



भारतीय आयुर्विज्ञान अनुसंधान परिषद  
INDIAN COUNCIL OF MEDICAL RESEARCH

स्वास्थ्य अनुसंधान विभाग (स्वास्थ्य एवं परिवार कल्याण मंत्रालय)  
डॉ. रामलिंगस्वामी भवन, अन्सारी नगर, नई दिल्ली - 110029  
DEPARTMENT OF HEALTH RESEARCH (MINISTRY OF HEALTH & FAMILY WELFARE)  
V. RAMALINGASWAMI BHAWAN, ANSARI NAGAR, NEW DELHI-110029

सं.16/5/2023-प्रशासन.

दिनांक:13/03/2023

सेवा में,

निदेशक/प्रभारी निदेशक  
परिषद के सभी संस्थान/केन्द्र

महोदय/महोदया,

विभिन्न मंत्रालयों/विभागों से प्राप्त निम्नलिखित पत्र, सूचना एवं आवश्यक कार्यवाही के लिए संलग्न है।

| S.No | Reference No. & Date                             | Name of Ministry                           | Subject                                            |
|------|--------------------------------------------------|--------------------------------------------|----------------------------------------------------|
| 1.   | No.D.O. No.6-2/2022/NBM/MoM<br>Dated: 06.02.2023 | भारत सरकार, संचार मंत्रालय, दूरसंचार विभाग | Addendum to Model Building Bye-Laws 2016-reg.      |
| 2.   | No. G20 (B)/302/1/2022<br>Dated: 06.02.2023      | विदेश मंत्रालय नई दिल्ली                   | G20 India: Logo-Theme Elements and Guidelines-reg. |

भवदीय,

21 जे 2023  
13/3/23  
जगदीश राजेश

सहायक महानिदेशक (प्रशासन)

अनुलग्नक: यथोक्त  
प्रतिलिपि:

1. महानिदेशक/वरि. उपमहानिदेशक (प्रशा.)/वरि. वित्त सलाहकार के निजी सचिव
2. परिषद के सभी प्रभाग प्रमुख
3. उपमहानिदेशक (प्रशा.)/सहा. महानिदेशक (प्रशा.)
4. डॉ. एल. के. शर्मा, वैज्ञानिक ई: वैबसाइट पर अपलोड करने के लिए ईमेल आईडी (sharma.lk@icmr.gov.in) पर मेल कर दिया गया है।





**icmr**  
INDIAN COUNCIL OF  
MEDICAL RESEARCH

**भारतीय आयुर्विज्ञान अनुसंधान परिषद**  
**INDIAN COUNCIL OF MEDICAL RESEARCH**

स्वास्थ्य अनुसंधान विभाग (स्वास्थ्य एवं परिवार कल्याण मंत्रालय)  
वी रामलिंगस्वामी भवन, अन्सारी नगर, नई दिल्ली - 110029  
DEPARTMENT OF HEALTH RESEARCH (MINISTRY OF HEALTH & FAMILY WELFARE)  
V. RAMALINGASWAMI BHAWAN, ANSARI NAGAR, NEW DELHI-110029

16/5/2023/Admn.

Dated:13/03/2023

To

The Directors/Directors-in-charge of  
All Institutes/Centers of ICMR

Sir/Madam,

Please find enclosed the following letters which have been received from different ministries/Departments for information and necessary action.

| S.No | Reference No. & Date                              | Name of Ministry                                               | Subject                                                |
|------|---------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|
| 1.   | D.O. No 6-<br>2/2022/NBM/MoM<br>Dated: 06.02.2023 | Ministry of Communications<br>Department of Telecommunications | Addendum to Model Building<br>Bye-Laws 2016-reg.       |
| 2.   | No.G20(B)/302/1/2022<br>Dated: 06.02.2023         | Ministry of External Affairs, New<br>Delhi                     | G20 India: Logo- Theme Elements<br>and Guidelines-reg. |

Yours faithfully

(Jagdish Rajesh)

Assistant Director General (Admin.)

Encl: As above

Copy to:

1. PS to DG/Sr. DDG(A)/Sr. FA
2. All Divisional Heads
3. DDG(A)/ ADG(A)
4. Dr. L.K. Sharma, Scientist "E"-soft copy of the same has been mailed at your email ID (Sharma.lk@icmr.gov.in) for website upload.





652177

ADMN-II ADMN &lt;admn2355@gmail.com&gt;

**Fwd: D.O letter dated 06.02.2023 received from Department of Telecommunication-reg.**

1 message

**R Lakshminarayanan** <lakshminarayanan.r@icmr.gov.in>

Fri, Feb 17, 2023 at 2:15 AM

To: admn2355 &lt;admn2355@gmail.com&gt;

Cc: SAFAL CHETRI CHETRI &lt;chetri.s@icmr.gov.in&gt;, Jagdish Rajesh &lt;rajeshj.hq@icmr.gov.in&gt;, dhrhq icmr &lt;dhrhq.icmr@gmail.com&gt;, rajnikant srivastava &lt;rajnikanant.srivastava@gmail.com&gt;, Mohan LaL &lt;mohan.lal15@nic.in&gt;, Harish Chandra &lt;harish.cmondal@gov.in&gt;, Jatin Singh &lt;jatin.singh90@gov.in&gt;, Kapil Singh &lt;kapil.singhk98@gov.in&gt;, Suresh Chandra Pant &lt;pantsc.hq@icmr.gov.in&gt;, Javed Akhtar &lt;akhtarj.hq@icmr.gov.in&gt;, Mukesh Amanta &lt;amantam.hq@icmr.gov.in&gt;, Alok Agarwal &lt;aloka.hq@icmr.gov.in&gt;

Please circulate to all the Institutes / Centres and Engineering cell.

Thanks

Dr R Lakshminarayanan  
Deputy Director General (A) &  
Vigilance Officer  
ICMR HQ, New Delhi.

**From:** "dhrhq icmr" <dhrhq.icmr@gmail.com>**To:** "rajnikanant srivastava" <rajnikanant.srivastava@gmail.com>, "R Lakshminarayanan" <lakshminarayanan.r@icmr.gov.in>**Cc:** "Mohan LaL" <mohan.lal15@nic.in>, "Harish Chandra" <harish.cmondal@gov.in>, "Jatin Singh" <jatin.singh90@gov.in>, "Kapil Singh" <kapil.singhk98@gov.in>, "dhrhq icmr" <dhrhq.icmr@gmail.com>**Sent:** Friday, February 17, 2023 2:36:37 PM**Subject:** D.O letter dated 06.02.2023 received from Department of Telecommunication-reg.

Sir,

I am directed to forward the D.O letter dated 06.02.2023 received from Department of Telecommunication regarding incorporation of 'In building Solutions' in design of new or retrofit of old buildings for information/necessary action.

Regards,  
Kapil Singh  
ASO(DHR)

**2 attachments** **3012136.pdf**  
307K **D.O letter dated 06.02.2023.pdf**  
4674K

Mr. Suresh/Madhav  
Jain  
20/2

D.No. 58 Admn  
20/2/2023.

30046  
35046

305 35044

FTS-3012136/23

क. राजारामन, भा. प्र. से.  
सचिव  
**K. Rajaraman, IAS**  
Secretary



सत्यमेव जयते  
75  
Azadi Ka  
Amrit Mahotsav

336  
13/2/2023  
भारत सरकार  
संचार मंत्रालय  
दूरसंचार विभाग  
Government of India  
Ministry of Communications  
Department of Telecommunications

D.O. No. 6-2/2022/NBM/MoM  
Dated the 6 February 2023

Dear Secretary,

As you may be aware that Ministry of Housing & Urban Affairs has come out with Addendum to Model Building Bye-Laws 2016 (copy attached) having provision for 'In-building solutions.

2. In Building Solutions (IBS) are telecom networks solutions comprising of a distributed antenna system (DAS) enhancing coverage and capacity inside the buildings with weak or no telecom signal. It also provides Quality of Experience for customers. Telecom Service Providers may be called to offer IBS solutions which can be shared by all telcos.

3. In view of above, it is requested to direct all units & CPSEs under your ministry to incorporate the IBS in design of new or retrofit of old buildings. This will improve overall telecom connectivity in government buildings.

With Regards,

Encl: As above

JS(4N) / JS(AN)

Yours sincerely,

(K Rajaraman)

To

All Secretaries to the Government of India

JS(AN) / JS(AN)  
16/2  
RB  
15/2  
17/02/23  
MA. Kapil, A.S.O.



कै. राजारामन, भा. प्र. से.  
सचिव  
**K. Rajaraman, IAS**  
Secretary



75  
Azadi Ka  
Amrit Mahotsav

336  
13/2/2023  
भारत सरकार  
संचार मंत्रालय  
दूरसंचार विभाग  
Government of India  
Ministry of Communications  
Department of Telecommunications

D.O. No. 6-2/2022/NBM/MoM  
Dated the 6 February 2023

Dear Secretary,

As you may be aware that Ministry of Housing & Urban Affairs has come out with Addendum to Model Building Bye-Laws 2016 (copy attached) having provision for 'In-building solutions.

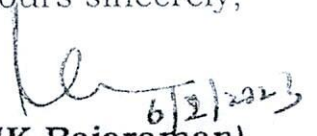
2. In Building Solutions (IBS) are telecom networks solutions comprising of a distributed antenna system (DAS) enhancing coverage and capacity inside the buildings with weak or no telecom signal. It also provides Quality of Experience for customers. Telecom Service Providers may be called to offer IBS solutions which can be shared by all telcos.

3. In view of above, it is requested to direct all units & CPSEs under your ministry to incorporate the IBS in design of new or retrofit of old buildings. This will improve overall telecom connectivity in government buildings.

With Regards,

Encl: As above

Yours sincerely,

  
(K Rajaraman)

To

All Secretaries to the Government of India



## CONTENTS

|    |                                                                                |    |
|----|--------------------------------------------------------------------------------|----|
| 1. | Introduction: Communication System                                             | 3  |
| 2. | Emerging Technologies in Telecommunication Services                            | 4  |
| 3. | Policy Efforts                                                                 | 6  |
| 4. | In Building and Gated Buildings Solutions                                      | 7  |
| 5. | Incorporation In State /UT Building Bye Laws                                   | 8  |
| 6. | At Layout Level                                                                | 9  |
| 7. | Other procedures for setting up In-Building Solution (IBS)<br>/ Fiber Networks | 10 |
|    | References                                                                     | 14 |

## ABBREVIATION

|      |                                         |
|------|-----------------------------------------|
| CCTV | Close Circuit Television                |
| CTI  | Common Telecommunication Infrastructure |
| DoT  | Department of Telecommunication         |
| FTTX | Fiber to the X Fiber                    |
|      | Fiber To The Home (FTTH)                |
|      | Fiber To The Premises (FTTP)            |
|      | Fiber To The Building (FTTB)            |
|      | Fiber To The Node (FTTN)                |
|      | Fiber To The Curb/Cabinet (FTTC)        |
| GDP  | Gross Domestic Product                  |
| IBS  | In Building Solutions                   |
| ISP  | Internet Service Provider               |
| MBIT | Megabit                                 |
| OFC  | Optic Fiber Communication               |
| QoS  | Quality of Service                      |
| RWA  | Residential Welfare Association         |
| TRAI | Telecom Regulatory Authority of India   |
| TSP  | Telecommunication Service Provider      |



*Annexure III*

ADDENDUM TO MODEL BUILDING BYE-LAWS, 2016

PROVISIONS FOR IN-BUILDING SOLUTIONS

*Digital Communication Infrastructure*

TOWN AND COUNTRY PLANNING ORGANIZATION

MINISTRY OF HOUSING AND URBAN AFFAIRS

GOVERNMENT OF INDIA

March, 2022



Annexure III to MBBL-2016

## **In-Building Solutions for CTI**

### **1. Introduction: Communication System**

Data growth is exploding globally and in India as per Nokia MBIT 2021 Report, the average monthly data usage per user in India has increased almost 17 times over the past 5 years. Covid 19 has further pushed data consumption with people staying indoors. Government has facilitated Work from Home (WFH) guidelines with a Work from Anywhere (within India) permitted. Home consumption of data has therefore grown exponentially through 2020. According to the Tower and Infrastructure Providers Association, almost 85% data traffic and 70% voice traffic is now generated indoors.

The World Bank has clearly demonstrated that every 10% Increase in broadband penetration leads to nearly 1.40% increase in GDP growth rate. While that is a global average, even the India specific study by the reputed quasi-Government research agency, ICRIER, has shown that every 10% increase in internet traffic delivers 3.1% increase in GDP per capita and a 10% increase in investment in Telecom Infrastructure will increase GDP by 3.3%. The entire consumer pull today is focused on data and broadband now with the new digital services providing voice services free with the data services. Video and app-based services are driving the demand for broadband with Apps for e-commerce, e-healthcare etc. in everyday use. It is very clear that internet traffic and Apps are contributing to GDP growth and for this to grow even further, conventional connectivity needs to be replaced with duct-sharing and fibre especially, which is an essential requirement In-Building as much as it is for FTTx and Tower Fiberization.

---

*[Note - "Service Provider": an agency that provides any type of telecom / IT services in a building complex, as per scope defined by DOT i.e. TSP / ISP / IP1 etc.]*



A broad variety of Information Communication Technology (ICT) systems are expected to be installed in buildings. In order to facilitate proper cabling and installation /up gradation of ICT systems and their cost effectiveness and maintenance, adequate physical infrastructure is required within buildings. This infrastructure will include common ducts, cable riser systems, conduits, cable trays and utility closets etc. among other things. The same can also be retrofitted into existing buildings wherever possible and feasible and must be designed in all new, re-developed and renovated structures. This section describes the general and specific requirements of such an ICT infrastructure in Building specially in respect of cabling aspects.

Communication systems are general utility in much the same way as water, power, gas, cable TV & CCTV/ Security. Unlike traditional communication systems which are constantly evolving, the recommended Digital infrastructure has to be designed to be flexible enough to accommodate a variety of ICT systems and emerging technologies and be future proof for the next 25-30 years. Space and power are required for installation of common ducts, optical fibre, small cells, antennas, smart sensors etc. Space, power and earthing are required for electronic equipment installation for supporting the various digital technologies of now and the future. Most communication utilities can share the same space since the physical topology and wiring requirements are similar and no significant power is present in the cables. However, in some cases state-of-the-art communication cabling or equipment will involve new or more specific requirements for utility spaces such as:

- Cable routing layout and cable length restrictions between Work-Space and utility closet.
- Bending radius and working clearance requirements for different cable types, e.g. Fiberoptic cables, Cat-6 Cables and co-axial cables
- Isolated power circuits for permanent communication equipment,
- Protection, Safety, Grounding and environmental requirements of communication equipment.

## **2. Emerging Technologies in Telecommunication Services**

The technologies used for telecommunications have changed greatly and over the past few years and particularly during the pandemic, India has experienced a massive surge in indoor voice and data consumption. According to the Tower and Infrastructure Providers Association, almost 85% data traffic and 70% voice traffic is now generated indoors. Telecommunication network architecture is changing to meet new requirements for a number of services/ applications viz. 5G, massive Internet of things, Artificial Intelligence, etc.



Choosing efficient and cost-effective and fast-deployment technologies such as wired and wireless networks will improve accessibility. Based on type of building and profile of customers in the buildings, the needs of wired and wireless may vary. Further, the architecture of the information and communication infrastructure is changing to accommodate the requirements of a growing number of ICT-enabled services/applications (broadband, IP, mobile, multimedia, surveillance, IoT, etc.)

In line with the changing market needs, the Digital Service Providers (TSPs)/ ISPs/ IP-1's have been scaling up the deployment of in-building solutions (IBS) and FTTx, covering active and/ or passive infrastructure. Further, industry stakeholders are putting greater emphasis on sharing in-building infrastructure to save opex and capex, as well as to avoid the duplication of infrastructure deployment.

Moving forward, the humungous growth of data traffic riding on the use of the digital infrastructure during the pandemic and with the new WFH (Work-from-Home) and work-from-anywhere paradigms and with the emergence of 5G are expected to create huge opportunities for extension of ubiquitous, reliable and high speed digital infrastructure into the homes and inside residential buildings, and lead to huge growth of shared in-Building Solutions sites.

Theoretically, wireless services can be provided from outside the building. However, there are appreciable losses in signal strength when it penetrates building walls. While all wireless services can suffer from poor in-building coverage, this problem is particularly pronounced for the high-speed services. These services require a much better signal quality than their voice counterpart. Therefore, in order to improve in-building coverage and to offer better-quality high-speed data services, there is a definite need to install in- building solutions (IBS) for augmenting the wireless-based voice and data services. This is equally true for installing 5G and Wi-Fi hotspots along with Fibre to x (FTTx) distribution network of Fiber and Cat-6 Cables for seamless data connectivity.

Provisioning of telecom services and broadcasting services viz. Cable TV, DTH and Security Services viz. CCTV Cameras and futuristic services viz. IoT based sensors would require suitable wire line connectivity inside the buildings inside buildings are not confined to wireless medium only. Wire line services through cables such as copper cables, optical fibre cables (OFC), LAN Cat-6 cables are also equally important for having uninterrupted connectivity. Also, for services such as Cable TV, DTH and Smart Devices Solutions (IoT), suitable cabling within building premises is a pre- requisite and for that, shared duct space across the building riser and floors is critical to achieve the flexibility in the future.



Improved IBS coverage MNOs / Network operators should be allowed to install such appropriate instruments as provided by licensor/ Regulator from time to time.

### **3. Policy Efforts**

The proliferation of in-building connectivity has become a key component of government policies. The National Digital Communications Policy, 2018 proposes to make the installation of telecom infrastructure and associated cabling and in-building solutions mandatory in all commercial, residential and official buildings (including government buildings) by amending the National Building Code of India with the help of the Bureau of Indian Standards.

The Government has been taking a number of steps for promoting the sharing of in-building infrastructure, in line with TRAI recommendations.

- a) In October 2019, the Digital Communications Commission (DCC) approved in-building access and sharing of infrastructure among TSPs, thereby allowing them to share infrastructure and, in the process, curbing TSPs' monopoly to install infrastructure through exclusive contracts with the owners/builders.
- b) In November 2019, the Department of Telecommunications issued an advisory to encourage all TSPs/IP-1s to share their in-building infrastructure such as systems, optical fibre, other cables, ducts and boosters on government premises and other public places such as airports, railway stations, bus terminals and hospitals.

The government's policy and regulatory push coupled with the ever-expanding data usage has propelled TSPs/IP-1s to scale up the deployment of IBS. There is an urgent requirement to allow TSPs/IP-1s to own active built and manage active infrastructure in addition to passive infrastructure to help them cater to the ever-increasing data demand.

Bureau of Indian Standards (BIS) has framed National Building Code of India under which provision of Common Telecom Infrastructure (CTI) housed inside the buildings for convenient provision of telecom services has been envisaged.

Making cities smarter: Ministry of Housing and Urban Affairs led Smart Cities Mission is another key driver that is encouraging the adoption of in-building solutions (IBS) and FTTx/IP networks covering Fiber and LAN cables. Since, the success of the mission relies on the underlying digital communications infrastructure, the cities



Identified under this programme have mandated to install common infrastructure inside buildings to enable seamless connectivity. To this end, certain smart cities have started collaborating with infrastructure providers to scale up the deployment of IBS and Fiber network. Moving forward, IBS and FTTx/IP networks covering Fiber and LAN cables should be included as one of the key parameters in the selection of smart cities for granting financial assistance.

#### **4. In- Building and Gated Buildings Solutions**

It is important to ensure quality telecom services inside a building – in residential, multi-story building, commercial complex, hotel or airport, police/ Government offices/ buildings etc. It is also essential for Telecommunication Service Providers/ IP-1s to work on sharing of telecom infrastructure which may be made mandatory as they extend the services in the buildings.

Telecom Service Providers/ IP-1s require a non-discriminatory and unhindered access inside the building / along the premises to install the telecom infrastructure or lay their cables.

At present, mobile operators and the building owner or building developer or Resident Welfare Associations (RWA) enter into commercial agreements for in-building deployment. Building owners or building developers delay the negotiations or request exorbitant rents — slowing down the speed of deployment. The Urban Local Body /Urban Development Authority may intervene in this regard wherein commercial agreements are insisted upon. TSPs/ IP-1s should be given legal rights and permissions to use the Common Telecom Infrastructure (CTI) within the premises of Building / Gated Society free of charge or for a standardized nominal charge just like other essential services like water electricity and/ or gas. Provision of CTI in a building should not be deemed as a revenue source in any way, much as the water and electricity utilities are not. Sufficient space should be provided within the premises to install telecom services by MNOs/ network operators.

The issue is not limited to sharing of IBS/ Distributed Antenna System (DAS) systems only, but TSP should get access to all telecom infrastructures including Fiber Cable and LAN cables for provision of wired and wireless network, other telecom/ ICT and IoT services.

It is important for telecom service providers to provide mobile coverage / network presence/high speed connectivity inside big residential / commercial complexes to improve QoS of their networks. It may not be practical to install individual in-building infrastructure by TSPs/ IP-1s as this will result in not only duplication of network resources but will also entail huge avoidable cost. It may also



be not advisable to lay down cables again and again on the same land / building by several TSPs/IP-1s.

#### **5. Incorporation in State /UT Building Bye Laws**

The buildings are to be constructed in such a way that they are 'Digital Infrastructure deployment' / 'Digital Connectivity' ready. There should be provision of telecom ducts / common pathways / runways (digital access paths) to reach to the accessible parts of the buildings. The common ducts /digital access paths to access buildings from outside should invariably be part of the CTI, which could be used by TSPs/ IP-1s for laying/ deploying digital infrastructure including cables. While approving the building plans, it has to be ensured that plan for creation of CTI including the common duct to access the common space used as telecom room inside the building is also prepared and separate set of drawings showing the inter / intra connectivity access to the building with distribution network need to be furnished.

*Occupancy-cum-Completion certificate* to a building to be granted only after ensuring that the CTI as per the prescribed standards is in place and an undertaking by the Architect or Engineer to be insisted to certify that building has ensured common access to all digital infrastructure to all Service providers in accordance with plan of creation of CTI. Provision of visit from Department of Telecom (DoT) / TRAI officials along-with joint inspection with TSPs - who may suggest any relevant modification in the plan to be ensured.

***As part of Building Bye-Laws, the builder/RWA should be mandated to ensure that***

1. While preparing the building plans, there is a need to mandate to have properly demarcated sections within buildings and on rooftops for housing BroadBand / digital connectivity infrastructure / antenna. These areas should have access to power supply for reliable, always-on services.
2. Access to building as well as CTI facilities inside the building should be available on a fair, transparent and non- discriminatory manner to all Service Providers/ IP1's.
3. The Service Providers/ IP1's should have unrestricted access for maintenance work.
4. The permission to in-building access and/or CTI facilities inside the building should not be seen as a source of revenue generation for builder(s)/ RWA(s) but as a means for facilitating penetration of



broadband access and thereby helping in socio-economic growth of all the residents.

5. Charges (rentals/ power rates etc.) levied to the TSPs/ IP-1s should be fair, transparent and non-discriminatory and should be on residential rates.

Suitable provision for the creation of Common Telecom Infrastructure (CTI) inside the newly constructed public places like Airports, commercial complexes and residential complexes, be incorporated in State/ UT Building Bye Laws.

#### 6. At Layout Level

While developing Greenfield cities/towns, the layout plans should clearly indicate the telecom as Utility infrastructure lines. Standards followed for Utility planning shall be published and work shall be done by the respective department for bringing in the standardization of the utility coding and sequences. The placement and sequence of above- and below-ground utilities at the appropriate location in the right-of-way to be ensured for unconstrained movement as well as easy access for maintenance. Telecommunication cables should be placed in a duct that can be accessed at frequent service points with sufficient spare capacity to enable scaling and future expansion, and empty pipes (large size hume pipes / HDPE pipes) should be laid before planting trees in order to accommodate additional infrastructure.

Digital Readiness Rating of Buildings / Society in line to the GREEN ratings shall be created where the existing and new buildings shall be rated on standardized parameters such as; but not limited to; Digital Infrastructure access, provisions for Emerging Technologies, Maintenance and Operational ease to TSPs / IPv1, Quality of Wireless Services, Quality / Inter-changeability ease of Wireline Services till each Unit Security, redundancy and Expandability of the digital Infrastructure etc. A detailed rating parameters and calculation mechanism of Points / Stars shall be devised and benchmarked for all new / retrofitting of buildings/ societies.

Digital Asset repository which will ensure Proper planning and mapping of utilities through GIS is necessary especially when the alignments of telecommunication cables are identified. Design criteria and standards Utilities should meet the following criteria:

- Telecommunication cables should ideally be placed below the parking area or service lane, which may be dug up easily without causing major inconvenience. Where this is not possible, the cables may be placed at the outer edge of the right-of-way.



- There is a need to reduce conflicts with pedestrian movements is to place telecom boxes in easements just off the right-of-way. Where this is not possible, they should be placed within parking or landscaping areas. If cables have to be located in the pedestrian path, a space of at least 2m should be maintained for the through movement of pedestrians. Telecom boxes should never constrain the width of a cycle track.
- In order to minimize disruptions, cables should be installed with proper maintenance Infrastructure.

**7. Other procedures for setting up In-Building Solution (IBS)/ Fiber Networks**

- (1) There is a need to promote installation of In-Building Solution (IBS) / Smart Connectivity infrastructure, where there is a poor connectivity in terms of weak signal strength inside the office, shopping mall, hospitals, multi-story building, education institutions and the objective has to be to strengthen quality of service of the voice & data of mobile and Fiber broadband network and access to digital services being offered by TSP And IP1's

**A) Procedures of obtaining IBS-NOC during plan approval and completion:**

- a) While submitting the proposed Building plan seeking approval from the relevant sanctioning Authority, applicant shall also submit
  - i. A complete Service Plan for IBS-infrastructure along with required specifications (in consultation with, and certified by a credible Telecom Networking hardware-consultant)
  - ii. An undertaking that such IBS Infrastructure, when constructed shall be available for sharing by various TSPs/IP-Is.
  - iii. Such Service Plan (IBS) shall be forwarded by the concerned Local Authority to the Telecom Enforcement Resource and Monitoring (TERM) cell of the State (external NOC agency) – for approval NOC.
  - iv. During the Joint Site Inspection of the completed building structure the TERM cell shall undertake inspection of the constructed/ installed IBS infrastructure – for issuance of NOC for OCC.
- b) The Local Authority shall liaise with the TERM cell as per its relevant online/ offline process of communication to seek the relevant NOCs within the specified time as per the Service Charter/ Service Guarantee

Act and rules in place. Separate communication from the applicant shall be needed to secure the IBS NOC.

**B) Provision of IBS components in building premises: (as per NBC 2016)**

Entrance Facilities (EF) /Lead-in conduits: (clause 3.1.4, of Part 8: Sec 6)  
min. 1.2m x 1.83m space to be allocated for each TSP adjacent to the EF.

Underground conduits/pipes to MDF room: min 100mm dia encased conduits.

Main Distribution Frame (MDF)/Equipment Room(ER):  
(clause 3.1.2, Part 8: Sec 6)

- prescribed size with L:W ratio between 1:1 to 2:1
- appropriate ventilation of MDF room
- proper Lighting for vision of equipments,
- located at a level above from the Natural Ground level to avoid incidence of flooding

Electric distribution panels, isolaters, sockets and earthing as per specific requirements w.r.t. the area proposed for coverage (DUs/ service subscribers)

Telecommunications Room (TR) at each building block unless provided with MDF room:

(all provisions of space to be as per clause 3.1.3.2, Part 8: Sec 6)

Appropriate nos. of Service/Telecom risers (vertical shafts) for all multi-storeyed buildings w.r.t the area proposed for coverage (DUs/ service subscribers):

- of appropriate nos. and size (width & depth) to accommodate cable trays
- with access door at each floor.

Telecommunications Enclosures (TE) at each floor of a block or TR  
(clause 3.1.5, Part 8: Sec 6)

Telecom Media and Connecting Hardware (TE):(clause 3.2, Part 8: Sec6)

Various cabling system and trays: (clause 3.2.4, Part 8: Sec6)

Wireless systems: (clause 3.2.5, Part 8: Sec6)

Backbone Cabling Media Distribution and Bldg. pathways  
(clause 3.3, Part 8: Sec6)

Horizontal Cabling Media Distribution and Bldg. pathways  
(clause 3.4, Part 8: Sec6)

IBS installation spaces: area for rooms or systems (e.g. antennas, base stations, remote units, power distribution boxes etc.) to be provided as per



requirements w.r.t. the area proposed for coverage/ no. of proposed users (as per clause 3.1.3.2, Part 8: Sec6, table stated below)

**1 Telecom room space norm for buildings with Built-up area >465 sqmt**

| Sl. | Area to be covered by IBS | Size of Telecom Room (all dimension in m)    |
|-----|---------------------------|----------------------------------------------|
| 1   | Upto 465 sqmt             | 3.0 x 2.4                                    |
| 2   | 465.0 sqmt to 930.0 sqmt  | 3.0 x 3.4                                    |
| 3   | More than 930.0 sqmt      | Additional TR required with same space norms |

**Space requirements for smaller buildings with Built-up area <465 sqmt**

| Sl. | Area to be covered by IBS | Space provisions (all dimensions in m)           |
|-----|---------------------------|--------------------------------------------------|
| 1   | Upto 93.0 sqmt            | Wall cabinets, self-contained enclosed cabinets. |
| 2   | 93.0 sqmt to 465.0 sqmt   | Shallow Room (0.6 x 2.6)                         |
|     |                           | Walk-in Room (1.3 x 1.3)                         |

IBS installation spaces, so provided, should be:

- not susceptible to flooding
- not exposed to water, moisture, fumes, gases or dust
- able to withstand designed equipment load (to be specified in design)
- located away from any vibrations to avoid dislocation/ dislodgement

For any other necessary detailing of building components and service installations with respect to common Telecom/Digital connectivity Infrastructure, architects/ developers and other service consultants involved in preparing building and service drawings may refer *Part 8 – Section 6: Information and Communication Enabled Installations of Volume 2 of the National Building Code, 2016*

- (2) Mode of deployment of In-Building, FTTx/IP Solution: There shall be various mode of deployment of In Building solutions such as: The possible modes are deployment by a neutral host infrastructure provider or build and managed by mobile operator and sharing with other service providers on non-discriminatory basis. The In-Build Solutions (IBS), FTTx/IP Solutions can also be deployed by TSPs/ IPs. Moreover, if TSP/ IP1 requires to install optical fiber for connecting In-Building Solution (IBS)/ Distributed Antenna System (DAS) nodes/ FTTx solutions, RoW/ permissions should be granted by the road owning agency through online mode (if same is working seamlessly) or offline mode till online system is established. For deploying indoor solutions these companies should have deemed permissions from the premises

owners for installation of Distribution Network within the utility shafts / common spaces with provisions for common / shared Points of Interconnect for Connectivity to individual units. Moreover, if the TSP/IP requires to install optical fiber for connecting In-Building Solution (IBS)/ Distributed Antenna System (DAS) nodes, FTTx/ IP Solutions for which RoW/ permissions should be granted by the road owning agency through online mode.

- (3) **Permissibility:** The IBS, FTTx/ IP component being small equipment can be installed on any type of land/building/utility pole and shall be exempted from obtaining the permission for installation of these components from the respective Urban Local Body/Urban Development Authority but should get permission from the Administrative Authority of the concerned premises.
- (4) **Procedure for submitting application for obtaining clearance:** TSP/ IP-1 will apply to the administrative authority of the building/ head of the office with layout diagram for implementing IBS in the building as mentioned in the RoW Rules 2016 or State notified RoW Policy
- (5) **Fees:** No fee will be charged for IBS/ FTTx Network. However, charges may be levied for power (as per Industry tariffs), fixtures, etc. provided by building owners to TSP/ IP-1s as per actuals.
- (6) **Access and Distribution Fiber and IP/ LAN networks for connectivity for the Shopping Malls, Multi-Storey Residential Buildings, Cooperative Housing Societies, Residential Welfare Association and Commercial Buildings to be planned and deployed by TSP/ IP-1s as per standard requirement of providing high bandwidth and adequate indoor coverage to each unit/ apartment in these complexes.**



References

1. Telecom Regulatory Authority of India (2011): *Recommendations on Telecommunications Infrastructure Policy*.
2. Telecom Regulatory Authority of India (2017): *Recommendations on In-Building Access by Telecom Service Providers*.
3. Uttar Pradesh Expressways Industrial Development Authority (2018): *Guidelines for Applicants for ducting & laying of optical fiber*.



65 2174

ADMN-II ADMN &lt;admn2355@gmail.com&gt;

**Fwd: G20 India: Logo-Theme Elements and Guidelines-reg.**

1 message

**R Lakshminarayanan** <lakshminarayanan.r@icmr.gov.in>

Fri, Feb 17, 2023 at 2:17 AM

To: admn2355 &lt;admn2355@gmail.com&gt;

Cc: dhrhq icmr &lt;dhrhq.icmr@gmail.com&gt;, Mohan LaL &lt;mohan.lal15@nic.in&gt;, Harish Chandra &lt;harish.cmondal@gov.in&gt;, Jatin Singh &lt;jatin.singh90@gov.in&gt;, Kapil Singh &lt;kapil.singhk98@gov.in&gt;, rajnikant srivastava &lt;rajnikantr.srivastava@gmail.com&gt;

Please circulate to all the Institutes / Centres / Divisions.

Thanks

Dr R Lakshminarayanan  
Deputy Director General (A) &  
Vigilance Officer  
ICMR HQ, New Delhi.

**From:** "dhrhq icmr" <dhrhq.icmr@gmail.com>**To:** "rajnikantr.srivastava" <rajnikantr.srivastava@gmail.com>, "R Lakshminarayanan" <lakshminarayanan.r@icmr.gov.in>**Cc:** "Mohan LaL" <mohan.lal15@nic.in>, "Harish Chandra" <harish.cmondal@gov.in>, "Jatin Singh" <jatin.singh90@gov.in>, "Kapil Singh" <kapil.singhk98@gov.in>, "dhrhq icmr" <dhrhq.icmr@gmail.com>**Sent:** Friday, February 17, 2023 2:54:19 PM**Subject:** G20 India: Logo-Theme Elements and Guidelines-reg.

Sir,

I am directed to forward the D.O letter dated 06.02.2023 received from OSD ( G20-Operations) regarding 'India's G20 Logo-Theme Elements and Guidelines' for information/necessary action.

Regards,  
Kapil Singh  
ASO(DHR)

G20 India logo.pdf  
1565K

*D.No. 59 Aelmu  
20/2/2023*

*Mr. Sumit / Madhu  
Vmt  
20/2*



## G20 India : Logo-Theme Elements and Guidelines

D.G. ICMR OFFICE  
 Diary No. 151133  
 Date 16/1/23

**From :** Abhay Ranjan Nayak <sologistics1.g20@gov.in>

Tue, Feb 07, 2023 06:24 PM

**Subject :** G20 India : Logo-Theme Elements and Guidelines

2 attachments

**To :** ROHIT KUMAR SINGH <secy-ca@nic.in>, Director General CSIR <dgcsir@csir.res.in>, Shri Sanjeev Chopra <secy-food@nic.in>, Sanjay Kumar <secy.sel@nic.in>, Mr Ajay Tirkey <secylr@nic.in>, Shri Vijoy Kumar Singh IAS <secyesw@nic.in>, Secretary DFS <secy-fs@nic.in>, DG ICMR <secy-dg@icmr.gov.in>, Secretary Youth Affairs <secy-ya@nic.in>, Dr. Niten Chandra, Law Secretary <secylaw-dla@nic.in>, Secretary DIPAM <secydivest@nic.in>, Shri Giridhar Aramane <defsecy@nic.in>, Dr. Dharmendra Singh Gangwar <secybm@nic.in>, Sujata Chaturvedi <secy-sports@nic.in>, Ms S. Aparna <secy-pharma@nic.in>, Anjali Bhawra <secywel@nic.in>, Rajesh Aggarwal <rajesh.aggarwal@ias.nic.in>, Secy DPIIT <secy-ipp@nic.in>, Jatindranath Swain <secy-fisheries@nic.in>, Shri Rajesh Kumar Singh IAS <secyahd@nic.in>, Shri Pankaj Kumar <secy-mowr@nic.in>, Ms. Vini Mahajan <secydws@nic.in>

JS (AN)

1. All Dir/DS in DIR  
 2. Pl inform ICMR/DSC  
 JS  
 15/2

Dear Sir/Madam,

Kindly download DO letter from Shri Muktesh K Pardeshi, OSD (G20-Operations) and G20 Logo Guidelines.

Regards,

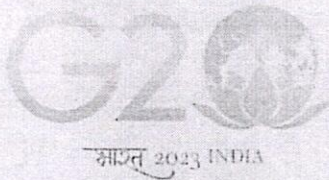
Ankita Dhanda  
 US(Branding)  
 G20 Sectt.  
 Sushma Swaraj Bhawan  
 New Delhi

US (Branding)

17/02/23  
 m. Kapil

**DO G20 Logo & Guidelines.pdf**  
 2 MB





विदेशमंत्रालय नई दिल्ली  
MINISTRY OF EXTERNAL AFFAIRS  
NEW DELHI

Muktesh K. Pardeshi  
OSD (G20-Operations)  
(Secretary Rank)

No. G20 (B)/302/1/2022

February 06, 2023

Dear Sir/Madam,

Kind reference is invited to email dated 17 November 2022 on 'India's G20 Logo-Theme Elements and Guidelines'.

2. It may kindly be noted that India's G20 branding is centred around the Logo and Theme that were unveiled by the Hon'ble Prime Minister on 8 November 2022. The use of the Logo in various contexts and applications is defined by a set of comprehensive guidelines that were shared vide email dated 17 November 2022. The need for amplifying and mainstreaming the use of Logo was also reflected in Cabinet Secretary's DO Letter No. 1/48/8/2022-Cab dated 8 November, 2022. However, deviations from these guidelines have been observed during recent G20 meetings, such as non-use of Logo, use of incomplete Logo, e.g., without 'भारत 2023 India', incorrect use of Logo colours, incorrect placement of map within the Logo, etc.

3. In this regard, Ministries and States are requested to use India's G20 Logo and Theme prominently in all publicity creatives related to G20 meetings as per stated guidelines. Further, Union Ministries/Departments and State/UT governments are encouraged to incorporate the theme, 'वसुधैवकुटुम्बकम्' (VasudhaivaKutumbakam in the original language text ONLY) 'One Earth · One Family · One Future', along with the Logo. The latest Logo Guidelines are therefore, being reiterated herein for reference (attached as **Annexure A**).

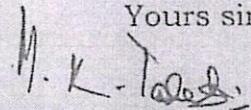


4. Besides the above, some States/Ministries have also been putting up flags of various G20 member and invitee countries in and around meeting venues. In a few cases, incorrect display of flags, upside down flags etc., have been noticed. As this is a sensitive issue, correctness of any flags being used may be closely checked before displaying the same for city/venue branding.

5. It is requested that these observations and suggestions may be adhered to for the upcoming meetings.

With regards,

Yours sincerely,



(Muktesh K. Pardeshi)

To,

1. All Secretaries, Government of India
2. All State Chief Secretaries/UT Administrators
3. All HOMs/HOPs in Missions abroad