TENDER FOR TOWER BASE CIVIL WORKS - NAIYALA REPEATER STATION



MR 212/2021

Tower Base Civil Works - Naiyala Repeater Station

1.0 THE COMPANY - EFL

Energy Fiji Limited is a public company limited by shares and having its registered place of business at 2 Marlow Street, Suva, in Fiji. It is responsible for the Generation, Transmission and Retail of electricity on the larger islands, Viti Levu, Vanua Levu and Ovalau, which account for some 90% of the country's population. Installed generation capacity is approximately 237MW, comprising 80MW Monasavu Hydro Scheme and 40MW Nadarivatu Hydro Scheme in Viti Levu and about 112MW of diesel capacity in 14 stations on the three main islands. Of the diesel capacity 92MW is on Viti Levu which has been supplementing the Monasavu hydro scheme for the Viti Levu Interconnected System (VLIS) which has been reaching maximum demand of 152MW. Transmission is provided by 145km of 132kV lines (connecting Wailoa & Nadarivatu Hydro Power Stations to the East and West coasts) and about 350km of 33kV lines. Power distribution is by means of more than 8,000km of 11kV and 415/240V lines.

2.0 Purpose and description of the Tender

The purpose of this tender is for Energy Fiji Limited (EFL) to secure the service of a reputable construction and rigging company to carry out the following works at Naiyala Repeater Site:

1. Construction **only** of a 24m Free Standing **Tower Base** on the design drawing attached as Appendix 3.

The successful bidder will be required to enter into a contract with EFL for the execution of these works.

3.0 Scope of Works

The following scope of works shall be undertaken by the successful bidder:

- 1. Supply all materials required to construct 24m Free standing **tower footing based** on the design provided in Appendix 2.
- 2. Excavate the platform to the correct level.
- 3. Cart away cut to waste.
- 4. Allow for compaction testing.
- 5. The construction work undertaken should comply with the design drawing provided.
- 6. The tower foundation constructed should fit the tower members that will be constructed later. Refer to appendix 3 for other site information.
- 7. The successful bidder is required to clean the area after construction work is completed.

Site Visit

Bidders are to meet on Tuesday, 26/10/2021 at 9.00am at the ICT Kinoya Workshop before the site visit to the actual site in Naiyala, Wainibuka.

4.0 Technical Specification and Standard Compliance

Attached, as Appendix 3 is the Technical Specification and compliance standard that must be strictly followed during the implementation of this project. EFL Consultant will be inspecting the work carried out based on these standards.

5.0 Tower & Earthing

The contractor must ensure that Tower is properly earthed. Earthing should comply with **AS/NZS 3015:2004** as per Section 4 –Electrical installations - Extra-low voltage DC power supplies and service earthing within public telecommunications networks. Earthing Connection shall be of **Cad Welded Connection**. EARTHING DESIGN shall be clearly shown and embedded into the tower base design.

6.0 Consultants Cost

EFL has engaged a consultant to manage this project and will provide site visits to look at key structural elements. Any site visit undertaken by the Consultant to revisit and inspect a defect that has to be rectified will be charged to the Contractor and will be deducted from the contractor's cost.

7.0 Project Timeline

Bidders are required to submit a detail Project Management plan on how they intend to carry out the required work based on the scope of works provided. Failure to provide Project Management Plan will render your bid disqualified.

8.0 **Project Execution**

The successful bidder is expected to execute the work as soon as the Purchase Order is received. Failure to meet the project timeline will incur penalties.

9.0 Bid Validity

This Bid shall be valid for **180 days** from the date of Opening.

10.0 Cost Details

It is **mandatory for Bidders** to use the **table below** on **cost associated** with this construction work. Bidders must quote in FJD VIP. **Failure to follow this instruction** will render your **bid disqualified**.

	Description	Total (VIP)
1.0	Preliminary & General	
1.1	Site Mobilization	
2.0	Earth Works	
2.1	Excavate tower foundation as per specification	
2.2	Dispose of Excavated material to disposal site	
3.0	Foundation Works	
3.1	Allow for 150mm Engineered fill to 98% compaction as per specification	

3.2	Allow for 50mm concrete Binding as per specification
3.3	Allow for steel works as per specification
3.4	Allow for 32MPa concrete for tower foundation as per
0.1	specification and mechanically vibration
3.4	Final finish works of tower foundation as per specification.
4.0	De-Establishment
4.1	Final finish of all works as per tender requirements, site
1.1	cleanup and de-mobilization.
	Total [VIP]

NOTE: A DETAIL COST BREAKDOWN SHOWING MATERIALS QUANTITIES AND OTHER ASSOCIATED PROJECT COSTS SHALL BE CLEARLY SHOWN AND ATTACHED AS APPENDIX.

11.0 Eligibility / Selection Criteria of the Bidder

The bidder shall be a contractor who is qualified and well versed with civil design and construction works and has many years of experience undertaking similar works. The successful bidder is expected to be familiar with the Fiji building code.

Mandatory Compliance

For bids to be evaluated further, bidders are to submit the following mandatory compliance requirements:

- 1) FNPF Compliance
- 2) Tax Compliance
- 3) FNU Compliance
- 4) Insurance Certificate
- 5) Company Registration Certificate
- 6) OHS Compliance

Bids will be further evaluated against the following criteria:

- 1) Compliance to Design Specification
- 2) Compliance to Technical Specification
- 3) Submitted a detail costing
- 4) Compliance to Earthing Design AS/NZS 3015:2004
- 5) Project Management plan with clear timelines and deliverables

6) Experience – submitted detail work experience similar to the work which is about to be undertaken together with contact details for referencing and feedback purpose.

Weighting table

Final evaluation will be based on the following weightings:

	Details	Weightings
1	Price	40%
2	Technical Compliance	30%
3	Compliance to design specification	10%
4	Experience with verified feedback from Customers	10%
5	Project Management plan with clear timelines and deliverables	10%
	Total	100%

12.0 Tender Check list

The following information are to be submitted by bidders:

	Details	Yes/No
1	Compliance to Design Specification?	
2	Compliance to Technical Specification?	
3	Submitted detail costing?	
4	Compliance to Earthing Design AS/NZS 3015:2004	
5	Experience in Tower construction work?	
6	Submitted a valid FRCS, FNU and FNPF compliance	
	letter?	
7	Submitted Clear Project Management Plan?	
8	Project duration in weeks clearly specified?	
9	Submitted successful projects implemented with	
	customers names and contact details for reference	
	purpose?	

Associated Cost Summary

	Description	Total (VIP)
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1	Materials	
	Platform	
	Cut to Waste – Machinery	
	Compaction testing Chahan Engineers – As per Specification	
	Material Cost needed for TOWER base construction	
2	LABOR COST	
	Cut to Waste – Operators	
	Tower Base	
	Total [VIP]	

13.0 Bidder Details

The Bidder shall provide all the necessary information specified in the tables below:

General

The registered name of the Bidder:

Business address for correspondence:

(Location, Street, Locality City, Pin Code, Country, Telephone, Facsimile, Email Other)

Contact name of the Authorised Person:

Contact's position:

Contact addresses if different from above

Locality City, Pin Code

Location, Street, Country, Telephone, Facsimile, Email, Web address

Business structure:

Include the organisations years of experience in this field and reputation in the market place.

Financial standing

(Information designed to give client confidence in the financial competence of the BIDDER.) Audited financial accounts for past three years shall be included in appendix.

Total Employees:

Sales Total	2018	2019	2020
Net Profit before Tax	2018	2019	2020

Company Profile(s)

Reference Sites.

[Details of at least **two** similar Projects in the last 5 years (including contact details) which will demonstrate the Bidders ability to carry out the functions for this project in a timely and professional manner]

14.0 Other value added services

The bidder is open to include any other information that may add value to their product or after sales services.

15.0 Technical Support

- Bidder should provide details of what technical support is available to EFL to make better use of supplier's product.
- 2. Include relevant manuals/drawings and instructions for proper care and handling of the Tower and accessories.

16.0 <u>Defects warranty period</u>

A 10% retention will be released after a Warranty Period of 12 months from the date of project completion has lapsed. During this period, any defective material/installation shall be replaced by the bidder at his own cost.

Price Validity

The price shall remain valid for acceptance within 3 months from the date of opening of bids and bidders shall not withdraw or amend their proposal prior to the expiration of the validity period.

In exceptional circumstances prior to expiry of the original validity period, the Authority may request the supplier for an extension in the period of validity. The request and the response thereto shall be in writing. A supplier agreeing to the request will not be permitted to amend his tender price.

17.0 Payment Terms

EFL shall pay the invoice amount in foreign currency to the overseas bank account nominated by the successful bidder within 30 days of receipt of the invoice subject to the service being delivered satisfactorily for overseas bidders. The local bidders will be paid in Fijian dollars.

Contract payments will be made according to the table below.

Payment Details	Description	Percentage payment	Comments
	Mobilization to site and		
1 st Payment	clearance to work. (Delivery of		
rayment	all construction materials and	30 /0	Invoice for payments
			will only be approved
2nd novement	Completion of tower		after endorsement from
	foundation construction work to		EFL consultant
2 nd payment	suit the Tower members that	he Tower members that 60%	
	will be constructed later.		the work
3 rd payment	Retention – to be paid after 1	10%	
o payment	year	1070	

18.0 <u>Tender Evaluation</u>

After the bids are received, it will go through a normal tender evaluation process as per EFL's Tender Policy and Procedures. The successful and unsuccessful bidders will be advised on the outcome after completion of the Tender evaluation process.

The successful bidder will enter into a contract with EFL as mutually agreed. All terms & condition, and pricing details will be stipulated in the contract documents. The evaluation of the tender submissions will be weighted as such:

No.	Components	Weighting
		(%)
1	Financial Components – provide clear costing in addition to providing breakdown cost of all components as per Section 9 above	30 %
2	Technical and financial capability – have the technical knowledge and the financial support to properly execute the tender scope of works.	40 %
3	Delivery timeframe – able to complete the work with the shortest	20 %

	timeframe	
4	Proven background on undertaking similar works	10 %

TENDER CHECKLIST

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

Ten	ender Number	
Ten	nder Name	
1.	Full Company / Business Name:	
	(Attach copy of Registration Certificate)	
2.	Director/Owner(s):	
3.	Postal Address:	
4.	Phone Contact:	
5.	Fax Number:	
6.	Email address:	
7.	Office Location:	
8.	TIN Number: (Attach copy of the VAT/TIN Registration Certificate - Local Bidders Only ((Mandatory)
9.	FNPF Employer Registration Number: (For Local Bidders only) (Ma	ndatory)
10.	Provide a copy of Valid FNPF Compliance Certificate (Mandatory- Local Bide	ders only)
11. onl ;	. Provide a copy of Valid FRCS (Tax) Compliance Certificate (Mandatory \mathbf{Loca} $\mathbf{ly})$	l Bidders
12.	. Provide a copy of Valid FNU Compliance Certificate (Mandatory Local Bidde	rs only)
13.	. Contact Person:	
	I declare that all the above information is correct.	
	Name:	
	Position:	
	Sign:	
	Date:	

19.0 Submission of Tenders

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

This is due to COVID 19 restrictions on movements. Therefore, 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 10th November, 2021.

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

The bidders must ensure that their bid is inclusive of all Taxes payable under Fiji Income Tax Act.

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.

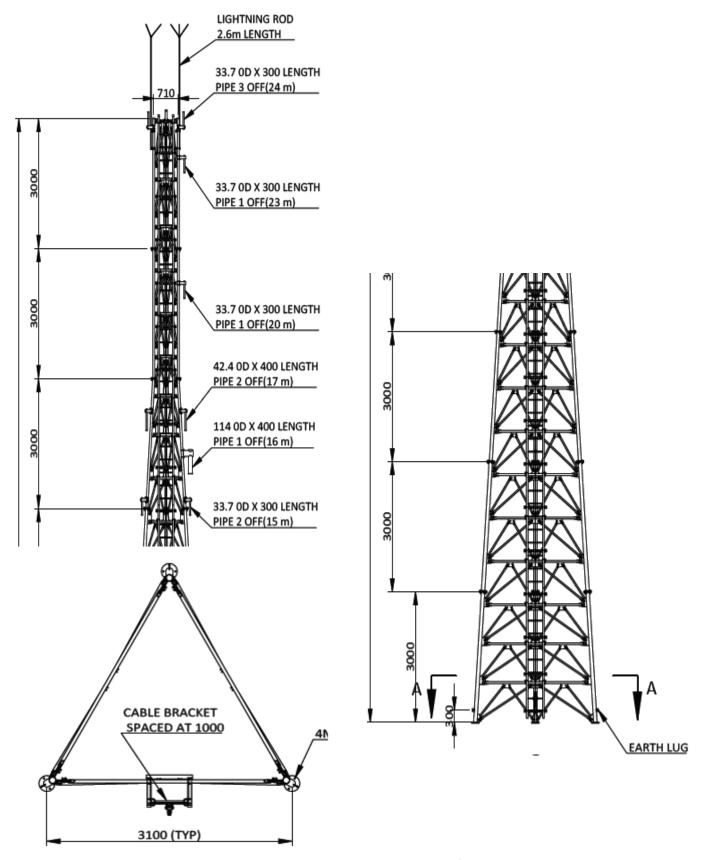
Tender Submission via email or fax will not be accepted.

Appendix 1 – GIS Map – Naiyala Repeater site location



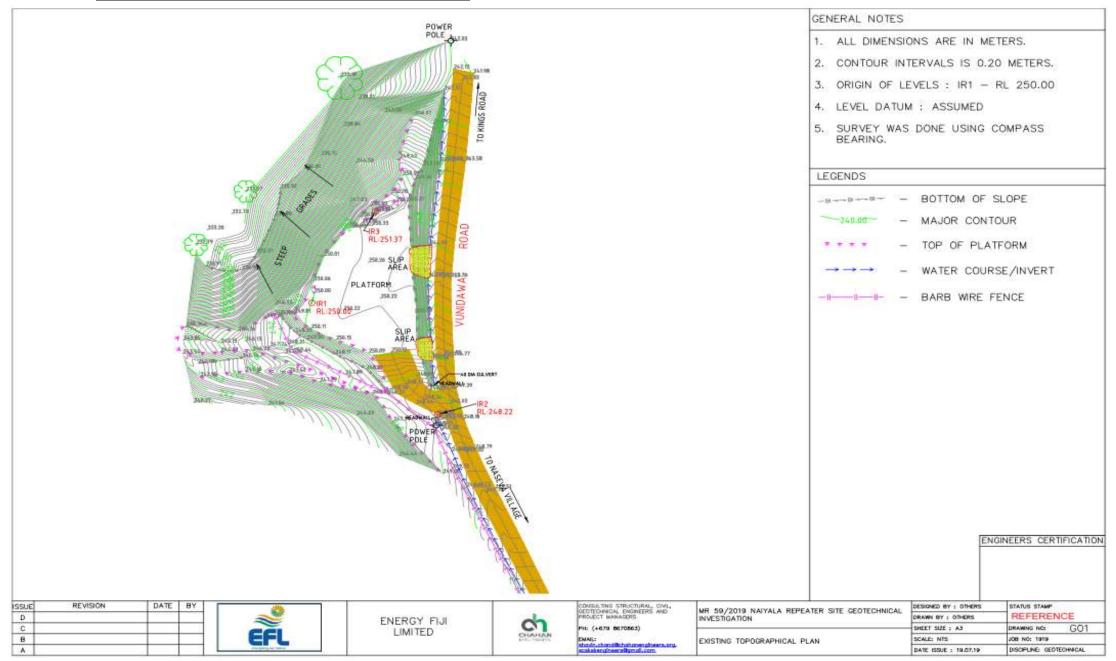


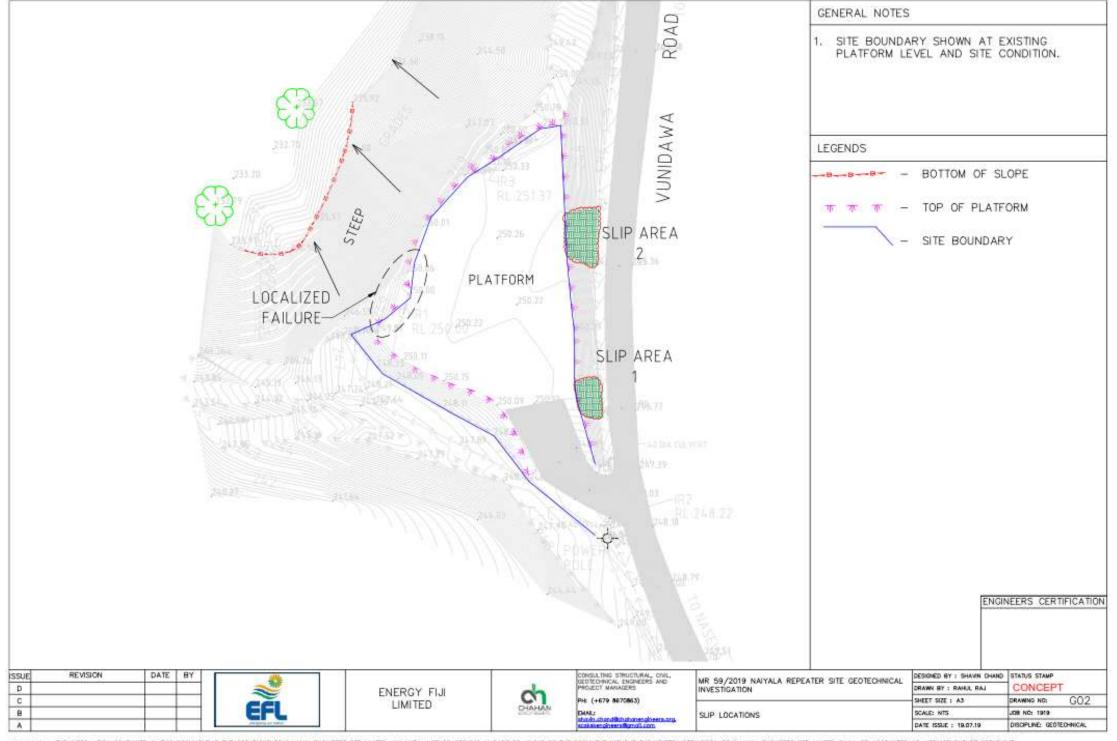
Appendix 2 - Tower Design Drawing

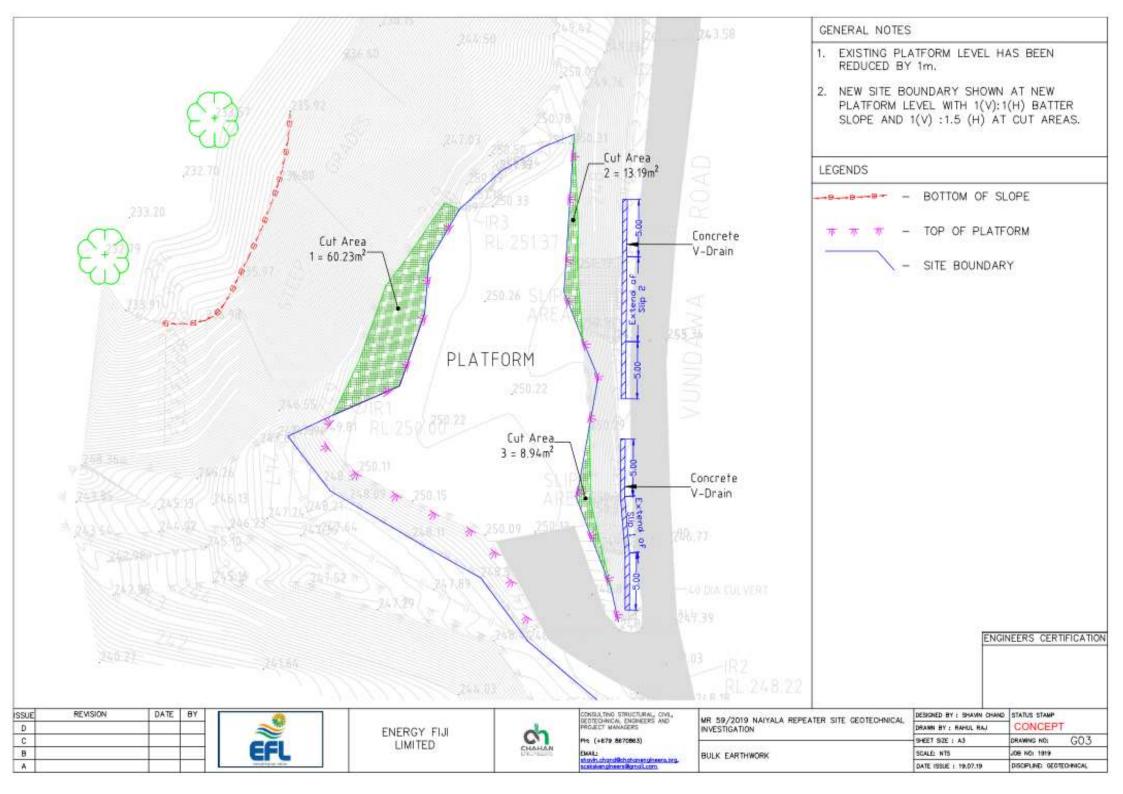


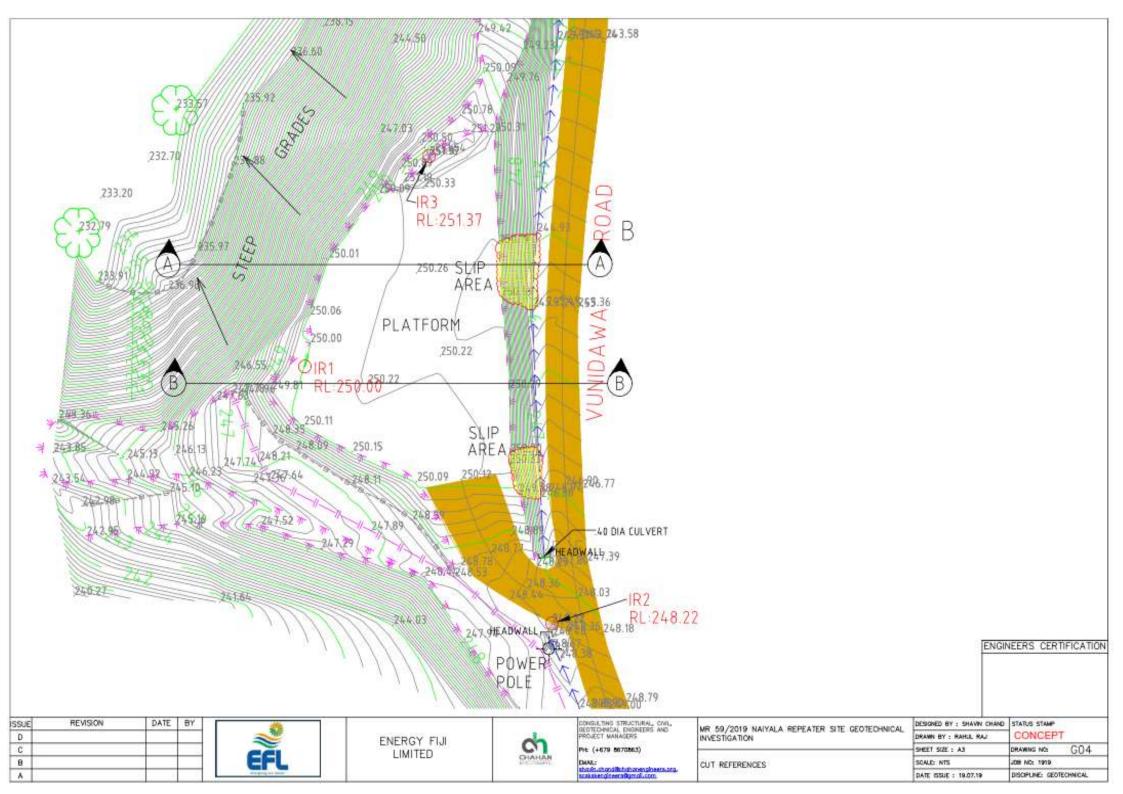
WEIGHT OF THE TOWER - 2,697kg

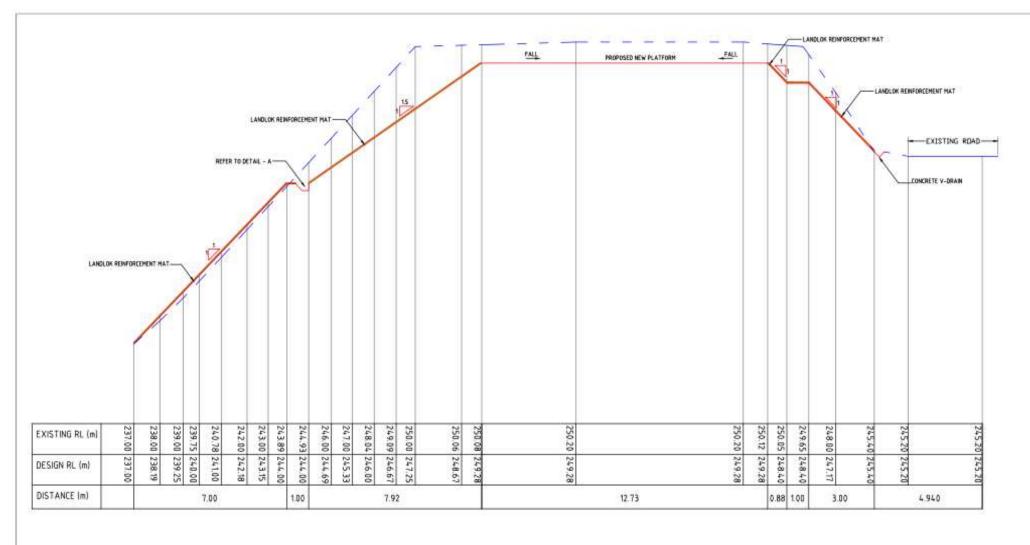
Appendix 3 – Tower Base Site Information



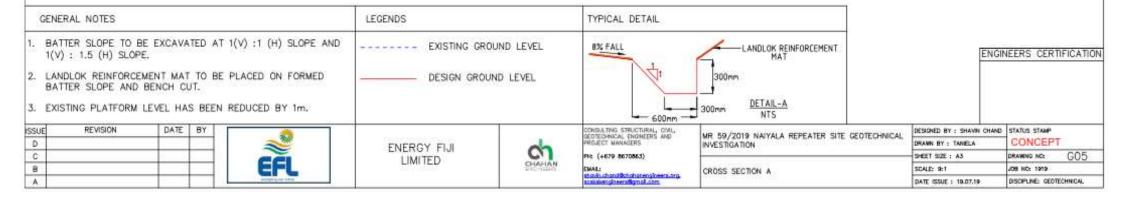


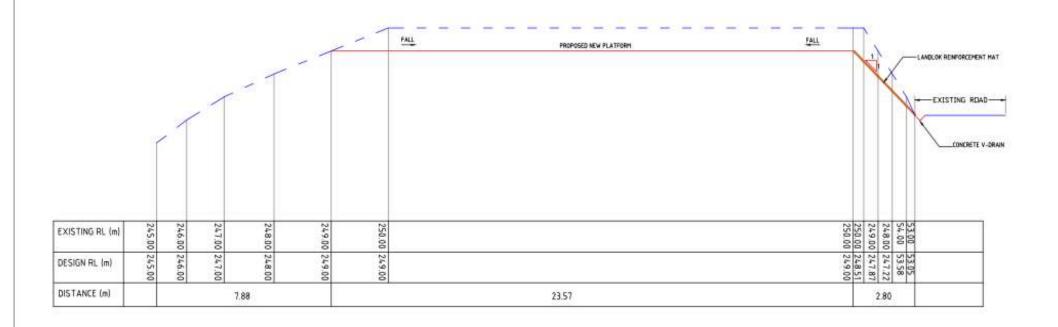






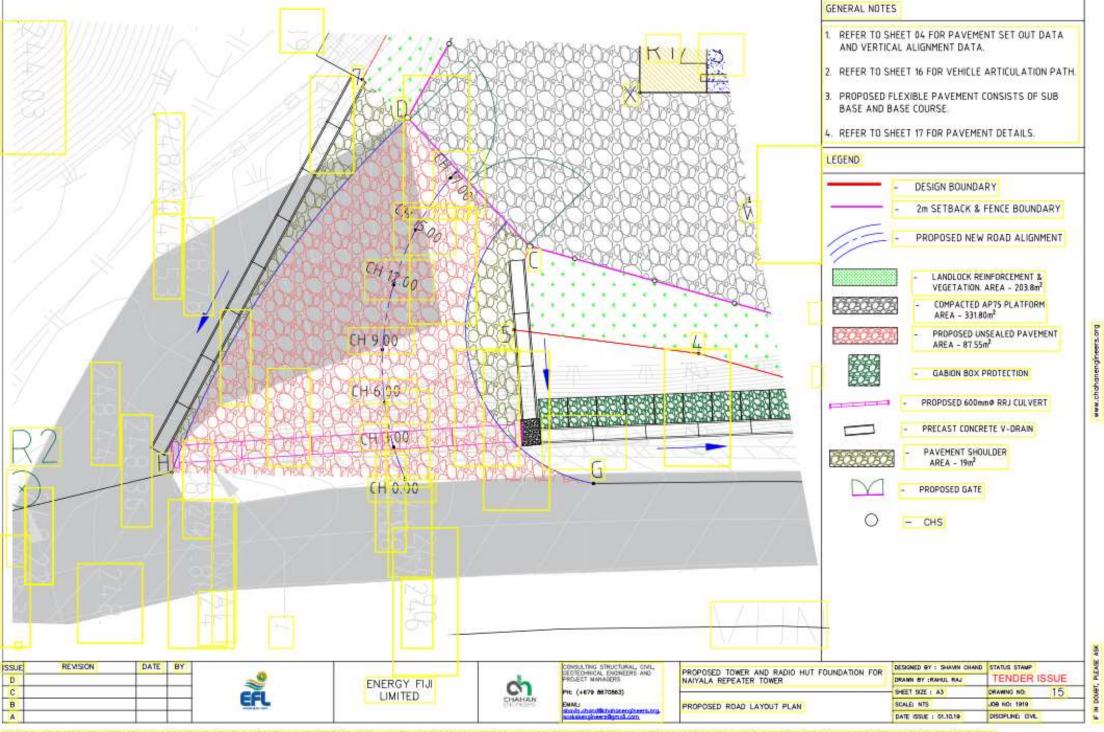
CROSS SECTION A Scale 9:1

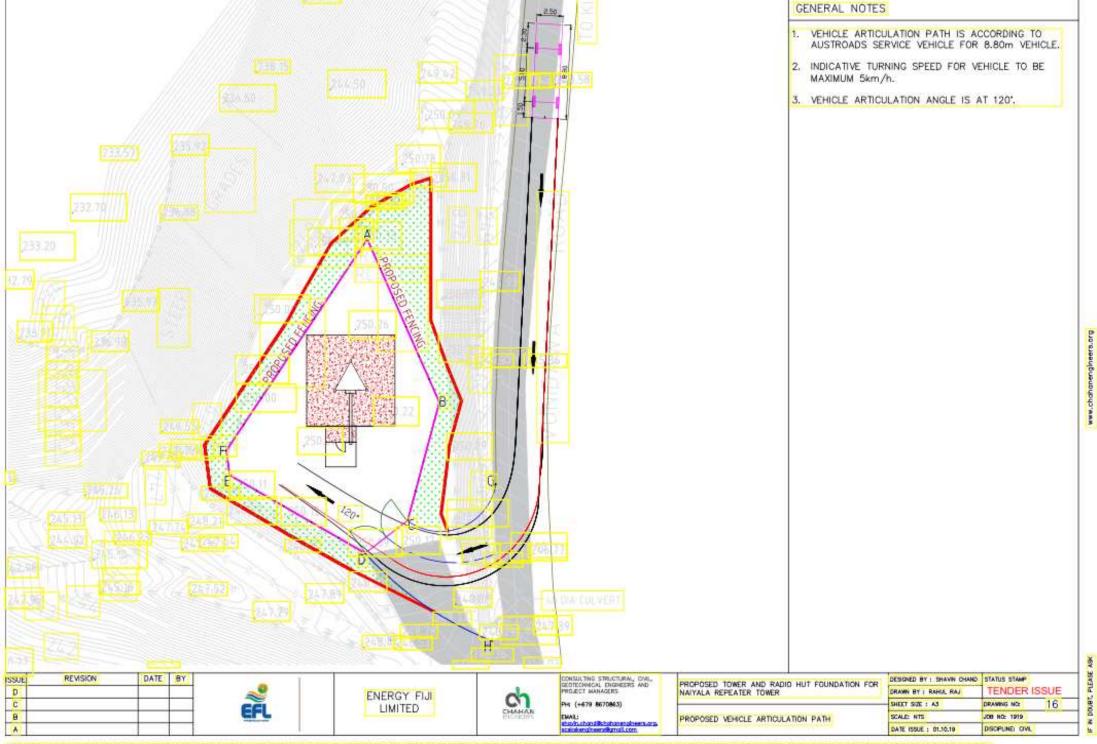




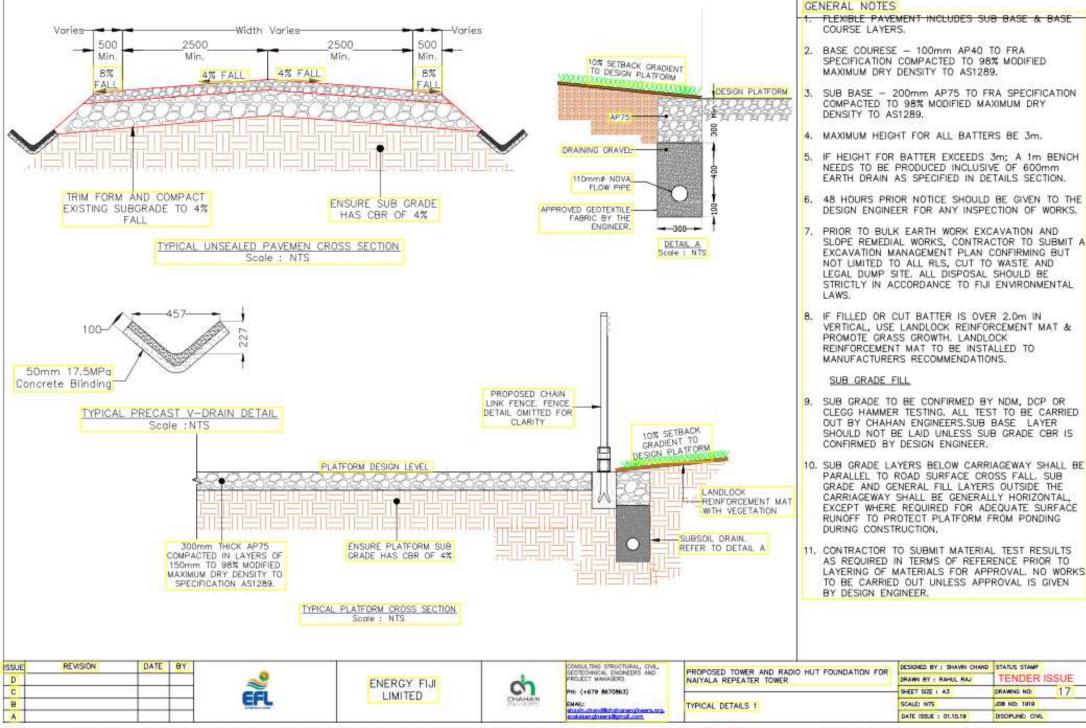
CROSS SECTION B Scale 9:1

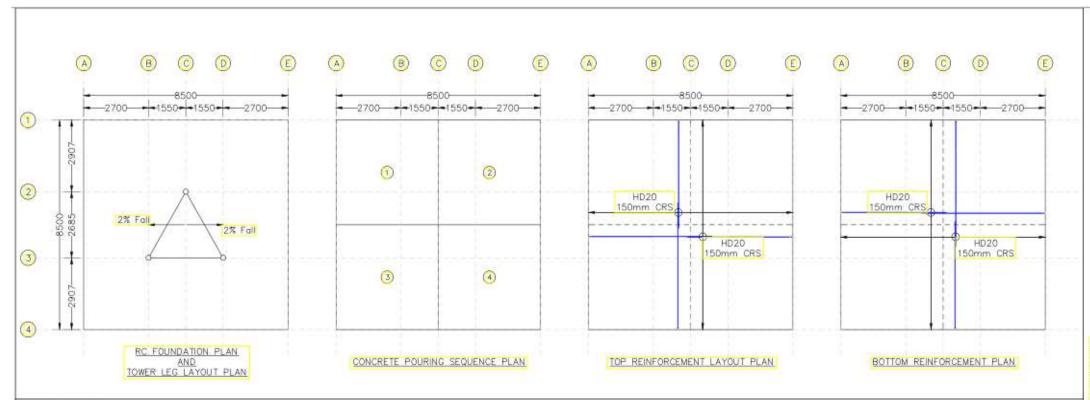
GE	NERAL NOTES				LEGENDS							
1. B	BATTER SLOPE TO BE	EXCAVA	ATED AT	1(V) :1 (H) SLOPE.	EXISTING GRO	DUND LEVEL			le le	NONE	ERS CERTI	EICATION
2. LANDLOK REINFORCEMENT MAT TO BE PLACED ON FORMED BATTER SLOPE AND BENCH CUT.			DESIGN GROUND LEVEL				-	NGINE	ERS CERT	FICATION		
3. E	EXISTING PLATFORM L	EVEL HA	S BEEN	REDUCED BY 1m.								
SSUE	REVISION	DATE	BY			7-47	DONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL ENGINEERS AND	MR 59/2019 NAIYALA REPEATER SITE GEOTECHNICAL	DESIGNED BY : SHAVEN O	S DIANE	TATUS STAMP	
D)				ENERGY FIJI PROJECT WAVAGERS INVESTIGATION	DRAWN BY : TANELA	- 3	CONCEPT				
C						LIMITED	PHI (+679 8670863)	CROSS SECTION 8	SHEET SIZE : A3	Dr	RAWING NO:	G06
В				EFL	LIMITED	CHAHAN	EWALI		SCALE: 9:1	JOB NO: 1919 19.07.19 DISCIPLINE: GEOTECHNICAL		1000000
A				CONTRACTOR DESIGNATION OF THE PERSON OF THE			shavin,chand@chuhanengineers.org.		DATE (SSUE : 19.07.19			CHNICAL











GENERAL NOTES

- 1. Foundation has been designed for an allowable geotechnical ultimate bearing capacity of 377kPa. The Contractor shall verify that the site conditions are consistent with the value and advise Design Engineer prior to any concrete pour.
- 2. Engineered Fill to be compacted in layers not exceeding 150mm to a maximum dry density of 98%. This needs to be verified by Design Engineer on site using either NDM or Clegg Hammer Frequency of testing will be as follows:
 - A Platform Area Layer 1- 10 Tests
 - B Platform Area Layer 2- 10 Tests
 - C Road Layer 1- 7 Tests
 - D Road Layer 2- 7 Tests
 - E Contractor to supply MDD and OMC values for the Engineered Fill.
 - F Testing will be done by CHAHAN Engineers, minimum of 48 hours notice is required and the Contractor shall allow for the field testing cost at a rate of \$1800.00 (VEP) per day. This includes field testing and reporting.

- All concrete shall be mechanically vibrated. Contractor to make provision for stand-by
- equipments and have contingency plan in place. Clear concrete cover to reinforcement shall be used. 75mm bottom cover, 50mm top & side cover to reinforcing steel.
- Tower Foundation Concrete shall have 32MPa compressive strength after 28days of standard curing.
- Grade of foundation reinforcement shall be HD -500MPa.
- Welding of reinforcement bars shall not be permitted.
- Contractor to seek clarification from client on tower and hut orientation prior to construction.
- The 7 days concrete cylinder test results should be submitted to the Design Engineer prior to installation of tower and radio hut.
- 48 hours prior notice should be given to the Design Engineer for any inspection of concrete works.

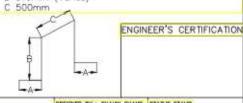
The client has supplied the reaction forces of 24m Lattice Tower, which has been used to design the tower foundation. The reactions provided were as follows:

Support Reactions (Along Leg) - Case 4010

Memb	Fx	Fy	Fz
2347	113.66	-6.47	0.31
2321	115.96	-6.31	-0.28
2341	-257.31	9.70	-5.50

- 11. Refer to manufacturer's drawings for tower leg set out detail and installation. Contractor to make provision for collection of tower from the location directed by the client, transportation, storage, security, installation and certification. Tower vertical test report is required for acceptance by a Realstered Surveyor.
- Prior to bulk earth work excavation and slope remedial works, Contractor to submit a excavation management plan confirming but not limited to all RLs, cut to waste and legal dump site. All disposal should be strictly in accordance to Fiji

- 13. All earthing works will be directed by the Client and the Contractor shall consult client during the tender period and make provisions for this in the BOQ. Final acceptance must include all testing certificates.
- 14. All electrical works will be directed by the Client and the Contractor shall consult client during the tender period and make provisions for this in the BOQ. Final acceptance must include all testing certificates.
- Provide steel bar chair at 900mm CRS to avoid wobbling of reinforcement. The Contractor may propose for an alternative.
 - A 500mm
 - B 915mm (Varies)



ISSUE	REVISION	DATE	BY
D			
C			
В			
A			



ENERGY FIJI LIMITED



Environmental Laws. CONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL ENGINEERS AND PROJECT MANAGERS

Ht. (+679 8670863)

EVAL: shavin,chand@chahanengineers.org. scakakengineers@gmail.com PROPOSED TOWER AND RADIO HUT

TOWER FOUNDATION PLAN

DESIGNED BY : SHAWN CHAND	STATUS STAMP	
DRAWN : SHAYAL PRIYANKA	TENDER ISSUE	
9-EET 97E ; A3	DRAWING NO: 19	
SCALE: 1:100	JOB NO: 9-025-19	
DATE ISSUE : 01.10.19	DISCIPLINE: STRUCTURAL	

