



भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
रेलवे बोर्ड (Railway Board)



सं.2006/Tele/TP/1(3359379)

रेलभवन, नईदिल्ली-110001

दिनांक: (As signed)

**The General Managers,
All Zonal Railways.**

Sub: Policy regarding laying of OFC cables for S&T works
Ref: (i) RB's policy No.2021/Sig/WP/Action Plan dated 04.10.2023
(ii) RB's policy No. 2006/Tele/TP/1 dated 12.04.2006

Presently multiple OFC cables are being laid under various Signalling and Telecom works like ABS, Kavach, MTRC, IPMPLS etc. in Zonal Railways as per policy under reference (i) above. So far there was no problem of distinction of OFC cables as most sections had single OFC cable. However after implementation of Railway board's policy dated 04.10.2023[ref. (i)], there is a likelihood of problems in proper distinction of these multiple OFC cables being laid in a section. It may create confusion for maintenance staff in identifying right OFC cable, particularly during critical breakdown incidences.

In view of above, the issue of OFC cable laying has been reviewed by Board and the following has been decided:

- i. 2 x 48 Fiber OFC cables will be laid on each side of the track (i.e. 96-Fiber each side) to achieve path redundancy, one for short haul and other for long haul communication requirement.
- ii. These OFC cables shall be laid in ducts as per Board's policy dated 12.04.2006. [ref. (ii) above] preferably using HDD below 2m depth to protect existing cables laid at depth of approx. 1 to 1.5m.
- iii. On each side, one 48-fiber OFC cable should be laid for meeting short haul communication requirements (which is terminated at LC, IBS, ABS huts and LTE/Kavach locations etc in mid-section). OFC cables shall be named as OFC-SH-UP and OFC-SH-DN for UP and DN directions respectively. Bright yellow and bright blue HDPE duct should be used as underground cable conduits for OFC-SH-UP and OFC-SH-DN short haul optical fibre cables respectively.
- iv. On each side, second 48-fiber OFC cable should be laid for meeting long haul communication requirements. OFC cables shall be named as OFC-LH-UP and OFC-LH-DN for UP and DN directions respectively. Bright red and bright black HDPE duct should be used as underground cable conduits for OFC-LH-UP and OFC-LH-DN long haul optical fibre cable respectively.
- v. If, in a station section/block section, there are OFC cables other than those specified above, e.g. OFC cables laid in distributed EI for signalling purpose, these OFC cables shall be named as OFC-MIS-UP and OFC-MIS-DN for UP and DN directions respectively. Bright brown and bright gray HDPE duct should be used as underground cable conduits for OFC-MIS-UP and OFC-MIS-DN optical fibre cable respectively.

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- vi. OFC cables should also be clearly distinguishable at location of OFC joints/pits/common entry point in huts/relay rooms. Clear demarcation based on colour of duct shall be made on joint enclosures/pits by adopting suitable means along with doing proper tagging/labelling. For identification of different cables at common entry points like huts/relay rooms proper tagging/labelling as per nomenclature provided above should be done.
- vii. Cable route plan and tapping diagrams: The cable route plan should include each OFC cable laid with its tagging/labelling, clearly indicating the route of OFC cables, location of joints in each OFC cable and their distance indicated with respect to the nearest main line in reference of fixed structures (e.g. OHE mast) and with respect to other available permanent structures for easy identification of cable route and joints. The nomenclature for different OFC cables as provided above should also be followed in cable route plans. A tapping diagram should be prepared for each OFC cable laid in a section indicating the tapping of various circuits from different OFC cables. The colour and label of different OFC cables and joint as shown in route plan should match with the colour and label of actual duct/cable at site.

These instructions issue with the approval of Board (M/Infra) and shall be applicable to all future works being executed by Zonal Railways.

(गौरवकुमार | Gaurav Kumar)

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- (i) DG/RDSO: For making necessary changes in technical specifications for implementation of these instructions.