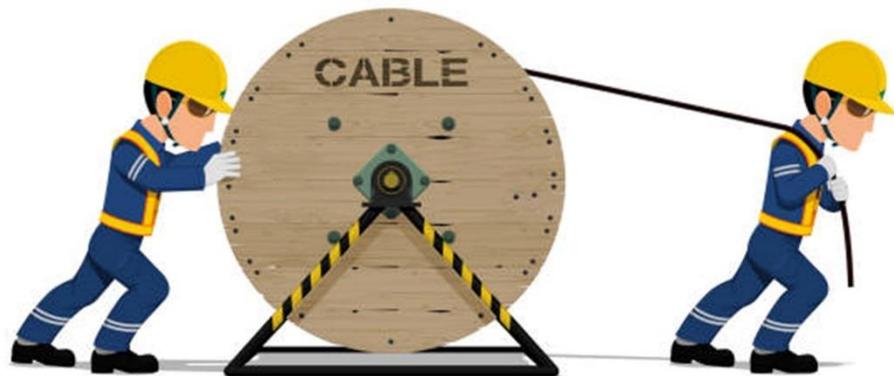




**ENERGY FIJI LIMITED**

# **TENDER SPECIFICATION**

**TENDER NO. MR 39/2026**



**Trenching, underground cable installation and reinstatement works for installation of new 33kV underground cable between Cunningham Road Substation and Sawani Substation (Scheme SR25-25)**

# 1. Introduction

Energy Fiji Limited (EFL) invites tenders from qualified and experienced contractors for trenching, underground cable installation and reinstatement works for installation of new 33kV underground cable between Cunningham Road Substation and Sawani Substation (Scheme SR25-25).

This specification outlines the technical, safety, documentary and compliance requirements for all bidders.

## 2. Project Scope

The works shall comprise the installation of cable as per attached Drawing No. A3 03 N78 001. The contract is broadly classified into four phases:

**Phase 1:** Trenching and transportation of cable.

**Phase 2:** Ducting and laying of power cable.

**Phase 3:** Ducting and laying of fibre cable.

**Phase 4:** Backfill and reinstatement.

Phase	Scope of work	Location
<b>1.0</b>	<b>Trenching and transportation of cable</b>	
<b>1.1</b>	Carry out HV Trenching works from EFL's Cunningham Road substation to Sawani Substation via Cunningham Road and Princess Road.	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 15.45km
<b>2.0</b>	<b>Ducting and laying of power cable</b>	
<b>2.1</b>	Lay new 3 x 630mm <sup>2</sup> 1C AL XLPE 33kV Cable from EFL's Cunningham Road substation to Sawani Substation via Cunningham Road and Princess Road.	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 15.45km
<b>2.3</b>	Lay new 1 x 240mm <sup>2</sup> 3C AL XLPE 11kV Cable from Pole marked "1" to Pole marked '2'	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 0.88km
<b>2.4</b>	Lay new 1 x 240mm <sup>2</sup> 3C AL XLPE 11kV Cable from Pole marked "3" to Pole marked 'C16308'	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 0.62km
<b>3.0</b>	<b>Ducting and laying of fibre cable.</b>	
<b>3.1</b>	Supply and install ducts for the proposed trench route with pits installed at 150m and at every bend	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 15.45km
<b>3.2</b>	Lay new 72 core underground fiber cable from EFL's Cunningham Road substation to Sawani Substation via Cunningham Road and Princess Road.	As shown in the construction Drawing A3-09-N78-001. Approx. Route length = 15.45km

<b>4.0</b>	<b>Backfill and reinstatement</b>	
<b>4.1</b>	Reinstatement of all trenches must be as per FRA and EFL standards and carried out under EFL supervision. Reinstatement works is inclusive of marker post, sand bedding, cable cover, base course (AP60 & AP40), Hep tape and driveway/tarseal reinstatement.	As per site visit. Refer attachment labelled: 'Standard EFL Trench Detail (Signed Drawing)'.

### 3. Technical Requirements

#### 3.1 Trenching and Excavation

- **Methodology:** Trenching near power poles must be carried out without affecting the pole base, maintaining at least 1.8m away from the pole base. Joint Pit trenching/formation is part of the scope
- **Sub-Soil Conditions:** Contractors are advised that the sub-soil comprises soapstone and may contain other services such as Telecommunication, Water & Sewerage.
- **Horizontal Directional Drilling (HDD):** The Contractor may propose and carry out Horizontal Directional Drilling (HDD) in lieu of open trenching, where deemed appropriate (e.g., major road crossings, high-traffic areas). Use of HDD must be approved by the EFL Project Manager prior to execution and shall be performed entirely at the Contractor's own cost and risk. All associated ducting and cable installation must still comply with EFL standards.
- **Infrastructure Protection:** The Contractor shall ensure minimal disturbance to road shoulders, existing road infrastructure, and drainage systems.

#### 3.2 Ducting and Power Cable Laying

- **Ducting:** Ducts (conduits) will be supplied by EFL.
  - 150mm HD-PVC Conduits (supplied by EFL) must be laid across all road crossings and driveways for HV and LV cable runs.
  - Where there is utility crossing (above or below) the new HV cable, the HV cable in that section must be in 150mm HD-PVC conduits.
  - This conduit requirement also applies to HV cable directly under pillar-box and LV cables or LV pits.
- **Cable Installation:** All cable laying must be carried out under the **direct supervision** of EFL personnel.
- **Cable Jointer:** A certified cable jointer shall be present at site while cable installation works are being carried out.

### 3.3 Ducting and Fibre Cable Laying.

- **Duct Installation:** Supply and installation of 100mm<sup>2</sup> green PVC conduit.
- **Draw Wire:** Every fibre duct must have a high-strength draw-rope (paraline) pre-installed for cable pulling.
- **Pit Installation:** Supply and installation of dedicated Underground Fibre Pits (Approx. dimensions: 84.5cm x 57.2cm x 61cm). Pits to be installed at every 150m and at bends along the proposed route. Approximately 100 pits is expected to be installed.



*Note: Pit cover rating: Solid thermoplastic – 10kN, Polymer Concrete heavy duty – 150kN*

- **Cable Pulling:** Pulling and laying of 72 Core Single Mode Underground Fibre Optic Cable through the designated green 100mm duct.
- **Bending Radius:** The fibre cable must never be bent beyond its "Minimum Bending Radius" (typically 20 times the cable diameter).
- **Fibre Storage Loops:** A minimum of 10 meters (or 20 meters at designated points) of fibre cable must be coiled and secured inside every pit to facilitate future splicing/repairs.
- **Entry Sealing:** All duct entries into pits must be sealed with an approved sealant to prevent the ingress of water, mud, and debris.
- **Blockage Remediation:** The contractor is responsible for clearing any blockages or repairing any damages in the conduit caused during the civil works phase.
- **End-to-End Testing:** At the completion of each drum or joint, EFL Technicians will carry out LSPM (Light Source & Power Meter) and OTDR (Optical Time Domain Reflectometer) tests. The Contractor must be present during testing to assist in cable handling.
- **Splicing Prep:** Contractor must ensure all fibre ends are capped and protected from moisture at all times. If water enters the cable due to poor capping, the contractor will be liable for the replacement of the entire drum.

### 3.4 Materials and Supplies

- **EFL Scope (Transported by Contractor):** Cables, cable cover, danger/warning tape, 150 mm HD-PVC Conduits and Fine sand from Sigatoka
  - The Contractor shall arrange transportation of these materials from EFL's Kinoya Depot to the Project Site.
  - The Contractor must transport all unused materials from the site to the Kinoya Depot.
- **Contractor Scope:** All concrete reinstatement and tarseal (if applicable) materials including Base coarse aggregate (AP40 & AP60). Bidder to provide price for the required quantity of the base course materials in the pricing schedule.
  - AP40 Backfill Testing: In addition to supplier certification, the AP40 material must be tested by an independent third-party laboratory to verify compliance with FRA standards.
  - 100mm<sup>2</sup> Green conduit and Fibre pit to be supplied by the contractor.

## 4. Reinstatement, Backfilling, and Quality Control

### 4.1 Backfilling and Compaction

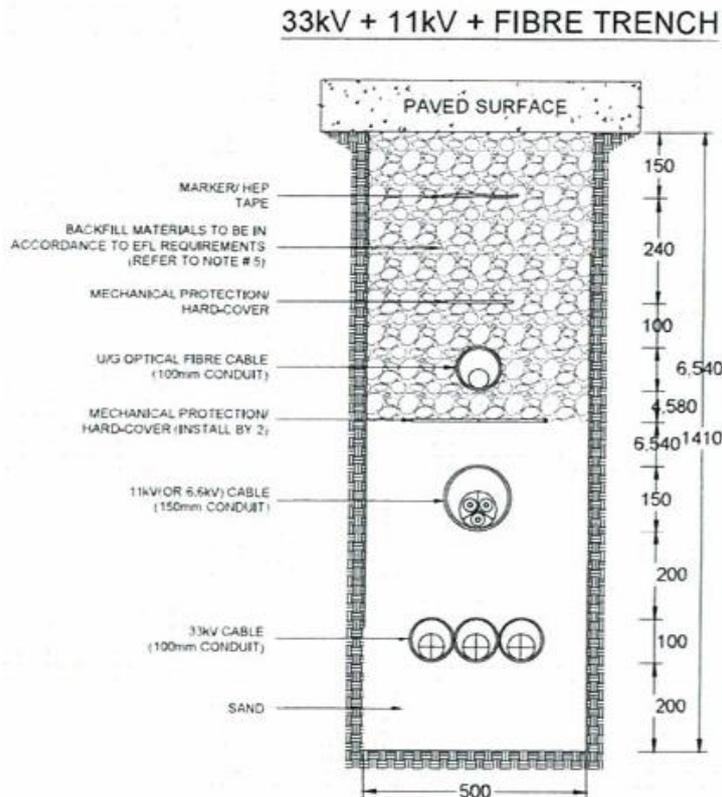
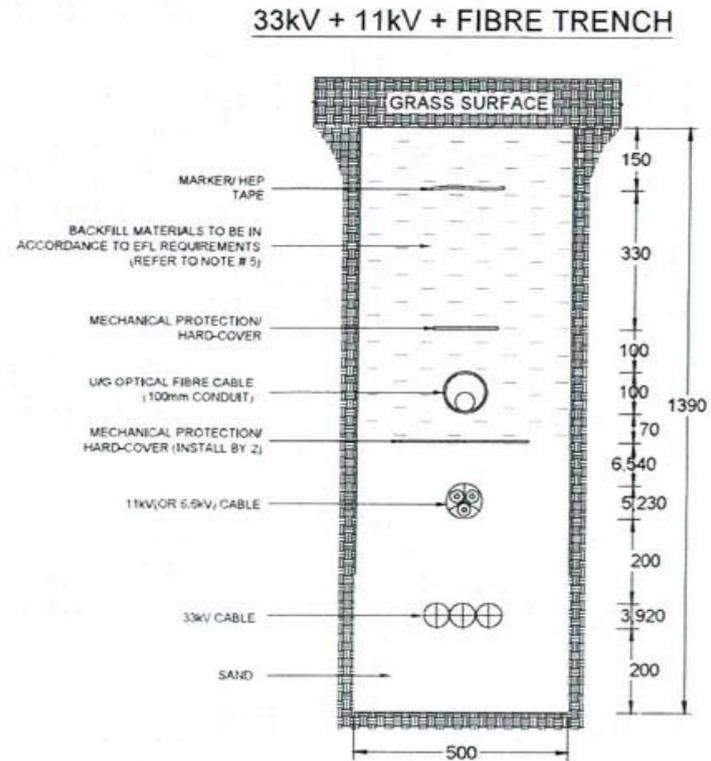
- **Bedding:** Sand bedding must be carried out prior to cable installation. A suitable layer of sand bedding, as per EFL standard trench layout, must be applied (supervised by EFL)
- **Backfill:** Backfill sand on top of the cable to the height specified by the EFL site supervisor (minimum as per EFL standard).
- **Materials:** All backfill material is to be AP65/AP40 to the finished surface level or as directed by the Fiji Roads Authority in the Work Access Permit.
- **Compaction:** Material must be compacted in layers not exceeding 200mm thickness, and compacted as directed by the Fiji Roads Authority in the Work Access Permit.
- **Testing:** Contractor must undertake **NDM testing** for all road crossings and shoulders (acceptable NDM is 98% unless specified otherwise by FRA) for the compacted base before tar seal or concrete pouring. All testing must be undertaken by an **FRA approved laboratory**.
- Compaction Testing requirement extracted from Code of Practice for Utility Operators' Access to Road Corridor Version 2.0

	Carriageway	Shoulder	Footpath	Berm
Basecourse	98% MDD	98% MDD	CIV 25	N/A
Sub-base	CIV 35	CIV 35	CIV 25	N/A
Deeper fill	CIV 25	CIV 25	CIV 15	CIV 10

- **Soil Disposal:** All unused excavated soil must be cleared off the site at the earliest and shall not be used for backfilling unless approved by FRA. The contractor shall be responsible for the safe disposal of all excavated materials in compliance with the Environment Management Act 2005.

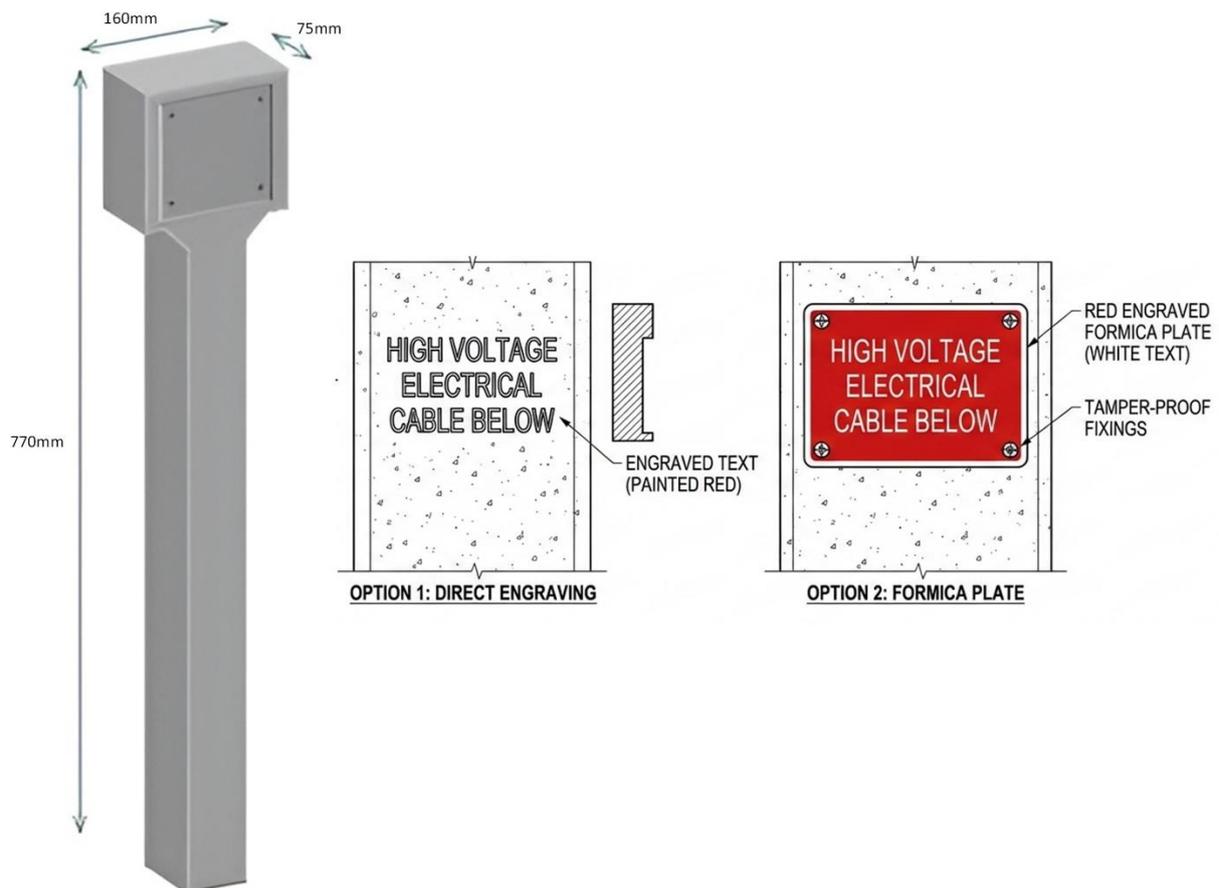
## 4.2 Reinstatement Standards

- Reinstatement of all trenches must be as per **FRA and EFL standards** and carried out under EFL supervision in coordination with FRA.



- Reinstatement Scope:** Inclusive of sand bedding, cable cover, base course (AP60 & AP40), Hep tape, and driveway/tarseal reinstatement (inclusive of test results if required by FRA).

- **Footpath Damage:** Footpath damages must be reinstated from construction joints to joints/whole slab reinstatement; **partial/section reinstatement is not allowed.**
- **Drawing Compliance:** Reinstatement must adhere to the attached 'Standard EFL Trench Detail (Signed Drawing)' and the typical layout for reinstatement on tarseal surface and shoulders.
- **Cable Marker Post:** To ensure the long-term safety of the underground assets, the Contractor shall install Concrete Cable Marker Posts along the entire route length. (Dimensions = H -770mm, W – 160mm, D – 75MM).
  - **Intervals:** Posts must be installed at every 500m interval on straight runs and at every change of direction (bends).
  - **Material:** Heavy-duty reinforced concrete posts, designed to withstand environmental weathering.
  - **Signage/Lettering:** The marker shall clearly display the warning: “High Voltage Electrical Cable Below”.
  - **Execution Options:**
    1. **Direct Engraving:** Letters engraved directly into the concrete.
    2. **Formica Plate:** Engraved white text on a red background Formica (UV resistant), drilled and securely fixed into the marker post using tamper-proof fixings.



## 5. Program, Warranty, and Payments

### 5.1 Program Milestones (Target Dates from LPO Issue)

Milestone	Target Date from LPO Issue	Corresponding Payment %
Commencement of the works	7 days	N/A
Completion of Phase 1 (Trenching)	215 days	30%
Completion of Phase 2 (Power Cable installation)	120 days	20%
Completion of Phase 3 (Supply and installation of fibre conduit and pits)	30 days	5%
Completion of Phase 3 (Fibre Cable installation)	60 days	5%
Completion of Phase 4 (Backfill/Reinstatement, FRA WCN)	215 days	30%
Final Completion	647 days	N/A

- **Payment Method:** Payable at the completion of each phase, with 10% retained. Payment shall not be processed unless the invoice is submitted together with the Contractor's Project Status Report.
- **Retention:** 10% of the contract sum, released after 12 months pending zero defects.
- **Liquidated Damages:** \$200 per day.

### 5.2 Warranty and Defects Liability

- **Defects Liability Period:** 12 months (inclusive of any reinstatement defects identified by FRA).
- **Defect Rectification:** Contractor shall respond within **48 hours** and begin repairs of defects. All defects must be rectified within **seven (7) days**.
- **Cable Failure:** If the cable fails to pass the test by EFL Technicians, the Contractor must pay all costs associated with the location and repair of the damage/fault.

## 6. Health, Safety, and Environment (HSE) & Contractor Requirements

### 6.1 Mandatory Submissions (HSE & Compliance)

The bid must include the following mandatory documents:

- **HSE Specification:** Contractor HSE Specification (10 clauses).
- **HSE Plan:** Contractor HSE Plan (Document HSE41C04).
- **JSA & Risk Assessment:** Form to identify hazards and outline proposed controls.
- **Registers:** Plant & Equipment Register and Chemical Register.
- **Safety Record:** Brief report on safety performance over the last two years, including all incidents and accidents.
- **Mandatory Compliance Certificates:** Valid FNPF, FRCS (Tax), and FNU Compliance Certificates.
- **OHS Compliance:** Evidence of OHS compliance from the Ministry of Labour.
- **Training Records:** Current, valid EFL training records for all relevant personnel.
- **Experience:** A list of completed underground cable installation projects specifically performed for EFL. This shall also include any fibre installation projects executed either for EFL or any other telecommunication utilities in Fiji.

### 6.2 Site Operations and Personnel

- **Certified Personnel:** It is **mandatory** for a certified cable jointer to be part of the team. Failure to include the certificate may render the bid non-compliant.
- **Personnel List:** Contractor must provide a tabulated list and photo ID of all employees working on the project, clearly indicating their Employment/FNPF number and Job Description.
- **Supervision:** All work requiring EFL supervision must be started and completed during normal EFL working hours.
- **Traffic Management:** Contractor shall ensure minimum disruption to traffic and pedestrians, meeting Fiji Roads Authority (FRA) standards.
- **Signage:** Contractor must erect two signboards 6ft x 4ft at the start and end of the works, stating Project, Contractor, and Emergency contact details. Portable signboards must be placed as per the EFL Safety Manual and meet minimum FRA requirements.

<b>DANGER</b>	<b>DANGER</b>
<b>PROJECT:</b> UNDERGROUND POWERLINE CONSTRUCTION – <i>[Insert Project Description Here]</i>	
<b>PROJECT SCHEME NO.:</b> SR06-15B-3	
<b>SCOPE:</b> TRENCHING AND UNDERGROUND CABLE INSTALLATION	
<b>CONTRACTOR:</b> <i>[Insert Full Company Name Here]</i>	
<b>EMERGENCY PHONE CONTACT:</b> <i>[Insert 24/7 Mobile Contact Number]</i>	
<b>TRAFFIC &amp; PEDESTRIAN NOTICE</b>	
Driver, please reduce speed.	
Pedestrians, please use other footpath/side of road.	
<b>THANK YOU</b>	

- **Worksite Protection:** Open trenches must be barricaded on a full-time basis. Bollards/cones must be placed at intervals not exceeding 10m (reduced to 5m or lower at critical locations).

### 6.3 Insurance Requirements

The Contractor will be required to possess valid insurance policies as shown below:

Policy type	Value
Public Liability	\$500,000
Contractors All Risk	\$500,000

### Accident Compensation Insurance

It is understood that under the **Accident Compensation Act 2017** it is a **no fault based system** and as such these are the maximum amounts payable by the Accident Compensation Commission of Fiji (**ACCF**) for **personal injuries** and **death arising out from Motor Vehicle Accidents** are as follows:

- Permanent Partial incapacity                      FJ\$75,000;
- Permanent Total Incapacity                        FJ\$150,000;
- Any other cases (other than the above)        FJ\$75,000;
- Deaths    FJ\$75,000.

It would be prudent that the Contractor have in place safe working and driving mechanisms to equip their employees with survival skills so as to avoid Personal Injuries at work or Motor Vehicle Accidents for that matter.

### Comprehensive General Liability Insurance

Comprehensive general liability insurance, covering Contractor, its employees and Third Party for all of Contractor's operations hereunder, including all activities at the Work Site, including, but not limited to, bodily injury, property damage, premises operations, elevators, products, completed operations and blanket contractual coverage with limits of not less than FJD\$500,000.00 combined single limit.

## Automobile Liability

Coverage for claims for bodily injury, including death, and property damage by any person, arising from the use of any automobile while engaged in the performance of Work hereunder, will be purchased locally in accordance with local statutory requirements.

## Professional Indemnity ('PI') Insurance Cover

For the contracts with the various monetary amounts listed below signed with EFL, the Contractor is required to obtain their PI covers (as applicable to them for the contract amount) which are as follows:

- For EFL Contracts up to FJD\$100K – **\$250,000 PI Cover** is required;
- For EFL Contracts > FJD\$100K up to \$500K – **\$1.5M PI Cover** is required;
- For EFL Contracts > \$500K up to \$1M – **\$2.5M PI Cover** is required; and
- For any EFL Contracts above \$1M and up to \$2M - **\$5M PI Cover** is required.

## 7. Pricing Schedule: Bid Submission

The Bidder shall enter the firm, all-inclusive prices for the execution of the works as defined in the Technical Specification and Scope of Works. All prices shall be submitted in **FJD (VIP)**. Bidders are also required to clearly state the percentage of VAT applicable to the bid prices.

No.	Description of Works	Unit of Measure	Amount \$ (VIP) (FJD)
1	Trenching and Transportation of Cable	Lump Sum	
2	Ducting and Laying of Power Cable	Lump Sum	
3	Supply and installation of fibre conduit and pits	Lump Sum	
4	Installation of Fibre cable	Lump Sum	
5	Backfill and Reinstatement	Lump Sum	
6	Supply of Basecourse Aggregate (AP40/AP65)	Lump Sum	
<b>TOTAL</b>	<b>(Sum of items 1 - 6)</b>	<b>FJD</b>	

# 8. Tender Submission Checklist

*The Bidders must ensure that the details and documentation mention below must be submitted as part of their tender Bid*

Tender Number \_\_\_\_\_

Tender Name \_\_\_\_\_

Full Company Business Name: \_\_\_\_\_

**(Attach copy of Registration Certificate)**

Director/Owner(s): \_\_\_\_\_

Postal Address: \_\_\_\_\_

Phone Contact: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Email address: \_\_\_\_\_

Office Location: \_\_\_\_\_

TIN Number: \_\_\_\_\_

**(Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only (Mandatory)**

FNPF Employer Registration Number: \_\_\_\_\_

**(For Local Bidders only) (Mandatory)**

**Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bidders only)**

**Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory Local Bidders only)**

**Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidders only)**

**Provide a copy of Valid Contractors all Risk and Public Liability Insurance (Mandatory Local Bidders only)**

**Provide a list of machinery, labor and previous work history (Mandatory Local Bidders only)**

Contact Person: \_\_\_\_\_

I declare that all the above information is correct.

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Sign: \_\_\_\_\_

Date: \_\_\_\_\_

## **9. Tender submission Instructions**

### **Tender submission**

Bidders are requested to upload electronic copies via Tender Link by registering their interest at: <https://www.tenderlink.com/efl>

**EFL will not accept any hard copy submission to be dropped in the tender box at EFL Head Office in Suva.**

**This tender closes at 4.00pm (1600hrs) on Wednesday 04<sup>th</sup> March, 2026.**

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360** or **(+679) 9992400** or email us on [tenders@efl.com.fj](mailto:tenders@efl.com.fj)

**The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act. Bidders are to clearly state the percentage of VAT that is applicable to the bid prices.**

The lowest bid will not necessarily be accepted as the successful bid.

**The Tender Bids particularly the “Price” must be typed and not hand written.**

**Any request for the extension of the closing date must be addressed to EFL in writing three (3) working days prior to the tender closing date.**

**Tender Submission via email or fax will not be accepted.**