2.9 FIBER OPTIC BACKBONE

A. General:
   1. The Fiber Optic Backbone shall include the installation of one (1) 12 strand (Unless otherwise noted on drawings) 62.5/125 micron multimode (OM1) cables from each designated TR to the Main Cross-Connect (MC). Refer to drawings that shall identify the location of TR's and MC's.

B. The cable shall be suitable for installation in building riser systems, conduit, cable tray, innerduct.

C. Cable materials shall be all dielectric (no conductive material).

D. Cable shall carry an OFNP rating (Optical Fiber Non-Conductive Plenum) or OFNR rating (Optical Fiber Non-Conductive Riser) as required per drawing and/or building notes.
   1. Cable Manufacturer: Panduit FSDR612Y or FSDP612Y

NOTE: Where fiber optic cable exists in the TR's, coordinate with the owner moving the terminated fiber ends to the new rack system and fiber enclosures being installed in this project. Install the terminated fibers into new fiber enclosures as described in these specifications.

2.11 FIBER OPTIC PATCH PANELS

A. All terminated OM1 fibers shall be mated to duplex SC couplings. (Manufacturer Part Number: Panduit FAP3WAQDSC), and mounted in fiber enclosures.

2.16 PATHWAYS AND SPACES

Outlet Pole

Outlet Poles refers to dual channel, floor-to-ceiling pole that provides convenient access to power and communication outlets. The Outlet Pole provides a floor space efficient and MAC friendly solution to power and communication access in open office, education, retail, factory, or warehouse applications. The outlet poles shall be available in 11' or 13' lengths.

Power and Communication Channels

The Power and Communications Pole channel shall be aluminum, in either off-white or electrical ivory color, with a cross sectional area of 2.90" X 1.77" with two separate compartments. One compartment is to be factory wired with two, (2) duplex style 20A, 125V NEMA 5-20R grounding-type specification grade receptacles, and colored, to match the pole finish.

Receptacles must be UL tested to meet the performance requirements of Fed. Spec. W-C695G General Specification for Electrical Power Connectors and conform to NEMA specification WD 1-7.01 to 7.10 "Heavy Duty General Use Grounding Receptacle". Receptacles shall also be UL Listed and be in compliance with UL-498.

The harness is to be single circuit (two conductor plus ground) with #12 AWG solid type THHN conductors, factory assembled to the receptacles.

Six-inch (6") conductor leads are to be furnished for termination to the overhead wiring system. A power entry box with ½, and ¾ " conduit breakouts, and 8" removable plate

must be provided at the top of the power compartment to facilitate the hard wiring of the pole harness.

The second compartment is to be for field installation of telephone or data network cabling. A non-metallic cover, which is removable and easily cut to create an opening for installation of communications faceplates, shall be provided to enclose the channel. The channel shall accept Snap-On communication faceplates or a standard faceplate bracket capable of mounting a NEMA standard single-gang communications faceplate. The channel shall be capable of mounting up to six communication faceplates, providing up to 24 communication ports.

Communication Only Channel

The Communications Only Pole shall be aluminum, in either off-white or electrical ivory color, with a cross sectional area of 2.90" x 1.77" with one compartment.

The compartment is to be for field installation of telephone or data network cabling. A nonmetallic cover that is removable and easily cut to create an opening for installation of communications faceplates shall be provided to enclose the channel. The channel shall accept Snap-On communication faceplates or a standard faceplate bracket capable of mounting a NEMA standard single-gang communications faceplate. The channel shall be capable of mounting up to six communication faceplates, providing up to 24 communication ports.

Mounting Hardware and Fittings

A full compliment of mounting hardware and fittings for the Power and Communications Pole and Communications Only Pole shall be provided. These shall include, but are not limited to, entrance end fitting, which protects cable bend radius, for the top of the pole, ceiling trim plate, pole mounting bracket, Velcro carpet gripper pad, and adhesive pad.

Pan-Pole Outlet Pole Extensions Kits

Two extension kits will be made available to construct outlet poles of 16' and 22'. Both kits consist of a pre-wired *PAN-POLE ™* and coupler, which attach to one of the standard 11' or 13' poles. Both of these kits maintain the dual channel aluminum construction that provides the complete separation of power and data.

Field Modification of Power and Communications Pole

The power and communications pole must be UL listed for field modifications, changes and additions of receptacles, devices, and circuits. Field installed power device addition kits shall be available to add duplex receptacles and shall be provided with plates that are color matched to the appropriate power and communications pole.

Snap-On Communication Faceplates

Snap-On single-gang communication faceplates must be available to mount workstation device faceplates, inserts and specialty mounting bezels. The power pole manufacturer will provide a complete line of connectivity outlets and modular inserts for UTP (including Categories 5, 5e and 6*), STP (150 ohm), Fiber Optic, Coaxial, and other cabling types. The workstation inserts shall also have available a complete line of port and station identification labels in a variety of colors that meet the requirements for ANSI/EIA/TIA 606.

Part number	Description	Size
PCPA11R20**	Power & Communications Pole	11' L
PCPA13R20**	Power & Communications Pole	13' L
PCPA11**	Communications Pole	11' L
PCPA13**	Communications Pole	13' L
PCPAKR20**	Power Addition Kit with 20A Duplex Receptacle	
PCPAKR**	Power Addition Kit without receptacle	
PCPAK16**	Power Pole Extension Kit	-
PCPAK22**	Power Pole Extension Kit	-
T70SDB-X	Standard Faceplate Mounting Bracket (for Communication)	

** Designates color option

All surface mount raceway must be mechanically fastened to the substrate in such a way as to prevent movement or "sagging".