



**Plumbing Upgrade Works for EFL's
National Control Centre (NCC) Staff
Quarters Area**

Tender Number – MR 09/2022



Energy Fiji Limited (EFL) is a statutory body vested with the responsibility for the provision of electricity supply throughout the Fiji Islands.

EFL 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.

1.0 INSTRUCTION TO BIDDERS

1. Bidders are requested to read carefully the contents of the tender document.
2. Bidders are to complete the tender document and provide all the related documents information in sufficient detail.
3. All documents must be in English language.
4. All Bidders will be informed accordingly after finalization of tender decision.
5. Bidders should note clearly the date and the time of submittal of the tender document. No late or delayed applications will be accepted. Bidders are reminded that no supplementary material will be entertained by EFL after the close of submission. However EFL may, if necessary, at its sole discretion ask for any clarification regarding the submitted tender and/or related documents.
6. All the bidders including those who have tendered are requested to get in touch with EFL's Supply Chain Office for any tender clarifications.

2.0 REQUIREMENTS

1. Bidder to verify all dimension on site before submitting their tender.
2. Bidder to verify all building surfaces and current condition and advise on any alteration before submitting their tender
3. Bidder to ensure all materials are used as per the plans and specification provided by the EFL.
4. Bidder to ensure all their workers have proper PPE while entering the EFL sites.
5. Bidder to ensure all cleaning and finishing works to be done within proper specification.
6. Bidder to ensure respective work are done by skilled Tradesman.
7. Bidder to use their own scaffolding, plants, machines, transportation, and services as necessary to complete all refurbishment work included in the specifications.
8. Bidder to coordinate with the EFL site supervisor to discuss all site issue and constraints.
9. Left over debris must be inspected by EFL and on approval from the client the same shall be disposed in a manner appropriate by the bidder. Debris that the client deems as not to be disposed shall remain the property of the client.
10. Bidder to provide full company profile.
11. Bidder to provide Tax Compliance Certificate.
12. Bidder to meet all Insurance requirements.



13. Selected bidders are to provide methodology and work program.
14. All workmanship to be of high expected standard with very neat finish.
15. Bidder shall be liable for any damages to the property/resources and repair them at their own cost.
16. An induction shall be done for all contractors together by respective EFL staff.

3.0 PRELIMINARIES

All Bidders are to visit site to view the works outlined in the Scope of Works. All work shall conform to the National Building Code of Fiji for construction with reference to standard below.

Standards and Regulations including but not restricted to:

AS 1170.0 / .1 - 2002 Structural Design Actions

AS 1288-2006 Glass in Buildings. Selection & Installation

AS/NZS 1680.0:1998 Interior Lighting-Safe Movement

AS 2047-1999 Windows in Buildings. Selection & Installation

AS 2311-2000 Painting of Buildings

AS 2870-1996 Residential Slabs and Footings

AS 2904-1995 Damp proof Courses and Flashings

AS/NZS 3500-3.2:1-2003 National Plumbing and Drainage

AS 3600-2001 Concrete Structures

AS 3700-2001 Masonry Code

AS 3727-1993 Guide to Residential Pavements

AS 3740-2004 Waterproofing of Wet Areas within Residential Buildings

AS 3958.1-1991 Ceramic Tiles

4.0 OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS

During submission process:

1. Bidders shall submit a current copy of the company:
 - OHS Policy
 - Environment Policy
 - Personal Protective Equipment Policy
 - Working at heights Policy (if applicable)
 - Valid license of your qualified electricians and plumbers
 - OHS professional who will be at the site together with his photos, qualifications and expertise
 - Safe Work Method Statement or Job Safety Analysis (Risk Management) of the project that clearly define in a table format the steps of work (in chronological order) with the associated hazards, risks and controls according to the hierarchy of control method
 - Project site safety inspection checklist and a Tool Box meeting form
 - Workers who will be directly involved at the site with their photos, names and designation/occupation in a A4 paper
2. Any working at heights using scaffolds more than 1.8 meter, the bidder should provide the OHS inspection report.
3. Any Plant mentioned in the (Legal Notice 170) Health and Safety at Work Regulations 1997, the bidder should provide the current and valid certificate.
4. Bidders shall submit sub-contractor management documents if at any stage they will involve in the project.

During project execution:

5. The selected bidder will have to attend the Safety Induction of the project site conducted by the respective EFL personnel.
6. The selected bidder should conduct at least a minimum of two Project meetings in a week to discuss the project safety issues, formal site compliance, site inspections, injury report and etc. This meeting should be recorded in the template and presented to EFL upon request.
7. Selected bidder shall provide an entry point and erect the appropriate applicable Mandatory safety signage's which are to be visible at all times.
9. Selected bidder shall also provide a designated OHS Notice board at the site.
10. Selected bidder should always maintain the safety barricades and signage's during and after the progress of the project at all times
11. The selected bidder should provide their own qualified First Aider and First Aid Kit at the site according to the size and ratio mentioned in the (Legal Notice 25) Health and Safety at Work (General Workplace Condition) Regulation 2003.

After the completion of project:

Should there be any hazard materials accumulated at the site, selected bidder should isolate them properly with mesh barricades before handover to the EFL Project Manager.

OHS Regulations 2003

The Selected Tenderers shall be responsible for ensuring all staff and the tools, equipment and excess materials that they are required to use are all stored safely in accordance with the above Occupational Health and Safety Regulation.

5.0 WORK PLAN

The contractor shall prepare a Work Programme, Work Safety Plan/Risk Assessment Plan in accordance and shall submit the plan to the respective EFL personnel for his/her approval before commencing with work on the site. This should be provided within **three (3) working days** from the date of the tender award letter.

6.0 MATERIALS

- The selected bidder shall ensure that the products nominated in the tender specification shall be used unless approval for substitute products is given by EFL in writing. Substitute product approval shall not be unreasonably withheld if quality and performance can be assured.
- The selected bidder shall ensure that the product used shall be used in strict accordance with Manufacturer's instructions and may be subject to the Manufacturer's inspections as required.
- The selected bidders shall supply all the necessary materials as new and shall further supply all necessary tools, equipment and access aids to allow the safe and prompt execution of the contractual works.

7.0 SITE CONDITIONS

- a) The selected bidder shall visit site to familiarize themselves with all aspects of the works.
- b) The selected bidder shall provide adequate protection for all adjoining and adjacent building elements. Any damage sustained as a result of the bidders work shall be repaired/ replaced to the EFL satisfaction without cost to the EFL and shall be completed within the Contract period.
- c) The selected bidder is responsible and shall allow for all types of site access, scaffolding, ladders, hoists as well as barricades, hoardings and or temporary fences.
- d) The selected bidder are responsible for and shall allow for any and all Council and regulatory authority fees and permits where such fees & permits apply to the construction, completion and occupation of the building.
- e) The site shall be progressively kept clean with final clean up prior to hand-over.
- f) The selected bidder shall identify, locate, secure and protect all existing services within the premises.
- g) The selected bidder shall prop and secure all elements that may be subject to vibration or movement from the proposed works.
- h) It is essential that the selected bidder give due consideration to the environmental conditions within which this property exists. It will be the selected bidder responsibility to ensure, for example, galvanizing to correct thicknesses, stainless steel components of the correct grade and similar issues should be adhered to appropriate separation for dissimilar materials should be allowed for to avoid any form of corrosion or cracking.
- i) No Parking shall be allowed on site to the selected bidder unless approved.
- j) Storage sheds if required to be supplied by the selected bidders and located as directed by EFL.



8.0 DURATION OF WORK

The expected duration for the completion of work shall be **four** weeks.

9.0 TOBACCO /ALCOHOL/DRUG FREE ENVIROMENT

EFL maintains tobacco, alcohol, drug free environment. Any personnel of the contractor found violating the policy will be requested to remove the product and themselves from the sites. Offensive language or actions are not acceptable. The EFL shall have the absolute right to require replacement of any employee the EFL deems objectionable to work on EFL premises.

10. INSURANCE REQUIREMENTS

The Contractor shall be solely responsible for all respective insurance cover of person, tools, equipment involved in carrying out the Works.

The Contractor must obtain and maintain respective insurance cover at all relevant times sufficient to cover any loss or costs that may be incurred and for which the Contractor is liable in connection with the contractual works.

11. SITE VISIT

a) All interested bidders must attend a **compulsory** site visit as follows:

Location	Date	Time	Contact Person
National Control Centre	19/01/22	12.30pm	Shaneel Chand - 99 25897

NB-All bidders must come in their own proper PPE (safety boots, vests, etc) for the site visit. Entry will be denied into the premises without proper PPE.

- b) All tenderers shall inspect and examine the site, its surroundings, and shall satisfy him/her before submitting his/her tender, as to the nature of the work and necessity for the carrying out the contract work.
- c) **Due to Covid-19 restrictions, only one representative from a company will be allowed entry into the premises for the site visit.**
- d) **Representatives coming for the site visit must ensure they have the careFiji app installed and activated, and must bring evidence of their vaccination details.**

12. SCOPE OF WORKS

Preliminary and General

Item	Scope	Price (VEP)
1.0	Site Works	
1.1	a. Contractor to allow for mobilization and demonization costs. b. Contractor is responsible to clean and clear site, and restore to initial conditions. c. All measurements to be confirm on site visit.	
Total VEP cost for Site Works		
2.0	Plumbing Works for Staff Quarters # 1, 4 & 5	
2.1	Remove the existing hot water tank. Allow to replace the hot water tank type to match the existing with complete plumbing- allow for Rheem brand tank.	
2.1	Supply and install ball value to the termination (hand basin, sink, cistern etc.) number to be confirm on site. Allow for Pex ball valve 1" Brass lever pex.	
2.2	Supply and replace the sink tap and S trap - allow for Ram Fiesta sink mixer tap complete with all fittings.	
2.3	Supply and replace the hand basin tap- and S trap- allow for Penguin Basin Pillar tap complete with all fittings.	
2.4	Supply and replace the shower mixer and Shower rose with complete fittings- allow for Deo brand.	
2.5	Supply and replace the washtub tap- allow for Deo brand.	
2.7	Mark the R.L (reference point)	
2.8	Excavation the top soil- derbies to be cart way.	
2.9	150mm Micron visqueen or equal waterproof membrane on 50mm sand blinding on 200mm compacted hardcore fill.	

3.0	Construct concrete slab measuring 1500mm x 1500mm	
3.1	Lay 125mm/150mm thick concrete slab over 663 mesh, 30mm top cover. Allow for 20MPa concrete.	
3.2	Concrete slab edge thickening using HD 12bars- 200mmx 150mm.	
3.3	Supply 1 x 1000L Polyethylene water tank.	
3.4	Fabricate HD16mm anchor bolt to ditto for tie down of turnbuckle.	
3.5	Supply and install galvanized turnbuckle x 4 to each.	
3.6	Carry out new plumbing works to connect tank to existing toilet/shower cold-water piping.	
3.7	Install 1 x non-return valve.	
3.8	Allow to harvest rainwater on sites where applicable.	
3.9	Supply and install new water pump complete with all electrical works	
4.0	Construction of pump room approximately 1-meter-L x 1 meter- W x 1meter H. Pump house to have gable type color bond trim deck roof.	
4.1	Test, commission and handover to EFL.	
4.2	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs.Colour will be advised later by EFL.	
4.3	Supply and install 75mm down pipe with all the fittings. DP to be properly fixed to concrete wall.	
4.4	Supply and installation of floor and wall tiles to wet area, allow for 600mm x 600mm non-slips tiles with grout finish. Colour will be advised later by EFL.	
Total VEP cost for Plumbing Works for Staff Quarters # 1, 4 & 5		
3.0	Plumbing Works for Staff Quarters # 2 & 6.	
3.1	Remove the existing hot water tank. Allow to replace the hot water tank type to match the existing with complete plumbing- allow for Rheem brand tank.	
3.2	Supply and install ball value to the termination (hand basin, sink, cistern etc.) number to be confirm on site. Allow for Pex ball valve 1" Brass lever	

	pex.	
3.3	Supply and replace the sink tap and S trap - allow for Ram Fiesta sink mixer tap complete with all fittings.	
3.4	Supply and replace the hand basin tap- and S trap- allow for Penguin Basin Pillar tap complete with all fittings.	
3.5	Supply and replace the shower mixer and Shower rose with complete fittings- allow for Deo brand.	
3.6	Supply and replace the washtub tap- allow for Deo brand.	
3.7	Supply and change the complete pan cistern-allow for Caroma Tasman brand complete with all fittings only in staff quarters 2.	
3.8	Mark the R.L (reference point)	
3.9	Excavation the top soil- derbies to be cart way.	
4.0	150mm Micron visqueen or equal waterproof membrane on 50mm sand blinding on 200mm compacted hardcore fill.	
4.1	Construct concrete slab measuring 1500mm x 1500mm	
4.2	Lay 125mm/150mm thick concrete slab over 663 mesh, 30mm top cover. Allow for 20MPa concrete.	
4.3	Concrete slab edge thickening using HD 12bars- 200mmx 150mm.	
4.4	Supply 1 x 1000L Polyethylene water tank.	
4.5	Fabricate HD16mm anchor bolt to ditto for tie down of turnbuckle.	
4.6	Supply and install galvanized turnbuckle x 4 to each.	
4.7	Carry out new plumbing works to connect tank to existing toilet/shower cold-water piping.	
4.8	Install 1 x non-return valve.	
4.9	Allow to harvest rainwater on sites where applicable.	
5.0	Supply and install new water pump complete with all electrical works	
5.1	Construction of pump room approximately 1-meter-L x 1 meter- W x 1meter H. Pump house to have gable type color bond trim deck roof.	
5.2	Test, commission and handover to EFL.	

5.3	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs. Colour will be advised later by EFL.	
5.4	Supply and install 75mm down pipe with all the fittings. DP to be properly striped to concrete wall.	
5.5	Allow to trace and repair the water leakage.	
5.6	Ditto allow to use Sikaflex roof and gutter sealant or Sikaflex 11Fc sealant.	
5.7	Supply and installation of floor and wall tiles to wet area, allow for 600mm x 600mm non-slips tiles with grout finish. Colour will be advised later by EFL.	
Total VEP cost for Plumbing Works for Staff Quarters # 2 & 6.		
4.0	Plumbing Works for Staff Quarters # 3	
4.1	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs.	
4.2	Supply and install 75mm down with all fittings. Down to be proper strip.	
4.3	Carry out new plumbing works to connect tank to existing toilet/shower cold-water piping.	
4.4	Install 1 x non-return valve.	
4.5	Allow to harvest rainwater on sites where applicable	
4.6	Construction of pump room approximately 1-meter-L x 1 meter- W x 1meter H. Pump house to have gable type color bond trim deck roof.	
4.7	Test, commission and handover to EFL.	
4.8	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs. Colour will be advised later by EFL.	
4.9	Supply and install 75mm downpipe with all the fittings. DP to be properly striped to concrete wall.	
Total VEP cost for Plumbing Works for Staff Quarters # 3		
5.0	Plumbing Works for Staff Quarters # 7	

5.1	Remove the existing hot water tank. Allow to replace the hot water tank type to match the existing with complete plumbing- allow for Rheem brand tank.	
5.2	Supply and install ball value to the termination (hand basin, sink, cistern etc.) number to be confirm on site. Allow for Pex ball valve 1" Brass lever pex.	
5.3	Supply and replace the sink tap and S trap - allow for Ram Fiesta sink mixer tap complete with all fittings.	
5.4	Supply and replace the hand basin tap- and S trap- allow for Penguin Basin Pillar tap complete with all fittings.	
5.5	Supply and replace the shower mixer and Shower rose with complete fittings- allow for Deo brand. Replace the bathroom floor and wall tiles with 300mm x 300mm non-slips tiles.	
5.6	Supply and replace the washtub tap- allow for Deo brand.	
5.7	Supply and change the complete pan cistern-allow for Caroma Tasman brand complete with all fittings.	
5.8	Mark the R.L (reference point)	
5.9	Excavation the top soil- derbies to be cart way.	
6.0	150mm Micron visqueen or equal waterproof membrane on 50mm sand blinding on 200mm compacted hardcore fill.	
6.1	Construct concrete slab measuring 1500mm x 1500mm	
6.2	Lay 125mm/150mm thick concrete slab over 663 mesh, 30mm top cover. Allow for 20MPa concrete.	
6.3	Concrete slab edge thickening using HD 12bars- 200mmx 150mm.	
6.4	Supply 1 x 1000L Polyethylene water tank.	
6.5	Fabricate HD16mm anchor bolt to ditto for tie down of turnbuckle.	
6.6	Supply and install galvanized turnbuckle x 4 to each.	
6.7	Carry out new plumbing works to connect tank to existing toilet/shower cold-water piping.	
6.8	Install 1 x non-return valve.	
6.9	Allow to harvest rainwater on sites where applicable.	

7.0	Supply and install new water pump complete with all electrical works	
7.1	Construction of pump room approximately 1-meter-L x 1 meter- W x 1meter H. Pump house to have gable type color bond trim deck roof.	
7.2	Test, commission and handover to EFL.	
7.3	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs. Colour will be advised later by EFL.	
7.4	Supply and install 75mm downpipe with all the fittings. DP to be properly striped to concrete wall.	
7.5	Supply and install hand basin complete vanity unit.	
7.6	Supply and install shower cubic divider.	
7.7	Supply and install tiles in washroom area.	
7.8	Construction of new sink-bench.	
Total VEP cost for Plumbing Works for Staff Quarters # 7		
6.0	Plumbing Works for Staff Quarters # 8	
6.1	Supply and install ball value to the termination (hand basin, sink, cistern etc.) number to be confirm on site. Allow for Pex ball valve 1" Brass lever pex.	
6.2	Supply and replace the sink tap and S trap - allow for Ram Fiesta sink mixer tap complete with all fittings.	
6.3	Construction of pump room approximately 1-meter-L x 1 meter- W x 1meter H. Pump house to have gable type color bond trim deck roof.	
6.4	Carry out new plumbing works to connect tank to existing toilet/shower cold-water piping.	
6.5	Supply and install new water pump complete with all electrical works	
6.6	Test, commission and handover to EFL	
6.7	Supply and replace the shower mixer and Shower rose with complete fittings- allow for Deo brand. Replace the bathroom floor and wall tiles with 300mm x 300mm non-slips tiles.	

6.8	Supply and install tiles in washroom area.	
6.9	Remove the existing gutter, Supply and install new colour bond gutter to entire perimeter. Allow colour bond gutter strips at every 600crs. Colour will be advised later by EFL.	
7.0	Supply and install 75mm downpipe with all the fittings. DP to be properly striped to concrete wall.	
Total VEP cost for Plumbing Works for Staff Quarters # 8		
7.0	Waste Water Plumbing Works for Quarters 1,2,3,4,5,6 & 7	
7.1	Allow to construction 600mmx 600mm x 200mm above ground level inspection chamber for each staff quarters.	
7.2	Connect all the wastewater piping works for ditto.	
7.3	Supply and install concrete lid.	
7.4	Connect all the storm water plumbing to existing drainage on site.	
Total VEP cost for Waste Water Plumbing Works for Quarters 1,2,3,4,5,6 & 7		
8.0	Sewerage/ Waste Line Plumbing Works	
8.1	Excavate and construct new septic tank approx 2 meter wide x 4 length x 2meter. Septic tank lid to be 300mm above ground level.	
8.2	Allow to trace the waste water line for all staff quarters and connect to existing Septic tank.	
8.3	Construction of approximately 800mm wide x 600mm length x 200mm above ground level inspection chamber at max 6 ctrs.	
8.4	Supply and install heavy-duty cast iron square airtight inspection manhole cover.	
8.5	Excavate and construct soak pit 2 meter wide x 3 length x 3meter deep fill with coarse rocks	
8.6	Lay geotextile fabric on top of soak pit and back fill.	
8.7	Provide the detail drawings.	



Total VEP cost for Sewerage/ Waste Line Plumbing Works		
9.0	Electrical Works	
9.1	Supply and install of 1-300watts solar floodlights to each staff (Osram Brand) - with sunset switch.	
Total VEP cost for Electrical Works		

Trade Totals \$.....VEP

9% VAT \$.....

Total Price \$..... VIP-FJD

NOTICE TO BIDDERS:- • The Contractor to include any allowance for the impacts that an outbreak, epidemic or pandemic, including Covid-19 may have on these works. The contractor shall incur all additional cost for delay arising from the impacts of an outbreak, epidemic or pandemic of disease including Covid-19. The contractor shall not be liable to claim a variation to works from this.

12. SELECTION CRITERIA

Compliance – the following documents are to be provided with the tender bid:

Mandatory Submission:

No.	Compliance
1	Valid FRCS tax compliance certificate for Local Companies
2	Valid FNPf certificate of Compliance for Local Companies
3	Business registration details
4	Public Liability Insurance - \$500,000
5	FNU Compliance (for local bidders)
6	Contractor’s All Risk Insurance - \$500,000

TENDER EVALUATION CRITERIA	
Category	Criteria
Bid Responsiveness	General responsiveness of bid, compliance to submission requirements and documentation.

Health, Safety & Environment	Assessment of Tenderer's compliance to health, safety and environmental requirements detailed within the technical specification. Past performance of Tenderers.
Technical Compliance	<p>Does the Tender meet Energy Fiji Limited's minimum technical requirements as outlined in the Technical Specification?</p> <ul style="list-style-type: none"> • Design of equipment and all components • Comprehensiveness of proposal, composition of tender's team • Risk management plan and mitigation of foreseeable risks • Past experience in delivering similar project •
Commercial Compliance	<p>Tenderer holds the required current insurance provisions and has provided evidence through valid insurance certificates of currencies.</p> <p>Has the Tenderer submitted Departures to the Terms and Conditions? If so is it likely that Energy Fiji Limited will be able to negotiate agreement without undue delay?</p> <p>Assessment of the Tenderers operational risks including conflicts of interest.</p> <p>Tenderer must comply with statutory requirements, such as that enforced by FRCS, FPNF, FNU etc. and provide evidence of compliance as required in the specifications.</p>
Energy Fiji Limited Procedures	Tenderer must comply with all relevant Energy Fiji Limited safety and environmental procedures. This is indicated by the Tenderer signing the Form of Tender Schedule, acknowledging all applicable procedures. Tenderer must also comply with the requirements of Electricity Act (2017), Electricity Regulations (2019).
Financial Stability	Assessment of Tenderer's current financial stability and ability to remain financially stable during the contract term.
Price Evaluation	<ul style="list-style-type: none"> • Base tendered prices; • Price escalation formula (foreign exchange and commodity based rise and fall formula or similar review mechanism); • Other value adding options.

13. SPECIFICATION

Paint Specification:

No	Paint Description	Application
1	Dulux/Apco/Resene/Taubmans Weather Shield acrylic undercoat	All works

2	Dulux/Apco/Resene/Taubmans Ceiling White acrylic	Ceiling
3	Dulux/Apco/Resene/Taubmans Acrylic Weather Shield X10 Low Sheen	Internal painting
4	Dulux/Apco/Resene/Taubmans Acrylic Weather Shield X10 Low Sheen	External painting
5	Dulux/Apco/Resene/Taubmans Enamel Weather Shield X10 Low Sheen	Framing/grills/railing
6	Dulux/Apco/Resene/Taubmans Weather Shield Water Proof for concrete walls	Exterior walls

Note:

- All painting to be conducted as per manufactures instruction.
- All colors to be confirmed by Project manager prior installation.
- All surfaces are to be painted as per Project managers instructions.

Timber:

- H3 treated timber for all internal and external uses.
- F7 treated timber for external uses.

Lock: Lockwood door lock. (For Internal door lock) or equivalent client approved.

CONCRETE WORK

1. PRELIMINARY

1.1 General

Refer to the General Conditions of Contract and the Preliminary and General Clauses which will also apply to this section of the week.

1.2 Standards

The following standards shall form part of this specification

- NZS 1900 9.3A : Materials and Workmanship
- NZS 1900 9.3A : Metric Handbook to AZS 1900 9.3A
- NZS 2086 : Ready Mixed Concrete Production
- NZS 3112 : Methods of Test for concrete
- NZS 3121 : Water and Aggregate for concrete
- NZS 3122 : Portland Cement

1.3 Co-operation

Allow co-operate with other trades to space, position and build in all fixing bolts, pipes, sleeves, nailing ground, chases, conduits, reinforcing, starters, weather-bars, inspection chamber, septic tank, etc. Also co-operative with the Block layer in the filling of cavities.

2 MATERIAL

2.1 General

All material used shall be the best their respective kinds, free from all impurities, properly packaged and supplied in top condition.

2.2 Cement

Shall be Portland cement or Rapid Hardening Portland Cement each conforming to the above standards.

2.3 Concrete

Concrete for any major pour shall be ready mix in accordance with the above standards supplied by a firm approved by the Architect.

2.4 Water

Water shall be clean and free from all impurities conforming to the above standards and of such standard that if required to do so the Contractor will drink it.

3 WORKMANSHIP

All work in this section shall be carried out by tradesmen skilled in the mixing and placing of Concrete to the satisfaction of the Architect and Engineer.

4 FORMWORK

4.1 General

Formwork may be constructed in timber and / or steel.

4.2 Timber

All timber shall be sound and free from knot holes. Timber in contact with concrete shall be not less than 20mm thick, or resin bonded plywood constructed so as to produce mortar tight joints.

4.3 Form Oil

Where form oil is used to preserve the oil shall be of a recognized proprietary brand which shall not affect the bond of plaster to the concrete.

4.4 Workmanship

All formwork shall be securely braced and supported to prevent any distortions due to pressure of Concrete and loads from operations. Particular attention shall be given to all wall and beam surfaces to render them straight and true. Formwork shall be provided with suitable clean out point to ensure the removal of all foreign matter from the interior before each pour. Before placing concrete all forms shall be fixed to proper lines and levels and shall be saturated with water, if form oil is not used.

4.5 Stripping

Formwork shall not be stripped before the times mentioned below. Time for normal hardening cement.

- Foundation Sides : 1 day
- Beam Sides, Wall : 2 days
- Columns : 5 days
- Beam Soffits and slabs : 21 days

5 PLACING

The handling, placing, protection and curing of all concrete shall be strictly in accordance with NZS 1900.Chapter 9. Which forms part of this specification and shall be read in conjunction with it. Care shall be taken to prevent segregation of the concrete spreading of the formwork and other methods likely to cause faulty concrete work. Concrete shall not be dropped over 1350 into forms. Should honeycombing be evident after stripping of boxing, the Engineer shall decide whether the honeycombing has deleterious effect on the structure or appearance in which case

the concrete shall be chipped out and replace or if not of a serious nature, surface may be repaired by plastering, al at the expense of the contractor. Adequate means of protection finished concrete surface shall be taken and effective damp curing by use of polythene sheet or sand covering kept continuously damp is also essential. All concrete shall be thoroughly consolidated by vibration. Minor surface blemishes on fai face concrete.

6 PROTECTION AND CURING

Placed concrete shall be protected from rain, sun and drying winds, by suitable coverings, immediately available on site. The whole of the surface area of concrete shall be properly cured by being kept continuously damp for 7 days. Artifice curing such as sand kept consciously wet shall be allowed for at all times. Polythene sheet may also be used.

7 REINFORCING

7.1 General

Refer to the Preliminary and General clauses which will also apply to this section of the work.

7.2 Standards

In addition to standards cited elsewhere the relevant provision of the following shall apply, unless modified accordingly:-

- NZS 1900 9.3A : Concrete-General requirements
- NZS 3402 : Hot rolled bars for reinforcements
- NZS 3421 : Hard drawn wire reinforcement
- NZS 3422 : Welded reinforcing fabric
- Standard arc welding (Minor Works) Witness

7.3 Read this section in conjunction with Masonry Section.

7.3 Materials

Provide all supports, hangers, spacers, and ties to approval where not shown.

7.5 Plain and deformed bars shall comply with NZS 3402P and be of mild steel and shall have a guaranteed minimum yield point of 275 megapascals.

7.6 Welded wire fabric shall confirm with the NZS 2422.

7.7 Alternative steels for reinforcement may be approved provided that by composition, manufacture, Certified tests of strength, elongation, fatigue resistance and walkability the alternative has equivalent properties to that specified above.

7.8 Origin and Specification

Before delivery provide certificate stating origin, manufacturer's name, steel specification; also test certificates to prove steel conforms to specifications stated. All steel delivered to site shall be clearly marked for identifications with the relevant certificate.

7.9 Protection

Store steel clear of ground mesh under cover.

7.10 Provide walkways to approval required.

7.11 Brace adequately all reinforcement projecting more than 1200mm from concrete, cut out defects around bars caused by movement as directed before resuming concreting.

7.12 Fabrication



Fit ties and stirrups tightly round main reinforcement.

7.13 Bend deformed bars around rollers, not fixed pins.

7.14 Bend deformed bars only once.

7.15 Tolerance and Protective Cove

Tolerance shall be as set out in Clause 12.2.1 of NZS 1900 9.3A.

7.16 The concrete cover shown in the drawings into the surface of main reinforcement.

7.17 Placing and Fastening

Support top steel on high chairs or by other approved means, precast blocks may be permitted.

7.18 Unless otherwise detailed, support slab reinforcement at maximum 1000mm, except reinforcement 10mm in dia. and smaller at maximum 600mm centers.

7.19 Tie reinforcement with not less than 1.25 mm soft black iron wire sufficiently to maintain correct relative positions. Bundle bars should be tied tighter at 500 ctrs with 2.65 mm min. soft wire.

7.20 Laps

Excepting as shown no lapping of reinforcement is permitted without written approval.

7.21 Where lengths of laps are not shown, as for approval.

7.22 Welding

Welding of reinforcement shall comply with "standard arc welding (minor works)" unless otherwise specified.

7.23 Excepting as shown on welding reinforcement is not permitted without written approval.

7.24 Identify rods or bars to be welded with tags or branding.

7.25 Inspection before Concreting

Before concreting, reinforcement must be inspected by supervising officer. Arrange with Engineer suitable time for inspection before approval. Work done without approval will be rejected.

7.26 Prior approval of cleaning, fabrication and securing reinforcement is subject to the reinforcement being satisfactory at time of concreting.

7.27 Extra will not be paid for remedial work caused by the inspection.

8 DAMP PROOF COURSE

Where shown on drawings, lay under floor slabs on ground 0.5 polythene DPC over sand blinding. Carefully check blinding for any protrusion likely to puncture the DPC. Tape all joints, protrusions, around pipes, tears, etc. with pressure sensitive tape. Carry DPC under thickening in slab and seal DPC to foundations walls. It is essential that the DPC is continuous so that dampness cannot penetrate.

9 CONSTRUCTION AND CONTROL JOINTS

Floor slabs on ground shall be poured to a maximum of 25 M2 and length of any side is not to exceed

7.5M. Reinforcement to be continuous and joints shall be well cleaned be in the positions indicated on the drawings. Construction joints in beams shall be generally located at the midpoint of the span; however the Engineer should be notified prior to pouring so that he may approve the location.

10 FOUNDATIONS

10.1 Set Out

The accurate set out of the foundations is very important to the satisfactory construction of the rest of the building. Refer to the Drawing setting out the exact dimensions for this work.

10.2 Footings

Ensure that the bed all footings is on solid bearing, fill soft spots with weak concrete, provide a solid, even, clean base for the pouring of the footings. Pour the footings to the shape and sizes indicated on the structural drawings. Co-operate with the Block layer in the location all starter and construction of the block foundation walls.

11 BEAMS

Ensure that prior to the pouring of concrete, the formwork for the bearing is adequately supported so as to prevent deflection and spreading upon the pouring of the concrete. Pour the beam to the sizes and profiles indicated on the structural drawings.

12 DRAINAGE WORKS

Co-operate with the Drain layer in the construction of the septic tank, inspection chambers, etc., indicated on the drainage plan.

13 BLOCKWORK

Work in and co-operate with the Block layer in the construction of block walls, filing and reinforcing of the same and location of all starters, bars etc.

14 BUILDING - IN

All to co-operate with other trades, space, and position and build in all fixing blots, pipe sleeves, nailing, locking, chases, conduits, reinforcing, starters, weather bars, etc. as shown on the drawings.

15 TESTING

15.1 Compressing Test

Allow take three concrete test cylinders either (304.8 X 152.4) per concrete batch or as many others as may be directed by the Engineer. These cylinders shall be taken from any random delivery of concrete for the test or as directed by the Engineer and shall be cures on site in conditions as near as possible to those under which the pour they were taken from being cured. The cylinders shall be prepared from a representative sample of the delivery.

15.2 Slump Test

This test shall be made in accordance with the requirements of NZSS 3112. A Slump Test shall be made immediately concreting is started at all times Compression Test samples are taken and at such other times when directed. Slump tests shall be made in accordance with AZSS 3112.

15 PLASTERER

15.1 GENERAL

Refer to the Preliminary and General clauses which also apply to this section of the works.

17 EXTENT OF WORK

The work specified under this section included all applied solid plastering, cement render and hard plaster finish to walls, internally, slab soffits, floor slabs to provide correct grades, with falls to outlets, stairways and for applied finishes as necessary.

18 MATERIALS

18.1 Cement, Sand and Water

Cement shall be normal Portland cement as specified for Concreter. Sand shall be clean, sharp, washed and free from salt or organic matter. All sand is passed through an approved sieve on site prior to mixing. Water shall be of drinking quality.

18.2 Lime

Lime shall be of approved quality run to a putty before use and run through a 20 sieve.

18.3 Waterproofing Additive

Waterproofing liquid for cement shall be Colemaboid No, 1 use and run through a 20 sieve.

18.4 Storage

Store all cement lime and plaster in clean dry areas and use in order of delivery store sand in covered bins or on clean hard surface and cover to prevent intrusion of foreign materials

19 WORKMANSHIP

19.1 Generally

All plasterwork shall be carried out by competent tradesmen. Finish surfaces flat, even, straight, hard and true. Free from imperfections. Finish angles plumb and square and surfaces uniformly textured. Carry render up walls 75mm above finished ceiling lines.

19.2 Surface Preparation

Clean surfaces of dust and loose particles. Ensure that all chasing plugging, rough cutting, pipe sleeves or fixings on, in and through the background are completed before beginning plasterwork. Carry out any dubbing-out-necessary. Provide key for plasterwork on dense, smooth and strong materials by dash coating with a cement rich slurry and fine crushed stone screenings thrown on to the surface to a depth of 3mm - 6mm without smoothing and smoothing and protect from drying out. Before plasterwork commence, wet background surfaces to reduce suction.

19.3 Mixing



Measure materials by volume in gauge boxes and machine mix. Do not use mixes containing cement more than two hours or mixes contain gypsum plaster more than 30 minutes after the addition of water.

19.4 Curing

Prevent rapid drying out of plaster surfaces by spraying with water. Ensure that each coat dries out for at least one day before applying the succeeding coat.

19.5 Protection

Protect all finished surfaces from damage by other trades and leave perfect on completion.

19.6 Control Joints

Form straight deep trowel cut finished with a "V" joint to control between background of different materials and at construction joints.

19.7 Waterproofing Liquid

Shall be "Colemanoid No. 1" or similar and equal used in accordance with the manufacturer's instructions.



TENDER SUBMISSION CHECK LIST

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

Tender Number _____

Tender 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) (Mandatory)**

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

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

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

13. Contact Person:

I declare that all the above information is correct.

Name: _____

Position: _____

Sign: _____

Date: _____



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 26th January, 2022.

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.