



DELHI TRANSIT

Delhi Integrated Multi Modal Transit System Ltd.

(A Joint Venture of Govt. of Delhi & IDFC Ltd.)

- Sub:** Implementation of BRT Corridor Project from
Ambedkar Nagar to Delhi Gate.
- Sub Head:** Repair/ replacement of electrical items on BQS from
Moolchand to Delhi Gate on BRT Corridor.

BID DOCUMENTS

VOLUME 2

TECHNICAL SPECIFICATIONS

Delhi Integrated Multi-Modal Transit System Ltd.

(A Joint Venture of Government of Delhi & IDFC Ltd.)

**1st Floor, Maharana Pratap Inter State Bus Terminus,
Kashmere Gate, Delhi-110006**

TECHNICAL SPECIFICATIONS**GENERAL**

Unless otherwise specified, all items contained in BOQ will be executed as per relevant BIS and CPWD Specifications.

Some of the reputed makes/ brands are specified in List of recommended makes below. Where no makes/brand names are suggested, the bidders will seek specific approval of the Engineer for using a particular make/ brand.

1. Deleted.
2. Deleted.

3. SPECIFICATION FOR L.T CABLES**3.1 GENERAL**

L.T. Cables shall be supplied, inspected, laid tested and commissioned in accordance with drawings, specifications, relevant Indian Standards specifications and cable manufacturer's instructions. The cable shall be delivered at site in original drums with manufacturer's name clearly written on the drums. The recommendations of the cable manufacturer with regard to jointing and sealing shall be strictly followed.

3.2 MATERIALS

The L.T. Power cables shall be XLPE insulated PVC sheathed type aluminium conductor armoured cable conforming to IS : 7098: 1988 (Part-I) with up to date amendments where as control cable shall be XLPE insulated and PVC sheathed copper conductor armoured unarmoured cable conforming to IS:7098 (Part-I) 1988.

3.3 INSTALLATION OF CABLES

Cables shall be laid directly in ground, pipes, masonry ducts, on cable tray, surface f wall/ceiling etc. as indicated on drawings and/or as per the direction of Engineer-In-Chargo Cable laying shall be carried out as per CPWD specifications.

3.4 INSPECTION

All cables shall be inspected at site and checked for any damage during transit.

3.5 JOINTS IN CABLES

The Contractor shall take care to see that the cables received at site are apportioned to variot locations in such a manner as to ensure maximum utilisation and avoiding of cable joints. This apportioning shall be got approved from Engineer-In-Charge before the cables are cut to lengths.

3.6 LAYING CABLES IN GROUND

Cables shall be laid by skilled experienced workmen using adequate rollers to minimize stretching of the cables. The cable drums shall be placed on jacks before unwinding the cable. With great care it shall be unrolled on over wooden rollers placed in trenches at intervals not exceeding 2 metres. Cables shall be laid at depth of 0.75 metres below ground level. A cushion of sand total of 250mm shall be provided both above and below the cable, joint boxes and other accessories. Cable shall not be laid in the same trench or alongside a water main.

The cable shall be laid in excavated trench over 80mm layer of sand cushion. The relative position of the cables, laid in the same trench shall preserved. At all changes in direction in horizontal and vertical planes, the cables shall be bent smooth with a radius of bent not less than 12 times the diameter of cables. Minimum 3 metre long loop shall be provided at both end of cable.

Distinguishing marks may be made on the cable ends for identifications of phases. Insulation tapes of appropriate voltage and in red, yellow and blue colours shall be wrapped just below the sockets for phase identifications.

3.7 EXCAVATION & BACK FILL

All excavation and back fill required for the installation of the cables shall be carried out by Contractor in accordance with the drawings and requirements laid down elsewhere. Trench shall be dug true to line and grades Back fill for trenches shall be filled in layer not exceeding 150mm. Each layer shall be properly rammed and consolidated before laying the next layer.

The Contractor shall restore all surface, roadways, sidewalks, kerbs wall or the works cut by excavation to their original condition to the satisfaction of the Engineer-In-Charge.

3.8 TESTING OF CABLES

Prior to installation, burying of cables, following tests shall be carried out. Insulation test between phases, phase & neutral, phase & earth for each length of cable.

- a. Before laying.
- b. After laying.
- c. After jointing.

On completion of cable laying work, the following tests shall be conducted in the presence of the Engineer-In-Charge.

- a. Insulation Resistance Test (Sectional and overall).
- b. Continuity Resistance Test.
- c. Earth Test.

All tests shall be carried out in accordance with relevant Indian Standard code of practice and Indian Electricity Rules. The Contractor shall provide necessary instruments, equipments and labour for conducting the above tests & shall bear all expenses of conducting such tests.

4. LIST OF RECOMMENDED MAKES/ BRANDS OF MATERIAL

S.No.	ITEM NAME	BRAND NAME
01.	Copper Wire PVC insulated	kalinga/ polycab/ Havells/ finolax

BRT-BQS Repair

Technical Specifications

- | | | |
|-----|-------------------------------|--|
| 02. | MCB, MCCB. RCCB, Contactors - | L&T/Siemens /Merlin Gerin/ C&S/
Havells |
| 03. | Timer - | FM/1 Quartz QT, GIC of L&T |