



DELIBERASAUN N. 100/VIII/CAFI/2025

Conselho de Administração do Fundo das Infraestruturas – CAFI, bazeia ba artigo 10º (1) e (3) DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, realiza reuniaun Ordinária iha loron Sexta-feira, 1 de Agosto de 2025, e halo deliberaun ba assunto tuir mai ne'e:

Asuntu: Pedidu Aprovasaun no autorizasaun despesas no konfirmasaun Finansiamentu iha FI 2025 ba *Detailed Engineering Design (DED)* ba projetu Konstrusaun Konservasaun Especies Flora no Fauna.

Proponente: Ministério do Turismo e Ambiente - MTA

Notas/justifikasaun:

- SGP simu karta husi Ministério do Turismo e Ambiente ho no. Ref.: 265/DGA/MTA/VII/2025, data 21 de Julho de 2025, ho asuntu: Pedidu aprovasaun no autorizasaun Despezas husi CAFI kona ba Detailed Engineering Design (DED) ba projetu Konstrusaun Konservasaun Especies Flora no Fauna;
- Resultadu verifikasiadaun ADN, I.P, ba projetu Consultancy services for the Detailed Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building Hera, ho montante verifikasiadu \$285,700.00;
- Desizaun kona ba abertura ka inisiasiadaun prosesu aprovisionamentu bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
- DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projetu FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor.
- Modalidade aprovisionamento bazeia ba kustu projetu no sei lao tuir Decreto-Lei No.22/2022 de 11 de Maio;
- Alokasaun orsamentu FI 2025: \$ 0, Programa 981: Protecção e Conservação do Ambiente, Kodigu atividade 9810310: Study and DED Construction of Center for Conservation of Flora and Fauna Species, Hera Metinaro, Dili;
- Projetu nain sei assume responsabilidade hodi assegura orsamentu ba Ezekusaun no Implementasaun projetu;
- Projetu nain konfirma katak sei assume responsabilidade ba monitorizasaun e akompanhamentu ba ezekusaun projetu ne'e no sei garante kualidade servisu nian tuir padraun no espesifikasiadaun ne'ebe aprova ona;

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IX GOVERNO CONSTITUCIONAL
MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS



Conselho de
Administração

Lista Proposta:

Naran Projetu	Resultadu Verifikasiadu ADN,I.P./referensia	Alokasaun Orsamentu FI / kodigu atividade
Consultancy services for the Detailed Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building Hera	\$285,700.00	<ul style="list-style-type: none">• FI 2025: \$ 0;• Programa 981: Protecção e Conservação do Ambiente,• Kodigu atividade 9810310: Study and DED Construction of Center for Conservation of Flora and Fauna Species, Hera Metinaro, Dili;

Rekomendasau:

- 1) CAFI atu aprova no autoriza despezas no kustu total nune'e mos konfirma finansiamantu iha FI 2025 bazeia ba pedidu husi Ministério do Turismo e Ambiente ba projetu ***Consultancy services for the Detailed Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building Hera, ho montante verifikadu \$285,700.00;***
- 2) Desizaun kona ba abertura ka inisiasaun prosesu aprovisionamentu bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
- 3) CAFI nudar orgão competente ba aprovasaun no autorizasaun despezas bazeia ba DL no. 23/2022, de 19 de maio;
- 4) DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projetu FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor;
- 5) Modalidade aprovisionamento sei lao tuir Regime Juridiku Aprovizionamento em vigor, (Decreto-Lei No.22/2022 de 11 de Maio);
- 6) Projetu nain sei assume responsabilidade hodi assegura orsamentu ba Ezekusaun no Implementasaun projetu;
- 7) Projetu nain sei asume responsabilidade ba koordenasaun entre entidade relevantes ba implementasaun projetu ne'e, e ba supervizaun, monitorizaun e akompanhamentu ba projetu ne'e iha faze implementasaun, e sei garante kualidade servisu nian tuir espesifikasiadaun nebe aprova ona;

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MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS



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Desizaun:

1. CAFI aprova no autoriza despeza no kustu total ba projetu nune'e mos konfirma finansiamentu iha FI 2025 bazeia ba pedidu husi projeto nain Ministério do Turismo e Ambiente;
2. Desizaun kona ba abertura ka inisiasaun prosesu aprovisionamentu bazeia, Artigo 24 & 25, Decreto Lei No.43/2024, de 20 de Dezembro, regra ezekusaun OGE 2025;
3. CAFI nudar orgão competente ba aprovasaun no autorizasaun despezas bazeia ba DL no. 23/2022, de 19 de maio;
4. DL Nº. 25/2024, de 22 de maio, Primeira Alteração ao DL Nº.13/2016, 18 de Maio, kona ba Regulamentu Fundo da Infraestrutura, determina katak aprovisionamento projeto FI nian sei lao tuir Regime Juridiku Aprovizionamento em vigor;
5. Modalidade aprovizionamento sei lao tuir Regime Juridiku Aprovizionamento em vigor, (Decreto-Lei No.22/2022 de 11 de Maio);
6. Projetu nain sei assume responsabilidade hodi assegura orsamentu ba Ezekusaun no Implementasaun projeto;
7. Projetu nain sei assume responsabilidade ba koordenasaun entre entidade relevantes ba implementasaun projeto ne'e, e ba supervizaun, monitorizasaun e akompanhamentu ba projeto ne'e iha faze implementasaun, e sei garante kualidade servisu nian tuir espesifikasiakaun nebe aprova ona;
8. Lista aprovasaun CAFI:

Naran projetu	Kustu estimativa verifikasiadu husi ADN,IP	Alokasaun orsamentu FI	Orgaun Kompetênti - DL No. 23/2022, 19 de Maio
Consultancy services for the Detailed Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building Hera	\$285,700.00	<ul style="list-style-type: none">• FI 2025: \$ 0;• Programa 981: Protecção e Conservação do Ambiente,• Kodigu atividade 9810310: Study and DED Construction of Center for Conservation of Flora and Fauna Species, Hera Metinaro, Dili;	<ul style="list-style-type: none">• CAFI : Konfirmasasaun Finansiamentu;• CAFI: alinea 1 (b) Artigo Artigo 5.º Competência para a autorização da despesa.

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MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS



Conselho de
Administração

Aprovado husi CAFI iha loron 1 de Agosto de 2025.

O Conselho de Administração do Fundo das Infraestruturas

O presidente,



Gastão Francisco de Sousa

Ministro do Planeamento e Investimento Estratégico

Santina José Rodrigues Ferreira Viegas Cardoso

Ministra das Finanças

(La Participa iha Reuniaun)



Miguel Marques Gonçalves Manetelu

Ministro dos Transportes e Comunicações

Samuel Marçal

Ministro das Obras Públicas

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MINISTÉRIO DO PLANEAMENTO E INVESTIMENTO ESTRATÉGICO
FUNDO DAS INFRAESTRUTURAS



**Conselho de
Administração**

Annexo:



REPÚBLICA DEMOCRÁTICA DE TIMOR-LESTE
Ministério do Planeamento e Investimento Estratégico
Fundo das Infraestruturas

NOTA DE DESPAICHO

1. ORIGEM DO DOCUMENTO

N Ref; 265/DGA/MTA/VII/2025

Data do Documento : 21/07/2025

Proveniência do Documento

DGA-Ministeriu Turismu Ambiente

2. DETALHES DO DOCUMENTO

Data Entrada do Documento: 21/07/2025

Enviado ao:

1. Sr/ Mauricio Borges
2. Sr/a _____
3. Sr/a _____
4. Assessores Nacionais / Internacionais

Assunto:

Pedidu aprovasaun no autorizasaun despesas hosi CAFI kona-ba Detail Engineering Design (DED) ba Projetu Konstrusaun Konservasaun Espesie Flora no Fauna iha Hera

3. INSTRUÇÃO DO DIRETOR DO SGP

Data do Despacho: 22/7/2025

Para Sr/a

1. Sr/a Mirco Deohmida
2. Sr/a _____
3. Sr/a _____

Despacho:

Hore Asmara Iha me

Assinatura :


Mauricio Borges



VICE PRIMEIRO - MINISTRO
MINISTRO DO TURISMO E AMBIENTE
IX GOVERNO CONSTITUCIONAL

DIRECÇÃO GERAL DO AMBIENTE

Edificio do Fomentu D. Boaventura No 16. Mandarin, Dili

No Telefone 77381717, Whatsapp 76616162, Correio eletronic: direcaogeralambiente@gmail.com

Nu. Ref: 265 /DGA/MTA/VII/2025

Data, 21..de Julho de 2025

Hato'o Ba : Ex ^{mu.} Diretor Executivo Sekretária Grande Projetu
Sr. Mauricio Borges

Assunto : Pedidu aprovasaun no autorizasaun despesas hosi CAFI kona-ba
Detail Engineering Design (DED) ba Projetu Konstrusaun
Konservasaun Espesie Flora no Fauna iha Hera

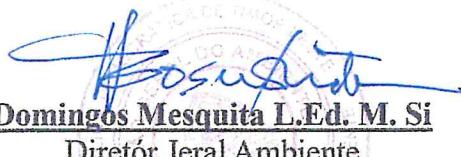
Ho respeitu;

Haktuir assuntu iha leten Diresaun Jeral Ambiente hato'o ba Ex.mu. Diretór Ezekutivu Sekretária Grande Projetu (SGP) katak, prosesu verifikasi saun Termu Referensia (ToR) kona-ba Detail Engineering Design (DED) hosi Agencia Desenvolvimento Nacional (ADN) remata ona no kompletu ho estimasun kustu.

Ho ida ne'e mak Diresaun Jeral Ambiente solisita ba Ex.mu. Diretór Ezekutivu Sekretária Grande Projetu (SGP) bele fasilita ba CAFI hodi hetan aprovasaun no autoriza despesas ba projetu konstrusaun konservasaun espésie flora no fauna ne'e. Ho nune'e Diresaun Jeral Ambiente liu hosi Diresaun Nasional Biodiversidade hodi kontinua koordena ho instituisaun seluk antes hetan finalidade. Dokumentu seluk ne'ebé mak relacionadu ho assuntu ami tau iha anexu.

Atu fasilita koordenasaun entre tekniku sira hosi parte Diresaun Geral do Ambiente ho ita boot sira bele kontaktu direta Sr. Faustino Reci Bere, Xefe Departemento Kontrollu Komercializaun Kassa Espésie Protezida, ho número kontaktu, +670, 7810 2161, whatsapp; 7630 8037. Email: reciberef9@gmail.com

Mak ne'e deit pedidu aprovassaun no aturizasaun despesas projetu konstrusaun ba konservasaun espésie flora no fauna, ba ita nia kolaborasaun, hato'o obrigadu wa'ain.


Domingos Mesquita L.Ed. M. Si
Diretór Jeral Ambiente



AGÊNCIA DE DESENVOLVIMENTO NACIONAL,
INSTITUTO PÚBLICO (ADN, I.P.)

COST ESTIMATIVE

Consultancy Service for the Detail Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building in Hera

No	Personnel	Unit	Quantity		Unit Price	Amount
			Personnel	Duration		
A	International Key Expert					
1	Team Leader /Architect	Month	1	5	\$ 12,400.00	\$ 62,000.00
2	Structural Engineer	Month	1	3	\$ 7,425.00	\$ 22,275.00
3	Geotechnical Engineer	Month	1	3	\$ 5,975.00	\$ 17,925.00
4	Mechanical, Electrical Engineer & Plumbing	Month	1	2	\$ 5,975.00	\$ 11,950.00
Sub -Total of Key Expert International			4	13		\$ 114,150.00
B	National Key Expert					
1	Structural Engineer	Month	1	5	\$ 3,325.00	\$ 16,625.00
2	Architect	Month	1	3	\$ 3,325.00	\$ 9,975.00
3	Quantity and Cost Engineer	Month	1	3	\$ 3,325.00	\$ 9,975.00
4	Water Supply and Sanitation Engineer	Month	1	3	\$ 3,325.00	\$ 9,975.00
5	Mechanical, Electrical Engineer & Plumbing	Month	1	2	\$ 3,325.00	\$ 6,650.00
6	Environmental Engineer	Month	1	2	\$ 3,325.00	\$ 6,650.00
7	Geodetic Engineer	Month	1	2	\$ 3,325.00	\$ 6,650.00
8	Information Technology Engineer	Month	1	2	\$ 3,325.00	\$ 6,650.00
9	Laboratorium Engineer	Month	1	2	\$ 3,325.00	\$ 6,650.00
Sub-Total of Key Expert National			9	24		\$ 79,800.00
C.	Supporting Staff					
1	Office Manager	Month	1	5	\$ 750.00	\$ 3,750.00
2	Office Boy	Month	1	5	\$ 225.00	\$ 1,125.00
3	Driver	Month	1	5	\$ 275.00	\$ 1,375.00
Sub-Total of Supporting Staff					\$ 6,250.00	
D.	Reimbursables					
1	International Transportation	R.Trip	4	2	\$ 1,500.00	\$ 12,000.00
2	Local Transportation rental	Month		5	\$ 1,650.00	\$ 8,250.00
3	Communication Cost	Month	13	5	\$ 50.00	\$ 3,250.00
Sub-Total of Reimbursables					\$ 23,500.00	
E.	Reporting					
1	Inception Report (6 bundles)	Ls		1	\$ 1,500.00	\$ 1,500.00
2	Interim Report (6 bundles)	Ls		1	\$ 1,500.00	\$ 1,500.00
3	Draft Final Report (6 bundles)	Ls		1	\$ 1,500.00	\$ 1,500.00
4	Final Report (6 bundles)	Ls		1	\$ 1,500.00	\$ 1,500.00
Sub-Total of Reporting					\$ 6,000.00	
F.	Soil Investigation					
1	Topographical Survey	Ls		1	\$ 15,000.00	\$ 15,000.00
2	Soil Investigation (Bore Drilling)	Ls		1	\$ 20,000.00	\$ 20,000.00
3	Material Testing	Ls		1	\$ 3,500.00	\$ 3,500.00
Sub-Total of Soil Investigation					\$ 38,500.00	



AGÊNCIA DE DESENVOLVIMENTO NACIONAL,
INSTITUTO PÚBLICO (ADN, I.P.)

COST ESTIMATIVE

Consultancy Service for the Detail Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building in Hera

No	Personnel	Unit	Quantity		Unit Price	Amount
			Personnel	Duration		
G	Facilities					
1	Office Establishment (Office Space, Etc)	Month		5	\$ 2,500.00	\$ 12,500.00
2	Office Equipment and Furniture (Comp. Printer, Scanner, Etc)	Ls		1	\$ 3,500.00	\$ 3,500.00
3	Office Operations (Office supplies, Software, toner, etc)	Month		5	\$ 300.00	\$ 1,500.00
Sub-Total of Facilities						\$ 17,500.00
Grand Total (A+B+C+D+E)						\$ 285,700.00

Verified by :

Antonia de F. Moraes Soares
Engineer - ADN,IP

Checked by :

Johannes Hornay
Chefe Dep-EPMETIC-UAP ADN, I.P

Certified by :

Jose Fernando Liu Soares
Coordenador UAP- ADN,IP

Melenia da C. Barros
National Adviser - ADN, I.P



**VICE-PRIMEIRO-MINISTRO
MINISTRO DO TURISMO E AMBIENTE
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DIREÇÃO GERAL DO AMBIENTE

**Edifisio do Fomento D. Boaventura No. 16. Mandarin, Dili
No. Telefone : +6703311473 – Telemovel : +6708445860 Email : fxfsoares7@gmail.com**

TERMS OF REFERENCE (TOR)

CONSULTANCY SERVICE FOR DETAILED ENGINEERING DESIGN (DED)

THE NEW CONSTRUCTION OF FLORA AND FAUNA SPECIES CONSERVATION

BUILDING IN HERA, DILI.


July 2025



VICE-PRI^MEIRO-MINISTRO
MINISTRO DO TURISMO E AMBIENTE
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I. INTRODUCTION

1.1. Definitions

a) Name of the Project

Consultancy Service for the Detail Engineering Design (DED) of the New Construction Flora and Fauna Species Conservation Building in Hera.

b) Project Owner

The Project Owner is the Ministry of Tourism and Environment-National Directorate of Biodiversity.

c) Management of Activities

The overall management of activities is led by a Project Manager appointed by the MTA-DGA under the guidance from the Employer and Project Steering Committee (PSC). PSC will consist of the representatives from the MTA-DGA and the National Directorate of Buildings-Ministry of Public Works. To facilitate payment procedures, The ADN.IP will participate in all PSC meetings whenever the products considered as milestones for the various payments are presented.

d) Procurement Process

The procurement process will be carried out by the National Procurement Commission (NPC). The NPC will arrange a pre-bid meeting, receive the proposals, evaluate the proposals, and propose the winner.

e) Design Consultant

The Design Consultant is the consulting company that has been determined the winner of the procurement process and that will sign the contract together with the owner.

1.2. Background

Timor-Leste's commitment to establish flora and fauna conservation centers is based on the Constitution of the RDTL, Article 6 (State Objectives), paragraph (f), To effectively protect the environment and preserve the country's natural resources, Decree Law No. 26/2012, Environment Basic Law, and Decree Law No. 6/2020, Legal Regime Protection and Conservation of Biodiversity. Timor-Leste also joined the United Nations Convention on Biological Diversity on 8 January 2007 and became a member of the UNCBD. Timor-Leste has established a biodiversity strategy and needs to achieve three (3) objectives, such as conservation, sustainable use, and sharing of benefits.

With this, the Ministry of Tourism and Environment, the General Directorate of the Environment through the National Directorate of Biodiversity, prepares a proposal on Detailed Engineering Development (DED), which is very important to ensure that all technical details, including specifications, designs, calculations,



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and instructions needed for construction, are prepared properly. This phase ensures that the project is executed according to the quality standards and current regulations set.

Timor-Leste is located in the Wallacea area, which is rich in biodiversity resources with its beautiful ecosystem and has many endemic species that are very global in biodiversity; therefore, the government of Timor-Leste has a policy to ratify the Convention on Biological Diversity on 8 January 2007.

Timor-Leste is committed to improving its infrastructure to support the work of the Ministry of Tourism and Environment-General Directorate of the Environment through the National Directorate of Biodiversity to establish a flora and fauna conservation information center and to conduct research and facilitate students to conduct scientific studies and also establish a place for endemic flora and fauna species to conserve resources. Currently, the team of the National Directorate of Biodiversity has conducted some research on traditional knowledge in Larisula village, post administrative of Baguia, Baucau Municipality, and Macadade village, Atauro Administrative Authority, Dili Municipality. The team has identified the function and use of plants that benefit the community through traditional knowledge to use plants as medicines and cosmetics and transform them into briefcases, wallets, clothes, and others. Therefore, the laboratory can encourage DNB to do more research elsewhere so as to become a reference material for plantation diversity in the territory of Timor-Leste.

The facilities in the new building are essential for research activities and conservation of endemic species of flora and fauna, providing modern and adequate spaces to support the services of the Ministry of Tourism and Environment-General Directorate of the Environment through the National Directorate of Biodiversity to exercise its functions efficiently.

1.3. Objectives

- 1 This Terms of Reference (Tor) should be used for guidance for the satisfactory and timely completion of the project. This TOR sets out the output, principles, criteria, process and input.
- 2 In this task, the Design Consultant will implement the duties in a professional manner so as to deliver the outputs in accordance with the technical specifications and standards stated in this TOR.
- 3 The objective of this TOR is to provide technical guidance and instructions to interested consulting companies so that they can fulfil the technical specifications in terms of architectural, structural and functional aspects.
- 4 The objective of the Detailed Engineering Design (DED) is to provide a comprehensive technical framework to guide the construction of the new Correctional building. This framework must ensure that all components of the project are meticulously designed to comply with technical, regulatory, and safety requirements/standards, while also optimizing available resource utilization and minimizing risks during both the construction and operational phases.



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1.4. Project Location

This project will be built in Ailok-Laran, Hera Village, post administrative of Cristo Rei, Dili Municipality, with a total area of 3,534m².

Key features include:

- **Accessibility:** Road link between community and company.
- **Topography:** The relatively flat terrain simplified the construction.
- **Existing Infrastructure:** Proximity to develop/established electricity, water, and sewage system networks.
- **Environmental Considerations:** Compliance with environmental regulations has been ensured through thorough impact assessments.



II. SCOPE OF WORKS

To ensure the attainment of the objective of the engagement, the design consultant shall provide the following services;

1. To make interpretation of terms of reference (TOR) in general
2. Carry out the Topographical Surveys, Geotechnical Studies, and other necessary Investigations for the new project location. The consultant is responsible for validating the information and collecting additional field data as may be required for finalizing the design.
3. The Geotechnical studies must cover both the index and engineering properties of the soil. The report should cover the following, but not limited to:

TOR DED- New Construction of Flora and Fauna species conservation Building in Hera, Dili.



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- a. SPT (use Standard National Indonesia [SNI] /American Society of Civil Engineering [ASCE] or any other international standards as reference for conducting this test).
 - b. Expansion index tests to determine soil expansiveness. Depending upon the depth /volume.
 - c. Geophysical Test-Seismic Refraction Survey.
 - d. A description of the existing site, which should include a map, diagrams, or photos, with regards to its location, current land uses, and topography as well as adjacent land uses and their potential impacts on the site.
 - e. A plot showing the location of all test borings and/or excavations.
 - f. Descriptions and classifications of the materials encountered.
 - g. Expected total and differential settlement.
 - h. Laboratory test results of soil samples.
 - i. Field borehole log containing the following information:
 - Project location
 - Depth of borehole
 - Ground elevation
 - Groundwater table elevation
 - Date started and finished
 - j. Discuss the suitability of the site's soils for the proposed development and its planned structures.
 - k. Provide a rationale for any recommendations of soil improvement if needed based on the test results.
 - l. Identify recommended construction methods and materials.
 - m. Provide recommendations on foundation design and construction based on the site's subsurface conditions.
 - n. Identify any concerns or recommendations for the site's drainage, taking into account prior, during, and post-construction conditions.
 - o. Provide the results of any further subsurface geological investigations and testing that may be required to accurately gauge soil conditions.
4. Validating information and collecting additional field data as required to complete the design.
 5. To formulate the design concept of the building including Environmental program and room program details.,
 6. Ensuring the design provides temperature control Special conditions for the Data Center Room, interior design and patterns and relationships between each room to have connectivity in accordance with the building theme.
 7. Undertake an Environmental impacts Assessment (EIA) and prepare report.
- The consultant will address the following issues;
- a) Delineate the Environmental impact of building construction activities associated with the project;
 - b) Describe and access the impacts;



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- c) Describe feasible mitigation measures for minimizing, eliminating, offsetting unavoidable adverse impacts, and

- d) To recommended the most appropriate mitigation and/or enhancements measures

8. The Environment Report should be consulted with ANLA (Autoridade Nacional de Licensa Ambiental) for its approval.

9. Develop up to three (3) Design Alternative

The consultant is required to develop up to three conceptual / Preliminary Design prior to prepare detail engineering design. The three conceptual designs shall include video simulation of the design and shall incorporate conceptual / preliminary design relevant work services as indicated and must have one final approval by the project owner

10. Prepare **preliminaries design** as the design concept has been completed which covers the following;

- a) Technical report containing's the descriptions of the choice of building concept, subsystem of structure, and sub-system of utilities and mechanical/electrical to be used.
- b) Drawings illustration the location Map, site plan, layout plan, elevations, long/cross section and details.
- c) Engineering cost estimates based on rough calculation.

11. Prepare **Interim design** that covers the following;

- a) Design of architectural works, describing site plan, layout plan, elevations, long/cross section and main details drawings, explaining room program, utilization for the whole buildings area comprehensively.
- b) Design of structure and descriptions of concept and its calculation including soil test, Sondir, NSPT, Deep Boring, etc.) and design of foundation.
- c) Design of utilities and descriptions of concept and its calculation, covering air management system, lighting, electrical including generator, plumbing, water supply and sanitation, drainage, fire protection, work safety and health, and termite control.
- d) Technical specifications describing classification, types and characteristic of materials to be used.
- e) Preliminary cost estimates covering aspect of local social culture, history and architecture, environmental mitigation measures, structure, mechanical/electrical to conform to the design concept.

12. Prepared **Detail Engineering Design** that covering the following;

- a) Detail engineering design of architecture, structure, utilities and mechanical/electrical, to conform, to the design drawing approved.
- b) Technical specifications
- c) Bill of quantities
- d) Cost estimates including unit prices analysis, unit price of labors, materials and equipment's, Back up Quantity.
- e) Construction schedule, bar chart, and "S" Curve,
- f) Design report cover all engineering disciplines



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- 13.** After finalizing the DED, continue to the design verification process for the construction stage, the design consultant is responsible for providing support to the project owner on the documents that have been produced, until the design verification process for the construction stage is completed.
- 14.** The results of design services should fulfill the regulations, standards and technical guidance of design that are generally in effect
- 15.** Provide Terms of Reference for the Consultant Supervision Service for the Construction of this project
- 16.** The design should ensure easy access for disabled people
- 17.** The design should consider minimal consumption of energy by applying the concept of Green Building.
- 18.** The building should increase the quality of the environment surroundings.
- 19.** The consultant should ensure knowledge and skill transfers between key experts and assistants of key experts.
- 20.** After the DED is completed, it is continued with the design verification process for the construction phase, the design consultant is responsible for providing support to the project owner for the documents that have been produced, until the design verification process for the construction phase is completed.
- 21.** During the civil works bidding period, the Consultant's work shall include but not necessarily be limited to the following:
 - a.** Assist the project owner in the conduct of pre-bidding conferences and pre-bidding site inspections to answer possible queries that may be raised by interested bidders on the design plans and provide other information that might be needed.
 - b.** Prepare for approval of any necessary revision or addenda to the tender documents during the bidding period. Any costs associated with these activities should be part of the proposal.



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22. Room Requirement

Item	Description	Quantity	Sq.m each	Function
I	LANDSECAP			
	Parking Area	1	TBD	A place to park cars and motorcycles
	Access road	1	TBD	Access path to flora & fauna conservation building
	Protective fence	1	TBD	To secure the building
	Electrical installation with street lights	6	TBD	To draw fire into the building
	Cyclopes left side, box culver	1	TBD	To ensure flora & fauna conservation building.
	Water drilling and water installation	4	TBD	To facilitate the needs of visitors and employees.
II	BUILDING			
	Receptionist office room	1	TBD	Accept the guests.
	Laboratory rooms, including with a bathroom	6	TBD	For flora and fauna species testing, as well as water, soil, and air quality testing.
	Rooms for plant and animal species,	4	TBD	To keep an herbarium for plant & animal species.
	Library room	1	TBD	Facilitates students to access biodiversity resources.
	Logistics room	1	TBD	To store materials and equipment (Furniture)
	Cafeteria	1	TBD	For informal meals and breaks
	Specimen testing room	1	TBD	To facilitate visitors testing the results of flora & fauna
	Kiosk room	1	TBD	To sell and promote the products of flora & fauna
	IT room	1	TBD	to control electronic equipment
	Security guard house	1	TBD	Guarantee the security of the building
	Meeting room with bathroom	2	TBD	Facilitate the meeting.
	Office room	1	TBD	facilitates the work of the department
	Electrical control room	1	TBD	For management of the building's electrical systems
	Public bathroom	1	TBD	For users' personal hygiene
	Ramp	1	TBD	To facilitate the disabled.

Table 1. The design and construction of flora & fauna conservation buildings.



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III. OUTPUT OF DESIGN ACTIVITIES

The output by the design Consultant shall consist of the following:

3.1. Inception report

The stage of design concept/technical design will consist of the following:

- The concept design approach should be based on analysis of existing site plan conditions by considering the surrounding environment.
- The concept of technical design including concept of room organization, number and qualification of team members, methodology of implementation and responsibilities.
- The concept of schematic technical design including room program, number of rooms and organization of room connection.
- Report of the existing site data and information including soil investigations, information from the user regarding the need of rooms and scope of services, facilities required, capacity of rooms, total number of user and other purposes needed.

These documents should be submitted in one (1) original and six (6) electronic copies in USB and/or other forms of electronic copies.

Comments on the inception Report will be prepared and discussed between the Design Consultant and the Project manager together with the PSC and agreed.

Technical design Concept will be approved by the Owner enabling the design consultant to continue his work with minimal delay.

3.2. Interim Report

a. The stage of preliminary design that will consist of the following:

- Preliminary design drawings of buildings in the aspect of architecture, structure, building utilities and environment.
- Preliminary Cost Estimates
- Outlines of work plan and specifications
- Initial Environmental Impact Assessment
- Result Consultations with the Owner

This document should be submitted in one (1) Original and six (6) electronic copies in CD and/or other forms of electronic copies.

This preliminary design should be discussed with PSC and approved by the owner in the third month of assignment, before continuing to the stage of design development.

b. The stage of design development that will consist of the following:

- Drawings of design development of architecture, structure and supporting utilities based on the preliminary design that is already approved.
- Description of design concept and its calculation needed.



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- Draft cost estimates
- Draft work schedule and specification

These documents should be submitted in one (1) original and six (6) electronic copies in CD and/or other forms of electronic copies.

Comments on the interim Report will be prepared and discussed between the design Consultant and the project Manager together with the PSC and agreed technical Design Concept will be approved by the Owner enabling the Design Consultant to continue his work with minimal delay.

3.3. Draft Final Report

The stage of detailed design will consist of the following:

- Detailed engineering design drawings (**Size A1**) of building for construction works. b. Technical Specifications.
- Bill of Quantities.
- List of Price of Labors and Materials
- Unit Price Analysis
- Cost Estimates
- Construction Schedule and "S" Curve
- Design report of architecture, structure, utilities, mechanical/electrical, and other calculation needed.
- Terms of Reference for the Consultant Supervision Service for the Construction of this project.

The draft final report should be presented with 3D presentation, showing a scaled building, models building layout exterior and interior building and its surrounding area. These documents should be submitted in one (1) original and six (6) electronic copies in USB and/or other forms of electronic copies.

Comments on Draft Final report will be prepared and discussed between the design Consultant and the project manager together with the PSC and an agreed technical design concept will be approved by the owner enabling the Design Consultant to continue the design his work with minimal delay.

3.4. Final Report

This final report should be submitted to the owner in the six months of assignment as the result of Draft Final Report that has already been discussed and approved by the owner. The final report should be submitted in one (1) original and six (6) electronic copies in USB and/or other forms of electronic copies.

The final Report should be presented with a scaled building model and lay out model covering the surrounding area.



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IV. DESIGN CRITERIA

4.1. General Criteria

The design consultant should take notice of the general criteria of the building to conform to its functionality and complexity, and are as follows;

a. Conditions of allotment and intensity;

- 1) To ensure that the building is constructed based on the regulation of spatial plan and building plan determined by the local authority.
- 2) To ensure that the building will be used to conform to its functions.
- 3) To ensure the safety of the user, community and environment.
- 4) To conform to the state budget principles;
 - a. Economical, no Luxurious, efficient and conforms to the technical proposed specified.
 - b. To be focused and controlled to conform to the plan, program, and its functions.
 - c. To utilize local product and resources as must as possible to promote national prosperity.

b. Conditions of architecture and Environment;

- 1) To ensure that the building is constructed based on the environment characteristics, determination of the nature of building and local culture, in order to obtain balance, harmony and compatibility with the environment.
- 2) To Ensure the creation of green spaced that is balanced and in harmony with the environment.
- 3) To ensure that the building is constructed and utilized with no negative impacts to the environments,

c. Conditions of building structures

- 1) To ensure the structural stability of the building to support the rising loads as the result of its utilization to conform to its functions, and as the result of the natural and human behavior.
- 2) To ensure the building has been designed as earthquake resistant.
- 3) To ensure the Safety of the people from possible accidents or injury due to the failure of the building structure.



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- 4) To Ensure the welfare of the people from losses or damages of their properties due to the failure of the building structure.
- 5) To ensure the protection for the other properties from physical damages due to the failure of the building structure.

d. Conditions of Water Supply

- 1) To ensure that the construction of the building is provided with water supply facilities.
- 2) Fulfil the quality standard, sufficient discharge of 100 liters /person/day.
- 3) Fulfil the requirement for fire protection adequate for minimum 45 minutes operation of fire tackling.

e. Conditions of sanitation facilities

- 1) To Ensure the provision of adequate sanitation facilities adequately to support the activities inside the buildings to conform to its functions.
- 2) To ensure the creation of a clean, hygienic, and comfortable environment for the dwellers of the building and surrounding area.
- 3) To ensure that the sanitation facilities are in good running conditions during testing and commissioning.

f. Conditions of waste water

- 1) To ensure that the construction of the building is equipped with facilities for discharging the waste water from the kitchens, bathrooms, and washroom to the city drainage canals.
- 2) The discharge of waste water from the kitchens, bathrooms, and washroom should use pipes to conform to the specifications.
- 3) The discharge of the waste water should use treatment plan.

g. Conditions of solid waste

- 1) To ensure the availability of trash bins and temporary solid waste collection point for 3 liters/person/day.
- 2) The temporary solid waste collection points should be made of watertight materials and enclosures.



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h. Conditions of drainage

- 1) To ensure the provision of drainage canals could retain the rain water before discharging to the city drainage canals.
- 2) To ensure the provision of drainage canals could manage the flood.
- 3) The rain water could be used as recycled water for plan and green areas.

i. Conditions of electricals installations, lighting rod, and communications facilities

- 1) To ensure that the installation of electrical facilities adequately and safety support the activities inside the building to conform to its functions.
- 2) To ensure the safety of the buildings and its dwellers from the danger of lighting
- 3) To ensure that the provision of communications facilities adequately support the activities inside the building to conform to its functions.

j. Conditions of lighting

- 1) To ensure that lighting – whether natural or artificial – is adequate to support activities inside the building in accordance with its functions.
- 2) To ensure that the lighting facilities are in good running condition during testing and commissioning.

k. Conditions of ventilation and air conditions

- 1) To ensure that adequate air supply, whether natural or man-made, is provided to support the activities inside the building to conform to its functions.
- 2) To ensure the air condition facilities are in good running condition during testing and commissioning.
- 3) To ensure adequate conditions equipment's within Data Centre area.

l. Conditions of noise and tremble

- 1) To ensure the creation of comfortable situation from unexpected noise and trembles disturbance.
- 2) To adopt environmental pollution mitigation measures resulting from construction activities, Cost of such measures should be included in the detailed construction cost estimates.



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m. Conditions of transport facilities inside the building

- 1) To ensure the creation of proper, safe and comfortable transport facilities inside the buildings.
- 2) To ensure the provision of transport facilities for the disabled.

n. Conditions of access entry and exit ways

- 1) To ensure save, proper and comfortable access to entry and exit ways to the building and its facilities, as well as to services areas inside the buildings.
- 2) To ensure the creation of efforts to protect the dwellers from pains and injuries during evacuation in emergency situations.
- 3) To ensure provision of easy access for the disabled.

o. Conditions of fire-fighting System

To ensure that the building will be stable in case of fire;

- 1) Sufficient time for the dwellers to evacuate safely.
- 2) Allow sufficient time for firefighters to arrive at the location to extinguish the fire.
- 3) To prevent damage to surrounding properties.

p. Conditions of emergency situation, exit sign and early warning system of danger;

- 1) To ensure the provision of an early warning system in the event of an emergency.
- 2) To ensure the occupants can evacuate easily and safely in emergency situations.

q. Conditions of landscaping

- 1) To ensure are suited to Timor – Leste climate and weather.
- 2) Buffer zones and operational controls to handle noise, odor and dust, as well as to meet aesthetic needs compatible with the surrounding environmental.

r. The design should ensure easy access for disabled people

s. Functionality: The design must meet the operational needs of Parliament.

t. Efficiency: The design must optimize the use of resources and minimize waste.

u. Safety: The design must prioritize the safety of users and comply with all applicable regulations.

v. Sustainability: The design must minimize environmental impact and promote the use of sustainable materials and practices.

w. Durability: The design must ensure the longevity of the building and facilitate maintenance.



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- x. Accessibility: The design must be inclusive, ensuring accessibility for all users.
- y. The design should account for a planning period of 15 to 20 years, ensuring that the building will meet the future needs of Parliament without the need for significant renovations.

4.2. Specific Criteria

The specific criteria relate to the building to be designed, either from the aspect of special functions or other technical aspects are follows:

- a) It relates to the effort of conservation for the existing building, if any.
- b) The unity of designing the building with its façade, aesthetics, and the scope of services in the surroundings, such as the frameworks of environment and area planning.
- c) Solutions and contextual limitations, such as aspects of local social culture, geography, climate and others.

V. DESIGN PROCESS

1. In the process of design services to produce the outputs required, the design consultant should prepare a schedule of periodic meetings with the owner.
2. In the periodic meetings, it should be determined which inception product, intermediate products shall be provided by the design consultant to conform to output plan determined in the TOR.
3. In the implementations of the tasks, the Design consultant should always consider that the works time schedule is fixed.
4. The works time schedule is Four (5) months after notice proceeded from the owner's instructions to begin the services.

VI. DESIGN INPUTS

6.1. Personnel

The design consultant should provide personnel who fulfil the requirements to implement the services based on the scope of service or the level of complexity of the works. The personnel required for this design activities should consist of the following;

A. International Key Expert

1) Team Leader (Architect)

Team leader should have a master degree or higher level in architecture and relevant minimum 12 years' experience in designing multi-story buildings (3-stories high or more), minimum 5 years' experience as Team Leader and possesses certificate of expertise issued by an institution recognized by the Timor-Leste Government, previous works experience in Timor-Leste and Proficiency in Tetum, Indonesian, English or Portuguese will be an added advantage.



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The tasks of Team Leader are the following:

- a) To plan, coordinate and control all activities and personnel involved in this work, to ensure the satisfactory and timely completion of the services.
- b) To prepare implementation guidance in the stage of data collection, processing, and final presentation of the whole services.
- c) To plan and implement all activities covering design of structures and give input to the other experts related to the design services.

2) Structural Engineer

Structure engineer should have a Bachelor degree or higher level in civil engineering and relevant minimum 10 years' experience in structure design multi stories building (2stories high or more), possesses certificate of expertise issued by and institution recognized by the Timor-Leste Government, previous works experience in Timor-Leste and Proficiency in Tetum, Indonesian, English or Portuguese will be an added advantage.

The task of Civil/Structural Engineer are the following :

- a) Prepare the structural design in coordination with other engineering team;
- b) Analyses of structure building, pressure, load and other technical requirements
- c) Ensure the quality and calculation of structure design
- d) Analysis topographical and geotechnical data to improve the structure and building design
- e) Support and advise the team leader for presentation and report to plan and implement all activities covering structural design, and give input to the other experts related to this design services.

3) Geotechnical Engineer

Geotechnical engineer should have a Bachelor degree or higher level in Geotechnical engineering or Civil Engineering and relevant minimum 8 years' experience in geotechnical investigation in multi stories building (2-stories high or more), possesses certificate of expertise issued by and institution recognized by the Timor-Leste Government, previous works experience in Timor-Leste and Proficiency in Tetum, Indonesian, English or Portuguese will be an added advantage.

The task of Geotechnical/Soil (Foundation Specialist) are the following :

- a) To be responsible for geotechnical/soil investigation including seismic event and material survey
- b) Topographical data analysis, design and development
- c) Provide input to the other experts related to this design services
- d) Assist and advise the Team Leader on Geotechnical/Soil Investigation including seismic events and material survey issues as required
- e) Data collection and analysis of for soil test
- f) Support and advise the team leader for presentation and report to plan and implement all activities covering geotechnical/soil & Foundation, investigation including seismic events and material survey for the multi-story building, and give input to other experts related to this design services.



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4) Mechanical, Electrical and Plumbing Engineer

MEP Engineer should have a Bachelor degree or higher level of education in Mechanical, Electrical and Plumbing Engineering and relevant field of study and has a minimum 8 years' experience in MEP works in multi-story buildings (2 stories high or more), possesses certificate of expertise issued by an institution recognized by the Timor-Leste Government, previous work experience in Timor-Leste and Proficiency in Tetum, Indonesian, English or Portuguese will be an added advantage.

The task of Mechanical, Electrical Engineer & Plumbing are the following :

- a) To plan and implement all activities covering MEP design
- b) Details design and drawing of electrical installation to the building and other infrastructures as required by ToR
- c) Support the overall review of the designs
- d) Support the team in developing the Technical Specification
- e) Identify construction material, cost material and other technical specification

B. National Key Expert (It is mandatory for the following local counterpart staff to be citizens of Timor-Leste of Local Timorese).

1) Structural Engineer

Education: Bachelor in Civil Engineering

Experience: Minimum 5 Years

2) Architect

Education: Bachelor in Architecture

Experience: Minimum 5 Years

3) Quantity Surveyor & Cost Estimator

Education: Bachelor in Civil Engineering

Experience: Minimum 5 Years

4) Water Supply and Sanitation Engineer

Education: Bachelor in Relevant area

Experience: Minimum 5 Years

5) Mechanical, Electrical Engineer & Plumbing Engineer

Education: Bachelor in relevant area

Experience: Minimum 5 Years

6) Environmental Specialist

Education: Bachelor in Environmental

Experience: Minimum 5 Years



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7) Geodetic Engineer

Education: Bachelor in Geodetic Engineering

Experience: Minimum 5 Years

8) Laboratory Specialist

Education : Bachelor in Laboratory Engineering

Experience: Minimum 5 Years

9) Information Technology (IT)

Education: Bachelor in Relevant area

Experience: Minimum 5 Years

C. Additional Technical and Administrative Support Staff

The design consultant is responsible for ensuring adequate technical support and administrative staff.

6.2. Person Month Requirement

It is estimated that 53 person-month of key experts, local counterpart staff services, and additional technical and administrative support staff will be required, as tabulated below:

No	Description	Unit	Qty	Duration
A	International Key Experts			
1	Team Leader /Architect	Month	1	5
2	Structural Engineer	Month	1	3
3	Geotechnical Engineer	Month	1	3
4	Mechanical, Electrical Engineer & Plumbing	Month	1	2
			4	13
B	National Key Experts			
1	Structural Engineer	Month	1	5
2	Architect	Month	1	3
3	Quantity and Cost Engineer	Month	1	3
4	Water Supply and Sanitation Engineer	Month	1	3
5	Mechanical, Electrical Engineer & Plumbing	Month	1	2



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6	Environmental Specialist	Month	1	2
7	Geodetic Engineer	Month	1	2
8	Information Technology Engineer	Month	1	2
9	Laboratory expert	Month	1	2
			9	24
C	Supporting Personnel			
1	Office Manager	Month	1	5
2	Office Boy	Month	1	5
3	Driver	Month	1	5
			3	15

Table 2: Personal Month

6.3. Facilities Provided by the Government of Timor-Leste

The government will provide the following:

- Counterpart staff according to availability for assistance with surveys and progress monitoring
- Assistance and advice on the processing of visas and work permits for consultant staff as requested.

6.4. Facilities Provided by the Consultant

The Consultant will provide the following:

- Office accommodation near project location and all furnishings and office equipment.
- All survey equipment as required.
- Computing, drafting, and mapping equipment and software
- Local Transportation
- Travel costs to and from Timor-Leste

VII. DESIGN COST, PAYMENT AND RETENTION

- The consulting services shall be a fixed lump sum cost contract based on the winning consultant's Financial Proposal and finalized in negotiation with the Owner.
- Upon signing of contract, no additional cost will be allowed, unless as subsequently agreed between the Design Consultant and the Owner through, and incorporated in, a written contract amendment.
- The payment of this design activities will be scheduled as follows:
 - The first payment equivalent to 15% of the contract price will be paid to the design consultant after the inception report was discussed and approved by the owner.



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- b. The second payment equivalent to 15% of the contract price will be paid to the design consultant after the preliminary design is discussed and approved by the owner.
- c. The third payment equivalent to 20% of the contract price will be paid to the design consultant after the Development design is discussed and approved by the owner.
- d. The fourth payment equivalent to 50% of the contract price will be paid to the design consultant after the Final report has been reviewed, approved and submitted to the owner.
- e. The employer shall retain 5% from each progress payment as Performance and Quality Guarantee for satisfactory performance of the Contract. The 5% of retention money will be paid to the Consultant until the finalization of the procurement process.

VIII. WORK PROGRAM

The Design Consultant should arrange work program that at minimum should cover the following:

- a. Work schedule in detail
- b. Manning schedule
- c. Allocation of experts and their discipline and expertise. The curriculum vitae and a letter of availability to work of the proposed experts should be attached.
- d. Concept of design work method.

The work program should be approved by the owner after presentation by the design consultant and input provided from the owner.