



Government of the Independent State of Samoa
Ministry of Agriculture and Fisheries

TERMS OF REFERENCE

Consultancy Services for Design Review and Finalisation for: New TRAINING FACILITY at Toloa, PACKHOUSE at Salelologa, BOAT- RAMP at Asau and MCS BUILDING in Apia

A. BACKGROUND

The Government of Samoa (“GoS”) received financial assistance from the World Bank and the International Fund for Agricultural Development (“IFAD”) towards the cost of the Samoa Agriculture and Fisheries Productivity and Marketing (SAFPROM) project. The Ministry of Agriculture and Fisheries (“MAF”) is the Implementing Agency for the SAFPROM Project. The Development Objective of the SAFPROM Project is *to increase the productivity and access to markets by selected producers, to improve management of targeted productive natural resources and, in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency.* The project consists of four (4) key components one of which is to strengthen National Institutions, aimed at creating an enabling environment for increased productivity and access to markets for target farming and fishing households and small private sector along targeted value-chains. In order to achieve and strengthen the value chains of agriculture (livestock and crops), veterinary and fisheries services in the island of Savaii there was a need for improved MAF infrastructure through the construction of a new MAF office with a packing house for agricultural crops and veterinary laboratory in Savaii.

The Government of Samoa through MAF (Client) intends to apply a portion of the financial assistance to design and/or construct a number of buildings in Savai’i and Upolu. To this end, MAF has undertaken a Site Planning Study with the following scope of services:

Site Planning and Preliminary Design of:

- a) new MAF Savai’i Headquarters Building,
- b) new Monitoring, Control & Surveillance (MCS) Building in Apia,
- c) new Training Facility at Toloa Hatchery, Upolu, and
- d) new fruit & vegetable Packhouses in Upolu and Savai’i

Furthermore, MAF has developed Preliminary Concept Plans for minor structures including:

- a) Fisheries Boat-Ramp at Asau Savaii plus
- b) a rural work-Station at Saleaumua in Upolu.

The Final Preliminary Design Report of the Site Planning Study and Preliminary Conceptual Plans, appended hereafter will provide the base data for the Final Detail Design services to be provided under this consultancy.

B. ASSIGNMENT OBJECTIVES

MAF now seeks the services of a Consulting Firm (Consultant) with suitable Architectural and Engineering expertise through a highly skilled and experienced team of experts, with a Project Manager who shall serve as the primary contact for the Consultant. The Consultant is expected to provide architectural and engineering design services as appropriate for the following activities:

- **Technical Review of Preliminary Engineering & Architectural Designs** – Review of Planning and Preliminary Designs report plus Conceptual Design undertaken by the Client for the infrastructure facilities noted below.
- **Community Consultation & ESMP/PEAR** – Conduct and document community consultations for Toloa Training Facility, Salelologa PHB, Apia MCS Office & Asau Boat Ramp. Conduct environmental and social site assessment with identification of potential risks and prepare & finalize relevant ESMP or PEAR as required by PUMA and the World Bank ESF.
- **Finalising Detailed Design & Documentation:** New Infrastructure Facilities for the Fisheries Division including: (1) a Training Office at Toloa, (2) a fruit and vegetable Pack-house in Salelologa (3) a Boat-Ramp in Asau, and (4) a Monitoring, Control & Surveillance (MCS) office in Apia, in that order of priority.

The overall objectives are to provide Detailed Designs, For-Construction Drawings, full Technical Specifications and Bills of Quantities that will be available for MAF to use in the construction of the buildings and facilities listed above.

The detailed design of buildings should where possible and practicable, maximize the use of renewable sources of energy, mainly solar energy and ensure the facilities are energy efficient (considering also “passive” design opportunities such as window location and selection, passive cooling, optimal building orientation, building eave design), as well as meeting seismic and flood resilience standards, and universal access design, per Samoa’s National Building Code 2017 (see link www.mwti.gov.ws)

The new Training Office for the Fisheries Division is to be located at Toloa, on the north-side of the Faleolo International Airport runway. The fruit and vegetable Packhouse in Savaii shall be located in the MAF compound at Salelologa opposite the EPC Power Station. The Boat-Ramp will be at the MAF Fisheries compound at Asau. The new MCS office is to be located inside the Fisheries Division compound, adjacent to the Apia Fish Market and opposite the Nelson Library. The locations of the four (4) project sites are shown on maps in the Annexure of this TOR¹.

Additionally, the consultant will need to prepare and finalize an Environmental and Social Management Plan (ESMP) or Preliminary Environmental Assessment Report (PEAR), along with all relevant documents for the Boat Ramp at Asau. The finalized ESMP or PEAR for Asau Boat Ramp will be submitted with all relevant documentation and attachment appropriate for PUMA DCA submission. The consultant will be required to conduct community consultations for all sites including Toloa Training Facility, Salelologa PHB, Apia MCS Office & Asau Boat Ramp.

C. SCOPE OF SERVICES

The services to be provided by the Consultant under this contract is the provision of Detailed Design services in two stages as follow:

¹ Refer to Figure 1 for the location of all the project sites for development, Figure 2 for the location of the proposed MCS Office project site in Apia, Figure 3 for the location of the proposed Training Office at Toloa, and Figure 4 for the new Multi-species Holding Facility & Boat-Ramp in Asau.

- **Stage 1** – Inception, Consultations, REVIEW of Site Planning & Preliminary Design Report & Designs (for Training Facility at Toloa, Pack-house at Salelologa, MCS Apia), plus the Review of Concept Design for Boat-ramp in Asau, including any additional testing/investigations/surveys needed. Develop ESMP or PEAR for Asau Boat Ramp (with all relevant documentation & attachments) and conduct all relevant assessments. Conduct community consultations for all infrastructure sites.
- **Stage 2** – Detailed Final Designs and Documentation (For-Construction Drawings, Technical Specifications, Bills of Quantities, etc). Final ESMP or PEAR with all relevant attachments for Asau Boat Ramp and final community consultation minutes for all infrastructures.

The consultant is required to undertake additional detailed engineering designs to produce a full set of architectural and engineering drawings, technical specifications and bills of quantities (or activity schedules as appropriate) for the new Fisheries Training Office at Toloa, the new Pack-house at Salelologa, the Boat-Ramp in Asau and the new MCS Office in Apia.

STAGE 1 –INCEPTION / CONSULTATION / SITE ASSESSMENTS / DESIGN REVIEW

Task 1.1 Inception Report

Prepare and submit an Inception Report setting out any agreed changes to methodology, staff utilization, detailed work-plan, additional work/tests/investigations/survey required to compliment/verify what was done by the Client under the Planning Study, identify any potential risks to the service delivery, communications and agreed progress meetings with the Client, etc.

All E&S requirements to be properly reflected & included in the Inception Report (inclusive in methodology, staff utilization & allocation, work-plan & any relevant additional assessment and consultation).

Task 1.2 Consultation and Site Assessment for the Boat Ramp:

The consultant shall undertake consultation with all stakeholders, both within MAF and outside as appropriate, to assess the impacts of the proposed designs on MAF staff, other existing and proposed users of the sites and others that are likely to be immediately affected by the proposed developments.

The consultant shall also conduct a site assessment for the Boat Ramp in Asau. Identify and collect all relevant, available data with the purpose to fully familiarize with the project area and conditions. Undertake site assessment and analysis including site analysis such as and not limited to geotechnical, soil analysis, surveys including topographical, landscaping, vegetation, access and movement, roads, neighborhood amenity, fencing, traffic analysis, storm water/drainage, cultural heritage, biodiversity and ecology.

Conduct & submit E&S site assessment results including potential environmental and social risks. Conduct relevant required consultations. Document all assessment findings and proposed mitigation measures in an ESMP or PEAR. All E&S assessment and consultations are conducted in conformance with relevant laws and policies of Samoa and Donor requirements. The consultant will prepare and submit all relevant documents necessary to process the PUMA DCA for the Boat Ramp assignment.

Task 1.3 Preliminary Design Review:

Based on the consultations, the consultant will undertake a desktop review of the Preliminary Designs for the three buildings prepared under the Site Planning Study and the Concept Design for the Boat-Ramp and suggest any design improvements or modifications that might better meet the project

objectives. These should be formally presented to, discussed and agreed with MAF prior to proceeding with the next stage of the assignment.

Conduct community consultations for all infrastructure sites included under this scope of works and document the consultations with all responses from the selected communities (if any).

STAGE 2 – DETAILED ARCHITECTURAL PLANS AND ENGINEERING DESIGNS, DETAILED PROJECT COST ESTIMATES, TECHNICAL SPECIFICATIONS AND BILLS OF QUANTITIES / ACTIVITY SCHEDULES AS APPROPRIATE

Task 2.1: Finalizing Detailed Architectural & Engineering Design

Using the agreed Preliminary Designs for the three buildings and Concept Design for the Boat-Ramp, the consultant will prepare additional detailed architectural, engineering and building services design documentation required to complete the Final Designs (including For-Construction Drawings, Technical Specifications, Bill of quantities, etc). The documentation should incorporate any design related mitigation measures identified in the relevant environmental and social impact assessment reports [PEAR's/CEAR] and ESMP or PEAR for the Asau Boat Ramp.

All the designs should be in conformity with Samoan and/or applicable regional engineering standards, and in compliance with relevant Samoan Environmental and Social Legislation. All necessary calculations will be prepared to determine and justify the engineering solution proposed for each component of the project and will be incorporated into the design reports. This shall include structural calculations to be done and signed off by a suitably qualified Structural Engineer registered as such with the Institute of Professional Engineers Samoa (IPES) who shall also certify and provide a Design Certificate required for the DCA and Building Permit applications.

The consultant shall prepare & submit the draft and finalized ESMP or PEAR for the Asau Boat Ramp with all comments from the client addressed. In the design reports, include a section or chapter to reflect environmental & social design aspects relating to any environmental and social safeguards requirements including but not limited to the finalized and approved EIA reports [including the Asau Boat-Ramp ESMP or PEAR].

Detailed Design documentation shall include a complete set of all For-Construction Drawings, full Technical Specifications (civil, structural, architectural, mechanical, etc), schedules, construction details, bills of quantities and cost estimates (using current local market rates), design calculations and other documentation needed to review the final designs and implement the project, including any additional geotechnical engineering design, architectural design, interior fit-out design, structural design, building services (electrical, mechanical, fire protection and suppression, telecommunication and ICT networks, HVAC), utility services (potable water storage and distribution, sewage reticulation system, wastewater treatment and disposal system, standby power), civil works design (boat-ramp, internal access roads, car parks and site storm-water collection and disposal) and external works (such as landscaping, , recreational space, fencing etc.).

Architectural documentation shall include all dimensioned site plans, elevations, floor plans, sections and details, as well as door and window schedules, sanitary ware, fixtures and fittings, schedules of finishes etc. The design of the new buildings should maximize the current use of renewable sources of energy to generate power and ensure the proposed facility is energy efficient – including “active” and “passive” design solutions.

Task 2.2: Design Completion Report including Confidential Cost Estimates and Bills of Quantities:

The consultant shall prepare a Final detailed Design Completion Report setting out the design calculations including design parameters, design standards used, design decisions/assumptions made, preliminary construction schedule, etc and including a confidential cost report / priced BOQ / Activity Schedule based on the market prices for the entire project.

Environmental and Social Requirements should be incorporated by the consultant in the Activity Schedule. The pricing and reflecting of these E&S requirements include and not limited to development of CESMP & OSH Plans, implementation, monitoring and reporting during construction.

D. BASIS OF THE CONSULTANTS' CONTRACT

DESIGN SERVICES (LUMP SUM-BASED)

The Design Services will be paid under a LUMP SUM-BASED form of contract which will comprise of the following:

STAGE 1 – CONSULTATIONS, INCEPTION REPORT, SITE ASSESSMENTS and REVIEW OF PRELIMINARY DESIGN Report (at 25% of Design Service completion)

Task 1.1 - Consultations & Inception Report

- ✓ Consultations
- ✓ Inception Report

Task 1.2 - Review of Preliminary Designs Report

- ✓ Review of Preliminary Designs Report and Conceptual Design.
- ✓ Additional Site Investigation/Data Collection
 - Topographic/Cadastral Survey
 - Geotechnical Investigations and Soil Testing/Analysis
 - Hydraulic and Hydrology
 - Utility Services
- ✓ Records of any Stakeholder Engagement Consultations.
- ✓ Community consultations for all infrastructure sites.
- ✓ Environmental and social assessment for Boat Ramp site and prepare ESMP or PEAR.

STAGE 2 - FINAL DETAIL DESIGN AND DOCUMENTATION (REPORT) (at 100% Design Service completion)

Task 2.1 – Draft Final Detail Design and Documentation (Report) (at 75% Design Service completion)

- ✓ Architectural and Engineering Detail Design Analysis and Calculations, etc.
- ✓ Draft For-Construction Final Drawings
- ✓ Draft Bill of Quantities /Schedule of Rates
- ✓ Draft Technical Specification
- ✓ Draft PEAR or ESMP report for the Asau Boat Ramp with all required documents for DCA and Building Permit submissions to PUMA & MWTI.
- ✓ Draft Minutes of community consultations for all infrastructures.
- ✓ Draft Engineering Cost Estimates

Task 2.2 – Final Detailed Design and Documentation (Report) (at 100% of Design Service completion)

- ✓ Final Architectural and Engineering Detail Design Analysis and Calculations, etc

- ✓ Final Detailed For-Construction Drawings
- ✓ Final Bill of Quantities/Schedule of Rates
- ✓ Final Technical Specifications
- ✓ Final PEAR or ESMP report for the Asau Boat Ramp with all required documents for DCA and Building Permit submissions to MWTL.
- ✓ Final Minutes of Community Consultations for all infrastructures.
- ✓ Final Engineering Cost Estimates

E. EXPERIENCE AND QUALIFICATION OF PERSONNEL

The Consultant shall provide a team comprising of qualified specialists (not necessarily limited to those listed below) with duties and responsibilities described in this Terms of Reference (TOR) and with satisfactory experience in implementing projects of similar nature and size. The Consultant shall provide the resources to fulfill the general requirements described in these TOR.

KEY PERSONNEL

1. DESIGN TEAM LEADER (DTL)

The Design Team Leader will provide direction and leadership for all activities. He/she will be responsible for all stakeholder liaison and the quality and appropriateness of all reports and the design and documentation outputs. The key responsibility of the DTL during design phase is to ensure that the Client and all stakeholders including Government agencies are engaged and informed throughout the design process and that the Services are executed and completed as required and to the highest professional standards.

2. ARCHITECT

The Architect will address architectural design issues during design phase of the project and will be responsible for developing and finalizing architectural designs and documentations².

3. LEAD STRUCTURAL / CIVIL ENGINEER

The Lead Structural/Civil Engineer will address structural and civil engineering design issues during design phase of the project and will be responsible for developing and finalizing structural and civil designs and documentations.

4. LEAD BUILDING SERVICES ENGINEER

The Lead Building Services Engineer will address building services engineering design issues during design phase of the project and will be responsible for developing and finalizing building services engineering designs and documentations.

5. ENVIRONMENTAL AND SOCIAL SAFEGUARD SPECIALIST

The Environmental and Social Safeguard Specialist will be responsible for conducting site assessments & consultations with all relevant stakeholders, develop and finalize the Asau Boat Ramp ESMP or PEAR, incorporate relevant environmental and social considerations into the final detailed design documentations. This specialist will also be required to price the estimated cost for implementing environmental and social requirements (ES Requirements) in the Activity Schedule, such E&S requirements for construction include development of CESMP, OHS & TMP plans including implementation, monitoring & reporting of those plans. The consultant is also required to conduct community consultations for all infrastructure sites under this scope of services and document them.

6. REGISTERED / LICENSED SURVEYOR

The registered / Licensed Surveyor is responsible for undertaking topographical, cadastral and engineering surveying services of the project.

TIME INPUTS

NO	KEY PERSONNEL	TIME-INPUTS (PERSON-MONTHS)
		DESIGN SERVICES
1	Design Team Leader	3.5
2	Architect	3.5
3	Lead Structural / Civil Engineer	3.5
4	Lead Building Services Engineer	2.0
5	Environmental and Social Safeguard Specialist	1.5
6	Registered / Licensed Surveyor	1.0
TOTAL TIME INPUTS =		15

NOTE: ENGINEERING QUALIFICATIONS AND REGISTRATIONS

The Government of Samoa has a legal requirement that all Engineers employed on local design, supervision or Works contracts, including Engineers who are members of international engineering companies and associations, be members of the Institute of Professional Engineers of Samoa (IPES).

All Engineers involved are required to comply with the requirements of the IPES Act 1998 Part IV, and they must adhere and comply with the following:

- Only Registered and Practicing Engineers (CPEng holders) are allowed to verify and peer review their own works during both design and construction phases;
- Registered and Practicing Engineers (CPEng holders) under each appropriate field of engineering can only sign off and certify engineering designs and installation works under their relevant field of engineering. For example: A Registered Electrical engineer cannot sign-off on civil engineering design and/or works.

DUTY STATEMENTS OF KEY PERSONNEL

1. DESIGN TEAM LEADER (DTL)

DUTIES	EXPERIENCE & QUALIFICATIONS
<ul style="list-style-type: none"> ○ Assume responsibility of the overall management of the design phase; ○ Represent the Client in project meetings including consultation meetings with affected parties during design phase; ○ Maintain on-going coordination and communications with stakeholders to ensure smooth implementation of the design; ○ Ensure quality design outputs to achieve design budgets and milestones; ○ Ensure that design team members have a common view of the objectives of the project together with any constraints; ○ Manage and supervise all design team members; ○ Manage all risks associated with the design phase; ○ Direct the design team in all matters relating to provisions of the services; ○ Lead the design team in the development of project reports and documentation including bidding documents; ○ Ensure all design reporting required by the Client is fully and punctually delivered; ○ Manage the evaluation of tenders and prepare Bid Evaluation Report for the Client and the Bid Evaluation Committee; 	<ul style="list-style-type: none"> ○ Tertiary qualifications in Civil/Structural Engineering from a recognized institution in Australia, New Zealand or Pacific region; ○ Must have a minimum of 15 years' experience in designing and project management of building structures. ○ Must be a Chartered Professional Engineer (CPEng) member of the Samoa Institute of Professional Engineers (IPES) or equivalent New Zealand or Australian institute, in Civil and Structural Engineering Disciplines; ○ Must have sound knowledge and experience of infrastructure design and construction in developing countries, preferably in Samoa and/or the Pacific Islands, including significant experience of liaising with host Governments

2. ARCHITECT

DUTIES	EXPERIENCE & QUALIFICATIONS
<ul style="list-style-type: none"> ○ Assume architectural responsibility throughout the entire design phase of the project; ○ Participate in field consultations with stakeholders to confirm design assumptions and design requirements; ○ Review applicable Samoan infrastructure standards, guidelines and policies in regards to architectural designs relevant to building types, functions and performance requirements of the project; ○ Assist the design team with the preparation of project reports and prepare architectural concept design drawings; ○ Refine architectural concept design drawings and develop preliminary design based on results of field investigations, consultations and review comments from the Client and World Bank; 	<ul style="list-style-type: none"> ○ Tertiary qualifications in Architecture from a recognized institution in Australia, New Zealand or Pacific region; ○ Must have a minimum of 10 years' experience in architectural designs of building structures of similar complexity and scale; ○ Must have sound knowledge and experience of infrastructure design and construction in developing countries, preferably in Samoa and/or the Pacific region;

<ul style="list-style-type: none"> ○ Prepare documentation sufficient to present the Preliminary design to the Client and key stakeholders of the project; ○ Prepare detailed architectural documentation sufficient to present the Detailed design including coordination of engineering and cost inputs for the Client and World Bank review; ○ Finalize documentation ensuring compliance with all standards, guidelines, policies etc; ○ Assist the DTL with clarifications on issues regarding architectural designs and with the evaluation of received tenders and tender evaluation; ○ Provide necessary support to the Site Superintendent during the Construction Phase; ○ Assist with the preparation of As-Built drawings at construction completion. 	
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3. LEAD STRUCTURAL / CIVIL ENGINEER

DUTIES	EXPERIENCE & QUALIFICATIONS
<ul style="list-style-type: none"> ○ Participate in field consultations with stakeholders to confirm design parameters and requirement; ○ Oversight any Geotechnical investigations to be carried out over the project sites; ○ Review applicable Samoan infrastructure standards, guidelines and policies in regards to civil and structural designs relevant to building types, functions and performance requirements of the project; ○ Assist the Architect in finalizing the development of the concept design based on the results of field investigations and consultations and Client/World Bank review; ○ Assist the design team with the preparation of project reports; ○ Lead in the preparation of detailed structural/civil engineering documentation; ○ Finalize structural/civil documentation and ensuring compliance with all standards, guidelines, policies etc. ○ Provide necessary support to the Site Superintendent during the Construction Phase; ○ Assist with the preparation of As-Built drawings at construction completion. 	<ul style="list-style-type: none"> ○ Tertiary qualifications in Civil/Structural Engineering recognized by an approved institution in Australia, New Zealand or Pacific region ; ○ Must be a Chartered Professional Engineer (CPEng) member of the Samoa Institute of Professional Engineers (IPES) or equivalent New Zealand or Australian institute, in Civil and Structural Engineering Disciplines; ○ Must have a minimum of 10 years' experience in civil and structural building designs of projects of similar complexity and scale; ○ Must have sound knowledge and experience of infrastructure design and construction in developing countries, preferably in Samoa and/or the Pacific region.

4. LEAD BUILDING SERVICES ENGINEER

DUTIES	EXPERIENCE & QUALIFICATIONS
<ul style="list-style-type: none"> ○ Participate in field consultations with stakeholders to confirm design parameters and requirement; 	<ul style="list-style-type: none"> ○ Tertiary qualifications in Mechanical or Electrical Engineering from a recognized institution in Australia, New Zealand or Pacific region; ○ Must be a Chartered Professional Engineer (CPEng) member of the Samoa Institute of Professional Engineers (IPES) or equivalent New

<ul style="list-style-type: none"> ○ Review applicable Samoan infrastructure standards, guidelines and policies in regards to building services engineering designs relevant to building types, functions and performance requirements of the project; ○ Assist the Architect in finalizing the development of the concept design based on the results of field investigations and consultations and Client/World Bank review; ○ Assist the design team with the preparation of project reports; ○ Lead in the preparation of detailed building services engineering documentation; ○ Finalize building services engineering documentation and ensuring compliance with all standards, guidelines, policies etc. ○ Provide necessary support to the Site Superintendent during the Construction Phase; ○ Assist with the preparation of As-Built drawings at construction completion. 	<p>Zealand or Australian institute, in Mechanical or Electrical Engineering Disciplines;</p> <ul style="list-style-type: none"> ○ Must have a minimum of 10 years' experience in building services designs of projects of similar complexity and scale; ○ Must have sound knowledge and experience of infrastructure design and construction in developing countries, preferably in Samoa and/or the Pacific region.
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5. ENVIRONMENTAL SAFEGUARD SPECIALIST

DUTIES	EXPERIENCE & QUALIFICATIONS
<ul style="list-style-type: none"> ○ Lead implementation of Environmental and Social Safeguards requirements into final design documentation. Including incorporating any design related mitigation measures indicated in the EIA reports. ○ Conduct and lead in community consultation for all infrastructure sites and address all comments by community and relevant stakeholders. Prepare minutes of consultations. ○ Conduct environmental and social field assessments for the Asau Boat Ramp. Identify all potential environmental and social risks and develop mitigation measures. ○ Prepare an ESMP or PEAR for the Asau Boat Ramp with all relevant required attachments and documents. ○ Address any arising community complaints or any environmental or social related issues regarding all infrastructures. ○ Ensure to incorporate all design related mitigation measures in the Final Detailed Design. ○ Responsible for all environmental and social related concerns regarding this scope of works. ○ Incorporate and estimate cost for E&S requirements during construction in the Activity Schedule. 	<ul style="list-style-type: none"> ○ Tertiary qualifications in the Environmental or Social Sciences or similar from a recognized institution in Australia, New Zealand or Pacific region. ○ Minimum of 5 years' experience in managing environmental and social risks on infrastructure projects, including experience monitoring building construction projects of similar complexity and scale. ○ Must have sound knowledge and experience of environmental and social legislation and policies for infrastructure developments in developing countries, preferably in Samoa and/or the Pacific region.

6. REGSITERED / LICENSED SURVEYOR

DUTIES	EXPERIENCE & QUALIFICATIONS
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<ul style="list-style-type: none"> ○ Establish benchmarks (horizontal and vertical control points) on the ground at strategic locations as reference bench marks; ○ Consult MNRE for any /all existing survey plans indicating all legal boundaries of the Project Site; ○ Wherever possible, surveys are to be tied into a <i>known MNRE</i> co-ordinated reference point with their location shown on a Survey Control Plan; ○ Prepare topographical survey plans showing coordinate system for referencing the construction works onsite, details of boundaries and existing fence-lines or hedge-lines, all natural and man-made features over the entire project site and including the adjacent roads with sufficient widths to be able to define the two road reserves; ○ Carry out the survey in metric units; ○ Spot heights should be given at a grid mesh of appropriate heights depending upon the terrain elevation of the ground; ○ Contours are to be generated from the spot heights in 3D points at appropriate contour intervals. Contours in submitting electronic files must not be exploded and must have z-values. 	<ul style="list-style-type: none"> ○ Bachelor's degree in surveying with more than 5 years of professional experience in the relevant field (topographic and engineering surveying); or ○ Diploma in Surveying with more than 7 years of professional experience in the relevant field (topographic surveying); ○ Must be thoroughly familiar with all the large-scale topographic procedures using GPS, Total Stations, relevant surveying software and AutoCAD; ○ Should have practical experience in carrying out topographic survey with proven record of supervising, organizing, managing project preparation and executing topographic survey of similar projects. ○ Must be a registered/licensed surveyor with the Ministry of Natural Resource & Environment (MNRE)
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F. DURATION AND LEVEL OF EFFORT

The estimated duration and level of effort for each phase of the assignment is as follows:

PHASE	DURATION (MONTHS)	PERSON-MONTHS
DESIGN SERVICES	3.5	14.5

G. REPORTING

The consultant shall provide the following reports and documentation to the Client in both hard copy and electronic copy:

ACTIVITY A – DESIGN SERVICES (LUMP SUM CONTRACT)	
DELIVERABLES	MONTH DUE
<p>Stage 1 – INCEPTION (at 25% of Design Service completion).</p> <p>✓ Task 1.1 Draft Inception Report consisting of:</p> <ul style="list-style-type: none"> • Consultations • Preliminary Design review and recommendations • Additional Data Collection, investigations, assessment and surveys, analysis • Methodology, staff utilization, work-plan, (update as needed) <p>✓ Task 1.2 Final Inception Report</p> <ul style="list-style-type: none"> • Final copies of above documents updated with the Clients review comments. • Preliminary Engineering Estimates updated <p><i>Client shall provide its comments 1 wk after receipt of the reports</i></p>	<p>1 mth after commence</p> <p>3 wks after commencing (Order of Priority: Training Centre Toloa, Salelologa PH, Asau Boat-ramp, MCS Office Apia)</p> <p>1 mth after commence</p>
<p>Stage 2 – FINAL DETAIL DESIGN & DOCUMENTATION (100% Design Service completion).</p> <p>✓ Task A2.1 Draft Final Design Documents (99% design completion) consisting of:</p> <ul style="list-style-type: none"> • Draft Detailed Design Drawings. • Draft Final Bill of Quantities/Schedule of Rates • Draft Final Technical Specifications • Draft Final Design Report (incl all data, test, investigation, surveys, analysis, design calculations and rationale, etc) • Final Records of Stakeholder Consultations • Final Engineering Estimates • Draft PEAR or ESMP reports for the Asau Boat Ramp. • Draft Records or minutes of all Stakeholder/Community Engagement Consultations <p>✓ Task A2.2 Final Design Documentation</p> <ul style="list-style-type: none"> • Final Detailed Design Drawings. • PUMA Development Consent Permits [Asau Boat Ramp]. • Building Permits for all 3 Buildings and 1 Boat-ramp. • Final PEAR or ESMP for the Asau Boat Ramp. • Final records or minutes of all stakeholder/community engagement consultations. • Final Bill of Quantities/Schedule of Rates • Final Technical Specifications • Final Design report (incl all data, test, investigation, surveys, analysis, design calculations and rationale, etc updated) 	<p>3.5 months after commencing.</p> <p>A2.1 – 3.0 mth after commence (Order of Priority: Training Centre Toloa, Salelologa PH, Asau Boat-ramp, MCS Office Apia)</p> <p>A2.2 – 3.5 mth after commence (Order of Priority: Training Facility Toloa, Salelologa PH, Asau Boat-ramp, MCS Office Apia)</p>

<i>Client shall provide its comments 2 wks after receipt of the reports</i>	
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ANNEXURE:

Annex A1 – LOCATION MAP

- **TRAINING Facility, Toloa, Upolu**
- **PACKHOUSE Salelologa, Savaii**
- **BOAT-RAMP, Asau, Savaii**
- **MCS Building, Apia Upolu**

