in place or to be in evidence” (PMBOK,2017) A constraint is defined as “ A limiting factor that affects the execution of a project, programme, portfolio or process” (PMI, 2013)

Chart 2 Assumptions and constraints (Source: Author of Study)

Objectives	Assumptions	Constraints
Create a Integration Managemnt Plan	NICH needs a Project management plan	The amount of work that needs to be compiled in a limited amount of time
To construct a Scope Management Plan for the construction of a national museum	NICH should have an Idea of the scope of the project and what needs to be done to carry out the project	The scope of the project may constantly change due to limited resources that outline the extent of the project.
Create a Cost Magement Plan	There are similar constructions cost in Belize that can be used to determine similar cost for the PMP	Costing varies as new tariffs and duties are imposed.
Create a Project Quality Management Plan	The quality management plan will be referenced during the construction of the national museum.	Little to no information on procedures to measure quality of projects in Belize

Objectives	Assumptions	Constraints
Create a Stakeholder management plan	NICH has a list of stakeholders for similar projects and projects done in the past	Some stakeholders may not want to participate in this project
Create a Time Management plan	NICH should have resources available to estimate the amount of time needed for the development and construction of a national Museum. This is based on pervious feasibility studies and terms of references for a national museum	Delays in NICH processes that may impede the plan.
Create a Communications Management Plan	NICH Should have a communications management plan already in	Senior management may not want to adapt changes if any to the

Objectives	Assumptions	Constraints
	place	communications management plan
Create a Project Risk Management Plan	NICH should have the capacity to identify the risk involved in building a national museum	Unidentified risk may emerge as the project is developed. They may need to be updated as the project goes along
Create a Procurement Management Plan	NICH should have a procurement plan uses in previous project and protocol in place for procurements.	Differences in policies from one project to the next may lead to not having one set procurement policy in place
Create a Project Resource Mangement Plan	The Project management plan should asses the resources at the disposal of NICH. The PMP should persuade NICH to pursue the construction of a national	Not all resources identified will be readily available to the project.

Objectives	Assumptions	Constraints
	museum.	

3.5 Deliverables

According to the PMBOK Sixth Edition, a deliverable is defined as "… any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables may be tangible or intangible." (PMBOK, 2017) Project deliverables have the possibility of existing beyond the scope of the project.

Chart 5 Deliverables (Source: Author of Study)

Objectives	Deliverables
Create a Integration Managemnt Plan	Integration Management Plan
To construct a Scope Management Plan for the construction of a national museum	Scope Management Plan
Create a Cost Magement Plan	Cost Management Plan
Create a Project Quality Management Plan	Quality Management Plan
Create a Stakeholder management plan	Stakeholder Management Plan
Create a Time Management plan	Time Management Plan
Create a Communications Management Plan	Communication Management Plan
Create a Project Risk Management Plan	Project Risk Management Plan
Create a Procurement Management Plan	Procurement Management Plan
Create a Project Resource Mangement Plan	Project Resource Mangement Plan

RESULTS

4.1. Project Integration Management

To develop a project management plan for the construction of the national museum of Belize, there needs to be the development of a project charter. This was done in consultation with tutor, stakeholders and the PMBOK as a resource. The processes that make up project integration management are as follows:

Develop Project Charter

Develop Project Management Plan

Direct and Manage project Work

Manage Project Knowledge

Monitor and Control Project Work

Perform Integrated Change Control

Close Project or Phase

According to PMBOK 6th edition, the Develop project Charter is " The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities."

4.1.2 Knowledge areas:

Scope Management

Schedule Management

Cost Management

Resource management

Risk Management

Procurement Management

Stakeholder management

Closing

4.1.3 Process groups:

Planning

Initiation

Executing

Monitoring and control

4.1.4 Project Objectives

General objective:

Developing a Project Management Plan for the construction of the National Museum of Belize(NMB)

Specific Objectives

To create a Integration Managemnt Plan that combine various processes within the project management plan

- To construct a Scope Management Plan for the construction of a national museum that includes cost planning, resource planning and stakeholder engagement

- To create a Cost Magement Plan to estimate the budget, financing, funding and control cost for the project

- To create a Project Quality Management Plan to meet stakeholder expectations

- To create a Stakeholder Management Plan to ensure that all stakeholders are identified and to ensure effective stakeholder engagement.

- To create a Schedule Management Plan to ensure that the all phases of the project are completed on time.

- To create a Communications Management Plan to ensure that information pertaining to the phases of the project are sent to NMB stakeholders.

- To create a Project Risk Management Plan to Mange risk

- To create a Procurement Management Plan to acquire products and services and determine if the resoureces are within the organization or are needed from outside

- To develop a Project Resource Mangement Plan to identify the resource needed for completion of a project mangement plan

4.2 Project Scope Management

Project Management Plan for the Construction of the National Museum of Belize
Scope Management Plan

4.2.1 Introduction

Project Scope Management includes the processes and activities to Identify, define, combine, unify and coordinate the various processes and project

management activities within the Project Management Process group. (Project Management Institute , 2017)

Project Scope Management follows a six step process; Plan scope management, Collect Requirements, Define Scope, Create WBS, Validate Scope, and Control Scope.

1) Collect Requirements – The requirements for the completion of this project include the following objectives. Creation of: Integration Management plan, Scope management Plan, Cost Management Plan, Project Quality Management plan, Stakeholder Management Plan, Time Management Plan, Communications Management Plan, Procurement Management Plan, and a Resource Management Plan. As stated in the project charter, there are six knowledge areas that need to be integrated in order to produce the Project management Plan.
2) Define Scope – The product and services generated by the project will be the following:
   Identification of Land
   Creation of overview of exhibit strategy for the musueum
   Assesment of the MOB organization and structure
   Assesment of musuem building storage and landscaping
   Assesment of collection needs within storage buildong
   Assesment of catalogur needs of national collection of artefacts
   Creation of a masterplan for Museum lands
   Development of Buisness and financial plan

3) Create WBS – is the process of dividing the project deliverables into smaller, more manageable components. It provides a framework of what has to be delivered. (Project Management Institute , 2017)

		Due Date

2.3.1	Scope Management Plan Submission	August 17
2.3.3	Cost Management Plan and Corrections Submission	August 24
2.3.5	Time Management Plan and Corrections Submission	August 31
2.3.7	Stakeholder Management Plan and Corrections Submission	September 7
2.3.9	Communication Management and Corrections Submission	September 14
2.7	Final Project Submission	October 21

4) Validate Scope – formalizes the acceptance of the completed project deliverables. It differs from project quality management and is done to validate each objective.
5) Control Scope – is the process of monitoring the status of the project and product scope and managing the changes to the scope baseline. (Project Management Institute , 2017)

4.2.2 Scope Management Approach

The Project Manager will have the responsibility of managing the scope of the project. They will develop the schedule management plan as well as the activities and objectives. The Project Manager will have to laisse with stakeholders to ensure that the objectives are completed and the outputs outlined in the project charter are completed.

The scope is defined by the work break schedule below. The project is the Construction of the National Museum of Belize. The construction of a national museum for Belize. The initial phases of the project call for a Museum with 4 wings each depicting a section of the History and culture of Belize.

Changes to the scope can be made by the Project Manager, stakeholders or any members of the project steering committee as well as the project management team. Changes to the scope must be done using a change request and approved by the project management team. The project manager will then submit the scope change to the sponsor, stakeholders and all other contractors.

4.2.3 Roles and Responsibilities

Name	Role	Responsibilities
National Institute of Culture and History	Project Sponsor	- Accept project deliverables - Evaluate and accept or deny scope changes
Director Museum of Belize	Project Manager	- Determine Scope - Facilitate scope change requests - Compile impact assessment of scope change requests - Update project documents - Communicate with stakeholders
Stakeholders	Workers Contractors Cultural workers President of NICH	- Convey the proper deliverables that are needed for the project to be successful - Provide scope changes if needed
Project Team	Project team member	- assist project manager - aid in facilitating scope changes - communicate with stakeholders

Chart 6, *Scope Management Roles and Responsibilities*

4.2.4Scope Definition

The scope was defined through a series of reports compiled by Lord Cultural Resources. This consulting group came in and through a series of evaluations of the current Museum as well as an overview of the National Institute of Culture and History. From this information Lords Cultural was able to compile a list of specifications and recommendations in order to construct a national museum.

The Deliverables were gathered through consultation with stakeholders, staff of NICH and representatives from the Ministry of Culture. This report then gave the background needed to start planning for the construction of a museum in Belmopan City.

4.2.5 PROJECT SCOPE STATEMENT

The project scope statement gives a description of the projects deliverables, constraints, exclusions, assumptions and acceptance criteria.

Scope description, Product Acceptance Criteria and Project Deliverables

The project calls for the building of a national museum comparable to national museums in a small state. There forty eight countries that would be defined as small states. With a population of under three hundred and fifty thousand people, Belize falls under this classification. NICH has been able to get a land grant for ten acres of land in Belmopan City.

The national museum must have the following criteria:

Accessibility and parking

Built on one floor

Include an outdoor pavilion

Include 5 wings

Have office Space

Include a collections storage, handling and research area
Building must be between 30,000 to 35,000 square feet with an exhibition area of 14,000 square feet.

4.2.6 Project Exclusion

Development of exhibitions for national Museum
Architectural drawings
Construction of botanical gardens

4.2.7 Project Constraints

The museum must be constructed by 2023. The project duration should not exceed over two years.

4.2.8 Project Assumptions

Finances
It is assumed that the project sponsor will have adequate finances to complete the project

Budget
It is assumed that the project can be completed using USD $15,000,000.00

Schedule
It is assumed that the project will take twenty four months to complete

4.2.9 Work Breakdown Structure

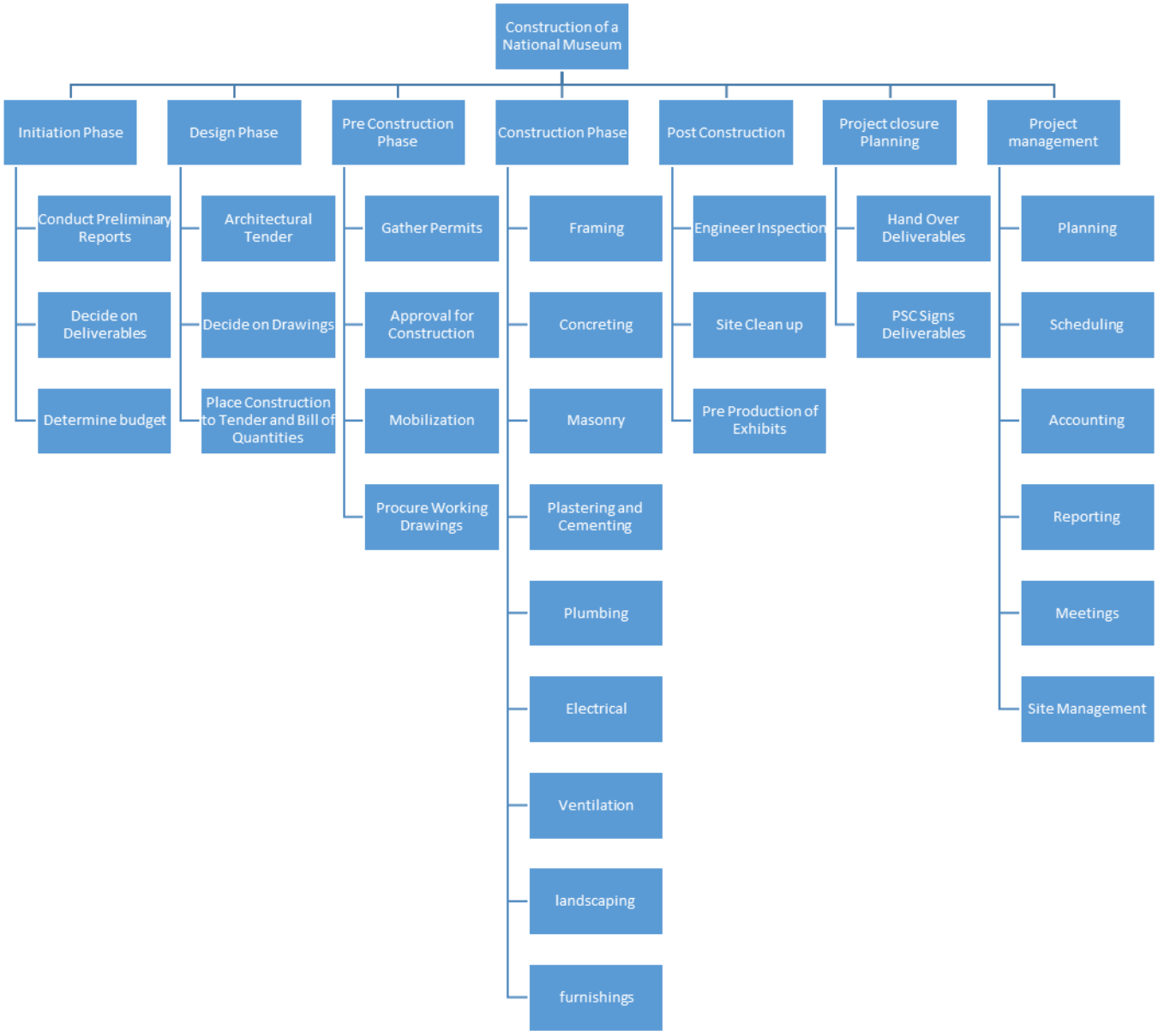

Figure 6, ***Work Breakdown Structure (WBS)***

The WBS Dictionary includes an entry for each WBS element. The WBS Dictionary includes a detailed description of work for each element and the deliverables, budget and resource needs for that element.

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
1	**1.1**	**Initiation Phase**	**Start of planning for national museum**		**120,000**	
2	1.1.1	Conduct Preliminary reports	Procure initial reports from Lord Cultural Report	Phase three report on national Museum	100,000	Internet Literature review Procurement protocol
2	1.1.2	Decide on Deliverables	Develop PSC to review report and determine what deliverables will be used	Objectives documented	10,000	Project Scope
2	1.1.3	Determine Budget	Break down of cost	Cost Evaluation	10,000	Project Scope
1	**1.2**	**Design Phase**	**Consultations with stakeholders**		**250,000**	
2	1.2.1	Architectural tender	Project will have a drawn rendition of museum building	Architectural drawings	50,000	Consultant
2	1.2.2	Decide on Drawings	Consultants will compile	Engineering of	100,000	Consultant

			engineering reports, survey reports, steel engineering reports.	Building		
2	1.2.3	Place construction to tender and bill of quantities	Contractor selection.	Engineering of Building	100,000	Consultant
1	**1.3**	**Pre-Construction Phase**	**Contractor will be given a formal contract to start construction as well as the formation of a project steering committee**		**210,000**	
2	1.3.1	Gather Permits	City Permits and construction permits need to be submitted and approved for construction to begin	Permits approved	30,000	Architectural drawings and engineering reports
2	1.3.2	Approval for Constructio	Engineering reports need to	Engineering approved	30,000	Engineering reports

		n	be completed in order for contractor to start			
2	1.3.3	Mobilization	Contractor will start to move to construction site	Site preparation including levelling, fencing and temporary water and electricity	100,000	Construction machines including mixers, graders cranes and bulldozers
2	1.3.4	Procure Working Drawings	Drawings that will be used by the contractor to build Museum to specifications outlined by the PSC		50,000	
1	**1.4**	**Construction Phase**	**Construction of Building starts**		**8,100,000**	
2	1.4.1	Framing	Entails the frames and beams that will carry the load of the Building	Frames are set up and inspected by engineer	1,100,000	Requirements, Architectural and structural Drawings
2	1.4.	Concreting	Entails all	Floors and	2,000,0	Requiremen

	2		concrete work to set foundation	foundation is completed	00	ts, Architectural and structural Drawings
2	1.4.3	Masonry	Entails all masonry work after foundation is set	Building is cemented and frames are covered	1,200,000	Requirements, Architectural and structural Drawings
2	1.4.4	Plastering and Cementing	Plastering of walls	All walls of building are plastered	800,00	Requirements, Architectural and structural Drawings
2	1.4.5	Plumbing	Installation of water and waste water lines in the building	Pipes are set up in the building	400,000	Requirements, Architectural and structural Drawings
2	1.4.6	Electrical	Electrical power to the building is set up	Building has electricity	600,000	Requirements, Architectural and structural Drawings
2	1.4.7	Ventilation	Set up central air and cooling	Air conditionin	300,000	Requirements,

				g and ventilation system		Architectural and structural Drawings
2	1.4.8	Landscaping	Yard work is completed around the building	Yard is Landscaped	1,100,000	Requirements, Architectural and structural Drawings
2	1.4.9	Furnishing	Furniture and fixtures for finishing are installed	Building is move in ready	600,000	Requirements, Architectural and structural Drawings
1	**1.5**	**Post Construction**			**2,625,000**	
2	1.5.1	Engineer Inspection	Engineer inspects all aspects of construction	Final engineering report on Building	25,000	Consultant
2	1.5.2	Site Clean up	All Material and construction equipment is removed	Building has no construction equipment or debris	100,000	Contractor
2	1.5.3	Pre-Production	Technical staff of the Museum	Exhibitions are set up	2,500,000	Technical Staff of

		of Exhibits	prepares for set up of exhibitions			Museum
1	**1.6**	**Project Closure Planning**	**Completion of project and handing Building over to NICH**		**NA**	
2	1.6.1	Hand Over Deliverables	Contractor prepares deliverables check list	Deliverables are all completed	NA	
2	1.6.2	PSC Signs Deliverables	Project manager goes over deliverables and makes recommendations to PSC	Deliverables are signed off	NA	
1	**1.7**	**Project management**	**Managing the planning monitoring and control an closure of project**		**387,000**	
2	1.7.1	Planning	Planning and update on project activates for duration of project	Project management Plan	100,000	

2	1.7.2	Scheduling	Project activities, timeline and dates to determine duration of project	Schedule	20,000	
2	1.7.3	Accounting	Monitoring of finances throughout the project	Reports	30,000	
2	1.7.4	Reporting	Reporting on project activities and presenting to stakeholders	Project Manager reports	25,000	
2	1.7.5	Meetings	Quarterly meetings with PSC	Quarterly Meetings	12,000	
2	1.7.6	Site Management	Monitoring of daily activates at construction site	Site management	200,000	

Chart 7, *WBS Dictionary*

4.2.10 Scope Verification

As the project starts and goes through its life cycle, the scope will need to be verified. The project manager will use the WBS and WBS Dictionary to verify the project deliverables. The project will have quarterly reports where the project manager will report on the deliverables as compared to those in the original scope.

The project sponsor is responsible to formally accept each deliverable presented by the project manager. This ensures that the project stays within the scope.

4.2.11 Scope Control

Control scope is the process of monitoring the status of the project and product scope and managing the changes of the scope baseline (Project Management Institute , 2017). The project manager is responsible for the monitoring of scope and the baselines. The project manager will request changes, recommend corrective or preventative actions through the change control process.

4.2.12 Sponsor Acceptance

Approved by the Project Sponsor:

_____ Date:_____

<Project Sponsor>
<Project Sponsor Title>

4.3 Project Schedule Management

According to the PMBOK sixth edition the Project Schedule Management Process "… includes the processes required to manage the timely completion of the project" The sub processes include:
Plan Schedule management

Define Activities

Sequence Activities

Estimate Activity Durations

Develop Schedule

Control Schedule.

The processes include the establishing of policy, procedure and documentation in order to ensure that they lifecycle of the project is carried out. The most important process to developing the lifecycle of the project is the Plan Schedule management. Inputs include the project management charter and the scope management plan. Scope management is important because widening the scope could mean that additional time to complete the project would be needed.

Project Schedule Management for the Construction of the National Museum of Belize
Project Schedule Management Plan

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4.3.1 Introduction

Schedule in project management is listing a projects milestones, deliverables and activities throughout the project life cycle (the start to finish of a project). It gives an account to the project team and sponsors as to how the project should be at any interval in time. Since this is a large project the project team will have to select the scheduling method, according to the PMBOK 6th edition this includes the critical path and or agile approach. The main purpose of this document is to communicate,

manage stakeholders' expectations and to report on performance of the project as well as determining, approving and not approving scope changes.

4.3.2 Plan Schedule management

Project schedule management includes the process of developing, maintaining and communicating schedules for time and resource. According to PMBOK sixth edition "is the process of establishing, planning, developing, managing, executing and controlling the project schedule"

The Project schedule will be made using Microsoft Project. The activities will determine which type of work will be performed in order to complete each deliverable in the project schedule. Based on previous knowledge acquired during the activities will be sequenced in order to determine the works and the relationship between activities. The activities will determine the resources and time needed to complete each milestone.

When the project schedule is determined. The project manager in consultation with stakeholders will review the proposed schedule and allot the resources needed to complete. After this is done the stakeholders and project steering committee will need to meet in order to approve the work schedule and resources.

These are the Milestones included in the Schedule for the Project:

1. Initiation of Project
2. Construction Preliminary Reports
3. Decide on Deliverables
4. Determine Budget
5. Architectural Tendering Process
6. Decide on Drawings
7. Bill of Quantities
8. Place Construction to Tender
9. Gather Permits
10. Approval for Construction
11. Mobilization
12. Procure Working Drawings

13. Framing
14. Concreting
15. Masonry
16. Plastering
17. Cementing
18. Plumbing
19. Electrical
20. Ventilation
21. Landscaping
22. Furnishing
23. Engineer Inspection
24. Site Clean Up
25. Pre-Production of Exhibits
26. Handing Over of Deliverables
27. PSC Sign Deliverables
28. Project Completion

The project manager will be responsible for taking the milestones and converting it into a schedule. The Schedule will be made using MS projects. Once the schedule is created it will then need to be presented to the project steering committee and stakeholders for it to be validated. This will then be used to determine the schedule baseline.

4.3.4 Schedule Control

Schedule controls include the inputs from the Schedule Management Plan, the Schedule Baseline, Scope baseline and Performance Measurement baseline. The schedule for this project will be reviewed and updated at the completion of each milestone. Relevant information will be added whereas unused information will be deleted. The document will include a start date and end date.

The Project manager will hold quarterly meetings in which the schedule will be reviewed and presented to the PSC for modification if any. The project manager is responsible for the schedule forecast quarterly and for any change requests that may be made. The Project manager will report on the current status of the project,

reasons for schedule changes if any, schedule changes needed if any and changes as they occur.

Included in this Project will be the following documents to aid in schedule control. These include a project schedule, resource calendar, schedule data and lessons learned register. Performance reviews will be used to assess the schedule. The project manager will submit all change request formally to the PSC and Stakeholders for approval.

4.3.5 Schedule Changes and Threshold

Schedule changes are usually asked for because of the following reasons:

1. A Problem is identified and needs to be fixed
2. The sponsor may want to increase the scope
3. Resources may not be easily procured

In the event of a schedule change, it must be requested by the project manager. The project manager will use a formal document to request the change. The project manager and team will have to review the request made and determine the amount of time and resources needed to make the change possible. If the schedule is impacted and additional time is needed to complete the project then the project manager will submit a change request.

Change Request Form (*example*)

[This form is divided into three sections. Section 1 is intended for use by the individual submitting the change request. Section 2 is intended for use by the Project Manager to document/communicate their initial impact analysis of the requested change. Section 3 is intended for use Project Steering Committee]

1.) SUBMITTER - GENERAL INFORMATION			
CR#	*[CR001]*		
Type of CR	☐ Enhancement	☐ Defect	
Project/Program/Initiative			
Submitter Name			

Brief Description of Request				
Date Submitted				
Date Required				
Priority	☐ Low	☐ Medium	☐ High	☐ Mandatory
Reason for Change				
Other Artifacts Impacted				
Assumptions and Notes				
Comments				
Attachments or References	☐ Yes	☐ No		
	Link:			
Approval Signature	*[Approval Signature]*		**Date Signed**	*[mm/dd/yyyy]*

2.) PROJECT MANAGER - INITIAL ANALYSIS				
Hour Impact				
Duration Impact				
Schedule Impact				
Cost Impact				
Comments				
Recommendations				
Approval Signature			**Date Signed**	

3.) CHANGE CONTROL BOARD – DECISION				
Decision	☐ Approved	☐ Approved with Conditions	☐ Rejected	☐ More Info
Decision Date				
Decision Explanation				
Conditions				
Approval Signature			**Date Signed**	

Figure 7 Change Request form, Adapted from:
https://www2.cdc.gov/cdcup/library/.../CDC_UP_Change_Request_Form. Retrieved September 12, 2018.

Define Activates is the second process in Project Schedule Management. It identifies and documents the actions that need to me done in order to produce the project deliverables. This process allows for the decomposition of works to activities. Those activities allow the estimating, scheduling, executing, monitoring and controlling of works.

The Activities list will be made based from the milestone list compiled in the previous section. According to PMBOK sixth edition the activity list "includes the schedule activities required for on the project." The activity list should include the activity identifier and scope of work description.

Activity ID Number	**Activity Name**	**Description of Work**	**Responsibility**
1.1	Initiation of Project	Write for proposals	Project Manager, Assistant Project manager
1.2	Construction Preliminary Reports	Procure initial reports from Lord Cultural Report and present to Stakeholders	Project Manager
1.3	Decide on Deliverables	Develop PSC to review report and determine what deliverables will be used	Project Manager, Stakeholders, Sponsors
1.4	Determine Budget	Determine cost of construction of Museum as well as the amount	Project Manager, Consultant

		requested.	
2.1	Architectural Tendering Process	Project will have a drawn rendition of museum building	Architect, Project Manager
2.2	Decide on Drawings	Consultants will compile engineering reports, survey reports, steel engineering reports.	Stakeholders, Sponsors, Project Manager
2.3	Bill of Quantities	Compiled list of what it will cost to gather the resources needed to build the Museum	Consultant, Ministry of Works, Project Manger
2.4	Place Construction to Tender	Advertise for contractor suitable and within budget as stipulated in the Bill of Quantities	Project Team
3.1	Gather Permits	Gathering permits needed for construction in Belmopan city Mainly the building permit	Ministry of Works
3.2	Approval of Construction	All permits are approved so construction can	Project Manager, Architect, Ministry of Works

		Begin	
3.3	Mobilization	Movement of resources to construction area	Assistant Project Manager, contractor, Foreman
3.4	Procure Working Drawings	Drawings that will be used by the contractor to build Museum to specifications outlined by the PSC	Architect
4.1	Framing	Entails the frames and beams that will carry the load of the Building	Contractor, Engineer, Assistant Project manager
4.2	Concreting	Entails all concrete work to set foundation	Contractor, Engineer, Assistant Project Manager
4.3	Masonry	Entails all masonry work after foundation is set	Contractor, Assistant Project Manager
4.4	Plastering	Plastering of walls	Contractor, Assistant Project Manager
4.5	Cementing	Cementing of Public access areas	Contractor, Assistant Project Manager
4.6	Plumbing	Installation of water and waste water lines in the building	Contractor, Engineer, Assistant Project manger

4.7	Electrical	Electrical power to the building is set up	Contractor, Engineer, Assistant Project manger
4.8	Ventilation	Set up central air and cooling	Contractor, Engineer, Assistant Project manger
4.9	Landscaping	Yard work is completed around the building	Contractor, Engineer, Assistant Project manger
4.10	Furnishing	Furniture and fixtures for finishing are installed	Assistant Project Manger
5.1	Engineer Inspection	Engineer inspects all aspects of construction	Engineer, Project Manager, Ministry of Works
5.2	Pre-Production of Exhibits	Technical staff of the Museum prepares for set up of exhibitions	Museum Director, Project Manager
5.3	Handing Over of Deliverables	Contractor prepares deliverables check list	Project Manager
5.4	PSC Sign Deliverables	Project manager goes over deliverables and makes recommendations to PSC	Project Manager, PSC, Stakeholders
6.1	Project Completion	All deliverables have been signed	Stakeholders, Sponsor, Project

		off on.	manager

4.3.6 Sequence Activities

After the activities are defined the following process is the sequence activities. According to the PMBOK Sixth edition the "…key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints." Inputs for the activity sequence include the Schedule Management Plan, Activity List, Milestone List and Project scope.

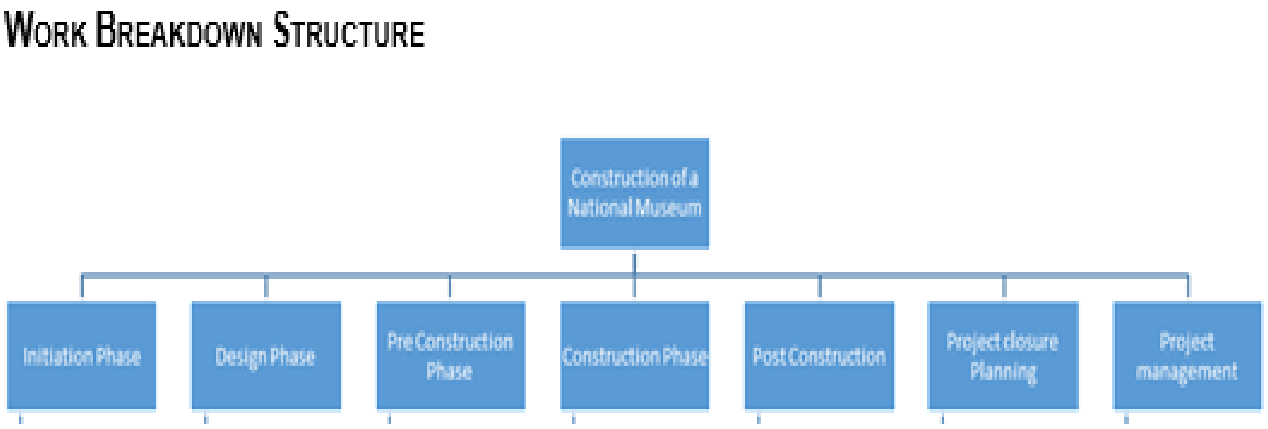

Figure 8 Schedule Network Diagram.

4.3.7 Estimate Activity Duration

The estimate activity Duration according to PMBOK Sixth Edition "…is the process of estimating the Number of Work periods needed to complete individual activities with estimated resources. The main output of this process is the Duration estimates as well as the basis of estimates.

Chart 8 Resource Assignment and Activity Durations

Activity ID Number	**Activity Name**	**Duration 633 Days**	**Resource Names**
1.1	Initiation of Project	21 Days	Project Manager, Assistant Project manager
1.2	Construction Preliminary Reports	21 Days	Project Manager

1.3	Decide on Deliverables	1 Day	Project Manager, Stakeholders, Sponsors
1.4	Determine Budget	7 Days	Project Manager, Consultant
2.1	Architectural Tendering Process	21 Days	Architect, Project Manager
2.2	Decide on Drawings	7 Days	Stakeholders, Sponsors, Project Manager
2.3	Bill of Quantities	21 Days	Consultant, Ministry of Works, Project Manger
2.4	Place Construction to Tender	21 Days	Project Team
3.1	Gather Permits	21 Days	Ministry of Works
3.2	Approval of Construction	7 Days	Project Manager, Architect, Ministry of Works
3.3	Mobilization	14 Days	Assistant Project Manager, contractor, Foreman
3.4	Procure Working Drawings	21 Days	Architect
4.1	Framing	84 Days	Contractor, Engineer, Assistant Project manager
4.2	Concreting	84 Days	Contractor, Engineer, Assistant Project Manager
4.3	Masonry	42 Days	Contractor,

			Assistant Project Manager
4.4	Plastering	42 Days	Contractor, Assistant Project Manager
4.5	Cementing	21 Days	Contractor, Assistant Project Manager
4.6	Plumbing	21 Days	Contractor, Engineer, Assistant Project manger
4.7	Electrical	21 Days	Contractor, Engineer, Assistant Project manger
4.8	Ventilation	21 Days	Contractor, Engineer, Assistant Project manger
4.9	Landscaping	42 Days	Contractor, Engineer, Assistant Project manger
4.10	Furnishing	21 Days	Assistant Project Manger
5.1	Engineer Inspection	7 Days	Engineer, Project Manager, Ministry of Works
5.2	Pre-Production of Exhibits	21Days	Museum Director, Project Manager
5.3	Handing Over of Deliverables	1 Day	Project Manager
5.4	PSC Sign Deliverables	1 Day	Project Manager, PSC, Stakeholders

6.1	Project Completion	0 Days	Stakeholders, Sponsor, Project manager

The Final Planning process is Project time management. This schedule was created using the previous two charts, the schedule management plan, activity list, and project schedule diagram and resource requirements. The table was created using Microsoft Projects.

4.4 Project Cost Management

Project cost management as defined by PMBOK sixth edition is" the processes involved in Planning, Estimating, Budgeting, financing, funding, managing and controlling costs to that the project can be completed within the approved budget."

These processes include:

Plan Cost management

Estimate Costs

Determine Budget

Control Cost

Project Management Plan for the Construction of the National Museum of Belize
Cost Management Plan

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4.4.1 Introduction

According to the PMBOK the Plan Cost Management process is the first process in the cost management plan. This process includes “Defining how the project Costs will be estimated, budgeted, managed, monitored and controlled.” The tools and techniques needed to generate the Cost Management Plan included expert judgement, analytical techniques and meetings.

For the identification of who is responsible for cost management, the project manager is responsible for managing and reporting the cost of the project during the project. This is reported on quarterly to the PSC. Monthly meetings will be held to update the cost of the project. This meeting will be held separately and will include the Project manager, Assistant Project manager and the project sponsor, in this case a representative from the Ministry of Finance representing the finance secretary. The Assistant Project manager is responsible to prepare the reports including the cost management plan, while the Project Managers responsibility is for accounting cost deviation, giving the pest options to the project sponsor but ultimately the Project Sponsor has the final authority to make changes to the budget to ensure that the project does not over spend and that it is completed within budget.

4.4.2 Cost Management Approach

This project does not use a project management information system. The cost of the project will be managed using the Work Breakdown structure (WBS.) the Control Accounts (CA) will be created to track costs. Earned Value calculations for CA will be used to measure and manage the performance of the construction project. Credit for work done will be assigned to work packaged. Work started will be granted fifty percent (50%) credit, the remaining fifty percent is credited upon completion of work defined in the work package. Cost will be rounded to the nearest dollar and work hours will be rounded to the nearest whole hour.

Cost Variances will be treated in the following manner, cost variances of +/-.01 in the cost performance indexes will be given the status of the cost to cautionary. Cautionary will be given the status yellow in the project status reports. Cost variances of +/- 0.2 in the cost performance indexes will be given the status of the cost as an alert stage. Alert stage will be given the colour red in the project status report. The corrective action will be initiated by the Project Manager to bring down the cost and schedule performance indexes. Any corrective action initiated by the Project manager will need the approval of the project sponsor. Corrective actions will be done using a change request.

4.4.3 Measuring Project Costs

Measuring project cost focuses on Earned Value Management for measuring and controlling a project cost. There are four Earned Value metrics used for this project to measure cost performance. They include:

Schedule Variance: Calculated using Earned Value and subtracting it from Planned Value

Cost Variance: Calculated by subtracting Actual Costs from Earned Value

Schedule Performance Index: Calculated as Earned Value divided by Planned Value

Cost Performance Index: Calculated as Earned Value divided by Actual Cost

The Project manager must report the reason for exception for the following scenario. If the Schedule Performance Index or Cost Performance Index has a variance of between 0.1 and 0.2. The Project manager must report the reason for exception and provide management with a plan for correction if the SPI or CPI has a variance of greater than 0.2.

Performance	**Yellow**	**Red**
SPI	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less than 0.8 or Greater than 1.2
CPI	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less than 0.8 or Greater than 1.2

4.4.4 Reporting Format

Cost management reporting will be done in the Monthly project status report. In the Project status report there will be a section known as cost management. The section of the report that has cost management will contain the Earned Value Metrics shown above. The Main items reported on will be the cost variances outside of the thresholds identified in the Cost Management Plan. The project manager will be responsible for change requests depending if there are any based on increased project costs.

4.4.5 Cost Variance Response Process

This section defines the role of the Project Managers in presenting the best options for corrective action to the Project Sponsor. These options may include increase in budget, reduce scope or quality or other corrective actions.

For this project the CPI or SPI of less than 0.8 or greater than 1.2 is the control threshold. A Cost Variance Corrective Plan is required if the project reaches the control threshold. The Project Manager will inform the Project Sponsor within three days, of corrective actions options when cost variance is reported. The Project manager will then give the best corrective options to the Project Sponsor. The Cost Variance Corrective Action Plan will account for the actions necessary to bring the project within budget and how the corrective actions will be measured. The Cost Variance Action Plan will become a part of the project plan once it as accepted. After the Cost Variance Action Plan is accepted then the project plan will be updated accordingly to show the corrective actions.

4.4.6 Cost Change Control Process

This process typically follows the project change control process. Project cost/budgets approvals must be done by the Project Sponsor.

4.4.7 Project Budget

The project budget is detailed below:

Fixed Costs
Material Costs
Contractor Costs
Total Project Costs **4,857,039**
Management Reserve **516,706**

Sponsor Acceptance

Approved by:

_____ Date:

_____

Representing Ministry of Culture

Figure 9 Construction of the National Museum of Belize Cost Management Plan. Adapted from *Project Management Docs.* Retrieved September 17, 2018 from https://docushare.sfu.ca/dsweb/Get/Document-501966

After the development of the Cost Management plan the next process is the estimate cost. This is the process according to PMBOK Sixth Edition "… is the process of developing an approximation of the cost of resources needed to complete project work." The inputs used for the development of this plan include the Cost Management Plan, Scope baselines and Project Documents. Meetings were held with the Central Building Authority of Belize to best determine the cost of construction of the National Museum of Belize.

The Work Breakdown Schedule was used to estimate the cost. The activity definition was used to determine the tasks required to complete the project. Analogous and parametric estimating methods were used and then compared to prices from local vendors and contractor estimates. The contingency reserve will be set at 5%, this was done in consultation with the Central Building Authority. The reserve is very low when compared to similar projects.

4.4.8 National Museum of Belize Cost Baseline

Project Name: Construction of the National Museum of Belize
Project Manager: Alexis Salazar
Project Sponsor: Ministry of Education Youth Sports and Culture
Prepared by: Alexis Salazar

Submitted to: Ministry of Finance

Total Cost Authorization:

Date:

Expense	Quantity	Unit Cost	Total Cost	Purpose
Construction and Subcontracts			**1,209,600**	
Unskilled workers	20	28,800	576,000	Labour
Skilled Workers	10	43,200	432,000	
Masons	4	48,000	192,000	
Security	4	2400	9600	
Sub-Contracts			**1,595,050**	
Framing	1	250,000	250,000	Labour and Material
Concreting	1	250,000	250,000	Labour and Material
Plastering	1	125,000	125,000	Labour and Material
Plumbing	1	230,000	230,000	Labour and Material
Electrical	1	125,000	125,000	Labour and Material
Ventilation	1	230,000	230,000	Labour and Material
Landscaping	1	50,000	50,000	Labour and Material
Furnishings	1	175,000	175,000	Labour and Material
Elevators	1	80,000	80,000	Labour and Material

Finishing	1	130,000	130,000	Labour and Material
Professional Consultants		**330,000**		
Architect	1	150,000	150,000	Labour Only
Engineer	1	180,000	180,000	Labour Only
Project Management		**269,000**		
Project Manager	1	80,000	80,000	Labour Only
Assistant Project Manager	1	65,000	65,000	Labour Only
Accountant	1	50,000	50,000	Labour Only
Office Supplies	1	20,000	20,000	Labour Only
Office Admin	1	30,000	30,000	Labour Only
Messenger	1	24,000	24,000	Labour Only
Site Management		**140,000**		
Foreman	1	50,000	50,000	Labour Only
Mobilization			50,000	
Foreman's Assistant	1	40,000	40,000	Labour Only
Procurement		**550,000**		
Programming	1	500,000	500,000	Labour Only
Research	1	50,000	50,000	Labour Only
Permits		**20,000**		
Prints		**20,000**		
Contingency (5%)		**206,683**		
General Sales tax (GST 12.5%)		**516,706**		
Total		**4,857,039**		

Approved by:

_____ Date:

_____

Representing Ministry of Culture

Figure 10 Construction of the National Museum of Belize Cost Baseline. Adapted from *Project Finding Docs*. Retrieved September 18, 2018 from https://www.projectmanagementdocs.com/template/project-documents/project-funding-requirements/#axzz5RUaVj1He

4.5 Project Quality Management

Project Quality management according to the PMBOK Sixth edition "… is the process for incorporating the organization's quality policy regarding, planning, managing, and controlling project and product quality requirements in order to meet stakeholders' objectives." Plan quality management will be used for the construction of the National Museum of Belize.

The inputs required to create the Quality management plan included the Project Charter, Project Management Plan, Project Documents and Organizational Process Assets. The Purpose of creating a quality management plan for the construction of the National Museum of Belize is to describe how quality will be managed throughout the life of the project. This plan will then establish activities, processes and procedures for ensuring quality of the project. The Project Managers role is to ensure that quality is planes, define how quality will be managed, plan the quality assurance activities, define quality control activities and determine the acceptable quality Standards.

This project is the first for the Country of Belize, since the existing museum was refurbished from an older prison built in the 1850's. The National Institute of Culture and History, the statutory board with responsibility of executing the project under the Ministry of Education, Youth, Sports and Culture. The Quality Management Plan will be used to ensure that the design, Materials used for construction and processes undertaken to construct the building are up to standard in order to have a quality building constructed.

Project Management Plan for the Construction of the National Museum of Belize

Quality Management Plan

National Institute of Culture and History

Belmopan City, Belize

Table of Content

4.5.1 Introduction

The Quality Management Plan for the construction of the National Museum of Belize tries to make sure that product and process are planned with quality in mind. The plan ensures that quality is planned, defines how quality will be managed, quality assurance activities, quality control activities and acceptable quality standards.

Quality improvements can be recommended by any member of the project team, stakeholders or project sponsor. The Project manager is responsible for formally proposing quality improvements. The Project sponsor is responsible for approval or denial of quality improvements.

4.5.2 Quality Management Approach

This section of the Quality Management Plan describes the approach that the Project manager will use in order to manage quality throughout the life of the project. For this project the National Institute of Culture and History through the Institute of Archaeology has a set of construction standards that can be referenced and communicated to the stakeholders in order to standardize the approach to quality.

Product Quality will be defined by the National Institute of Culture and History through the Institute of Archaeology with consultation from an architect and engineer. Establishing the process quality standards will guarantee that the activities conform to NICH's standard for buildings.

Metrics will be established to measure the quality throughout the project lifecycle for the construction of the National Museum of Belize. The manager for quality will liaise with the project manager and project team to determine the metrics, assess metrics and analyse results. Metrics to be used include:

Schedule

Resource

Cost

Process performance

Building Design

Product Performance

End User Satisfaction

Any member of the project team or quality group can identify quality improvements. The recommendations from either of the two parties named above will be reviewed to determine the cost against the cost of implementing the improvement. Quality improvements will be measured on how the improvement will impact the product or processes. When an improvement is implemented the Project manager will update the project document as well as any other pertinent documents the improvement affects.

4.5.3 Quality Requirements/ Standards

This process will describe how the project team will identify and document the quality requirements and standards.

4.5.4 Product Quality:

Product quality will be initiated and determined by the Project Manager, in consultation with the Director of the Institute of Archaeology as well as an architect. The standards used for the construction of the building will come from the Central

Building Authority of Belize. The Assistant Project manager will review the regulations of the Central Building Authority and determine the quality standard in consultation with an architect. The Project team will use these newly identified standards to build the National Museum of Belize. All of these processes will be communicated to the stakeholders of the project.

4.5.5 Process Quality:

The Process quality Standards and requirements will be determined by the project team in consultation with the Director of the Institute of Archaeology and an architect. Many of these standards are outlined in the Central Building Authority Act. It is anticipated that building a national museum, since it is the first attempt in Belize, will have a number of unique steps in the construction of the National Museum of Belize. The standards will be communicated to all stakeholders of the project.

4.5.6 Quality Assurance:

For the construction of the National Museum of Belize the quality control focuses on the design and construction of the building. Quality assurance processes should be iterative. This includes measuring the metrics for quality, analysing and process data and improving processes where possible.

The Project Manager along with the project team will perform regular assessment on a quarterly basis throughout the project. This will aid in ensuring the all processes are being implemented properly and completed. The key performance metrics are based on the design, construction and programming of the museum. The key quality assurance metrics for the project are found below.

Process Action	**Acceptable Process Standards**	**Process Phase**	**Assessment Intervals**
Strength Concrete testing	Required PSI strength	Onsite Testing	Completion of load bearing walls
Strength Steel testing		Onsite Testing	Completion of floor
Maturity Testing	Rebound Hammer	Onsite Testing	7 days after

	ASTM C805		pouring of concrete

The Project through the Institute of Archaeology will identify a staff member with responsibility to manage the quality of the project throughout its life cycle. They will be identified as the quality manager. They will conduct process audits on a bi monthly basis. This also includes the monitoring of process performance metrics and ensure that all processes are in compliance with standards set out by NICH and the Central Building Authority.

The project manager will meet quarterly with the quality manager and whenever discrepancies are found. They will meet and determine what processes can be used on the process for improvement initiatives.

4.5.7 Quality Control

Quality control in the Quality Management Plan describes how the project will define and document the results of executing the quality activities. For this project the quality control is based mainly on the design, construction and programing of the building. The project team will be responsible for all on site auditing and ensuring that the standards are met.

The project manager is responsible for revision of products and discrepancies found in the audit.

4.5.8 Quality Control Measurements

This segment of the Quality Management process entails determining what type of document will be used to take quality measurements and comparing them against quality standards. Examples of a quality assurance log can be seen below.

Quality Assurance Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Quality Control Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Sponsor Acceptance

Approved by:

_____ Date: _____

For Ministry of Youth, Sports and Culture

Figure 11 The National Museum of Belize Quality Management Plan. Adapted from *Project Management Docs* Retrieved September 24, 2018 from https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5RZO07yv0

4.6 Project Human Resource Management

According to the PMBOK Sixth edition, “Project Resource management includes the processes to identify, Acquire, and manage the resources needed for the successful completion of the project.” The resource management processes include Plan Resource Management, Estimate Activity Resource, Acquire Resources, Develop Team, Manage Team and Control Resources.

Project Management Plan for the Construction of the National Museum of Belize
Human Resource Management Plan
National Institute of Culture and History
Belmopan City, Belize
September 29 2018

Table of Content

4.6.1 Introduction

The human resource management plan for the construction of the National Museum of Belize is a key component for this project. Proper planning of

human resources will aid in the success of the project. For this project the human resource plan will define the roles and responsibilities, organizational charts, how resources will be acquired, time when each resource will be needed and training requirements if needed.

The Human Resource management plan for the construction of the National Museum of Belize will include the following:

* How resources will be acquired
* Timeline for resources/skills sets
* Training required to develop Skills
* How performance reviews will be conducted
* Recognition and reward systems

This plan will aid in achieving project success by acquiring the proper skilled human resources, provide training for project team, team building strategies and manage team activates.

4.6.2 Roles and Responsibilities

This segment of the plan outlines the roles and responsibilities of the team members and stakeholders. The roles and responsibilities for members of the project team and must be clearly outlined. For the construction of the National Museum of Belize the following roles and responsibilities are established.

Project Manager (PM), (1Position): responsible for the overall success of the construction project. The Project manager is responsible for authorizing and approval of all project expenditure. Other responsibilities include approving work activities, acceptable variances, reporting on project status, communicate project team performance to functional manager and acquire human resources

Assistant Project Manager (AP), (1Position): Assists the project manager in the creation of the project planning documents. The AP also assists in taking minutes of meetings held, update the document log, compiling project reports and communicating with stakeholders.

Engineer (E), (1Position): Responsible for inspection of the structure. Ensure that the building is built to standards to ensure structural integrity. Produces calculations for the architect

Architect (A), (1Position): Responsible for the drawing and schematics of the building. The architect works with the engineer to ensure that the building is up to regulated building standards.

Accountant (AA), (1Position): Responsible for all financial transactions pertaining to the project. Responsible for project expenditure reports.

Plumbing Engineer (PE), (1Position): Responsible for the plumbing inside the building. This includes all bathrooms, water lines and waste lines.

Electrician (EE), (1Position): Responsible for the wiring of the building as well the air condition systems. The electrician is responsible for following the electrical plan and placing electrical drops as specified in the architectural drawings.

Quantity Surveyor (QS), (1Position): Responsible for collecting data from the construction specifications to produce the cost analysis of the construction project.

Interior Designer (ID), (1Position): Responsible for programing of the museum. Laisse with the museum technical director to program exhibits. The Interior designer is also responsible for the furniture and setting up of office space.

Messenger (M), (1Position): Responsible for performing errands related to the construction project.

Foreman (F), (1Position): Responsible for the supervision of requirements made in the architectural drawings. The foreman is responsible for the skilled workers and supervises their work.

Mason (MA), (1Position): Is responsible for assisting the foreman and provides day to day inspection of the work that the unskilled workers complete.

Project Organizational Charts

The RACI Chard shows the relationship between project tasks and the team members. The Project Manager will manage any changes to the chart and review and approve changes when necessary. Changes done will be in accordance with the change control processes. If changes are made the

assistant project manager will update the project documents and redistribute responsibilities.

	Project manage	Assistant Project	Engineer	Architect	Foreman	Mason	Workers
Gathering Permits		R	R	A	I		I
Permit Approval		R	R	A	I		I
Building Design	A	R		R	I	C	I
Procurement	A	R		C	I		
Contracts Administration	A	R		C	C		
Site Management		R			R	A	I
Change Request	A	R		C			
Scope	A	I	I	I			I
Communication	A	R	I				
Quality	A	R		I	C		
Site work		I		C	R	A	I
Preparing Reports	A	R		C	C		

Key:

R – Responsible for completing the work

A – Accountable for ensuring task completion/sign off

C – Consulted before any decisions are made

I – Informed of when an action/decision has been made

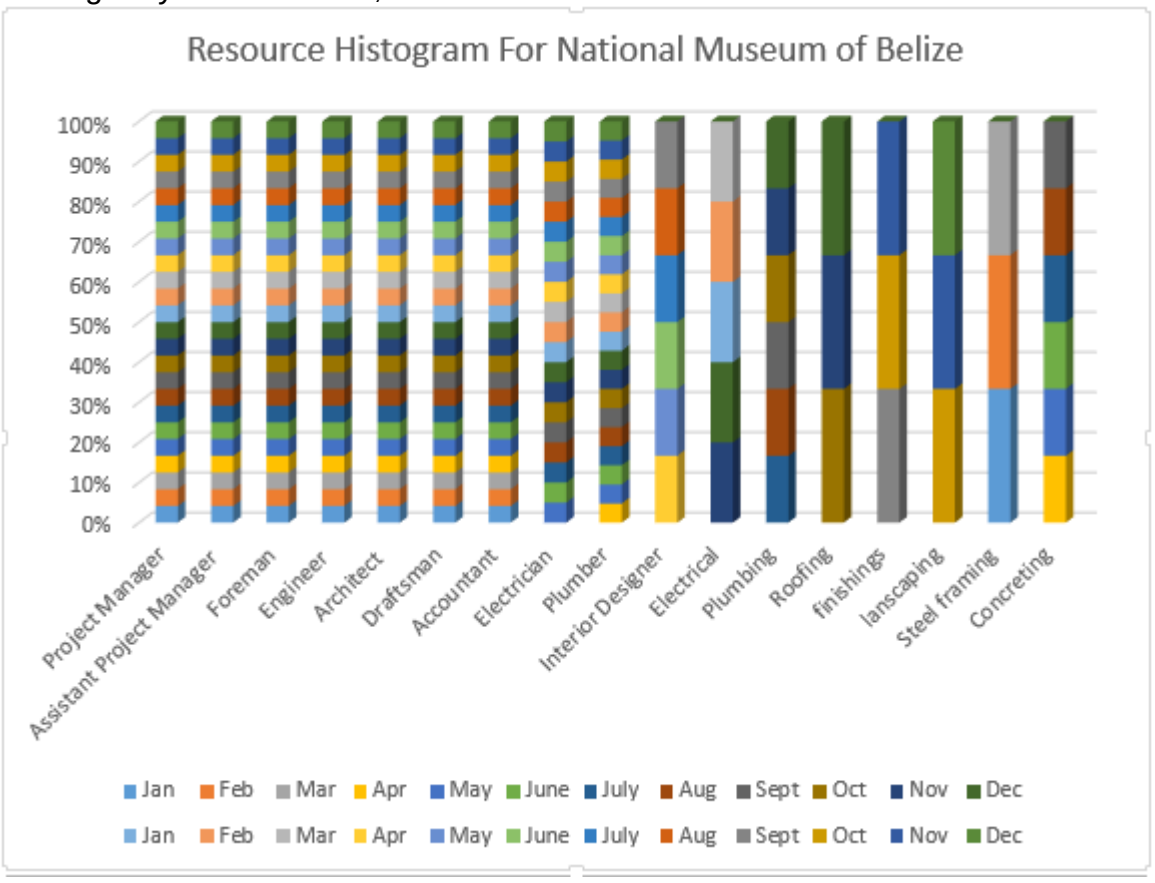
4.6.3 Staffing Management

Staff Acquisition

For the building of the National Museum of Belize, the National institute of Culture and History will source the Assistant project manager from its current staff. The Museum of Belize which is a branch of NICH has a technical director who is responsible to oversee the construction of the museum. The Project manager in this case will be the Director of the Museum of Belize since his background is in project management. The Institute of Archaeology will also provide the mason to supervise the day to day construction by unskilled labourerers. The project manager will be responsible to contract all the other functional managers for this project.

Resource Calendars

The Building of the National Museum of Belize will take 24 months to complete. The resource histogram below shows the process to build the national Museum with workers working forty hours a week,



Training

There is currently no training scheduled with regard to the Construction of the national Museum of Belize. If training needs are required then funding will be provided from the project contingency.

4.6.4 Performance Reviews

The project manager will review each team member's assigned work activities at the beginning of the project and communicate all expectations of work to be performed. The project manager will then evaluate each team member throughout the project. Prior to releasing project resources, the project manager will meet with the appropriate functional manager and provide feedback on employee project performance. The functional managers will then perform a formal performance review on each team member.

4.6.5 Recognition and Rewards

The scope of this project does not make mention of incentives or rewards. Incentives and rewards can be programmed into the contracts of the functional managers if they complete tasks ahead of schedule

Sponsor Acceptance

Approved by:

_____ Date: _____

For Ministry of Youth, Sports and Culture

Figure 12 The National Museum of Belize Human Resource Management Plan. Adapted from *Project Management Docs* Retrieved September 29, 2018 from https://www.projectmanagementdocs.com/template/project-planning/human-resource-plan/#axzz5SVn1IC9T

4.7 Project Communication Management

The purpose of Project Communications management is to setup and define the communication requirements for the project. This entails setting up how information will be distributed. According to the PMBOK sixth edition "Project Communication Management" includes the processes necessary to ensure that the information needs of the project and its stakeholders are met through developments of artefacts and implementation of activities designed to achieve effective information exchange." It goes on to state that" Project communications Management consists

of two parts. The first part is developing strategy to ensure communication is effective for stakeholders. The second part is carrying out the activities necessary to implement the communication strategy."

Since the project is a project management plan, the templates for how communication will be carried out will be sourced with examples as to how stakeholders will be communicated to.

Project Management Plan for the Construction of the National Museum of Belize

Communications Management Plan

National Institute of Culture and History

Belmopan City, Belize

October 2, 2018

Introduction 4.7.1

The Purpose of this Communication Management Plan is to outline the requirements for communication for the construction of the National Museum of Belize. The communications plan will serve to communicate information between the project team and stakeholders. The plan identifies and defines the roles of persons involved in this project. It will include the communications matrix which maps the communications requirement for the construction of the National Museum of Belize. Other items to be included are a guide for conducting meetings and a project team directory.

Communication Type	**Objective of Communication**	**Medium**	**Frequency**	**Audience**	**Owner**	**Deliverable**	**Format**
Kick-off Meeting	Introduce project management team to	Face to Face	Once	Project Team	Project Manager	Agenda Meeting Minutes	Soft Copy archived
Project Team Meeting	Review project objectives with project	Face to Face	Weekly or As Needed	Project Team	Project Manager	Agenda Meeting minutes Project Schedule	Soft Copy Archived

Design Meetings	Report status of construction to the	Face to Face	As Needed	Technical Staff	Architect	Agenda Meeting Minutes	Soft Copy Archived
Status Update Meetings	Report on status of project to managemen	Face to Face Conference Call	Monthly	Project Staff	Project Manager	Project Schedule	Soft Copy Archived
Project Status report	Reports the status of the project including	Email	Project Sponsor Project Team Stakeholder	Project Manager	Project Manager	Project status report Project schedule	Soft Copy Archived

4.7.2 Communication Delivery Methods and Technology

The Main method of Communication will be face to face meetings and email. Meetings, reports presentations and announcements will also be used to communicate.

4.7.3 Communications Matrix

Communication will follow the plan outlined in the communication matrix above

4.7.4 Communication Standards

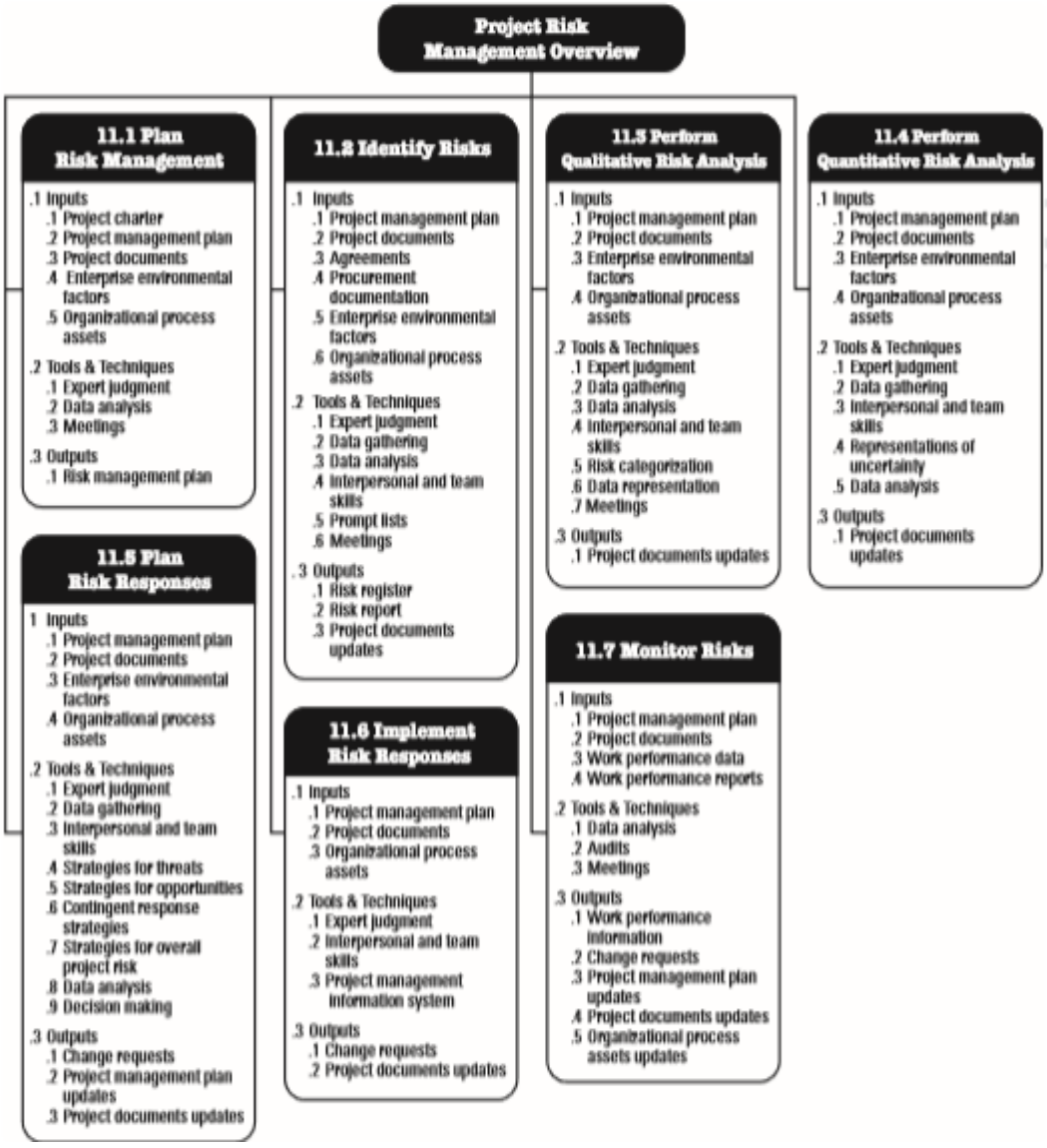
There are no communication standards outlined by the National Institute of Culture and History.

Figure 13 Communications Management Plan. Adapted from *Project Management Docs.* Retrieved on October 3, 2018 from https://www.projectmanagementdocs.com/template/project-planning/communications-management-plan/#axzz5ShPJ5eUm

4.8 Project Risk Management

Project Risk Management according to the PMBOK sixth edition “includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.” Risk management in project management follows a simple rule of thumb. The project manager will manage risk by increasing the probability of positive risks while decreasing the probability of a negative impact on a project.

The processes are outlined in the following Overview taken from the PMBOK.



Project Management Plan for the Construction of the National Museum of Belize

Risk Management Plan

Table of Content

4.8.1 Introduction

The purpose of risk management is to identify risk and mitigate risk that may be detrimental to the project. As construction of the National Museum of Belize begins there is a level of uncertainty that the project will have. Risk management is therefore necessary because its processes identify, Assess, respond to, Monitor and report risk. The Risk Management Plan outlines how risks associated with the construction of the National Museum of Belize will be done. The Project Risk Management Plan will identify, analyse and manage risk. The Risk Management Plan will also outline how risk management activities will be performed, recorded and monitored through the life of the project. The Risk management Plan is created by the Project Manager with the assistance of the Assistant Project Manager. It is created during the planning phase of the project and will be Monitored and updated throughout the project lifecycle.

4.8.2 Risk Management Procedure

The project team through the Project Manager will work to identify risks. Once the risk is identified they will be analysed and managed throughout the lifecycle of the project. Risk will be identified in the planning phases of the project to minimize their impact. The project manager will serve as the Risk Manager for this project.

Risk Identification will be done in consultation with the project team, relevant stakeholders and include the revision of environmental factors, organizational culture and the Project Management Plan. During risk identification project deliverables, assumptions, constraints, work breakdown schedule, resource plan and other project documents will be used. Once risk is identified it will be analysed to determine the range of possible outcomes. The risk will then be categorized to determine top risk and to determine which risk con be ignored. The Project manager is responsible for planning risk responses.

4.8.3 Monitoring and Controlling Risk

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle. A “Top 10 Risk List” will be maintained by the project team and will be reported as a component of the project status reporting process for this project.
All project change requests will be analysed for their possible impact to the project risks.

Figure 14 Risk Management Plan. Adapted from *Risk Management Template*. Retrieved on October 5, 2018 from https://gta.georgia.gov/sites/gta.georgia.../Risk-Management-Plan-Template.docx

In the assessment of risk, there are a number of documents that need to be prepared in order to identify risk. These include the Work Breakdown Schedule, the estimated project cost, and the available resources, identification of baselines and

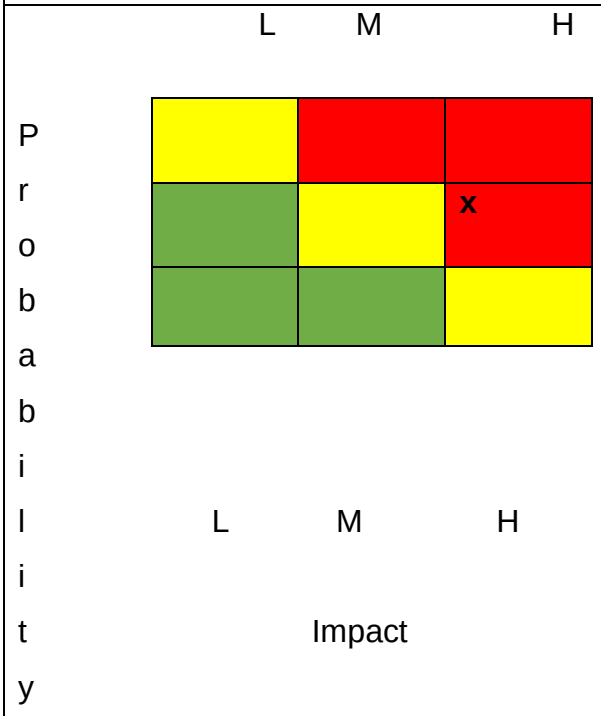
thresholds and the definition of risk management roles and responsibilities. Listed below is the top ten risks identified for this project.

Risk ID	Risk Description	Responsible Individual	Category	Contingency Plan	Prevention Strategy	Comments
1	Hurricane	Project Manager	Climate			
2	Accidents on Site	Foreman	Construction			
3	Price Increase on Materials	Procurement Officer	Finance			
4	Extended Wet weather during construction	Foreman	Climate			
5	Design Delays	Architect	Design			
6	Project cost underestimated	Project Manager	Pre-construction			
7	Delay in construction permits	Project Manager	Construction			

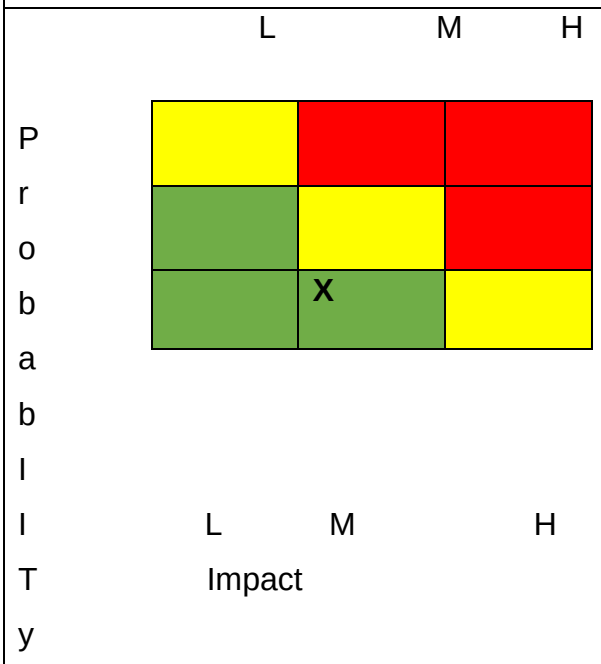
8	Redesign request from project sponsor	Project Manager/ Architect	Design			
9	Construction time underestimated	Project Manager	Pre-construction			
10	Construction Noise impact on residential areas	Foreman	Environment			

Along with the list of identified risk above, the risk needs to also be measured and prioritized. The use of a risk matrix will be used to prioritize the risk identified above. Based on the probability of each risk a black X is placed on the estimated risk position. The risk Matrix uses the probability and the impact of a risk event occurring. Red represents high impact high probability, green medium impact medium probability and yellow represents low impact low probability

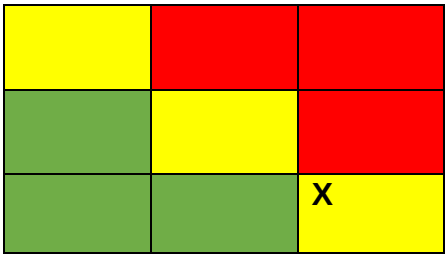
Project Name: Construction of the National Museum of Belize	
Project ID# 1. Hurricane	
Description of Risk Event	Prevention Strategies
A tropical cyclone may hit Belize during	Cannot be prevented only mitigated

the construction of the museum	before the storm
Probable Cause:	Risk Response/ Contingency Plans:
Natural Event	Mitigate impact by halting construction, clearing site of construction debris and storing all construction material in warehouse
Risk Matrix:	Triggers Events:
	Hurricane warning issued by the National Emergency Management Organization

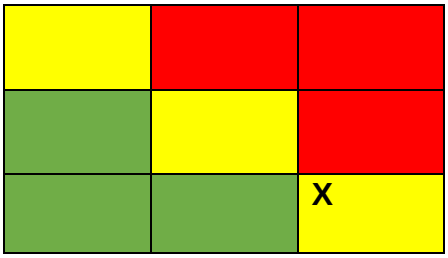
Project Name: Construction of the National Museum of Belize	
Project ID# 2 Accident on Site	
Description of Risk Event	Prevention Strategies
Worker gets injured during construction	Training on work safety for all workers

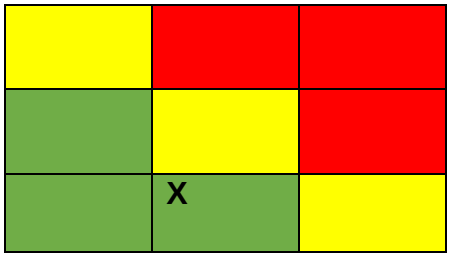
Probable Cause:	Risk Response/ Contingency Plans:
Not following safety procedures	Risk: Avoid Adequate fencing and signage to secure site and prevent unauthorized access
Risk Matrix:	Triggers Events:
	Injury to worker

Project Name: Construction of the National Museum of Belize	
Project ID# 3 Price Increase in Materials	
Description of Risk Event	Prevention Strategies
Price increase from items budgeted to	Procurement prices must be set early in

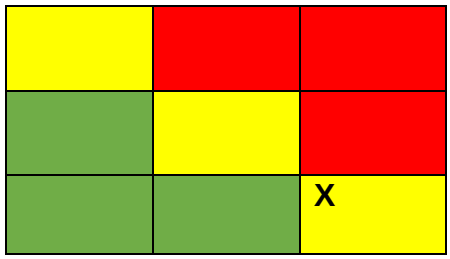
time of procurement	construction
Probable Cause:	Risk Response/ Contingency Plans:
Inflation	Risk: Avoid
Risk Matrix:	Triggers Events:
L M H P H r o b M a b L i l I Impact t y  	Increase in price when Items are being procured

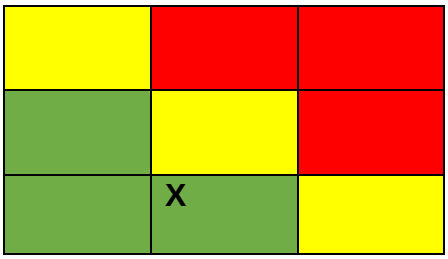
Project Name: Construction of the National Museum of Belize	
Project ID# 4 Extended wet weather during construction	
Description of Risk Event	Prevention Strategies
Excessive rain can cause delays in	Begin construction at the start of the dry

construction from pouring the foundation to setting up of the exterior walls and roof	season so foundation has enough days to set.
Probable Cause:	Risk Response/ Contingency Plans:
Belize has a rainy season from June to November	Mitigate Site workforce rescheduled to work during dry spells in the evening if necessary. Schedule construction to begin during the dry season
Risk Matrix:	Triggers Events:
L M H P H r o b M a b L i l I t y  Impact	Excessive rain
Project Name: Construction of the National Museum of Belize	
Project ID# 5 Design Delays	
Description of Risk Event	Prevention Strategies
The procurement and completion of	Screening Architects and selecting an

design is delayed due to underestimating the amount of time needed to prepare the design.	architect who has done large scale construction projects before.
Probable Cause:	Risk Response/ Contingency Plans:
Underestimating amount of time needed	Use an architectural firm to complete the design then hire an independent architect to lead a design team during construction.
Risk Matrix:	Triggers Events:
L M H P H r o b M a b L i l I Impact t y  	Plans are not completed at deadline

Project Name: Construction of the National Museum of Belize	
Project ID# 6 Project Cost Underestimating	
Description of Risk Event	Prevention Strategies
Budget was under estimated and project	Project manager will liaise with

does not have enough funds to complete the building	procurement specialist and get three estimates for the construction project
Probable Cause:	Risk Response/ Contingency Plans:
Under estimating by project team	Risk: Avoid Add contingency to the budget
Risk Matrix:	Triggers Events:
L M H  P H r o b M a b L i l I t y Impact	Cost of procuring items is higher than what was budgeted
Project Name: Construction of the National Museum of Belize	
Project ID# 7 Delay in construction permits	
Description of Risk Event	Prevention Strategies
Construction permits may be delayed	Mitigate the likely hood of this risk

<table>
<tr><td>due to building regulations and codes</td><td>occurring by having the architectural firm consult with the building authority concerning the proper building codes</td></tr>
<tr><td>Probable Cause:</td><td>Risk Response/ Contingency Plans:</td></tr>
<tr><td>Technical Specifications</td><td>Add time to the schedule contingency</td></tr>
<tr><td>Risk Matrix:</td><td>Triggers Events:</td></tr>
<tr><td>L M H
 

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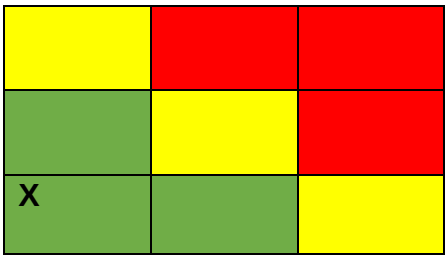
y</td><td>Permits are rejected by the building authority</td></tr>
<tr><td colspan="2">Project Name: Construction of the National Museum of Belize</td></tr>
<tr><td colspan="2">Project ID# 8 Redesign request from project sponsors</td></tr>
<tr><td>Description of Risk Event</td><td>Prevention Strategies</td></tr>
<tr><td>Project sponsors are not pleased with</td><td>Present 3 design options to the project</td></tr>
</table>

<table>
<tr><td>proposed drawings and design of the museum building</td><td>sponsor so they can select the design of the building</td></tr>
<tr><td>Probable Cause:</td><td>Risk Response/ Contingency Plans:</td></tr>
<tr><td>Lack of consultation with project sponsor</td><td>Avoid</td></tr>
<tr><td>Risk Matrix:</td><td>Triggers Events:</td></tr>
<tr><td>L M H
 

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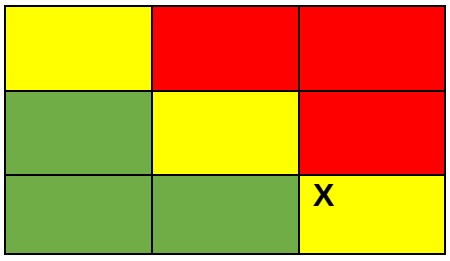
y</td><td>Sponsor asks for redesign</td></tr>
<tr><td colspan="2">Project Name: Construction of the National Museum of Belize</td></tr>
<tr><td colspan="2">Project ID# 9 Construction time underestimated</td></tr>
<tr><td>Description of Risk Event</td><td>Prevention Strategies</td></tr>
<tr><td>The time estimated for construction was</td><td>Consult with Architect and foreman to</td></tr>
</table>

underestimated.	determine the amount of time needed for each phase of the project.
Probable Cause:	Risk Response/ Contingency Plans:
Human Error	Avoid Place contingency time in estimating the time needed for construction of Museum
Risk Matrix:	Triggers Events:
L M H P H r o b M a b L i l I Impact t y  	Construction time and estimated construction time are not the same
Project Name: Construction of the National Museum of Belize	
Project ID# 10 Construction noise impact on residential areas	
Description of Risk Event	Prevention Strategies
Construction site is near a residential	Belmopan has a large number of

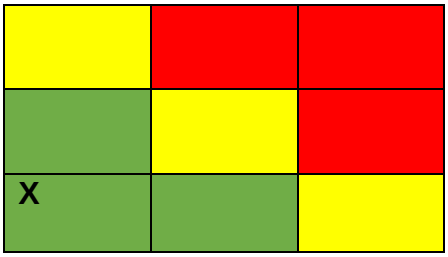
area and during construction could cause noise pollution to residents in Belmopan	residents that work for the public service and will not be at home during construction.
Probable Cause:	Risk Response/ Contingency Plans:
Construction	Mitigate Construction should take place between normal working hours along with when most residents are not at home.
Risk Matrix:	Triggers Events:
L M H P H r o b M a b L i l I t y  Impact	Complaints from residents

Figure 15 Qualitative Risk Analysis Summary. Adapted from *Risk Analysis Template.* Retrieved October 8, 2016 from https://www.smartsheet.com/all-risk-assessment-matrix-templates-you-need

The project manager will lead the project team in developing the risk register and identifying the response to each risk. The Risk register will be maintained as an appendix to the Risk Management Plan. Prior to the start of a phase of the project where a risk is most likely to occur the project manager will assign the assistant project manager to ensure that the risk is adhered to and that the mitigation agreed to is carried out throughout the phase of the project. The Assistant Project Manager will report to the project team during the quarterly meetings.

4.9 Project Procurement Management

According to the PMBOK sixth edition Project Procurement Management "…includes the processes necessary to purchase or acquire products, services or results needed from outside the project team." The definition goes on to state that " Project Procurement Management includes the management and control processes required to develop and administer agreements such contracts, purchase orders, memoranda of agreements (MOA's), or internal service level agreements (SLAs)." The processes of procurement management include plan procurement management, conduct procurements and control procurements.

Project Management Plan for the Construction of the National Museum of Belize

Procurement Management Plan

Table of Content

Procurement Risk Management
Cost Determination
Standardized Procurement Documentation
Procurement Constraints
Contract Approval process
Decision Criteria
Vendor Management
Performance Metrics for Procurement Activities
Sponsor Acceptance

4.9.1 Introduction

For the construction of the National Museum of Belize the procurement framework for the project is set up through the Procurement Management Plan. The Project Procurement Plan will be used as a guide by the management team to manage procurement throughout the lifecycle of the project. The Management plan will be updated as needed by the Assistant Project Manager. A proper procurement plan identifies the items that need to be sourced outside of the organization, the contract approval process and decision criteria. Items to be included in the Procurement Management Plan include: procurement risk and risk management considerations, determination of cost, how to use procurement documentation, procurement constraints as well as coordinating procurement activities, establishing contract deliverables and metrics used in measuring procurement activities.

4.9.2 Procurement Management Approach

The National Museum of Belize Project Manager will have oversight over the procurement activities throughout the lifecycle of the project. The project manager and the project team will identify all items that will need to be procured. This will be done in consultation with the architect and engineer and will be reviewed by a representative from the Central Building Authority to review the list. After the

Central Building authority gives approval the items will then be given to the Ministry of finance for disbursal of funding after contracts have been submitted. The Ministry of Finance will review contracts and make disbursements to the project. Vendor selection will be done by the Project Manager in consultation with the project management team.

4.9.3 Procurement Definition

The purpose of procurement definition is to describe the items that will be procured and the conditions under which they can be obtained. The items need to be described in specific terms and list the deadline for obtaining items. The deadline is important as it affects the project schedule it they are not obtained on time. The procurement items are listed, justified and the conditions are defined. The items for the construction of the National Museum of Belize will be listed using a template similar to the template pictured below.

Item/Service	Justification	Needed By
Item A; 3″ x ¾″ tool	Needed for manufacturing widget type 1; we do not make this item	31 July 20xx
Item B; 4″ x ½″ tool	Needed for building tool type 2; we make this item but do not know the cost comparison vs. purchasing it	15 August 20xx
Item C	Needed for transferring data to new operating system; we do not make this item	1 September 20xx

In addition to the above list of procurement items, the following individuals are authorized to approve purchases for the project team:

Name	Role
John Smith	Project Manager
Jane Doe	Lead Engineer
Bob Jones	Design Technician

4.9.4 Type of Contract to be Used

The services required for the construction of the National Museum of Belize, including but not limited to the steel frame, electrical, roofing will be procured under firm-fixed price contracts. The project team will work with the associate director for finance and administrator for NICH to define the items, quantity and the required delivery dates. The items will be put out to tender and gazette. They will be an open tender process and the Project Manager and management team will review tenders and select the tender that is closest to the in house estimate. The contract

will be awarded to the tender that meets the criterion established by the Project manager.

4.9.5 Procurement Risk

As in any project, all procurement activities have some risk which needs to be managed. Project risks are managed using the Project Risk Management plan, there are specific risk which fall under procurement. The following risk in procurement management must be considered:

Unrealistic schedule and cost expectations for vendors

Manufacturing capacity capabilities of vendors

Conflicts with current contracts and vendor relationships

Configuration management for upgrades and improvements of purchased technology

Potential delays in shipping and impacts on cost and schedule

Questionable past performance for vendors

Potential that final product does not meet required specifications

4.9.6 Procurement Risk Management

Project risk will be managed using the project risk management plan. As stated in the previous segment, risk related to procurement will have its own set of responses. Project procurement involves external organizations and will affect current and future business relationships as well as internal supply chain and vendor management operations. To ensure that this process functions properly the project manager, project sponsor and a representative from the ministry of finance will be a part of all project meetings and be involved in the procurement process.

4.9.7 Cost Determination

The purpose of cost determination is to describe how costs will be determined and how it will be used as part of the selection criteria. For construction projects like these a Request for Quote is the best option for procurement. This enables the Project manager to get various proposals from vendors. The proposals will describe how the vendor will meet the requirements and the cost of meeting

requirements. The vendors will submit proposals for items on the procurement definition list individually. Each vendor will outline how the items will be obtained, their experience in providing these goods, background and resumes of past work and a breakdown of all costs involved. In order to qualify for selection all vendors must include all the information outlined above. Any proposals received that are incomplete will be discarded and not considered.

4.9.8 Standardized Procurement Documentation

This section describes the process for what standard procurement documentation will be uses part of the procurement. The Standardized Procurement Document aids in simplifying procurement management by providing a standard documentation of steps in the procurement management process. The document allows for comparison of proposals, accurate pricing, detailed responses and effective management of contracts and vendors.

The Following Standard documents will be used for project procurement activities:

Standard Request for Proposal Template to include

- Background
- Proposal process and timelines
- Proposal guidelines
- Proposal formats and media
- Source selection criteria
- Pricing forms
- Statement of work
- Terms and Conditions

Internal source selection evaluation forms

Non-disclosure agreement

Letter of intent

Firm fixed price contract

Procurement audit form

Procurement performance evaluation form

Lessons learned form

4.9.9 Procurement Constraints

There are several constraints that must be considered as part of the project's procurement management plan. These constraints will be included in the RFP and communicated to all vendors in order to determine their ability to operate within these constraints. These constraints apply to several areas which include schedule, cost, scope, resources, and technology:

Schedule:

- Project schedule is not flexible and the procurement activities, contract administration, and contract fulfilment must be completed within the established project schedule.

Cost:

- Project budget has contingency and management reserves built in; however, these reserves may not be applied to procurement activities. Reserves are only to be used in the event of an approved change in project scope or at management's discretion.

Scope:

- All procurement activities and contract awards must support the approved project scope statement. Any procurement activities or contract awards which specify work which is not in direct support of the project's scope statement will be considered out of scope and disapproved.

Resources:

- All procurement activities must be performed and managed with current personnel. No additional personnel will be hired or re-allocated to support the procurement activities on this project.

Technology:

- Parts specifications have already been determined and will be included in the statement of work as part of the RFP. While proposals may include suggested alternative material or manufacturing processes, parts specifications must match those provided in the statement of work exactly.

4.9.10 Contract Approval Process

The contract approval process goes through a series of steps. The first step is to determine what items will require procurement from outside vendors. A cost analysis on products and services will be used to determine which can be provided internally and compare with the purchase prices from vendors. After the cost analysis is complete and the list of items to be procured externally are determined the National Institute of Culture and History will send out solicitations for outside vendors. Once solicitations are complete and proposals have been received by all vendors the approval process begins. The first step of this process is to conduct a review of all vendor proposals to determine which meet the criteria established by the project team. Purchases less than $10,000 only require the approval of the Project Manager; whereas, purchases greater than $10,000 must be approved by the Project Steering Committee. For these larger purchases the project steering committee will meet to determine which contract will be accepted.

4.9.11 Decision Criteria

The criteria for the selection and award of procurement contracts under this project will be based on the following decision criteria:

- Ability of the vendor to provide all items by the required delivery date
- Quality
- Cost
- Expected delivery date
- Comparison of outsourced cost versus in-sourcing

- Past performance

These criteria will be measured by the Project Manager. The ultimate decision will be made based on these criteria as well as available resources.

4.9.12 Vendor Management

The Project manager is responsible for managing all vendors. In order to ensure the timely delivery and high quality of products from vendors the Project Manager, will meet monthly with a representative from the Ministry of Finance and each vendor to discuss the progress for each procured item. The meetings can be in person or by teleconference. The purpose of these meetings will be to review all documented specifications for each product. This forum will provide an opportunity to review each item's development or the service provided in order to ensure it complies with the requirements established in the project specifications. It also serves as an opportunity to ask questions or modify contracts or requirements ahead of time in order to prevent delays in delivery and schedule. The Project Manager will be responsible for scheduling this meeting on a Monthly basis until all items are delivered and are determined to be acceptable.

4.9.13 Performance Metric for Procurement Activities

The following metrics will be used to determine vendor performance for the construction of the National Museum of Belize. The rating is as follows:

1- Unsatisfactory

2- Acceptable

3- Exceptional

Vendor	Product Quality	On Time Delivery	Documentation Quality	Development Costs	Development Time	Cost per Unit	Transactional Efficiency
Vendor #1							
Vendor #2							

Sponsor Acceptance

Approved by:

_____ Date: _____

For Ministry of Youth, Sports and Culture

Figure 16 The National Museum of Belize Procurement Management Plan. Adapted from *Project Management Docs* Retrieved October 12, 2018 from

https://www.projectmanagementdocs.com/template/project-planning/procurement-management-plan/#ixzz5U89gSkJ3

4.10 Project Stakeholder Management

According to the PMBOK 6th edition " Project Stakeholder Management Includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution." The processes identified in Project Stakeholder Management are, identifying stakeholders, plan stakeholder engagement, manage stakeholder engagement and monitor stakeholder engagement.

4.10.1 Introduction

The Stakeholder Management Strategy for the construction of the National Museum of Belize will be used to identify and classify project stakeholders. Once stakeholders are identified then they will be further assessed to determine stakeholder power, interest and influence. This will be used to analyze the management approach and communication to project stakeholders. This process will allow for the identification of powerful stakeholders, to solicit input for project planning and gain their support throughout the project lifecycle. The use of the Stakeholder Management Policy will benefit the project by reducing the likelihood of competing objectives and increasing the resources needed to complete the

project. The earlier the stakeholders are identified in the project the greater the likelihood of a successful project.

4.10.2 Identify Stakeholders

This section of the Stakeholder management strategy discusses the methods the project team will use in the identification of stakeholders. It is important that all stakeholders be identified, after they are identified they will then be categorized. For this to occur the project team will conduct a meeting in order to identify all possible stakeholders. The initial meeting to identify stakeholders will include members of the project team and the project sponsors. The session will identify two types of stakeholders. The following stakeholders may be identified in the firs process:

Functional Managers

Operations Personnel

Stakeholders within NICH

The second part of the meeting will focus on external stakeholders. These may include but are not limited to:

Suppliers

Government Ministries

Branches of NICH

Cultural Stakeholders

The Criteria to be used to determine if an individual or organization is a stakeholder is as follows:

Will the person or their organization be directly or indirectly affected by this project?

Does the person or their organization hold a position from which they can influence the project?

Does the person have an impact on the project's resources (material, personnel, funding)?

Does the person or their organization have any special skills or capabilities the project will require?

Does the person potentially benefit from the project or are they in a position to resist this change?

Any individual who meets one or more of the above criteria will be identified as a stakeholder. Stakeholders from the same organization will be grouped in order to simplify communication and stakeholder management.

Stakeholder Register Template

Name	Position /Role	Organization	Internal /	Contact	Supports / Neutral /	Major Require	Main Expectation
				E-mail:			
				E-mail:			
				E-mail:			
				E-mail:			

Figure 17 Stakeholder Register Template. Adapted from *Stakeholder Register Template.* Retrieved October 12, 2018 from www.corpedgroup.com/resources/pm/Stakeholder%20Register%20Template.do

4.10.3 Key Stakeholders

After stakeholders have been identified the next step in the stakeholder strategy is identifying those stakeholders which are key stakeholders. Key stakeholders are usually seen as those stakeholders who potentially have the most influence over the project. The project team will go over the stakeholder register and identify the

key stakeholders. They will determine which stakeholders have the most influence over the project or which stakeholders are going to be impacted by the project the most. Once selected the Project team will have to be in constant communication with these stakeholders, they project manager will obtain feedback the level of participation they desire, frequency and type of communication, and any concerns or conflicting interests they have.

Based on the feedback gathered by the project manager, the determination may be made to involve key stakeholders on steering committees, focus groups, gate reviews, or other project meetings or milestones. Thorough communication with key stakeholders is necessary to ensure all concerns are identified and addressed and that resources for the project remain available.

4.10.4 Stakeholder Analysis

This section describes how the project team will analyze each identified stakeholder. The purpose of analysis is to determine the stakeholders' level of power or influence, plan the management approach for each stakeholder, and to determine the appropriate levels of communication and participation each stakeholder will have on the project.

The project team will categorize stakeholders based on their organization or department. Once all stakeholders have been categorized, the project team will utilize a power/interest matrix to illustrate the potential impact each stakeholder may have on the project. Based on this analysis the project team will also complete a stakeholder analysis matrix which illustrates the concerns, level of involvement, and management strategy for each stakeholder.

The template below will be used to establish the level of power and interest as part of the stakeholder analysis.

4.10.5Stakeholder Analysis Matrix

Stakeholder Name	**Contact Person** *Phone, Email, Website, Address*	**Impact** *How much does the project impact them? (Low, Medium, High)*	**Influence** *How much influence do they have over the project? (Low, Medium, High)*	**What is important to the stakeholder?**	**How could the stakeholder contribute to the project?**	**How could the stakeholder block the project?**	**Strategy for engaging the stakeholder**
EXAMPLE ***Nurses & Midwives Union***	*Carlos Davida cdavida@nu.org 0998 765 287*	*High*	*High*	*Maintaining working conditions for nurses*	*Agree for union members to implement the new reforms*	*Going on strike*	*Monthly round-table discussions*

Stakeholder Name	**Contact Person** *Phone, Email, Website, Address*	**Impact** *How much does the project impact them? (Low, Medium, High)*	**Influence** *How much influence do they have over the project? (Low, Medium, High)*	**What is important to the stakeholder?**	**How could the stakeholder contribute to the project?**	**How could the stakeholder block the project?**	**Strategy for engaging the stakeholder**
Patient Advocacy Group	*Viki Chan vchan@pag.org 888 587 101*	*High*	*Medium*	*Maximising quality of care for patients*	*Communicate with other stakeholders to express their support for reforms*	*Making complaints about quality of service after the reports*	*and eetings nths*

Stakeholder Name	**Contact Person** *Phone, Email, Website, Address*	**Impact** *How much does the project impact them? (Low, Medium, High)*	**Influence** *How much influence do they have over the project? (Low, Medium, High)*	**What is important to the stakeholder?**	**How could the stakeholder contribute to the project?**	**How could the stakeholder block the project?**	**Strategy for engaging the stakeholder**
Sunday Times Newspaper	*Jane Smith jsmith@stn.com 888 587 101*	*Low*	*High*	*Getting a good story*	*Print stories that support the new reforms*	*Printing stories that oppose the new reforms*	*Quarterly press meetings*

Stakeholder Name	**Contact Person** *Phone, Email, Website, Address*	**Impact** *How much does the project impact them? (Low, Medium, High)*	**Influence** *How much influence do they have over the project? (Low, Medium, High)*	**What is important to the stakeholder?**	**How could the stakeholder contribute to the project?**	**How could the stakeholder block the project?**	**Strategy for engaging the stakeholder**

Figure 18 Stakeholder Analysis template. Adapted from *Stakeholder Analysis Matrix Template.* Retrieved October 14, 2018 from
www.tools4dev.org/resources/stakeholder-analysis-matrix-template/

Figure 19 The National Museum of Belize Stakeholder Management Plan. Adapted from *Project Management Docs* Retrieved October 12, 2018 from
https://www.projectmanagementdocs.com/template/project-initiation/stakeholder-management-strategy/#ixzz5UELcSvJc

5. CONCLUSIONS

1. The Project Management Plan was created using the analytical research method and the sixth edition of the PMBOK.

2. The Project Charter was created during the final graduation seminar. It was used to develop the project management plan and outlined the general and specific objectives. The template provided by the tutor was used to determine the objectives, project description, scope statement, project risk, preliminary scope statement, project deliverables and summary milestones.

3. The scope management plan was developed using templates from project management docs as well as incorporating the processes outlined in the PMBOK sixth edition. This process included consultations with the different directors of the institutes that make up NICH.

4. The Cost Management plan was created using estimates from similar buildings constructed in Belize, the estimated financing and budgeting was done by looking at past projects as well as consulting with the CBA. The template used was from past project documents and the processes were taken from the PMBOK sixth edition.

5. Project Quality Management was done in consultation with primary stakeholders of the proposed project. This was done to ensure that if the project were started the objectives would meet stakeholder expectations.

6. Stakeholder Management Plan was created with templates on how stakeholders would be selected, using established criteria. The plan also outlines how stakeholders would be analyzed and determine the method of communication. There was no listing of actual stakeholders since NICH already has a detailed list of stakeholders that would then be used to create the actual stakeholder registry for the project.

7. The Schedule Management Plan was created using Microsoft Project. This along with estimates were used to determine the length of time needed to complete the construction and programming phases of the museum. The PMBOK sixth edition was used to determine the processes required to complete the Schedule Management Plan.

8. The Resource Plan was created. For the project, NICH will have to go through the processes of determining what resources they have and what resources they will need to procure. This will include the organizational chart to determine technical capacity and the roles that current staff members will need to transition to if the project gets funding.

9. The Communications Management Plan was created, and addressed how the project team would communicate with the sponsors and stakeholders of the project. It details the responsibility of the project team and outlines how communication will flow throughout the project lifecycle.

10. The Project Risk Management Plan was created using sourced templates and the processes from the PMBOK Sixth Edition. A list of ten risks was created and analyzed, they were placed in the risk register. A qualitative risk analysis was done for each risk identified.

11. The procurement Management Plan was developed. A template was sourced and the procurement process was outlined in the Procurement management Plan.

6 RECOMMENDATIONS

Having completed the Project Management Plan for the Construction of the National Museum of Belize the student makes the following recommendations to the National Institute of Culture and History. This document serves as a plan to further develop discussion and actualization of the construction of a national museum for Belize.

1. NICH should use the Project Management Plan as a guide for the Construction of NMB

2. The Project Management Plan should be used to develop a working paper to source funds for construction of the NMB

3. Develop a Project Management Office for projects that involve construction and upkeep of current and future historic/ Cultural sites in Belize

4. Future projects carried out by NICH should use the processes outlined in project management

7. BIBLIOGRAPHY

Cambridge Dictionary. (2018, June 7). *Cambridge University Press*. Retrieved from cambridge.org: https://dictionary.cambridge.org/dictionary/english/research-method

cdc.gov. (2018, September 1). *Change request form*. Retrieved from cdc.gov: https://www2.cdc.gov/cdcup/library/.../CDC_UP_Change_Request_Form

Corpedgroup. (2018, October 12). *Stakeholder Register Template*. Retrieved from www.corpedgroup.com: www.corpedgroup.com/resources/pm/Stakeholder%20Register%20Template.do

Creswell, J. (2013). *Research Design, Qualitative,Quantitative, And Mixed Method Approaches.*

GTA Georgia. (2018, October 5). *Risk Management Template*. Retrieved from gta.georgia.gov.

Institute, P. M. (2017). *PMBOK Guide 6th Edition.* Newtown: Project Managment Institute, Inc.

Ithaca College Library. (2018, June 6). *library.ithaca.edu*. Retrieved from Primary and Secondary Sources: https://library.ithaca.edu/sp/subjects/primary

karibouconnect.net. (2018, June 6). *Definition of information/information sources*. Retrieved from http://karibouconnections.net/medlibafrica/training_module/15.html

Lim, M. (2018, April 10). *What is the Difference Between Procurement and Purchasing*. Retrieved from www.blog.procurfy.com: https://blog.procurify.com/

Project Management Docs . (24 de September de 2018). *Project Management Docs*. Obtenido de www.projectmanagmentdocs.com: https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5RZO07yv0

Project Management Docs. (2018, September 29). *Human Resource Plan*. Retrieved from www.projectmanagementdocs.coom:

https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5RZO07yv0

Project Management Docs. (2018, October 12). *Procurement Management Plan*. Retrieved from www.projectmanagementdocs.com: https://www.projectmanagementdocs.com/template/project-planning/procurement-management-plan/#ixzz5U89gSkJ3

Project Management Docs. (2018, September 18). *project managementdocs.com*. Retrieved from Project Finding Docs: https://www.projectmanagementdocs.com/template/project-documents/project-funding-requirements/#axzz5RUaVj1He

Project Management Docs. (2018, October 12). *Stakeholder managment Strategy*. Retrieved from www.projectmanagementdocs.com: https://www.projectmanagementdocs.com/template/project-initiation/stakeholder-management-strategy/#ixzz5UELcSvJc

Project Managment Docs. (2018, October 3). *Communications Management Plan*. Retrieved from www.projejectmanagementdocs.com: https://www.projectmanagementdocs.com/template/project-planning/communications-management-plan/#axzz5ShPJ5eUm

SCRIBD. (2018, June 7). *Analythical Research.* Retrieved from scribd.com: https://www.scribd.com/doc/33329016/Analytical-Research

Smartsheet. (2018, October 8). *Risk Assesment matrix*. Retrieved from www.smartsheet.com: https://www.smartsheet.com/all-risk-assessment-matrix-templates-you-need

Stfu.ca. (2018, September 17). *Project Management Docs*. Retrieved from docshare.sfu.ca: https://docushare.sfu.ca/dsweb/Get/Document-501966

Tools4Dev. (2018, October 14). *Stakholder Analysis Matrix Template*. Retrieved from www.tools4dev.org: www.tools4dev.org/resources/stakeholder-analysis-matrix-template/

Wanner, R. (2013). *Project Risk managment.* Procorus 2013.

APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.	
Date	**Project Name:**
Issue Date May 14 2018	Project Management Plan for the Construction of the National Museum of Belize
Knowledge Areas / Processes	**Applicacion Area (Sector / Activity)**
Knowledge areas: Scope Management Schedule Management Cost Management Resource management Risk Management Procurement Management Stakeholder management **Process groups:** Planning Initiation Executing Monitoring and control Closing	Construction Culture Heritage Finance
Start date	**Finish date**
May 14 2018	March 15 2020
Project Objectives (general and specific)	
General objective: Developing a Project Management Plan for the construction of the National Museum of Belize(NMB) Specific Objectives: Create a Integration Managemnt Plan which will combine various processes within the project management plan To construct a Scope Management Plan for the construction of a national museum which includes cost planning, resource planning and stakeholder engagement Create a Cost Magement Plan to estimate the budget, financing, funding and control cost for the project Create a Project Quality Management Plan to meet stakeholder expectations Create a stakeholder management plan to ensure that all stakeholders are accounted for and that they be placed in the correct categories. Create a time management plan to ensure that the different phases of the project are done on time	

Create a communications management plan to ensure that information pertaining to the phases of the project are sent to NMB staekolders.

Create a Project Risk Management Plan to identify risk

Create a Procurement Management Plan to acquire products and services and determine if the resoureces are within the organization or are needed from outside

Create a Project Resource mangement Plan to identify the resource needed for completion of a project mangement plan

Project purpose or justification (merit and expected results)

The National Institute of Culture and History (NICH) Through two of its Departments, the Institute of Archaeology (IA) and the Museum of Belize and Houses of Culture (MOB/HOC) have the responsibility of researching and displaying artifacts for the proliforation of culture and history in Belize. Currently this is being done at the Museum of Belize which is the only museum that currently falls under the administration of NICH. Exhibitions are limited due ot the size of the current building and protocols based on it being on the compound of the Central Bank of Belize.

NICH which falls under the Ministry of Education, Youth, Sports and Culture (MOEYSC) is given the responsibility of improving the way in which the patrimony of the country is displayed. A project management plan for the construction of the National Museum of Belize will facilitate the eventual construction of NMB. This will look at the assesment of NICH as an organization and its capacity to construuct a museum as well as the scope, time and cost of doing such a project.

Description of Product or Service to be generated by the Project – Project final deliverables

The development of a project management plan will have to be done using eight (8) shorter plans.
These plans include the following:

1. Identification of Land
2. Creation of overview of exhibit strategy for the musueum
3. Assesment of the MOB organization and structure
4. Assesment of musuem building storage and landscaping
5. Assesment of collection needs within storage buildong
6. Assesment of catalogur needs of national collection of artefacts
7. Creation of a masterplan for Museum lands
8. Development of Buisness and financial plan

Assumptions

It is assumed that the project Scope will not be modified
It is assumed that funding will be made available for impelentation and construction of NMB
It is assumed that the people of Belize will support the NMB project
It is assumed that stakholders will aid in the development of the project management plan
It is assumed that the project management plan will be completed within the time from and milestone dates

Constraints

Resources avilable to compile the project management plan since research on museums is limited in Belize
The time to complete the Management plan is very short
Cost: funding for the development of the management plan is limited and rely on personal funding

Preliminary risks

Scope of work may change
Time for completion of subsidiary plans is too short
Cost of the project may change

Budget

There is no initial budget for the project since it is a Management plan that may lead to the eventual construction of NMB.

Milestones and dates

Milestone	Start date	End date
Submission of Charter	May 14 2018	May 20 2018
Submission of WBS	May 14 2018	May 20 2018
Submission of Introduction Chapter	May 21 2018	May 27 2018
Submission of FGP Schedule	May 21 2018	May 27 2018
Submisssion of Theorethical Framework	May 21 2018	May 27 2018
Submission of Methodogical Framework	June 4 2018	June 8 2018
Submission of Executive Summary	June 4 2018	June 8 2018
Submission of Bibliography, Indexes	June 4 2018	June 8 2018
Acquisition of Signed Charter	June 21 2018	June 25 2018
Scope Management Plan	June 18 2018	Sept 14 2018
Tutor Review	June 18 2018	June 18 2018
Cost Management Plan	June 19 2018	June 20 2018
Tutor Review	June 21 2018	June 27 2018
Time Management Plan	Sept 3 2018	Sept 7 2018
Tutor Review	Sept 17 2018	Sept 18 2018
Stakeholder Management Plan	Sept 17 2018	Sept 21 2018
Tutor review	Sept 17 2018	Seot 18 2018
Communications Management Plan	Sept 19 2018	Sept 20 2018
Tutor Review	Sept 21 2018	Sept 21 2018
Conclusion and recommendations	October 8 2018	November 2 2018
Tutor Review	October 22 2018	November 2 2018
Final Project Submission	November 5 2018	November 9 2018
Completion of Final Graduation Project	November 9 2018	November 9 2018

Relevant historical information

The National Institute of Culture and History (NICH) is a statutory board that amalgamated the Institute of Archaeology, Institute of Creative Arts, Institute for Social and Cultural Research and the Museum of Belize and Houses of Culture. This board was formed in august of two thousand and thirteen. The main purpose of NICH is to enable Belizeans and non Belizeans to have a better understanding of the History and Culture of Belize.

The Museum of Belize and Houses of Culture is one of four departments that make up NICH. This department is dedicated to the promotion, documentation and exhibition of Belize's culture and history. This depatment currently has 1 museum and 6 houses of culture currently active within Belize. This department along with Heads of Department from the other institutes will be responsible for the execution of the construction of a National Museum of Belize.

Stakeholders

Direct stakeholders:
Course Facilitator
Tutor
Project Review board
Candidate

Indirect stakeholders:
National Institute of Culture and History
Classmates

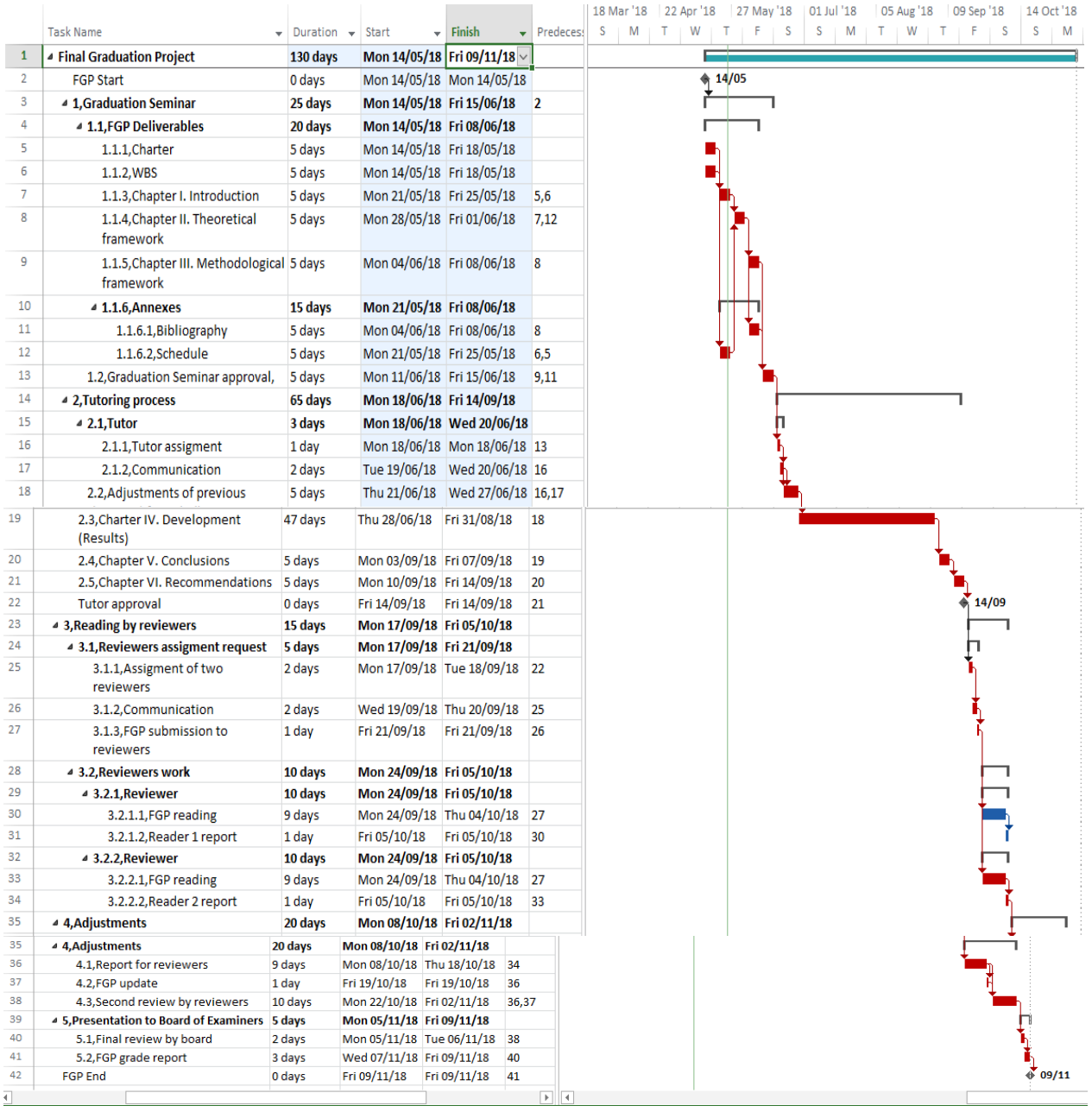
Project Manager: Alexis Daniel Salazar	**Signature:** 
Authorized by:	**Signature:**

Appendix 2: FGP WBS

No.	Task
	Final Graduation Project
1	**Final Graduation Seminar**
1.1	Week 1 Deliverables
1.1.1	Charter
1.1.2	WBS
1.2	Week 2 Deliverables
1.2.1	Introductory Chapter
1.2.2	FGP Schedule
1.3	Week 3 Deliverables
1.3.1	Theoretical Framework
1.4	Week 4 Deliverables
1.4.1	Methodological Framework
1.5	Week 5 Deliverables
1.5.2	Bibliography
1.5.3	Indexes
1.5.4	Signed Charter
2	**Tutoring Process**
2.1	Tutor
2.1.1	Tutor Assignment
2.1.2	Communication Establishment
2.2	Previous Charter Adjustment (If Needed)
2.3	Chapter IV. Development (Results)
2.3.1	Scope Management Plan Submission
2.3.2	Tutor Review
2.3.3	Cost Management Plan and Corrections Submission
2.3.4	Tutor Review
2.3.5	Time Management Plan and Corrections Submission
2.3.6	Tutor Review
2.3.7	Stakeholder Management Pan and Corrections Submission
2.3.8	Tutor Review
2.3.9	Communication Management and Corrections Submission
2.3.10	UCI School Break
2.3.11	Tutor Review
2.4	Chapter V. Conclusions
2.5	Chapter VI. Recommendations
2.6	Tutor Review
2.7	Final Project Submission
2.8	Tutor Approval
3	**Reading by Reviewers**
3.1	Reviewers Assignment Request
3.1.2	Communication Establishment
3.1.3	FGP Submission to Reviewers
3.2	Reviewers Work
3.2.1	Reviewer
3.2.1.1	FGP Reading
3.2.1.2	Reader 1 Report
3.2.2	Reviewer
3.2.2.2	FGP Reading
4	**Adjustments**
4.1	Report For Reviewer
4.2	FGP Update
4.3	Second Review by Reviewers

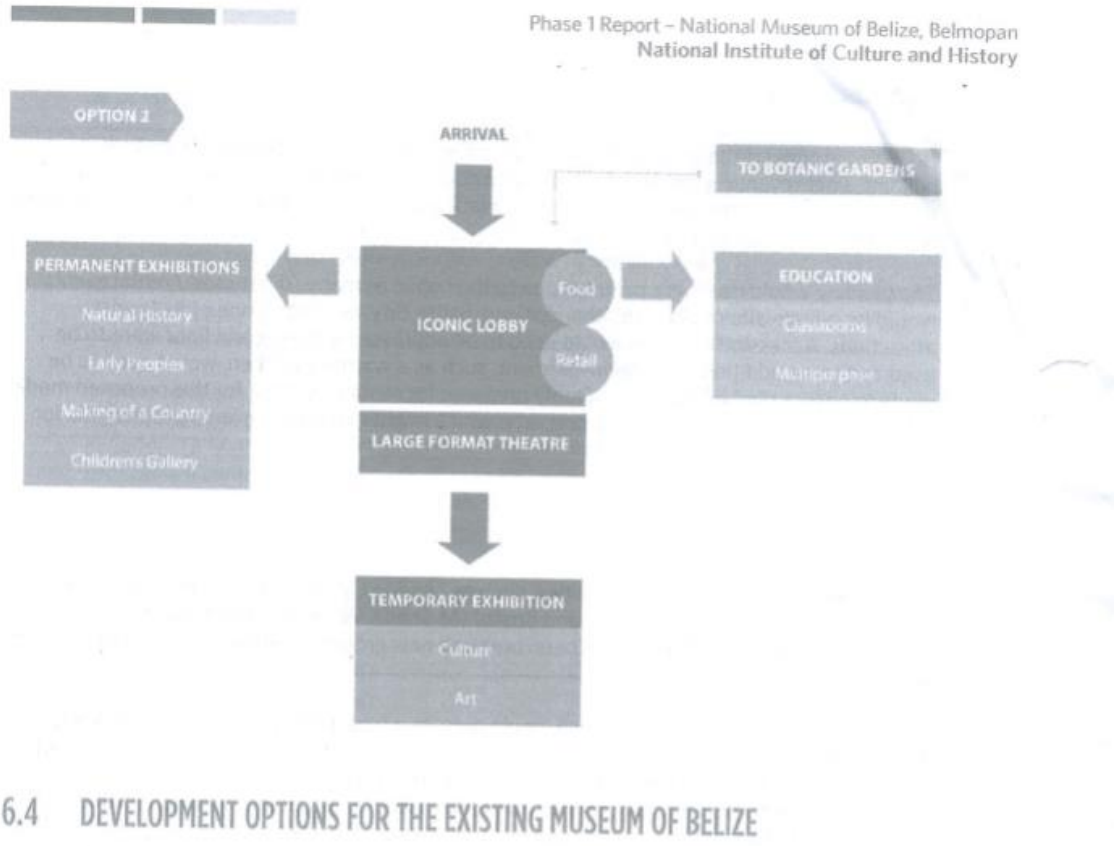
5	**Presentation to Board Of Examiners**
5.1	Final Review Board Meeting
5.2	Loading of FGP Grade Report
FGP End	

Appendix 3: FGP Schedule

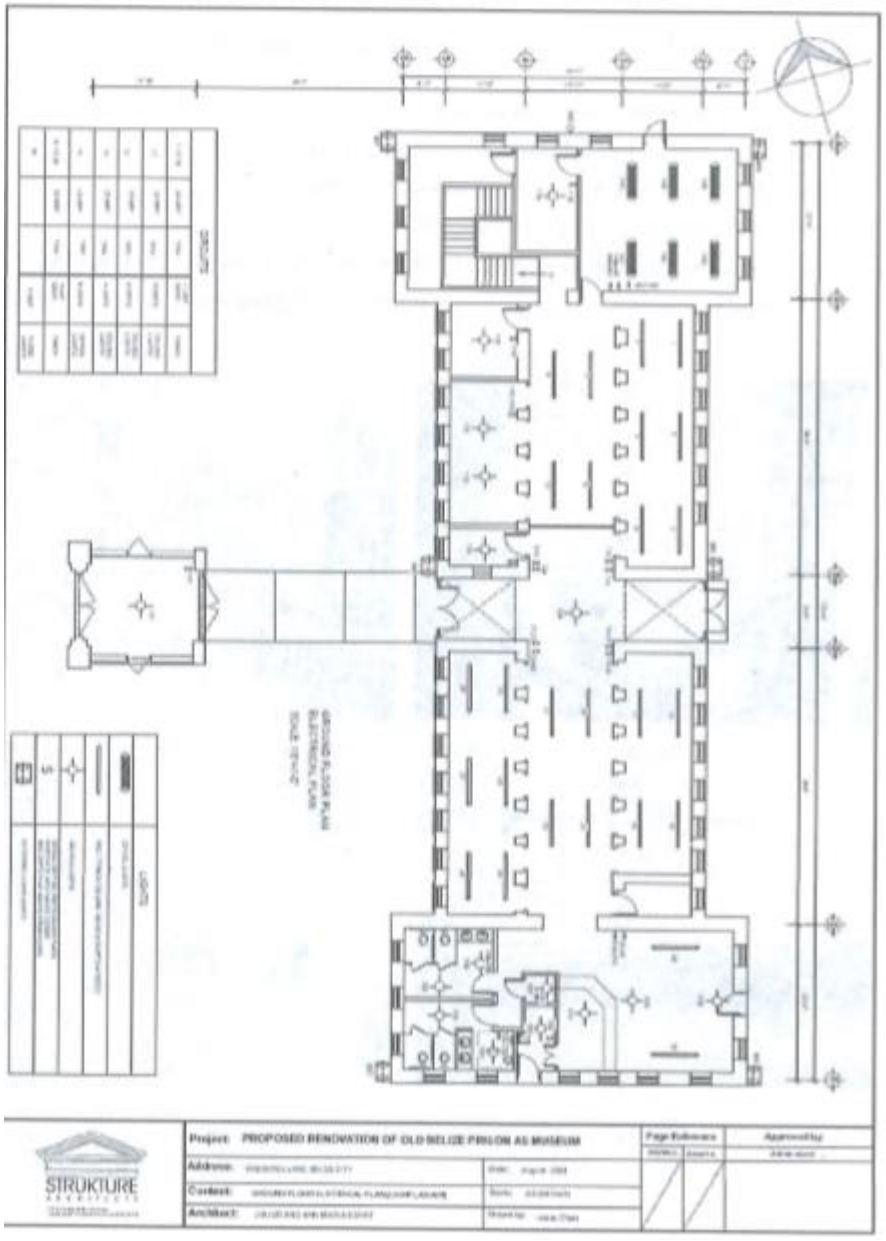


	Task Name	Duration	Start	Finish	Predeces
1	**Final Graduation Project**	**130 days**	**Mon 14/05/18**	**Fri 09/11/18**	
2	FGP Start	0 days	Mon 14/05/18	Mon 14/05/18	
3	**1,Graduation Seminar**	**25 days**	**Mon 14/05/18**	**Fri 15/06/18**	2
4	**1.1,FGP Deliverables**	**20 days**	**Mon 14/05/18**	**Fri 08/06/18**	
5	1.1.1,Charter	5 days	Mon 14/05/18	Fri 18/05/18	
6	1.1.2,WBS	5 days	Mon 14/05/18	Fri 18/05/18	
7	1.1.3,Chapter I. Introduction	5 days	Mon 21/05/18	Fri 25/05/18	5,6
8	1.1.4,Chapter II. Theoretical framework	5 days	Mon 28/05/18	Fri 01/06/18	7,12
9	1.1.5,Chapter III. Methodological framework	5 days	Mon 04/06/18	Fri 08/06/18	8
10	**1.1.6,Annexes**	**15 days**	**Mon 21/05/18**	**Fri 08/06/18**	
11	1.1.6.1,Bibliography	5 days	Mon 04/06/18	Fri 08/06/18	8
12	1.1.6.2,Schedule	5 days	Mon 21/05/18	Fri 25/05/18	6,5
13	1.2,Graduation Seminar approval,	5 days	Mon 11/06/18	Fri 15/06/18	9,11
14	**2,Tutoring process**	**65 days**	**Mon 18/06/18**	**Fri 14/09/18**	
15	**2.1,Tutor**	**3 days**	**Mon 18/06/18**	**Wed 20/06/18**	
16	2.1.1,Tutor assigment	1 day	Mon 18/06/18	Mon 18/06/18	13
17	2.1.2,Communication	2 days	Tue 19/06/18	Wed 20/06/18	16
18	2.2,Adjustments of previous	5 days	Thu 21/06/18	Wed 27/06/18	16,17
19	2.3,Charter IV. Development (Results)	47 days	Thu 28/06/18	Fri 31/08/18	18
20	2.4,Chapter V. Conclusions	5 days	Mon 03/09/18	Fri 07/09/18	19
21	2.5,Chapter VI. Recommendations	5 days	Mon 10/09/18	Fri 14/09/18	20
22	Tutor approval	0 days	Fri 14/09/18	Fri 14/09/18	21
23	**3,Reading by reviewers**	**15 days**	**Mon 17/09/18**	**Fri 05/10/18**	
24	**3.1,Reviewers assigment request**	**5 days**	**Mon 17/09/18**	**Fri 21/09/18**	
25	3.1.1,Assigment of two reviewers	2 days	Mon 17/09/18	Tue 18/09/18	22
26	3.1.2,Communication	2 days	Wed 19/09/18	Thu 20/09/18	25
27	3.1.3,FGP submission to reviewers	1 day	Fri 21/09/18	Fri 21/09/18	26
28	**3.2,Reviewers work**	**10 days**	**Mon 24/09/18**	**Fri 05/10/18**	
29	**3.2.1,Reviewer**	**10 days**	**Mon 24/09/18**	**Fri 05/10/18**	
30	3.2.1.1,FGP reading	9 days	Mon 24/09/18	Thu 04/10/18	27
31	3.2.1.2,Reader 1 report	1 day	Fri 05/10/18	Fri 05/10/18	30
32	**3.2.2,Reviewer**	**10 days**	**Mon 24/09/18**	**Fri 05/10/18**	
33	3.2.2.1,FGP reading	9 days	Mon 24/09/18	Thu 04/10/18	27
34	3.2.2.2,Reader 2 report	1 day	Fri 05/10/18	Fri 05/10/18	33
35	**4,Adjustments**	**20 days**	**Mon 08/10/18**	**Fri 02/11/18**	
35	**4,Adjustments**	**20 days**	**Mon 08/10/18**	**Fri 02/11/18**	
36	4.1,Report for reviewers	9 days	Mon 08/10/18	Thu 18/10/18	34
37	4.2,FGP update	1 day	Fri 19/10/18	Fri 19/10/18	36
38	4.3,Second review by reviewers	10 days	Mon 22/10/18	Fri 02/11/18	36,37
39	**5,Presentation to Board of Examiners**	**5 days**	**Mon 05/11/18**	**Fri 09/11/18**	
40	5.1,Final review by board	2 days	Mon 05/11/18	Tue 06/11/18	38
41	5.2,FGP grade report	3 days	Wed 07/11/18	Fri 09/11/18	40
42	FGP End	0 days	Fri 09/11/18	Fri 09/11/18	41

Appendix 4: Other relevant information



i. Lords Cultural report on Lobby set up



ii. Sketch of Museum of Belize

The Belau National Museum Koror, Palau

The Belau National Museum (BNM) is a dynamic institution for the preservation and promotion of the national heritage, exhibition of natural, cultural, social and historical values, and the development of arts at all levels.

The Belau National Museum is an institution of learning established to collect, cultural, preserve and display object of scientific, cultural, historical and aesthetic value. The Museum's purpose is to preserve and protect the nation's cultural heritage through collection, identification, documentation, preservation, interpretation and exhibition of specimens, artifacts and other Palauan cultural property. It was established in 1955 and is the oldest museum in Micronesia

iii. Comparison Between Belize and Small States National Museums