

TENDER – MR 38/2017

PROJECT:

**1.SCH: SR 84/15 UPGRADE OLD NAVAKAI
FEEDER FROM NADI POWER HOUSE TO
DENARAU SUBSTATION, NADI**

**2.SCH: SR 13/16 COMSTRUCTION OF NEW
33KV UNDERGROUND CABLE FROM
WAQADRA SUBSTATION TO DENRAU
SUBSTATION, NADI – STAGE 2**

Note: We are tendering these 2 projects together since portions of the cables will go into the same trench.

HSE REQUIREMENTS

The following documents are to be submitted with the Tender:

- 1). **Contractor HSE Specification** – it contains 10 clauses which contains the overall HSE requirements and the contractor needs to agree to this.
- 2). **Contractor HSE Plan** (Document HSE41C04) – The contractor shall fill in each part of the Plan.
- 3). The Contractor will list down all the plants and equipment to be used in the **Plant & Equipment Register** as well as chemicals in the **Chemical register**.
- 4). The **JSA & Risk Assessment** form will require the contractor to identify hazards which may not have been adequately addressed in FEA's existing procedures and outline proposed controls.

FIRST SCHEDULE

A. SPECIAL CONDITIONS OF CONTRACT

1. The works shall comprise the installation of ducts and cable including concrete footpaths, sealed roads and grass verge as per attached: Drawing No: A1 09 N54 137(11KV) and A1 03 N53 008(33kV)
 Note: Note trenching works for 33kV and 11kV trench need to be carried out together and cables laid at the same time as per breakdown below.

Stage 1	Nadi PS/Nataly Junction to Denarau substation	Route Length (Approx.)	Total Price (VIP)
A	From Nadi PS to J2 11kV		
i	Dig Trench	1090m	
ii	Lay 1 X 300mm ² 3C HV XLPE cable		
iii	Backfilling		
B	From Nataly junction to J2 33kV		
i	Dig Trench	1125m	
ii	Lay 3 X 300mm ² 1C HV XLPE cable		
iii	Backfilling		
C	From J2 to J4 33kV and 11kV common trench		
i	Dig Trench	2126m	
ii	Lay 1 X 300mm ² 3C HV XLPE cable		
iii	Lay 3 X 300mm ² 1C HV XLPE cable		
iv	Backfilling		
D	From J4 to J5 33kV and 11kV common trench		
i	Dig Trench	701m	
ii	Lay 1 X 300mm ² 3C HV XLPE cable		
iii	Lay 3 X 300mm ² 1C HV XLPE cable		
iv	Backfilling		
E	From J5 to Narewa switching station 33kV		
i	Dig Trench	2126m	
ii	Lay 3 X 300mm ² 1C HV XLPE cable		
iii	Backfilling		
F	From Narewa switching station to Denarau bridge 33kV and 11kV common trench		
i	Dig Trench	3763m	
ii	Lay 1 X 300mm ² 3C HV XLPE cable		
iii	Lay 3 X 300mm ² 1C HV XLPE cable		
iv	Backfilling		
G	From Denarau bridge to Denarau substation 11kV		

i	Dig Trench	573m	
ii	Lay 3 X 300mm ² 3C HV XLPE cable		
iii	Backfilling		

Note:

1. Ducts (supplied by FEA) will need to be laid across each road crossing and Drive Way.
 2. Route comprises sealed road, concrete footpath and grass verge.
 3. Sub-seal comprise soapstone and services.
2. The Contract sum (refer clauses 4 and 23) for the works shall be \$ _____ VIP
- a) Payable in a single lump sum upon final completion of the works; or
 - b) Payable at the completion of each stage as follows :
 - 30% upon completion of phase 1,
 - 30% upon completion of phase 2,
 - 30% upon completion of phase 3,
 - 10% retention fund.
3. (Refer clauses 5, 18, 19, 21 and 22)
- (a) Latest date for commencement of the works: 7 days from issue of LPO
 - (b) Date of completion of Phase 1 : 20 weeks
 - (c) Date of completion of Phase 2 : 8 weeks
 - (d) Date of completion of Phase 3 : 8 weeks
 - (c) Date of completion of the works. : 38 weeks after receiving LPO
4. For the purpose of supervising the contract on behalf of the Authority, references in the General Conditions to the Authority shall include the Unit Leader Distribution Western or his designated officer. The Project Manager shall be the Unit Leader, Project Engineer shall be Distribution Engineer and Project Supervisor shall be the Construction Coordinator Western.
5. Insurance (refer clause 14)
- (a) Contractor's risk \$500,000.
 - (b) Public Liability \$500,000.
 - (c) Worker's Compensation \$250,000.

6. Liquidated and ascertained damages (refer clause 20):
\$200 per day
7. Defects Liability period (refer clause 21): 6 months
8. Retention Fund (refer clause 24)
 - (a) Limit of retention fund : 10% of contract sum
 - (b) Nature of retention fund : cash
 - (c) Release of retention fund: Subject to no pending defect, and as per FEA Finance Policy.

SECOND SCHEDULE

PROJECT:

1. **SCH: SR 84/15 UPGRADE OLD NAVAKAI FEEDER FROM NADI POWER HOUSE TO DENARAU SUBSTATION, NADI**
2. **SCH: SR 13/16 COMSTRUCTION OF NEW 33KV UNDERGROUND CABLE FROM WAQADRA SUBSTATION TO DENRAU SUBSTATION, NADI – STAGE 2**

1.0 General

This specification covers the installation of Distribution Power Cable from Nadi Power Station/Nataly junction to Denarau Switching Station as per attached drawing no: A1 09 N54 137 and A1 03 N53 008 under conditions of contract attached herein.

2.0 Scope of Work

Work involved in this contract is broadly classified into three phases:

- i) Trenching and ducting
- ii) Laying of power cable, slabs and danger notice tape
- iii) Backfilling of trench

2.1 Phase One – Trenching of cable route

The first phase comprises of the following works:

- Excavation and Installation of ducts across roads and drive ways.

- Excavation and trenching works for the power cable.
- Reinstatement works for vegetation, customer compound and boundary.

Note – all ducting works is to be completed BEFORE excavation of grass verge. This is to ensure that trenches are kept open for a minimum duration.

2.2 Phase Two – Installation of power cable and conduit

The second phase will involve the installation of power cable. This involves manually pulling the cable along the trench using rollers, and through ducts. All the work of phase two must be as per the specifications given in the drawing and it shall conform to all aspects of the standards outlined in the "Standard Overhead Line Design and Construction Manual" a guideline set by FEA.

This work shall be carried out under direct supervision of FEA personnel, and is to be done during normal working hours only. Set up of cable drums shall be done by FEA.

This phase shall be deemed complete once the cable has been tested healthy by FEA Technicians. In the event that the cable fails to pass the test, the Contractor shall be required to pay all costs associated with the location and repair of the damage/fault.

2.3 Phase Three – Backfilling of trenches

This phase of the contract involves the backfilling of trenches.

Various works for this phase will be:

- i) Apply suitable layer of sand bedding (to be supervised by FEA).
- ii) Backfill sand on top of cable to height specified by FEA site supervisor.
- iii) Backfill remainder of trench with trench spoil.

All materials (cable and slab) are to be transported to work site by the contractor.

The contractor is responsible for ensuring that all unused excavated soil is laid neatly on top of the trench to allow for soil subsidence. All left over materials is to be returned to the Lautoka Stores and credited accordingly.

Sand shall be supplied by FEA.

All the works of phase three must be as per the specifications, and it shall conform with all aspects of the standards outlined in the "Standard Overhead Line Design and Construction Manual", guideline set up by FEA.

C: CONTRACTOR REQUIREMENTS

1. **Tender Bid** – Contractor shall submit a firm lump sum bid.
2. **Site Visit** – Contractor shall participate in a site visit which is compulsory. Bids from tenderers who do not participate in the site visit shall be disqualified.
3. **Standards** – All construction work shall be in compliance with FEA Standard Overhead Line Design & Construction Manual.
4. **HSE Compliance** – The tender bid shall include all requirements from the FEA HSE Contractor Safety Management System. These will be evaluated by the FEA's HSE Unit. Tender bids with incomplete, unacceptable, or without the HSE requirements will not be considered for award.
5. **Safety Record** – Tender bid shall include a brief report on Safety performance over the last two years. The report shall include all incidents and accidents.
6. **Sub-contracting** – Subcontracting shall not be permitted, except where this is specifically presented in the tender bid, and only upon approval by FEA. Subcontractors shall be required to fulfil all requirements as if they were the contractor.
7. **Scope of works** - Work involved in this contract is broadly classified into three phases, and progress payments shall be processed accordingly.
 - i) Ducting, trenching
 - ii) Cable installation
 - iii) Backfilling
8. **Contact** - Contractor shall have a valid postal address, Office phone/fax/e-mail contact. The Principal shall be available by mobile phone at any time.
9. **Work Program** - Contractor shall submit a work programme before starting of project. This shall be part of the contract. Work shall commence within seven (7) days after receiving an official FEA Local Purchase Order.
10. **Training** – Contractor shall ensure his employees have attended FEA Safety Manual Training at least once in the past 6 months, and records of this shall be submitted with the tender bid. In the event that the training has not been carried out, the Contractor shall ensure these training are carried **PRIOR** to induction for new project.
11. **Ground condition** – Contractors are to note that sub-soil comprises soapstone and could contain other services like Telecom Fiji Ltd, Water & Sewerage, etc.
12. **Invoicing** – Contractor shall submit details of work completed to allow prompt approval of invoice.

13. **Safety Induction** - A Safety induction must be conducted before start of power line construction work.
14. **Instruction to Commence Work** - Contractor shall NOT commence work on site unless an “Instruction to Commence Work” has been received from the Project Manager.
15. **Signboards** - One signboard (6’X 4’) must be erected at the start of the works and one at the end of the works clearly stating :

<p>DANGER</p> <p>PROJECT: UNDERGROUND CABLE CONSTRUCTION WORKS – [Description of project]</p> <p>CONTRACTOR:</p> <p>UNDERGROUND CABLE CONSTRUCTION WORKS.</p> <p>Driver please reduces speed. Pedestrians please use other footpath/side of road</p> <p>THANKS</p>

16. **Accident Reporting** – All accidents and incidents shall be reported immediately to FEA using approved forms available in the FEA Safety Plan Template, or equivalent.
17. **Project Updates** - Contractor shall meet with FEA Project Manager, Project Engineer and Project Supervisor on a weekly basis to discuss project progress and bottlenecks. These meetings shall be minuted for records, and circulated to the appropriate stakeholders.
18. **Tidiness** – The Contractor shall maintain the worksite in a neat and tidy condition.
19. **Transportation of material** – The Contractor shall transport all materials from Lautoka Stores to work site.
20. **Security** - Contractor shall be responsible for the safekeeping of all materials at work site, and will be required to pay for damage and/or loss.
21. **Damage to property** – The Contractor shall ensure that there is no damage to roadways, footpaths, drains, water-courses, properties and other services. The Contractor shall

make good to the satisfaction to the owner any damage caused by the contractor.

22. **Portable signboards** - Portable signboards must be placed at 50m intervals.
23. **Traffic and Pedestrian Control** – The Contractor shall ensure that there is minimum disruption to the flow of traffic and pedestrian. FEA procedures on Traffic Control and Pedestrian Control shall be diligently exercised.
24. **Worksite protection** - Bollards/cone must be placed at 10m intervals.
25. **Barricades** - Open trench/pole-hole is to be barricaded on a full time basis by the Contractor.
26. **Jobsite Safety Assessment** - Contractor to carry out Jobsite Safety Assessment daily, and as and when required, and submit these to FEA on a weekly basis.
27. **Credit of surplus material** – The contractor shall transport and credit all unused materials to Lautoka Stores.
28. **Defects Rectification** – The contractor shall rectify all defects within seven (7) days as per contract.
29. **Project completion** – The contractor shall complete work on time as per contract.
30. **Project progress** – If the Contractor fails to proceed with the works with reasonable diligence or suspends the works or refuses to comply with the reasonable direction from FEA by reason of which the works are materially affected and any such default continues for a period of seven (7) days after the issue of written notice, FEA may itself call any other person to complete the works at the Contractor's risk and expense.
31. **Safe Work Procedure Training** - Contractor must have completed Distribution Safe Work Procedure training.

D: FEA REQUIREMENT

- FEA Project Supervisor shall obtain Road/footpath opening permits.
- FEA Project Engineer shall obtain clearance from Municipal Council, Telecom Fiji Ltd, Water Supply Department, and Sewerage Department.
- FEA’s HSE Unit shall vet Safety Plan submitted by Contractor and approve after queries clarified by Contractor.
- FEA Project Engineer shall ensure that any FEA underground mains on the jobsite is clearly located, marked and identified to the Contractor.
- FEA Project Engineer shall submit to the Project Manager all necessary approval documentation from Municipal Council, Telecom Fiji Ltd, Water Supply Department and Sewerage Department. Upon receipt of these approvals, and the approved Safety Plan, the Project Manager shall issue an “Instruction to Commence Work” to the Contractor.
- FEA Project Supervisor and Project Engineer shall carry out regular site inspections to ensure compliance with HSE requirements, and submit Safety Visit Reports of the visit.
- FEA Project Supervisor and Project Engineer shall issue Non-Conformance Report if required, and follow up for verification of implementation of Action Items arising out of the Non-Conformance Report.

E: PAYMENT SCHEDULE

Payment shall be made as per payment schedule:

Phase	Description	Percentage payment
1	Ducting and Trenching	30%
2	Installation of cable	30% upon positive cable test results
3	Backfill	30%
4	Retention	10% to be released after 6 months pending zero defects.

Submission of Tender

Two (2) hard copies of the tender bids in sealed envelope shall be deposited in the tender box located at the Supply Chain Office at the FEA Head Office, 2 Marlow Street, Suva, Fiji.

Courier charges for delivery of Tender Document must be paid by the bidders.

This tender closes at 4:00 p.m. (16.00hrs Fiji time) on Wednesday 08th March, 2017.

Each tender shall be sealed in an envelope with:

The envelope bearing only the following marking:

TENDER No. MR 38/2017 – Installation of Underground Power Cable – Scheme# SR84/15 & SR13/16

The Secretary, Tender Committee
Fiji Electricity Authority
Supply Chain Office
Private Mail Bag, Suva

It must also indicate the name and address of the tenderer on the reverse of the envelope.

All late tenders, unmarked Envelopes and envelopes without bidder's name and address on the reverse on the envelope will be returned to the Tenderers unopened. (Bids via e-mail or fax will not be considered).

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act and must have the most current Tax Compliance Certificate.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360** or **(+679) 9991587**.