

## SECTION 27 05 39

### ELECTRICAL TECHNOLOGY - SURFACE RACEWAY

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. This Section includes specific requirements for surface raceway within the Communications Pathway System. General requirements are covered in Division 27 Specification Section *Electrical Technology - General Requirements*.

##### 1.02 RELATED SECTIONS

- A. The requirements of Division 27 Specification Section *Electrical Technology - General Requirements* shall serve as the basis for the requirements of this Section, and are incorporated by reference into this Section.

##### 1.03 SUBMITTALS

- A. Comply with the Submittal portion of Division 27 Specification Section *Basic Communications Requirements*. Provide submittal information for the following:
1. Product Data

#### PART 2 - MATERIALS

##### 2.01 GENERAL

- A. Part Numbers: Refer to the Equipment Schedule(s) for specific manufacturers and part numbers. If no part number is provided, then any part meeting the manufacturer and requirements specified is acceptable.

##### 2.02 RACEWAY

- A. Surface Raceway:
1. Provide Surface Raceway for all exposed stations and as shown on the Drawings. Surface Raceway shall be provided with all fittings including but not limited to mounting clips and straps, couplings, flat, internal and external elbows, cover clips, bushings, end fittings, outlet boxes and other incidental and miscellaneous hardware required for a complete Surface Raceway system. Fittings/bends shall meet TIA/EIA 569 Category and optical fiber bend radii. Surface Raceway finish shall match as close as possible the finish of the wall it is to be mounted on. Provide surface mount outlet boxes.
  2. Provide <plastic> or >metal> surface raceway and boxes.
  3. Unless specified otherwise on the Drawings, raceway shall be sized to accommodate quantity of cables at installation plus 50percent (per NEC)
  4. Non-metallic, multi-channel raceway for concurrent (but separated) routing of low-voltage and power cables shall be Panduit raceway types LD-10, T-45, T-70, TG-70 and Twin-70.
  5. In some legacy locations Contractor may be installing small, single-channel Panduit "latching duct" raceway LD-5. This is only to match previously installed raceway.
  6. In locations using Wiremold raceway, the Contractor may match the raceway previously installed. The legacy Wiremold is type 2400 or 4000. A 1" conduit will be supplied for each 10' of Wiremold placed. All new installations shall use raceway types as described in the project documentation.

## **PART 3 - EXECUTION**

### **3.01 RACEWAY**

#### **A. Surface Raceway:**

1. Surface Raceway shall be constructed and installed for all exposed stations and as shown on the Drawings. Contractor shall match as closely as possible the existing wall finish but shall not paint Surface Raceway. Surface Raceway shall be:
  - a. Constructed and installed per Article 352 of the NEC. Mechanically and electrically continuous and shall be bonded in accordance with NEC and TIA/EIA 607 (latest edition and addenda) codes and standards.
  - b. Constructed and installed according to TIA/EIA 569 (latest edition and addenda) standards for optical fiber and Category 5 bend radii. Bend points shall have a minimum two inch radius control.
  - c. Securely supported by screws or other anchor-type devices (tape or glue is not an acceptable support medium) at intervals not exceeding 5-feet and with no less than two supports per straight raceway section. Support shall be in accordance with the manufacturer's installation sheets.
  - d. Installed complete including insulating bushings and inserts where required by manufacturer's installation sheets.
  - e. Installed parallel and perpendicular to surfaces or exposed structural members, and follow surface contours where possible.
  - f. Installed with all unused raceway openings closed.
2. Contractor is responsible for confirmation of raceway size so fill does not exceed 50% upon installation per manufacturer's fill calculations.
3. All Contractor installed raceways shall be installed in practical alignment with either the building or structures within the building and securely attached to the building by use of plastic anchors, toggle bolts, expansion anchors or other method appropriate for the application as approved by the DoTS Project Manager. Raceway installed with only pressure sensitive foam will not be accepted.
4. All Contractor installed raceways shall be installed within the building to not interfere with or block any existing fixture, painting, mural, or artwork presently existing in the building. All Contractor installed raceways shall be level and plumb when run vertically or horizontally along walls or ceilings.
5. All Contractor installed raceway shall be routed in a quality workmanship manner meeting all applicable State and Local Building Codes, ordinances, OSHA requirements and DoTS specifications while maintaining the architectural integrity of the building.

**PART 4 - EQUIPMENT SCHEDULE**

**4.01**

<b>27 05 39 - SURFACE RACEWAY (SR)</b>		
<b>DESCRIPTION</b>	<b>Manufacturer/Part Number</b>	
	<b>PANDUIT</b>	<b>Special Rqmt</b>
LD5 RACEWAY - 8FT SECTIONS	LD5E18-A	Legacy installs only.
LD10 RACEWAY - 8FT SECTIONS	LD10E18-A	Legacy installs only.
T-45 POWER RATED MULTI-CHANNEL RACEWAY BASE	T45BE110	
T-45 POWER RATED MULTI-CHANNEL RACEWAY COVER	T45CE110	
T-70 POWER RATED MULTI-CHANNEL RACEWAY BASE	T70BE110	
T-70 POWER RATED MULTI-CHANNEL RACEWAY COVER	T70CE110	
T-70/TWIN-70 DIVIDER WALL	T70DW10	
TWIN-70 BASE	T702BE110	
TWIN-70 COVER	T702CE110	
T-70 POWER RATED MULTI-CHANNEL RACEWAY BASE AND COVER	TG70E110	
*FOR RACEWAY FITTINGS SEE PANDUIT.COM*		

**END OF SECTION 27 05 39**