

Tender for Supply of Fiber Optics Cable and Accessories



MR 174/2024

Supply of Fiber Optic Cable and Accessories

PUBLICITY

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ALL THOSE WHO REQUEST TO UPLIFT A COPY OF THIS TENDER HAVE AGREED NOT TO DISCLOSURE ANY INFORMATION REGARDING THIS TENDER.

Glossary

- i. EFL – Energy Fiji Limited
- ii. CBM – stands for "cubic meter" in shipping. This measurement is calculated by multiplying the width, height and length together of one's carton.
- iii. DIFOTIS - Delivery in Full on Time in Spec
- iv. VAT – Value Added Tax
- v. VIP – VAT Inclusive Price
- vi. SBA – Strategic Business Area

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1. GENERAL

1.1. The Company - EFL

Energy Fiji Limited (EFL) is a public company limited by shares is solely responsible for supplying power throughout the Fiji Islands. Power is supplied through Hydro, Diesel and wind mill generators located in different parts of Fiji.

The operations of the company are organized into three geographically defined divisions, which correspond to the national administrative divisions. These divisions are:

- Central Eastern Division based in the capital Suva
 - Suva, Lami, Navua, Tailevu, Levuka and part of the Coral Coast
- Western/Nothern Division based in Lautoka
 - Lautoka, Tavua, Ba, Sigatoka, Vatukoula, Northern Division (Labasa, Savusavu, Taveuni)

EFL provides electricity services to most parts of the country especially in the Viti Levu and Vanua Levu area and its electricity grid is shown in the map below.

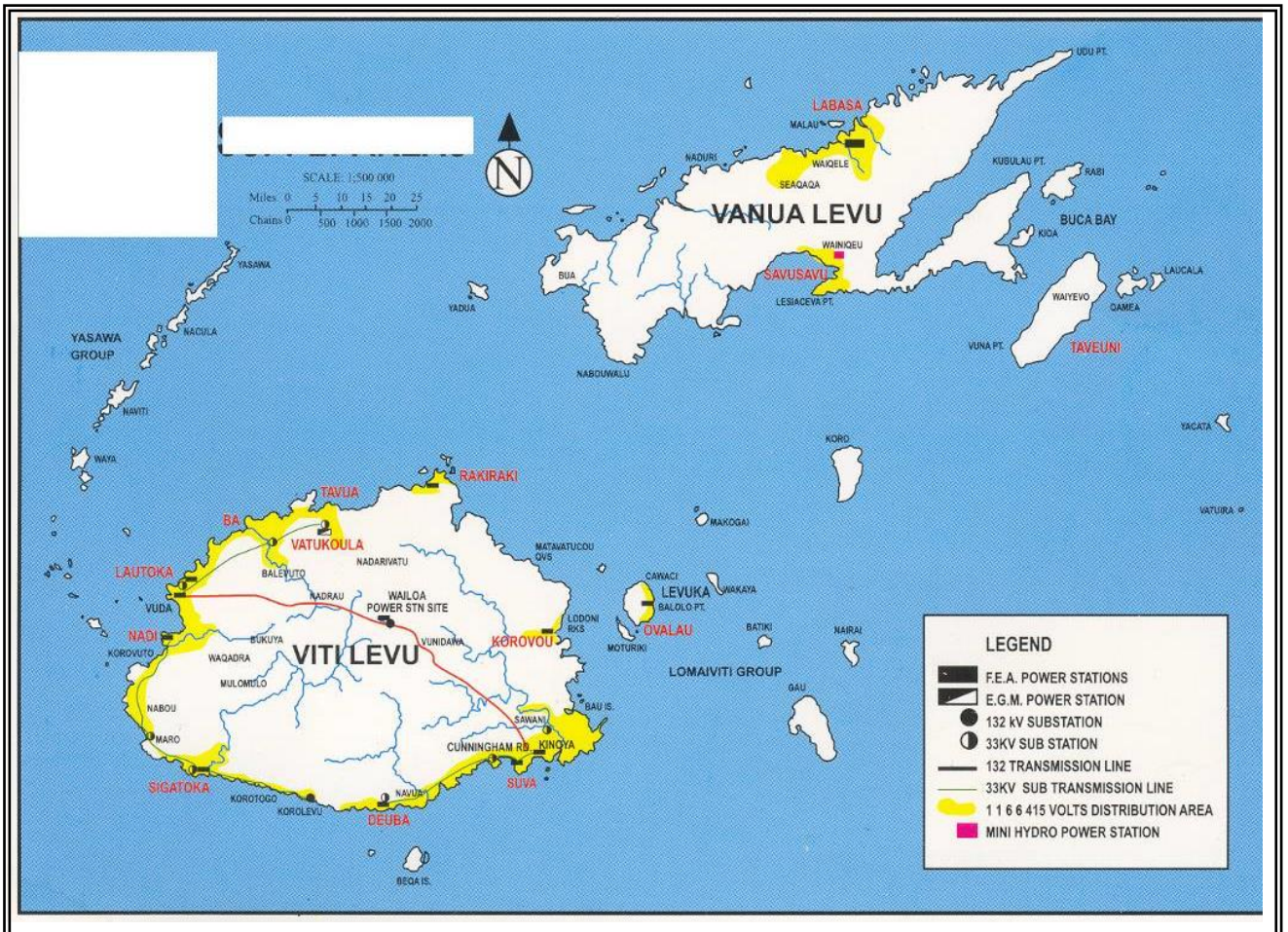


Figure 1 – Energy Fiji Limited coverage Area

EFL’s official website is www.evl.com.fj

2. PURPOSE AND DESCRIPTION OF THE TENDER

The Energy Fiji Limited (EFL) is requesting for bids from Fiber Optics manufacturers, authorized distributors or resellers for the supply of Fiber Optics Cable and accessories, listed in Section 12 of this Tender document.

3. ELIGIBILITY / SELECTION CRITERIA OF THE BIDDER

The bidder should be a manufacturer, authorized distributor or authorized reseller of the products that is offered in the bid.

The vendors shall submit the names/contacts of utilities or projects where they have previously supplied similar products.

All relevant test reports, product standard certificates, and product specification as a table form / drawings are required to be supplied in the tender as part of their bid.

Other information to be provided by the Bidder as part of the proposal is:

1. Company Profile
2. Documentary proof stated that the bidder shall be the manufacturer/authorized distributor or reseller of the offered product and at least 10 years of outstanding experience in manufacturing and timely delivery of such materials
3. Manufacturer's / Vendor's warranty on the product.
4. Method of replacement or reimbursement of faulty / defective or damaged goods
5. Lead time including manufacturing time and shipping duration.
6. The bidder must provide the weight or CBM of the products
7. Full details of the production and testing facilities available with the manufacturers
8. Technical specification/literature of the offered items.
9. The bidder should provide a 'Quality Assurance Certificate' (QAC) from the manufacturer stating that this equipment supplied is in conformity with the specifications requirements in the Tender.

4. DELIVERY

All required equipment & accessories shall be addressed to: **Telecom Engineer Central, ICT Workshop, Energy Fiji Limited, Kinoya, Fiji.**

5. 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: <i>(Location, Street , Locality City, Pin Code, Country, Telephone, Facsimile, Email Other)</i>
Contact name of the Authorised Person:

<p>Contact's position: Contact addresses if different from above <i>Locality City, Pin Code</i> <i>Location, Street, Country, Telephone, Facsimile, Email, Web address</i></p>
<p>Business structure:</p>
<p>Include the organisations years of experience in this field and reputation in the market place.</p>

6. TECHNICAL SUPPORT

- i. Bidder should provide details of what technical support is available to EFL to make better use of the product offered.
- ii. Include relevant manuals and instructions for proper care and handling of the Fiber Optics cable and accessories, and operations.

7. PRODUCT INFORMATION

Bidders must include the following document together with their Bid:

- Full Product Specification
- Relevant Test Certificates
- Standard Compliance Certificate.

8. PACKAGE SIZE

The bidder must ensure proper and suitable packing of the item before dispatch to avoid damages during transit.

9. DEFECTS WARRANTY PERIOD

All goods shall be supplied with a Warranty Period of **not less than 12 months** from the date of the receipt of the Goods by EFL. During the Warranty Period, defective parts shall be returned to the supplier for replacement on a pick-up exchange and return-delivery basis.

10. PRICE VALIDITY

The price submitted shall remain valid for acceptance within 120 days from the date of opening of bids and bidders shall not withdraw or amend their proposal prior to the expiration of the validity period. Price Validity of more than 120 working days is highly accepted.

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.

11. PAYMENT TERMS

EFL's contract payment terms is payment to be made within 30 days from the date when invoice is received subject to the full delivery of ordered goods as per contract. If this is not accepted, Letter of Credit and Advance Payment is also accepted. The cost of arranging Bank guarantee or Letter of Credit shall be the responsibility of the bidder.

Failure to accept the above payment terms will render your bid non-compliance.

12. TECHNICAL SPECIFICATION AND REQUIREMENT

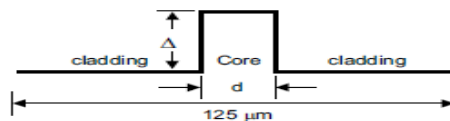
Technical specifications of fibre optic cable required is shown in 12.1 below. Bidders are required to comply with the technical specifications of the fibre optic cable required for both 144 core and 72 core cable. It is a requirement that bidders shall provide the technical specifications of the cable they are supplying and the name of the manufacturer that will be manufacturing the fibre optic cable, dead ends and suspension clamps and its accessories. **EFL preferred cables to be purchased from ZTT as we have undertaken factory acceptance testing on their products from their manufacturing base in Nantong, China.**

12.1. 144 Core, 72, 36 & 12 core ADSS Single-Mode G652D Fibre Optic Cable (maximum span length – 150m)

2. Optical Fiber Requirements

TFOC Matched Cladding Single Mode Fiber consists of a germanium doped core and a silica cladding. The fiber is fully compatible with other commercially available matched cladding Fibers. The dispersion characteristics of the fiber are optimized for systems operating in the 1310 nm region, although operation at 1550 nm is possible.

TFOC Fibers feature a dual UV curable acrylate coating system, which provides unparalleled performance in a wide range of environmental conditions. The advantages of this coating structure are excellent resistance to micro-bending induced losses, superior hydrolytic stability and long term preservations of color code integrity. The coating is easily strippable using mechanical methods.



(d = core diameter)

Fig.1. Refractive index profile, Dispersion Unshifted Single Mode Fiber

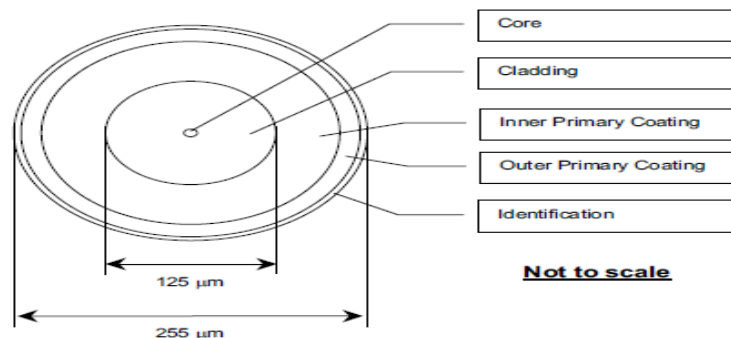


Fig. 2 Cross Section View of Dispersion Unshifted Single Mode Fiber

Table 1. Single Mode Fiber Requirements, Dispersion-Unshifted Fiber (ITU-T Rec. G.652)

Fiber attributes			
Item	Description	Notes	
Manufacturing Method	VAD (vapor axial deposition method)	-	
Refractive Index Profile	Step Index, Matched Cladding	-	
Core	Germania (GeO ₂) doped Silica (SiO ₂)	-	
Core Diameter	8.3 μm	2	
Cladding	Silica (SiO ₂)	-	
Primary Coating	2 layers of UV curable resin	-	
Index of refraction Difference	0.36%	2	
Group refractive index *	1.467 @ 1310 nm and 1550 nm	2	
Cladding Diameter	125 ± 1 μm	1	
Cladding Non-Circularity	≤ 1 %	1	
Core/Cladding Concentricity error	≤ 0.8 μm	1	
Coating Diameter (uncolored)	245 ± 10 μm	1	
Coating/Cladding Concentricity error	≤ 12 μm	1	
Colored Fiber Diameter	255 ± 10 μm	1	
Mode Field Diameter	9.2 ± 0.5 μm @ 1310 nm 10.4 ± 1.0 μm @ 1550 nm	1	
Proof test stress	The entire length of fiber is subjected to tensile stress greater than 0.69 GN/ m ² (100 kpsi) : 1% strain equivalent, 1s	1	
Attenuation with Bending	100 turns, 25 mm radius	≤ 0.05 dB @ 1310 nm ≤ 0.10 dB @ 1550 nm	1
	1 turns, 16 mm radius	≤ 0.50 dB @ 1550 nm	
Zero-Dispersion Wavelength (λ ₀)	1300 ≤ λ ₀ ≤ 1324 nm	1	
Max. Zero-Dispersion Slope (S _{0max}) at λ ₀	≤ 0.092 ps/(nm ² .km)	1	
Chromatic dispersion coefficient, D(λ)	$D(\lambda) = \lambda S_{0max} / 4 \cdot [1 - \{\lambda_0/\lambda\}^4]$ ps/(nm•km) (λ = Operating Wavelength)	-	
Coating Strip Force (@ 0 °C to +45 °C)	1.3N (0.3lbf) ≤ F ≤ 8.9N (2.0lbf)	2	
Cable attributes			
Item	Description	Notes	
Attenuation coefficient	< 0.40 dB/km @ 1310 nm < 0.25 dB/km @ 1550 nm	1	
Attenuation discontinuities (step)	≤ 0.10 dB at 1310 nm and 1550 nm	1	
Cabled Cut-off Wavelength (λ _{cc})	≤ 1260 nm	1	

Notes: 1. Qualification Requirement
2. Typical Value, Not Specified

* Optical time domain reflectometers (OTDRs) require the setting of the fiber's group refractive index in order to calculate and display distance. The above is a group refractive index values for OTDR settings.

3. Cable Core / Cable Sheaths Characteristics and Construction
 These core/sheath combinations are described in detail below.

Table 2. Constructions of single jacket dry core loose tube fiber optic cable.

Item		Description			
		2-30 fibers	36 fibers	48-60 fibers	72 fibers
Optical Fiber	Construction	Table 1			
Filling Compound	Material	Thixotropic Jelly Compound			
Loose Tube	Material	(PBT) Polybutylene Terephthalate with color coding			
	Fiber per Tube	Max. 6		Max. 12	
	Number	1-5	6	4-5	6
	Assembly	Fibers are brought together with the filling compound and placed in the extruded tube			
Filler Rod	Material	Polyethylene, natural color			
	Number	4-0	0	1-0	0
Stranding	Method	Reverse oscillating lay (ROL) technique (SZ Direction)			
Central Strength Member	Material	FRP (Fiberglass Reinforce with Plastic) If necessary, jacketed with polyethylene			
Water Blocking Element	Material	Suitable Water Swellable Materials (Dry-Core Technology)			
Core Covering	Material	Water Blocking tape			
	Assembly	The tape shall be wrapped longitudinally over the cable core			
Additional Strength Member	Material	Aramid yarns or Flexible E-glass yarns (When necessary)			
	Number	The quantity of additional strength member shall be selected to minimize cable cost while meeting the performance requirement of the cable applications			
Ripcord	Material	Plastic threads			
Sheath	Material	Sky Blue Polyethylene			
	Thickness	Minimum 1.5 mm			
Cable Diameter (Approx.) mm		11.0	12.0	12.5	13.5
Cable Weight (Approx.) kg/km		85	100	110	130
Structure		Fig. 3			

* The thickness of the thinnest point shall not be measured at the groove of the ripcord.

** Manufacturer may use additional suitable tape(s), thread(s) or dielectric elements into suitable place in the cable for manufacturing's reason.

Table 2. (Con't) Constructions of single jacket dry core loose tube fiber optic cable.

Item		Description			
		84-96 fibers	108-120 fibers	132-144 fibers	216 fibers
Optical Fiber	Construction	Table 1			
Filling Compound	Material	Thixotropic Jelly Compound			
Loose Tube	Material	(PBT) Polybutylene Terephthalate with color coding			
	Fiber per Tube	Max. 12			
	Number	7-8	9-10	11-12	18
	Assembly	Fibers are brought together with the filling compound and placed in the extruded tube			
Filler Rod	Material	Polyethylene, natural color			
	Number	1-0	1-0	1-0	0
Stranding	Method	Reverse oscillating lay (ROL) technique (SZ Direction)			
Central Strength Member	Material	FRP (Fiberglass Reinforce with Plastic) If necessary, jacketed with polyethylene			
Water Blocking Element	Material	Suitable Water Swellable Materials (Dry-Core Technology)			
Core Covering	Material	Water Blocking tape			
	Assembly	The tape shall be wrapped longitudinally over the cable core			
Additional Strength Member	Material	Aramid yarns or Flexible E-glass yarns (When necessary)			
	Number	The quantity of additional strength member shall be selected to minimize cable cost while meeting the performance requirement of the cable applications			
Ripcord	Material	Plastic threads			
Sheath	Material	Sky Blue Polyethylene			
	Thickness	Minimum 1.5 mm			
Cable Diameter (Approx.) mm		15.5	17.5	20.0	19.0
Cable Weight (Approx.) kg/km		175	225	280	265
Structure		Fig. 3			

* The thickness of the thinnest point shall not be measured at the groove of the ripcord.

** Manufacturer may use additional suitable tape(s), thread(s) or dielectric elements into suitable place in the cable for manufacturing's reason.

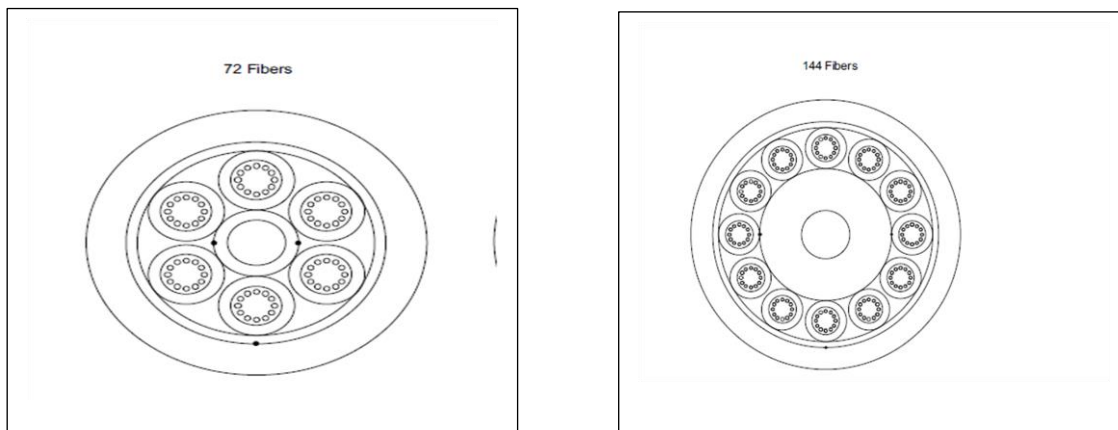


Figure 1 – Cross section view of the single jacket dry core loose tube fibre optic cable

4. Mechanical and Environmental Requirements.

This section covers the mechanical and environmental for the cable.

Table 5. Mechanical, Environmental Requirements for the cables

Item	Spec	Method
Torsion Test	Maximum attenuation change ≤ 0.10 dB at 1550nm. No cable jacket cracking or splitting.	TIA/EIA-455-85A or IEC-60794-1-E7 Test sample; 2 m Maximum Load; per table 2, EIA-455-85A Rotation; ± 180 degree, 10 cycles
Tensile Performance Test	Maximum attenuation change ≤ 0.10 dB at 1550 nm at maximum allowable pulling tension.	IEC-60794-1-E1A Test sample; 25 m Minimum Sheave Dia.; 480 mm(Universal) Load; maximum rated tensile load
Impact Test	Maximum attenuation change ≤ 0.10 dB at 1550 nm. No cable jacket cracking or splitting.	TIA/EIA-455-25B or IEC-60794-1-E4 Starting Energy; depend on cable diameter, per Table 1, EIA/TIA-455-25B Number Impact; 25 Test sample; Approx. 20 m
Repeated Bending Test	Maximum attenuation change ≤ 0.10 dB at 1550 nm. No cable jacket cracking or splitting.	TIA/EIA-455-104A or IEC-60794-1-E6 Sheave Dia.; 20 x cable dia. Number Cycles ; 25 Load; per Table 2, EIA-455-104A Test Sample ; Approx. 20 m
Compression Test	Maximum attenuation change ≤ 0.10 dB at 1550 nm. No cable jacket cracking or splitting.	TIA/EIA-455-41A or IEC-60794-1-E3 Load ; 2,200 N(220N/cm) non-armored Duration; 10 minutes Test sample ; Approx.20 m
Cable Bending Test	Maximum attenuation change ≤ 0.10 dB at 1550 nm. No cable jacket cracking or splitting.	IEC-794-1-E11B Mandrel Diameter : 20 x External Diameter of Cable Cycles : 1
Water Penetration Test	No fluid leakage through the open cable end after 1 hour.	EIA-455-82B or IEC-60794-1-F5 Fluid Pressure; 1m static head or equivalent pressure. Test sample ; 3 m Duration ; 1 hour
Temperature Cycling Test	Max. Attenuation change ≤ 0.10 dB/km at 1550 nm and no cable jacket cracking or splitting at operating temp.	TIA/EIA-455-3A or IEC-60794-1-F1 Time at Temp. ; At least 16hr. Each Temp. Temp. Range ; -10°C ($\pm 2^\circ$ C)Minimum +70°C ($\pm 2^\circ$ C)Maximum Number of Cycles; Not less than 1 cycle

5. Cable Marking and Shipping Requirements

5.1 Sheath marking

The sheath marking is available upon customer's request. The sheath marking shall be printed (Hot Stamp) on the outer sheath of the cable with white color in one-meter intervals and there are two sky blue color identification stripes run longitudinally along the outer sheath diametrically opposite each other.

5.2 Reels

- 5.2.1 The cable will be delivered at the required length on a wooden reel. The reels are designed to prevent damage to the cable during shipment and installation.
- 5.2.2 The cable shall be delivered on wooden reel in standard manufacturing length of 4,000 m. (Special length is available upon request)
- 5.2.3 The diameter of the barrel shall be not less than 30 times of the outer diameter of the cable.
- 5.2.4 Circumference shall be completely enclosed with wooden battens, these battens shall be secured by nails to each flange. There are steel bands are strapped about the wooden batten to help secure the battens to the reel.
- 5.2.5 To provide access for testing, the inner end of the cable protrudes through the inside of the reel. The end is wound between rings located on the side of the flange to protect it during transport and storage. The length of the inner end is typically 3 meters. The cable ends are securely fastened so as not to protrude beyond any portion of the reel in an unprotected manner and to prevent the cable from becoming loose in transport.

5.3 Sealing and Cable Termination

The both end of the cable shall be sealed with a suitable rubber cap or heat shrinkable cap to prevent ingress of moisture.

5.4 Information Accompanying the Reel

The following information is securely attached to the reel.

- Manufacturer's Name
- Customer's Name
- Customer Order Number
- Customer Part Number (if Applicable)
- Kind & Size (Cable Description)
- Order Length
- Outside sequential
- Inside sequential
- Inspected by
- Drum No.
- Reel ID.
- Ship Length
- Gross Weight
- Net Weight
- Date

- END OF SPECIFICATION -

12.2. 72 core SM Underground Fibre Optic Cable shall meet the following minimum specifications:

12.2.1. The cable shall be manufactured to the following standards:

- 12.2.1.1. **IEC 60794-1-2-E1**
- 12.2.1.2. **IEC 60794-1-2-E3**
- 12.2.1.3. **IEC 60794-1-2-E4**
- 12.2.1.4. **IEC-60794-1-2-E7**
- 12.2.1.5. **IEC-60794-1-2-E11**
- 12.2.1.6. **IEC-60794-1-2-E18**
- 12.2.1.7. **IEC-60794-1-2-F1**
- 12.2.1.8. **IEC-60794-1-2-F5B**
- 12.2.1.9. **ITU-T G.650**
- 12.2.1.10. **ITU-T G.652**
- 12.2.1.11. **EIA/TIA 596**
- 12.2.1.12. **ISO 9001**

12.2.2. GENERAL

The underground fibre optic cable shall be unarmoured and shall be suitable for underground installation in pipes. The cable should be of low weight, small volume and high flexibility. The mechanical design and construction of each unit shall be inherently robust and rigid under all condition of operation, adjustment, replacement, storage and transport.

12.2.3. Colour Coding & Fibre Identification

Color Coding & Fibre Identification Individual optical fibre within a fibre unit, and fibre units shall be identifiable in accordance with EIA/TIA 598 or IEC 60304 or Bellcore GR-20 colour-coding scheme. The color coding system shall be discernible throughout the design life of the cable. Coloring utilized for color coding optical fibre shall be integrated into the fibre coating and shall be homogenous. The color shall not bleed from one fibre to another and shall not fade during fibre preparation for termination or splicing. Each cable shall have traceability of each fibre back to the original fibre manufacturer's fibre number and parameters of the fibre. If more than the specified number of fibre are included in any cable, the spare fibre shall be tested by the cable manufacturer and any defective fibre shall be suitably bundled, tagged, and identified at the factory. The coloring scheme shall be submitted along with the cable DRS/drawing for Employer's approval.

12.2.4. Strength Members

The central fibre optic unit should include a central strength member of Fibre Reinforced Plastic (FRP) or other suitable material. Peripheral strength members and aramid yarns are also acceptable. The central FRP strength member may be slotted type with SZ lay (reverse oscillation lay) of fibre units or it may be cylindrical type with helical lay of fibre units

12.2.5. Filling Compound

The interstices of the central fibre optic unit and cable shall be filled with a suitable compound to prohibit any moisture ingress or any longitudinal water migration within the fibre optic unit or along the fibre optic cable. The water tightness of the cable shall meet or exceed the test performance criteria as per IEC60794-1-2-F5. The filling compound used shall be a non-toxic homogenous waterproofing compound that is free of dirt and foreign matter, anti-hygroscopic, electrically nonconductive and non-nutritive to fungus. The compound shall also be fully compatible with all cable components it may come in contact with and shall inhibit the generation of hydrogen within the cable. The filling compound shall remain stable for ambient temperature up to +70o C and shall not drip, flow or leak with age or at change of temperature. Reference method to measure drip point shall be as per IEC 60811-5-1 and drip point shall not be less than 70o C

12.2.6. The Sheath / Inner jacket

The sheath shall be black, smooth, concentric, and shall be free from holes, splits, blisters and other surface flaws. The sheath shall be extruded directly over the central fibre optic unit and shall also be non-hygroscopic. The cable sheath design shall permit easy removal without damage to the optical fibres or fibre units. The sheath shall be made from good quality of weather resistant polyethylene compound (Black High Density Polyethylene- HDPE) and thickness shall be > 1.8mm.

12.2.7. The Outer Jacket/ Termite protection

A circular jacket of not less than 0.65mm Polymide-12 (Orange Nylone-12) material should be applied over the sheath as an outer jacket. The outer jacket shall have smooth finish and shall be termite resistant.

12.2.8. Rip Cord:

Suitable rip cord(s) shall be provided to open the outer sheath of the cable. The rip cord(s) shall be properly waxed to prevent wicking action and shall not work as a water carrier. 3.2.7 Mechanical Parameters & Test: The offered cable shall meet requirement of mechanical characteristic & tests specified in latest TEC specifications.

12.2.9. Cable drums.

Marking, Packaging and Transport All optical fibre cable shall be supplied on strong wooden drums provided with lagging with adequate strength, constructed to protect the cabling against all damage and displacement during transit, storage and subsequent handling during installation. The cable drum shall be suitable to carry underground fibre optic cable of length upto 4 Km $\pm 5\%$ or 2 km $\pm 10\%$.. Drum schedule shall be approved by the Employer before manufacturing the FO cable. Both cable ends in the drum shall be sealed and shall be readily accessible. The drum shall be marked with arrows to indicate the direction of rotation. Both the ends of the cable shall

be provided with pulling eye. The pulling eye and its coupling system should withstand the same tensile load as applicable to the cable.

The following marking shall be done on each side of the cable drums

1	Manufacturers name	8	Inspected by
2	Customers Name name and address	9	Drum No.
3	Customer Order Number	10	Reel ID
4	Kind and Size (Cable Description)	11	Ship Length
5	Order Length	12	Gross Weight
6	Outside sequential	13	Net Weight
7	Inside sequential	14	Date

12.3. Quantity of the cable required

The table below depicts the fibre optic cable length required to be supplied in this tender:

	Fibre Capacity	Drum QTY	Drum type
1	144 core ADSS single mode cable	2 x 3km drum	Aluminium/Plastic
2	72 core ADSS single mode cable	4 x 3km drum	Aluminum/Plastic
3	36 core ADSS single mode cable	4 x 3km drum	Aluminum/Plastic
4	12 core ADSS single mode cable	3 x 3km drum	Aluminum/Plastic
5	72 core underground fibre optic cable	2 x 3km drum	Aluminum/Plastic

12.2 Dead End Kits for 144 core, 72 core and 12 core Fibre Optics cable and underground fibre optic cable.

Bidders shall supply the correct Dead end with its accessories (complete) based on the size of fibre optic cable required as per tender specifications in 12.1 above.

Quantity of the dead ends to be supplied complete with its accessories is tabulated below.

	Fibre capacity	QTY of Dead end with accessories (complete set)
1	144 core ADSS single mode cable	500
2	72 core ADSS single mode cable	500
3	36 core ADSS single mode cable	500
4	12 core ADSS single mode cable	700

Bidders shall provide detail drawings and specifications of dead end supplied together with installation guidelines and procedures.

12.4. Suspension clamp for 144 core, 72 core and 12 core Fibre Optics cable.

Bidders shall supply the correct suspension clamps with its accessories (complete) based on the size of fibre optic cable required as per tender specifications in 12.1 above.

Quantity of the suspension clamps to be supplied complete with its accessories is tabulated below.

	Fibre capacity	QTY of Suspension clamp with accessories (complete)
1	144 core ADSS single mode cable	500
2	72 core ADSS single mode cable	300
3	36 core ADSS single mode cable	300
4	12 core ADSS single mode cable	400

12.5. COYOTE® DOME CLOSURE x 300

Bidders shall provide splicing enclosures and it is recommended that the COYOTE DOME enclosure shall be supplied. Size of the Coyote DOME Closure to be supplied is shown in the table below. The splicing closures should be equipped with splicing trays that is capable of housing 144 splices.

Enclosure [Splicing box]				
	Fibre	QTY	Size	Comments
1	144 core ADSS single mode cable	100	SIZES: 6.5" x 17"	Max Splice Capacity: (144) Single Fusion
2	72 core ADSS single mode cable	100		
3	36 core ADSS single mode cable	100		
4	12 core ADSS single mode cable	100		

Catalogue Number	CXD617U-001	
Splice Capacity (Maximum) - Single Fusion (Low Profile, 80809958), Single Fusion (Low Profile, 80813152), Single Fusion (Deep Profile, 80808945)	96, 144, 80	
Number of Splice Trays – 80809958, 80813152, 80808945	4, 4, 2	
Cable Port Quantity	4	
Cable Diameters¹	2.4 – 31.8 mm and Flat Drop	
Configuration	Butt	
Cable Types	Buffer Tube or Ribbon	
Application	Direct Buried, Below Grade, Pole and Wall, Aerial	
Ingress Protection	In accordance to Telcordia® GR-771-CORE ¹ , Buried, Underground, IP-68	
Size	W 218 x L 463 mm	
Adapter Port Quantity (Maximum)	24 SC or 48 LC	
Kit Contents	CXD617U-001	Includes (2) 1-Hole Grommets 10.2 – 15.2 mm, (2) 1-Hole Grommets 15.2 – 21.6 mm, (1) Transition Tubing Kit, (2) Transport Tubing Kits, and (1) 16 Position Bulkhead Bracket. NOTE: Adapters and pigtails sold separately.

¹ This is the maximum range of cable diameters this closure can accept and does not reflect the cable diameter range for the closure kits listed above. Check the grommets provided with each closure kit to determine the acceptable cable diameter range for that closure kit.

Telcordia® is a registered trademark of Telcordia Technologies Inc., now part of Ericsson.

13. TENDER EVALUATION

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 of the outcome after completion of the Tender evaluation process.

The evaluation of the tender submissions will be weighted as such:

No.	Components	Weighting (%)
1	Cost	30 %
2	Compliance to Technical specification	55 %
3	Delivery timeframe. Refer to section 4.	5 %
4	Letter from Manufacturer/Preferred supplier	10 %

14. SUBMISSION OF TENDER

14.1. Overseas & Local Bidders

All bidders shall upload an Electronic copies of their bid in the **TENDER LINK** Electronic Tender Box no later than **4:00pm, on Monday 5th June, 2024**.

To register your interest and tender a response, view 'Current Tenders' at:

<http://www.efl.com.fj/contractors-suppliers/tenders/current-tenders/>

For further information, contact The Secretary Tender Committee, by e-mail tenders@efl.com.fj or to ShazminaK@efl.com.fj.

Tenders received **after 4:00pm** on the closing date of **Monday 5th June, 2024** will **not be considered**.

Lowest bid will not necessarily be accepted as successful bid.

For further information or clarification please contact our Supply Chain Office on phone **(+679) 3224360** or **(+679) 9992400**.

15. Appendix

15.1. Submission Forms

The following information has to be filled by the bidder and submitted with Tender Documents:

1. Company

Name: _____

2. Director/Owner(s): _____

3. Postal

Address: _____

4. Email

Address: _____

5. Phone

Number: _____

6. Fax

Number: _____

7. Office

Location: _____

8. Facsimile & Skype:

9. Web Address:

10. After Sales Contact details:

11. TIN Number (local bidders

only): _____

12. Company Registration Number(local bidders

only): _____

13. FNPF Employer Registration Number (local bidders

only): _____

14. Number of Branches &

locations: _____

15. Years of Experience & reputation in the market

: _____

16. Area of business Specialization:

Manufacturer & Supplier

[Please tick where applicable]

Retailer

- Licensed Agent
 Others, please specify

17. Business Structure :

I hereby, declare that all the above information is correct.

Sign: _____

Name: _____

Position: _____

Date: _____

General Requirement

#	<u>General Requirement</u>	Please Tick (<input type="checkbox"/>)	Describe in detail
a).	Specification of the Fibre cable and accessories provided in the bid.		
b).	Warranty Details of each item included.		
c).	Manufacturer's detail, address		
d).	Willing to accept Purchase Order and provide a minimum of 30days credit account.		
e).	Be able to provide back up support		
f).	Delivery time frame stated.		
g).	Proven background on supplying Test equipment products.		
h).	Validity period of the price.		
i).	Letter from Manufacturer to state that the bidder is the authorised distributor or reseller of the test equipment offered.		
j).	Overseas bidders are to provide their price offer as CFR, Lautoka, Fiji		

16. Bid Price

16.1. Fibre Optic cable

	Fibre	Drum QTY	Unit price per km	Total
1	144 core ADSS single mode cable	2 x 3km drum		
2	72 core ADSS single mode cable	4 x 3km drum		
3	36 core ADSS single mode cable	4 x 3km drum		
4	12 core ADSS single mode cable	3 x 3km drum		
5	72 core single mode underground fibre	2 x 3km drum		

16.2. Dead Ends and Accessories (Complete)

Dead end with accessories (complete set)				
	Fibre	QTY of Dead end with accessories (complete set)	Unit Price	Total
1	144 core ADSS single mode cable	500		
2	72 core ADSS single mode cable	500		
3	36 core ADSS single mode cable	500		
4	12 core ADSS single mode cable	700		

16.3. Suspension Clamps and Accessories (Complete)

Suspension Clamps and Accessories (Complete)				
	Fibre	QTY of Suspension clamp with accessories (complete)	Unit Price	Total
1	144 core ADSS single mode cable	500		
2	72 core ADSS single mode cable	300		
3	36 core ADSS single mode cable	300		
4	12 core ADSS single mode cable	400		

16.4. COYOTE DOME [SPLICING ENCLOSURE]

COYOTE DOME Enclosure [Splicing box]				
	Fibre	QTY	Size	Comments
1	144 core ADSS single mode cable	100	SIZES: 6.5" x 17"	Max Splice Capacity: (144) Single Fusion
2	72 core ADSS single mode cable	100		
3	36 core ADSS single mode cable	100		
4	12 core ADSS single mode cable	100		

Note:

1. Supply of Equipment will not attract 15% With Holding tax as per Fiji Government Tax law Service (Training) but Training (service) will be charged 15% Withholding Tax. Indicate in your offer if provisional tax is included in the price bid.

All local bidders are to provide with the VIP price which is inclusive of freight, duty, taxes, customs clearance and delivery charges to Telecom *Workshop, Lautoka.*

2. Overseas bidders are to provide their price offer as CFR, Lautoka, Fiji

TENDER 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 _____

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: _____

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 05th June, 2024.

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. 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.