



**REGULATIONS ON TELECOMMUNICATIONS
INFRASTRUCTURE DEPLOYMENT, SHARING AND
DECOMMISSIONING**

2026

Table of Contents

Part I: Introduction	3
1.0 Preamble	3
2.0 Short Title	3
3.0 Purpose of These Regulations	3
4.0 Scope of Application	3
5.0 Objective of These Regulations	4
6.0. Terms and Definitions	5
Part II: Telecommunications Infrastructure Deployment	8
7.0 General Requirements	8
8.0 Tower/Mass Installation	10
8.1 Technical Standards	10
8.2 Public Safety and Environmental Protection	10
8.3 Operation and Maintenance	11
9.0 Optical Fiber Deployment	11
9.1 Right of Way (ROW)	11
9.2 Optical Fiber Type and Standard	12
9.3 Optical Fiber Laying Standards	12
9.4 Coverage Obligations	13
Part III: Infrastructure Sharing	14
10.0 Scope of Sharing	14
11.0 Passive Infrastructure Sharing	16
12.0 Active Infrastructure Sharing	18
13.0 Access Rights and Obligations	18
Part IV: Infrastructure Sharing Agreements	19
14.0 Commercial Negotiation	19
15.0 Obligation to Share Infrastructure on an Open Access Basis	20

16.0 Lodging Infrastructure Agreement with the LTA	22
17.0 Rules for Infrastructure Sharing on an Open Access Basis	Error! Bookmark not defined.
Part V: Reference Access Offers for Infrastructure Sharing ..	22
18.0 Requirements for Reference Access Offers	22
Part VI: Other Provisions.....	26
19.0 Cost-Sharing and Competition	26
20.0 Dispute Resolution	26
21.0 Financing Telecom Infrastructure Deployment	Error! Bookmark not defined.
Part VII: Monitoring, Compliance and Enforcement	27
22.0 Monitoring and Compliance.....	27
23.0 Enforcement Mechanism	27
Part VIII: Transition, Amendment and Entry into Force.....	28
24.0 Transitional Provision	28
25.0 Amendment	28
26.0 Entry into Force	28
Annex A: Specific Breaches and Corresponding Fines.....	29
Annex B: Technical Guidelines for Telecom Infrastructure Deployment	31
Annex C: ITU Standards Reference Summary	35
Implementation Notes:	Error! Bookmark not defined.

Part I: Introduction

1.0 Preamble

1.1 The Liberia Telecommunications Authority (LTA), established by an Act of National Legislature in 2007 as the independent regulatory body with the power and authority to regulate the telecommunications sector has, pursuant to Part III Section 11 (q), (t), and (w), Part VIII Section 41 and Part XIII Sections 66 and 67 of the Telecommunications Act 2007 (The Act), developed these Regulations to govern the deployment and sharing of Telecommunications Infrastructure in line with international best practices and ITU Recommendations.

2.0 Short Title

2.1 These Regulations may be cited as the ***Infrastructure Regulations 2026***.

3.0 Purpose of These Regulations

3.1 The purpose of these Regulations is to establish a robust regulatory framework that governs telecommunications infrastructure deployment, sharing and decommissioning in the Republic of Liberia.

4.0 Scope of Application

4.1 These Regulations shall apply to all licensed Telecommunications Service Providers owning, deploying sharing and/or decommissioning Telecommunications Infrastructure, including towers, masts, satellite earth facilities, fiber optic cable, and ducts in Liberia.

4.2 In implementing these Regulations, the LTA shall:

- (a) Take action(s) to ensure that deployment of Infrastructure meets acceptable standards as set out in these Regulations;

- (b) Encourage the sharing of both Passive and Active Infrastructure;
- (c) Establish the specific circumstances under which Telecommunications Service Providers shall be obligated to share infrastructure;
- (d) Take necessary enforcement measures to ensure the sharing of infrastructure where it is technically feasible and economically viable; and
- (e) promote commercially driven decisions and agreements to the extent possible.

5.0 Objective of These Regulations

5.1 The objectives of these Regulations are to:

- (a) Create a framework that ensures the deployment of Telecommunications Infrastructure that aligns with ITU Recommendations and international best practices;
- (b) Create a framework that improves cooperation among stakeholders and ensures the sharing of Telecommunications Infrastructure by Telecommunications Service Providers;
- (c) Eliminate unnecessary duplication of Telecommunications Infrastructure, and maximize the use of existing and future Telecommunications Infrastructure;
- (d) Mitigate the undesirable impacts on public health, safety and the environment resulting from the proliferation of Telecommunications Infrastructure installations;
- (e) Promote competition in the provision of Telecommunications Services, orderliness and effective planning in the provision of Telecommunications Infrastructure Services;
- (f) Promote investment and innovation in the provision of Telecommunications Services;

- (g) Reduce the cost of providing services and accelerate the speed of network deployment by leveraging pre-existing infrastructure; and
- (h) Incentivize investment in new network infrastructure to enhance service delivery.

6.0. Terms and Definitions

6.1 As used in these Regulations, the below defined terms and acronyms shall have the following meanings, and shall refer to both the singular and plural:

- 1. The Act:** means the Telecommunications Act 2007.
- 2. Access Network:** means the segment of a telecommunications network that connects end-user devices (like phones, computers, IoT terminals) to the Core network, enabling them to access services such as voice, data, and the internet.
- 3. Active Infrastructure:** means the electronic and radio equipment of a network that processes, routes, or transmits signals.
- 4. Active Sharing:** means sharing of active infrastructure.
- 5. Amenable to sharing:** means passive and active infrastructure that has been deemed to be sharable on a technically feasible and economically viable basis by the LTA;
- 6. Core Network:** means the central part of a telecommunications network that provides switching, routing, service control, and connectivity functions.
- 7. Dark Fiber:** means fiber optic cable infrastructure which has not yet been activated;
- 8. Decommissioning:** means the permanent removal, dismantling, or retirement of telecommunications infrastructure, including towers, fiber optic cables, ducts, base stations, satellite earth stations, and related facilities, from active service.

- 9. Dig Once Policy:** A regulatory approach that requires or strongly encourages coordination of the deployment of infrastructure so that optical fiber, ducts, or conduits are installed simultaneously with other infrastructure with the objective to minimize repeated digging, reduce costs, speed up broadband deployment, and limit disruption to communities.
- 10. Economically viable:** means that the requested sharing arrangement can be implemented on a cost-oriented basis that ensures recovery of investment, promotes efficient use of resources, and does not impose unreasonable financial burden on either party.
- 11. GIS Registry:** means a **geographic information ssystem-based database** used by regulators and operators to record, manage, and analyse Telecommunications Infrastructure and spectrum resources in relation to geography.
- 12. Infrastructure:** means **Telecommunications Infrastructure**.
- 13. Liberia Telecommunications Authority (LTA):** means the regulatory authority established and empowered pursuant to Part III of the Act;
- 14. Off the Shelf Services:** means services that are available for immediate purchase and use as compared to custom or bespoke services;
- 15. Open Access:** means a regulatory approach requiring that certain infrastructure be made available to third party Telecommunications Service Providers on fair, transparent, and non-discriminatory terms and conditions.
- 16. Passive Infrastructure :** means the non-electronic physical components of a telecommunications network that support or accommodate network equipment and facilities but do not themselves process, generate, amplify or transmit telecommunications signals.
- 17. Passive Sharing:** means the sharing of Passive Infrastructure.

- 18. Dense Wavelength Division Multiplexing (DWDM):** means an optical networking technology that massively increases fiber bandwidth by combining multiple data streams on different light wavelengths to travel simultaneously over a single strand of fiber.
- 19. Radio Access Network (RAN):** means the part of a mobile Telecommunications Network that connects user devices to Telecommunications Service Providers' core network via radio signals.
- 20. Reference Access Offer:** means the standardized, published terms and prices for wholesale access to Telecommunications Infrastructure or services on an open access basis.
- 21. Right of Way (ROW):** means the right to use the land of a third party for the purpose of deploying Telecommunications Infrastructure;
- 22. Satellite Service ProviderService Provider:** means an entity owning and/or operating satellites and authorized by the LTA to provide satellite-based services to licensed Telecommunications Service Providers within the territory of Liberia.
- 23. Technically Feasible:** means that the requested sharing arrangement can be implemented without compromising network performance, safety, or service quality, given the physical, engineering, and operational constraints of the infrastructure.
- 24. Telecommunications Equipment:** means an equipment intended to be connected directly or indirectly to a Telecommunications Network in order to provide Telecommunications Services;
- 25. Telecommunications Infrastructure:** means all passive and active infrastructure, supporting systems, and shared resources including access networks, transmission, switching, and signalling systems necessary for the establishment, operation, and expansion of Telecommunications Networks.
- 26. Telecommunications Infrastructure Service:** means the use of Telecommunications Infrastructure to support the delivery of Telecommunications Services.

27. Telecommunications Networks: means the structured system of interconnected transmission, switching, and signalling infrastructure that enable communication between users.

28. Telecommunications Service: means any provision of the voice and data transmission, SIM cards, and pre-paid accessories; equipment and infrastructure to customers; or any form of transmission of signs, signals, text, images or other intelligence by means of a Telecommunications Network.

29. Telecommunications Service Provider: means an entity authorized or licensed by the LTA to provide a Telecommunications Service to the public, or to own and/or operate Telecommunications Infrastructure,

30. Supporting Facilities: means the supplementary physical systems and services that enable active and passive Telecommunications Infrastructure to operate, which are distinct from the core structure and active electronic equipment.

31. Shared Resources: means infrastructure elements subject to co-location, leasing, or open access arrangements to promote efficiency and universal service.

32. Neutral Host: means an independent Telecommunications Service Provider providing shared access to infrastructure under non-discriminatory terms.

33. Universal Access Fund (UAF): Means the fund established pursuant to Part V Section 23 of the Telecom Act, 2007.

34. ITU Recommendations: means an official non-binding international standards or policy guidelines developed and approved by the member states and sector members of the International Telecommunication Union (ITU).

Part II: Telecommunications Infrastructure Deployment

7.0 General Requirements

7.1 All Telecommunications Service Providers intending to deploy Telecommunications Infrastructure in the Republic of Liberia

shall apply to the LTA for approval before commencing deployment of such [infrastructure](#).

7.2 Pursuant to Section 7.1 above, a Telecommunications Service Provider shall ensure that its application to the LTA contains the following:

- (a) Description of the Telecommunications infrastructure it intends to deploy. The description should include the site/location for deployment, in the case of a tower, the height; in the case of optical fiber, the path/route; in the case of Satellite earth station, (site/location and any other necessary information that may be required;
- (b) The estimated cost of the proposed infrastructure;
- (c) Right of way (ROW) approval from the Ministry of Public Works in the case of optical fiber laying, land use agreement, in the case of tower construction, and Landing Rights Authorization, in the case of Satellite Service Provider;
- (d) Report of the Environmental Impact Assessment/ Environmental social Impact Assessment (EIA/ESIA) done along the path and site/location of the deployment of Telecommunications Infrastructure along with clearance/permit from the Environmental Protection Agency (EPA) approving the deployment in the identified environment;
- (e) Clearance/Permit from the Liberia Civil Aviation Authority (LCAA), in the case of erecting towers within five (5) kilometres of an airport or such other distance as required by the LCAA,
- (f) Possess LTA-issued Type Approval certificate(s) for all telecommunications equipment.

7.3 In consideration of Section 7.2 the LTA shall have the right to conduct due diligence, which shall include background check, verification of information presented and visitation to the site identified.

8.0 Tower/Mast Installation

8.1 Technical Standards

- (a) Telecommunications Service Providers installing or modifying a tower shall ensure that the below technical standards are adhered to:
- i. **Structural integrity:** Towers erected shall comply with IEC 60652 standards for wind and seismic loads.
 - ii. **Foundation:** Geotechnical testing shall be conducted prior to constructing a tower in accordance with ANSI/TIA-222
 - iii. **Lightning protection:** All towers shall be equipped with grounding systems in accordance with ITU-T K.56
 - iv. **Fall Zone:** A minimum setback equal to the tower height shall be maintained from adjacent properties in accordance with ANSI/TIA-222

8.2 Public Safety and Environmental Protection

- (a) The below measures shall be put in place by Telecommunications Service Providers when erecting a tower:
- i. **Radio Frequency (RF) Exposure:** Ensure compliance with ITU-T K.52 and ITU-T K.91 limits on electromagnetic emissions.
 - ii. **Access Control:** Towers shall be fenced to secure against unauthorized entry in accordance with ITU-T X.1051.
 - iii. **Visual Impact:** Adopt designs that minimize aesthetic disruption in residential areas.
 - iv. **Noise and Pollution:** Ensure generators and equipment noise/pollutions are in compliance with national environmental standards

8.3 Operation and Maintenance

(a) Telecommunications Service Providers shall ensure the below activities are regularly undertaken and adhered to within their operation and maintenance services:

- i. **Annual Audits:** Annual RF exposure and structural integrity reports shall be submitted to the LTA at the end of the first quarter of the subsequent year.
- ii.
- iii. **Maintenance Records:** Logs of inspections, repairs and upgrades shall be maintained and made available to the LTA upon request.
- iv. **Emergency Preparedness:** Maintain disaster, recovery and safety protocols, and they shall be made available on request by the LTA.

9.0 Optical Fiber Deployment

9.1 Right of Way (ROW)

- (a) Telecommunications Service Providers deploying optical fiber are required to obtain a right of way permit from the Ministry of Public Works before commencing any digging and/or deployment.
- (b) The LTA shall coordinate with the Ministry of Public Works to ensure that ROW approvals are issued in a timely fashion to avoid unnecessary delays for the person or entity needing the approval.
- (c) The LTA shall coordinate with the Ministry of Public Works to implement a “Dig Once” policy mandating installation of open-access ducts.
- (d) Pursuant to Section 9.1 (C) above, the LTA, the Ministry of Public Works and other relevant entities shall ensure coordination among utility companies in order to minimize repeated excavation and ensure existing infrastructure are utilized.

9.2 Optical Fiber Type and Standard

(a) Telecommunications Service Providers deploying or intending to deploy optical fiber shall ensure that the installation is in compliance with the below **ITU Recommendations**

- i. **ITU-T G.652.D:** Only Standard single-mode fiber shall be used for backbone and metro networks.
- ii. **ITU-T G.655:** Only Non-zero dispersion-shifted fiber shall be used for long-haul DWDM systems.
- iii. **ITU-T G.657.A/B:** Only Bend-insensitive fiber shall be used for FTTH and indoor wiring.
- iv. **OM3/OM4 Multimode Fiber:** Telecommunications Service Providers are required to use these Multimode Fibers in their data centers and enterprise LANs.
- v. **ITU-T L.110:** Optical fiber cable management and maintenance recommendations shall be followed.
- vi. **IEC 60794:** Mechanical and environmental performance standards shall be followed for optical cables.

9.3 Optical Fiber Laying Standards

- (a) In laying optical fiber, Telecommunications Service Providers shall ensure that fiber ducts are installed at a minimum depth of **1.2 meters** in urban areas and **0.8 meters** in rural areas.
- (b) Optical fiber routes shall be mapped in a national GIS Registry, and micro-trenching may be permitted through LTA's guidance.

- (c) All optical fiber installations shall comply with ITU-T L.87 (Optical Fiber Cable Installation Guidelines).
- (d) In installing optical fiber, Telecommunications Service Providers shall ensure that all environmental safeguards are in place to minimize visual and ecological impact.
- (e) All installations shall include grounding and lightning protection per **IEC 60652**.

10.0 Technical Standards for Satellite Ground Station Installation

10.1 Ground Station Installation

- (a) Satellite Service Providers shall ensure that all ground stations are installed in locations free from obstructions to ensure optimal satellite visibility.
- (b) In installing ground stations, Satellite Service shall comply with ITU-R guidelines on radio wave propagation to avoid interferences.
- (c) Satellite Service Providers shall ensure that all antenna mounts and towers meet national engineering standards and ITU recommendations for stability and wind resistance.

10.2 Technical Installation Standards

- (a) In installing antennas, earth station equipment and power systems, Satellite Service Providers shall ensure:
 - i. That antennas are aligned precisely and point accurately as required by ITU-R S.1001 and related recommendations.
 - ii. Transmitters, receivers, and amplifiers meet ITU-R M.1480 essential technical requirements for mobile earth stations.

- iii. Backup power and redundant systems are installed to ensure service continuity.

10.3 Frequency Coordination and Spectrum Use

- (a) Satellite Service Providers shall ensure that all installations comply with ITU Radio Regulations (on frequency assignments and orbital slot coordination).
- (b) Satellite Service Providers-are required to implement shielding, filtering, and monitoring systems to prevent harmful interference with other services.
- (c) Although satellite frequency uses are coordinated internationally through the ITU, however, Satellite Service Providers are required to report frequency use to the LTA.

10.4 Operational Safety and Compliance

- (a) Satellite Service Providers shall follow ITU guidelines on long-term sustainability of outer space activities to ensure effective mitigation of space debris.
- (b) For electromagnetic compatibility (EMC) Satellite Service Providers shall ensure that all ground installations comply with ITU-R standards to avoid interference with terrestrial and aeronautical systems.
- (c) Satellite Service Providers shall submit to the LTA an annual report on maintenance and interference consistent with ITU -RS-465 at the end of the first quarter of the following year.

Part III: Infrastructure Sharing

11.0 Scope of Sharing

- 11.1** Infrastructure sharing shall include both Passive and Active sharing.

11.2 Active sharing, including RAN and Spectrum, may be permitted only under LTA's oversight.

11.3 Shared facilities shall comply with ITU-T L.1000 (Universal power adapter and efficiency standards).

12.0 Principles of Infrastructure Sharing

12.1 Infrastructure sharing shall be mandated where it is both **technically feasible** and **economically viable**, ensuring efficient use of resources, fair competition, and sustainable investment in telecommunications networks.

12.2 Sharing shall be deemed technically feasible where:

- (a) The infrastructure has sufficient **structural capacity** to host additional equipment without exceeding safety or load limits;
- (b) The arrangement complies with **recognized engineering standards** (e.g., ITU-T, IEC, IEEE) to ensure interoperability;
- (c) Service quality is not materially degraded, nor harmful interference introduced;
- (d) Shared use allows safe access for installation, maintenance, and upgrades; and
- (e) Active sharing arrangements ensure **secure traffic separation** and data privacy.

12.3 Infrastructure Sharing shall be deemed economically viable where:

- (a) Access charges are **cost-oriented**, reflecting actual costs plus reasonable return on investment;
- (b) Terms are **transparent, fair, and non-discriminatory** across operators;
- (c) The arrangement reduces **CAPEX/OPEX** compared to independent deployment;

- (d) The long-term sustainability of infrastructure maintenance and upgrades is preserved; and
- (e) The arrangement promotes **competition, coverage expansion, and consumer welfare** without undermining existing networks.

13.0 Passive Infrastructure Sharing

13.1 The LTA shall ensure the sharing of passive infrastructure and supporting services amenable to sharing, including but not limited to the following:

- (a) Rights of way,
- (b) physical sites, buildings, shelters and battery back-up facilities,
- (c) Utility poles, ducts, conduits and trenches;
- (d) Dark fiber;
- (e) Masts and tower structures;
- (f) Air conditioning systems;
- (g) Electrical power supplies;
- (h) Grounding and earthing systems; and
- (i) Security arrangements.

13.2 The LTA shall require Telecommunications Service Providers to share existing passive infrastructure amenable to sharing on an open access basis.

13.3 Nothing in these Regulations shall excuse any Telecommunications Service Provider from obtaining any necessary approval from relevant statutory authorities in relation to the access to, or use of, any Infrastructure.

13.4 Service Provider is under no obligation to develop or modify new infrastructure as a means to support requests for new or existing infrastructure sharing agreements.

13.5 A Telecommunications Service Provider that proposes to construct new passive infrastructure amenable to sharing shall, at least fifteen (15) calendar days before it finalizes the design of the facility:

- (a) publish details of its proposal on its website together with an invitation for expressions of interest in sharing; and
- (b) provide a copy of the proposal to the LTA who shall also publish the invitation on its website.

13.6 Any Telecommunications Service Provider may, within twenty (20) working days of the publication of the invitation, submit an expression of interest to the Telecommunications Service Provider proposing the construction of the new passive infrastructure, with a copy to the LTA.

13.7 The Telecommunications Service Provider that proposes to construct the new Passive Infrastructure, and all other Telecommunications Service Providers that have provided an expression of interest, shall make necessary modifications to the design characteristics of the new Passive Infrastructure to accommodate reasonable anticipated requirements of the Telecommunications Service Providers expressing interest.

13.8 The LTA shall implement and enforce a “Dig Once” Policy which may include, but not limited to the following elements:

- (a) minimum requirements for the infrastructure to be deployed, including the number and size of any ducts, conduit, hand holes, manholes or other infrastructure;
- (b) technical requirements for the installation of the infrastructure, including acceptable methods of installation and any standards to be followed;
- (c) requirements to advertise or otherwise notify Telecommunications Service Providers and other persons of the proposed installation of infrastructure;
- (d) coordination of the planning for and installation of infrastructure with other service providers, including the sharing of relevant information;

(e) provisions for access to and maintenance of the infrastructure once built;

(f) and costs.

14.0 Active Infrastructure Sharing

14.1 The LTA shall ensure the sharing of active infrastructure and supporting services amenable to sharing, including but not limited to the following:

- a) Radio Access Network
- b) Antennas
- c) Base Station Radio Equipment
- d) Backhaul Transmission Equipment
- e) Microwave Transmission System
- f) Switching and Routing Equipment
- g) Satellite Ground Station

14.2 A Telecommunications Service Provider that is providing wholesale access and transmission products and services using Active Infrastructure, and sharing Passive Infrastructure under section 14.1 above, shall make the terms and conditions on which such products and services are provided publicly available by publishing them on its website. The terms and conditions shall provide for wholesale access and infrastructure sharing on an open access basis.

15.0 Access Rights and Obligations

15.1 Telecommunications Service Providers shall grant access on an Open Access Basis, and shall publish Reference Offers with pricing and terms that are fair, transparent, cost-based and non-discriminatory.

15.2 Access requests shall be processed within 30 calendar days beginning the date of receipt of access request.

15.3 Telecommunications Service Providers requesting access shall notify the LTA of the access being requested.

Part IV: Infrastructure Sharing Agreements

16.0 Commercial Negotiation

16.1 Telecommunications Service Providers may negotiate, execute and modify infrastructure sharing agreements in such a manner and on such terms and conditions as are mutually acceptable.

16.2 A Telecommunications Service Provider seeking access to infrastructure shall make a request in writing to the Telecommunications Service Provider from which it is seeking the infrastructure service.

16.3 When negotiating infrastructure sharing, both parties shall:

- (a) Negotiate in good faith;
- (b) Provide all information relevant to the negotiations or agreement within 30 calendar days upon receipt of the request for sharing;
- (c) Not obstruct or delay the negotiations, or mislead or coerce the other Telecommunications Service Provider into reaching an agreement it would not otherwise have made;
- (d) Not interfere in any way with the other Telecommunications Service Provider's ability to communicate with the LTA, including having a Telecommunications Service Provider sign a non-disclosure agreement that precludes it from providing information requested by the LTA; and
- (e) Not refuse to permit amendment of the agreement to take into account changes in circumstances, including changes to the Act or any applicable regulation or rule.

16.4 A Telecommunications Service Provider may refuse to share infrastructure only if:

- (a) the infrastructure requested is not amenable to sharing;

- (b) the infrastructure requested has been reserved for its own use in accordance with sections 16.3 and 16.4 of these Regulations; or
- (c) the requested sharing would, in the Telecommunications Service Provider's reasonable opinion, and where the LTA had not made an Order otherwise:
 - (i) cause or be likely to cause material danger, damage or injury to any person or to any property;
 - (ii) cause material damage or otherwise interfere with the operation of its Telecommunications Network, telecommunications facilities or the provision of its telecommunications services; or
 - (iii) not be reasonable, having regard to technical or economic constraints.

17.0 Obligation to Share Infrastructure on an Open Access Basis

17.1 A Telecommunications Service Provider that receives a written request to share infrastructure, shall, within thirty (30) calendar days of receiving such request, prepare and provide to the requesting Telecommunications Service Provider an infrastructure sharing agreement that includes all necessary terms and conditions applicable to the sharing of the infrastructure, including, at a minimum the following:

- (a) Transparent prices, terms and conditions that do not unfairly discriminate between Telecommunications Service Providers, and which are consistent with any regulations or rules established by the LTA under Part X, Sections 54, 55 and 56 of the Act;
- (b) Provisions for the billing of the services;
- (c) Provision of information, including relevant technical and commercial information required to conclude the infrastructure sharing agreement, and to share the infrastructure;

- (d) Charges that are non-discriminatory and allow for a reasonable return on investment for bespoke services and a standard price list for off the shelf services;
- (e) Charges for dominant Telecommunications Service Providers shall be cost-based and comply with any regulations, rules or orders issued by the LTA;
- (f) Access to the requested infrastructure and supporting services including co-location services on a timely basis;
- (g) A commitment from each Telecommunications Service Provider not to disclose or use information received from another Telecommunications Service Provider in connection with an infrastructure sharing agreement for any purpose other than that for which it was supplied;
- (h) Where a request for infrastructure sharing is denied, provide reasons in writing consistent with these Regulations;
- (i) Provisions to handle any disputes in relation to or arising under the agreement; and
- (j) Any other terms that the LTA determines, from time to time, necessary to promote effective infrastructure sharing agreements.

17.2 A Telecommunications Service Provider that has made a written request to share infrastructure may request a site inspection visit at its own costs as a means to make an informed decision related to the sharing agreement.

17.3 The Telecommunications Service Provider owning the infrastructure to be shared shall provide prompt access to the site.

17.4 A Telecommunications Service Provider owning infrastructure amenable to sharing shall have the right to reserve capacity on such infrastructure, provided that it can demonstrate that it has specific plans for its own use of the infrastructure.

17.5 A Telecommunications Service Provider's right to reserve capacity for its own use shall not exceed 50% of the infrastructure which is not already in use, and shall be limited to infrastructure which it can demonstrate that it plans to use within no more than three (3) years.

17.6 Any reserved capacity that is not utilized within three (3) years shall be subject to sharing.

18.0 Lodging Infrastructure Agreement with the LTA

18.1 A Telecommunications Service Provider that enters into an infrastructure sharing agreement with another Telecommunications Service Provider shall file a copy of the agreement with **the LTA**.

Part V: Reference Access Offers for Infrastructure Sharing

19.0 Requirements for Reference Access Offers

19.1 The LTA may by written notice to a dominant Telecommunications Service Provider:

- (a) Require the dominant Telecommunications Service Provider to prepare and submit a Reference Access Offer for the LTA's approval by the date specified in the notice;
- (b) Accept a Reference Access Offer that the dominant Telecommunications Service Provider has submitted; or
- (c) Direct the dominant Telecommunications Service Provider to make changes to a Reference Access Offer by a particular date.

19.2 Before directing a dominant Telecommunications Service Provider to make changes to a Reference Access Offer, the LTA shall first consult with the dominant service provider.

19.3 If the LTA directs the dominant Telecommunications Service Provider to make changes to a Reference Access Offer, the

dominant Telecommunications Service Provider shall do so promptly and provide the revised Reference Access Offer to the LTA for approval by the date set by the LTA in the notice.

19.4 If a dominant Telecommunications Service Provider fails to prepare or make changes to a Reference Access Offer to the reasonable satisfaction of the LTA by the date set by the LTA, the LTA may by written notice to the dominant Telecommunications Service Provider:

- (a) Determine any aspect of the Reference Access Offer, including, if necessary, the terms of the entire Reference Access Offer, and in doing so shall ensure that the Reference Access Offer includes the provisions referred to in Section 16.0 of these Regulations; or
- Order the dominant Telecommunications Service Provider to take specific action to prepare the Reference Access Offer for approval (such as to engage a consultant to produce the Reference Access Offer).

19.5 In pursuant to Part V of these Regulations, the LTA may require a non-dominant Telecommunications Service Provider to prepare and publish a reference access offer.

19.6 The LTA shall publish all Reference Access Offers it approves or determines on its website. The Reference Access Offer shall also be published on the relevant Telecommunications Service Provider's website.

19.7 A Telecommunications Service Provider which publishes a Reference Access Offer shall accept, without further negotiation, all terms of that Reference Access Offer that are agreed to unconditionally and without modification by the Telecommunications Service Provider seeking infrastructure sharing.

20.0 Guidelines for preparing Reference Access Offer

20.1 In preparing a Reference Access Offer the following guidelines shall be considered:

- (a) Clearly defined terms and conditions shall be used in any infrastructure sharing agreement or Reference Access Offer;
- (b) The determination of prices including costing methodologies and other related principles;
- (c) The circumstances in which preferential, rather than open and non-discriminatory, access may be required;
- (d) The manner and time in which such Reference Access Offer shall be prepared and provided to the LTA for approval; and
- (e) The matters to be included in the Reference Access Offer for its effective implementation.

Part VI: Decommissioning of Telecommunications Infrastructure

21.0. General Principle

21.1 A Telecommunications Service Provider intending to decommission its telecommunications infrastructure shall ensure that the decommissioning exercise is conducted in a safe, environmentally protective and transparent manner.

21.2 In the decommissioning of infrastructure, Telecommunications Service Providers shall put measures in place to ensure that ongoing services are not disrupted or public safety compromised.

20.3 Prior to decommissioning infrastructure, a Telecommunications Service Provider shall notify the LTA, providing justification and timelines for the decommissioning.

22.0 Decommissioning Plan

22.1 Telecommunications Service Providers shall submit a Decommissioning Plan to the LTA at least 90 days before intended removal of the telecommunication infrastructure.

22.2 The Decommissioning Plan shall include:

- (a) Description of infrastructure to be decommissioned.
- (b) Reasons for decommissioning the infrastructure (e.g., obsolescence, replacement, relocation);
- (c) Impact assessment on service coverage and customers; and
- (d) Environmental and safety measures.

22.3 The LTA shall review and approve or reject the Decommissioning Plan within 30 days.

23.0 Environmental & Safety Obligations

23.1 Telecommunications Service Provider shall ensure that hazardous materials (e.g., batteries, fuel, cabling) are disposed of in accordance with national environmental laws.

23.2 Towers, base stations, satellite earth stations and Supporting Facilities shall be dismantled safely, with proper permits from relevant authorities.

23.3 Fiber ducts and underground facilities shall be sealed or repurposed to avoid hazards.

24.0 Infrastructure Sharing Consideration

24.1 Before decommissioning infrastructure, a Telecommunications Service Provider shall assess whether the infrastructure can be shared or transferred to another Licensee.

24.2 Decommissioning of infrastructure shall not be approved by the LTA if sharing is technically feasible and economically viable, unless all potential users decline to use/share the infrastructure.

24.0 Consumer Protection

24.1 Telecommunications Service Providers shall provide public notice of service changes resulting from decommissioning at least 60 days in advance.

24.2 In the event of decommissioning, Telecommunications Service Providers shall ensure that alternative service arrangements are offered to affected customers.

24.3 The LTA may impose conditions, including mandatory transfer of assets, if decommissioning threatens service continuity.

24.4 Unauthorized decommissioning shall result in the appropriate sanctions stipulated in Annex A appended to these regulations.

Part VI: General Provisions

25.0 Cost-Sharing and Competition

25.1 Telecommunications Service Providers shall allocate cost fairly among infrastructure users based on the capacity utilized.

25.2 Any Telecommunications Service Provider having unutilized capacity, pursuant to Section 16.4 of these Regulations, shall avail said capacity for utilization by other Telecommunications Service Providers.

25.3 Telecommunications Service Providers shall submit to the LTA on a semi-annual basis capacity utilization report.

26.0 Dispute Resolution

26.1 Any dispute arising from the implementation of these Regulations shall be resolved in accordance with the LTA's Regulations for the Treatment of Confidentiality, Dispute Resolution, Compliance and Enforcement 2009 (LTA-REG-002)

Part VII: Monitoring, Compliance and Enforcement

27.0 Monitoring and Compliance

27.1 Telecommunications Service Providers shall maintain a GIS-based registry of towers, ducts, satellite ground stations, fibre routes, and ensure they are updated semi-annually.

27.2 Telecommunications Service Providers shall submit infrastructure deployment and sharing data/information, including compliance with ITU and IEC standards annually, on January 31st of every year.

27.3 The LTA shall inspect, at any time, ongoing Telecommunications Infrastructure deployment to ensure that they meet required deployment standards.

28.0 Enforcement Mechanism

28.1 If a Telecommunications Service Provider breaches any provision of these Regulations, the LTA shall take one or more of the following enforcement measures pursuant to the Act, these Regulations and the Licensing Authorization Regulations:

- (a) Require the Service Provider to take action(s) to remedy the breach in a timely manner;
- (b) Subject the Telecommunications Service Provider to the appropriate penalty stipulated in the Table in Annex A of these Regulations;
- (c) Seek court actions to compel compliance of the Telecommunications Service Provider; or
- (d) Institute regulatory actions to suspend or revoke the License or Authorization.

Part VIII: Transition, Amendment and Entry into Force

29.0 Transitional Provision

29.1 Telecommunications Service Providers shall ensure that existing infrastructure sharing agreements comply with these Regulations within twelve (12) months of the effective date hereof.

30.0 Amendment

30.1 The LTA may review or amend these Regulations, including the Annexes pursuant to Section 58 (2) of the Act whenever it deems it necessary.

30.2 In conducting a review or amendment of these Regulations, the LTA may request and receive advice or comments from external advisory groups or consultants. However, the advice or comments shall not be binding on the LTA

30.3 The LTA may issue additional Rules, Orders, or Notices on any aspect of these Regulations. Such Rules, Orders or Notices Shall be of general application or specific to a Telecommunications Service Provider from time to time.

31.0 Entry into Force

31.1 These Regulations shall come into effect on the day they are published by the LTA.

Annex A: Specific Breaches and Corresponding Sanctions

No.	Breach	Sanctions
1	Deploying Telecommunications Infrastructure without LTA's approval	Deployment shall be halted and only resumed upon LTA's approval. Fines of not less than \$5,000.00 and not more than \$15,000.00 shall be imposed.
2	Any deviation from plan approved by LTA	Fine of 5 percent of the value of the proposed infrastructures.
3	Non -compliance with any of the technical standards pursuant to sections (8.1), (9.2 -9.3) and (10.1 – 10.3) of these Regulations when erecting or deploying Telecommunications Infrastructures	An Order to remedy the breach shall be issued, and the breach shall be remedied within 30 calendar days beginning the date of the Order. Failure to remedy, a fine of 5% of the cost of infrastructure shall be imposed.
4	Non -compliance with any of the safety and environmental standards pursuant to sections 8.2 and 10.4 of these Regulations when erecting or deploying Telecommunications Infrastructures	An Order to remedy the breach shall be issued, and the breach shall be remedied within 30 calendar days beginning the date of the Order. Failure to remedy the breach, a fine not less than \$1,000.00 and not more than \$50,000.00 shall be imposed.
5	Failure to submit reports by due date.	Penalty in Part X Section 26 of the Amended Licensing and Authorization Regulations shall apply.
6	Refusing to share infrastructure amenable to sharing.	Order a mandatory compliant action. Failure to comply, impose a fine of \$10,000.00 or 10% of the

		value of the infrastructure whichever higher
7	Delays beyond 30 days for the processing of access request	A fine not less than \$2,000.00 and not more than \$10,000.00 shall be imposed.
8	Failure to publish wholesale access terms and conditions for infrastructure sharing.	Order a mandatory compliant action. Failure to comply, a fine not more than \$5,000.00 shall be imposed.
9	Failure to published Reference Access Offers	Order a mandatory compliant action. Failure to comply, a fine not less than \$5,000.00 and not more than \$50,000.00 shall be imposed.
10	Reserving more than 50% unused capacity, and/or failing to utilize reserved capacity for more than 3 years in line with section 16.4 of these regulations.	Order a mandatory compliant action. Failure to comply, a fine not less than \$5,000.00 and not more than \$50,000.00 shall be imposed
11	Failure to update or submit reports on time.	Penalty in Part X Section 26 of the Amended Licensing and Authorization Regulations shall apply.
12	Unauthorized decommissioning of Telecommunications Infrastructure	A fine not less than \$5,000.00 and not more than \$50,000.00 shall be imposed. Order a mandatory reinstatement of infrastructure. Failure to reinstate, license may be suspended

No.	Standard Code	Title/Description	Application Area	Compliance Requirement
1	ITU-T K.52, K.61, K.70, K.83, and K.91	Guidance on limits of human exposure to electromagnetic fields (EMF) from telecommunication installations.	Tower siting, antenna placement, and EMF safety zones.	Mandatory compliance for all tower and antenna installations; Telecommunications Service Providers must maintain EMF exposure below recommended thresholds.
2	ITU-T K.56	Protection of radio base stations against lightning surges.	Tower grounding and surge protection systems.	All towers must include certified lightning arrestors and grounding systems per IEC 60652.
3	ITU-T K.59	Methods for assessing compliance with EMF exposure limits for mobile networks.	EMF measurement and monitoring.	Telecommunications Service Providers must conduct annual EMF audits and submit compliance reports to the LTA.
4	ITU-T G.652.D	Characteristics of a single-mode optical fiber and cable.	Backbone and metro fiber networks.	Standard fiber type for national backbone; ensures interoperability and low attenuation.
5	ITU-T G.655	Non-zero dispersion-shifted fiber optimized for DWDM systems.	Long-haul transmission and intercity links.	Required for high-capacity, long-distance routes; supports wavelength-division multiplexing.
6	ITU-T G.657.A/B	Bend-insensitive single-mode fiber for reduced bending loss.	FTTH (Fiber-to-the-Home) and indoor wiring.	Mandatory for last-mile and in-building fiber installations; improves durability and flexibility.

7	ITU-T L.87	Optical fiber cable installation guidelines.	Civil works and ducting.	All fiber installations must follow trenching, ducting, and cable-pulling procedures defined in L.87.
	ITU-T G.652.D	Single-mode optical fiber cable	For aerial backbone. OS2 single-mode fiber	Ensure low attenuation and dispersion, suitable for long distance transmission.
	ITU-T G.657.A2	Bend insensitive single-mode optical fiber	For aerial drop cables to the last-mile because it handles bends/wind	Handles light bends without significant signal loss.
	ITU-T G.655	Nonzero dispersion-shifted fiber (NZDSF)	Used for long-haul aerial DWDM links	Optimized for DWDM in longhaul networks.
8	ITU-T L.1000	Universal power adapter and efficiency standards for ICT equipment.	Shared facilities and neutral-host sites.	Power systems must meet energy-efficiency benchmarks and support multi-vendor interoperability.
9	ITU-T L.110	Optical fiber cable management and maintenance.	Network operations and maintenance.	Telecommunications Service Providers must maintain fiber routes per L.110, including labelling, splicing, and fault-management protocols.

10	IEC 60794	Mechanical and environmental performance of optical cables.	Fiber cable design and testing.	All cables must pass tensile, crush, and temperature tests per IEC 60794.
11	IEC 60652	Loading tests for structures.	Tower design and structural integrity.	Towers must withstand wind speeds up to 160 km/h and seismic loads per local building codes.
	Standard Code	Title / Description	Application Area	Compliance Requirement
12	ITU-R P.618-14 and P.619	Radio wave propagation models (rain fade, tropospheric effects, link budgets)	Link budget design, interference analysis, siting of ground stations	Telecommunications Service Providers must apply propagation models to ensure accurate link calculations and avoid harmful interference
13	ITU-R S.465/S.580	Mechanical integrity of earth station antennas	Antenna mounts, towers, and structural design	Antennas must meet mechanical stability and wind-resistance standards
14	ITU-T K.66	Lightning protection and EMC resistibility	Grounding, surge protection, electromagnetic compatibility	Install proper lightning arrestors, grounding systems, and EMC shielding
15	ITU-R M.1480	Essential technical requirements for mobile earth stations	Mobile ES transmitters, receivers, amplifiers	Equipment must comply with ITU technical specifications for mobile ES

19	ITU-R SM.329	Electromagnetic compatibility (EMC) standards	Spectrum monitoring, interference prevention	Operators must implement filtering, shielding, and monitoring systems to prevent harmful interference
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Annex B: ITU Standards

Annex C: Technical Guidelines for Telecom Infrastructure Deployment

1.0 Fiber Deployment Depths

-
- Urban areas: 1.2 m minimum depth.
 - Rural areas: 0.8 m minimum depth.
 - Micro-trenching: 0.3–0.4 m permitted under LTA’s approval.
-

2.0 Tower Safety Standards

-
- Compliance with ITU-T K.52, K.56, K.59.
 - Structural design per IEC 60652.
 - Mandatory lightning protection systems.
-

3.0 Fiber Type Applications

-
- G.652.D: Backbone, metro rings.
 - G.655: Long-haul, DWDM.
 - G.657: FTTH, indoor wiring.
 - OM3/OM4: Data centers, enterprise LANs.
-

4.0 GIS Registry Template

- Fields: Asset ID, Type (tower/fiber/duct), Location (GPS), Capacity, Owner, Sharing Status.

Annex D: Model Decommissioning Plan Template

1. General Information

- i. Telecommunications Service Provider's Name: _____
- ii. License Number: _____
- iii. Contact Person & Details: _____

2. Infrastructure Details

- i. Type of Infrastructure (tower, fiber, duct, base station, etc.): _____
- ii. Location (GPS coordinates / address): _____
- iii. Ownership Status (owned, leased, shared): _____
- iv. Date of Commissioning: _____

3. Reason for Decommissioning

- Obsolescence (technology upgrade, e.g., 2G → 4G/5G)
- Relocation / Replacement
- Safety Concerns
- Economic Non-viability
- Other (specify): _____

4. Impact Assessment

- Service Coverage Impact (areas affected, number of subscribers impacted): _____
- Alternative Service Arrangements (e.g., migration to nearby sites, roaming agreements): _____
- Consumer Notification Plan (timeline, channels of communication): _____

5. Environmental & Safety Measures

- Hazardous Material Disposal Plan (batteries, fuel, cabling): _____
- Structural Dismantling Method (tower removal, duct sealing, etc.): _____
- Permits & Approvals from Local Authorities: _____

6. Infrastructure Sharing Consideration

- Assessment of potential reuse by other operators: _____
- Evidence of consultation with other licensees: _____

- Justification if sharing was declined: _____

7. Timeline

- Proposed Start Date of Decommissioning: _____
- Expected Completion Date: _____
- Contingency Measures for Delays: _____

8. Regulatory Compliance

- Confirmation of adherence to national telecom regulations:

- Confirmation of adherence to environmental laws:

- Supporting Documents Attached (maps, technical reports, environmental clearance): _____

9. Declaration

We hereby declare that the information provided in this Decommissioning Plan is accurate and complete, and that all necessary measures will be taken to ensure safe, environmentally responsible, and consumer-friendly decommissioning of the infrastructure.

Signature: _____ Date: _____

This template ensures operators **justify decommissioning, assess impacts,** and **consider reuse/sharing** before dismantling infrastructure. It also gives regulators a **standardized format** to evaluate compliance and enforce penalties if obligations are ignored.