# GENERAL

## SUMMARY

### Provide all services, labor, materials, tools and equipment required for complete and proper installation of communications blocks and patch panels as called for in these specifications and related drawings.

## system description

### Design Requirements: Provide blocks and patch panels required to terminate all communication cabling within the telecommunication rooms.

## submittals

### Product Data: Submit manufacturers’ product information.

### Submit manufacturers’ printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for Shop Drawings and Equipment Brochures.

## quality assurance

### Comply with section 270000.

### The horizontal cable plant installed shall be link performance warranted by the manufacturer for a period of 25 years.

## delivery, storage & handling

### Comply with section 270000.

# products

## manufacturers

### A certified Structured Cabling System with a 25-year CAT6 link performance compliance warranty is required. Use Corning Pretium distribution housings, fiber optic panels,and wall cabinets.

## materials & fabrication

### Building entrance terminals and Telco fed TRs

#### Follow section 271113, Entrance Protection.

### Multipair copper riser cable termination blocks (other than Telco termination)

#### Provide all required 66 blocks and labeling strips. (Confirm block types with UNL Project Manager). Block types are dependent on existing conditions and Telco terminations.

### Termination block mounting bracket frames/jumper ring bars

#### Provide all required mounting frames.

#### Provide all required wall-mount jumper ring bars.

#### Provide all required rack-mount jumper ring bars.

### (4) UTP CAT 6 Patch panels

#### Patch Panels: See Appendix A “APPROVED COMMUNICATIONS EQUIPMENT VENDORS” for a list of material.

#### Patch panels are to be 48-port panels unless otherwise specified in the drawings.

### Fiber optic cable panels

#### Install 19-inch rack mount optical fiber connector housings sized and equipped with connector housing adapter panels. Housing size and adapter panel configurations are provided in the contract drawings.

#### For each optical fiber connector housing, the equipment rack and mounting location within the equipment rack are specified in the contract drawings.

#### For the outside plant (OSP) install a 25-foot to 30-foot service loop in the outside plant (OSP) optical entrance cable and securely fasten the service loop to the wall of the telecommunication room.

#### Service loops are not required for the optical fiber riser cable. Leave 30 feet of slack at both ends of the fiber riser cable.

### Fiber Optic Connectors

#### All fiber optic connectors will be LC terminations.

### Fiber Optic Cable Connector Housings

#### Provide all required TR connector housings.

#### Provide all required connector adapter panels.

# execution

## examination

### Comply with section 270000.

## installation

### Copper backbone terminations

#### Mount mounting brackets on wall or rack mount bracket frames as shown on the contract drawings.

#### Backbone cables are to be routed neatly on overhead cable runway to termination block brackets. For cable management from cable runway to termination block brackets and dressing of cable in brackets follow manufacturer’s instructions and standard industry practices.

#### Terminate all riser backbone pairs per manufacturer’s specifications and place blocks on brackets.

#### At the termination end of multi-pair riser cables, the Contractor shall provide 4 to 6 feet of managed service slack.

#### If removal of the cable jacket is required to facilitate routing of ARMM or plenum backbone cable into the termination blocks, the exposed cable pairs shall be fully covered with black or gray plastic tape, neatly lapped to prevent gaps.

#### The Contractor shall bond ARMM riser cable to the Telecommunication Grounding Buss Bar (TGBB) using 1/0 AWG 1/0 AWG thermoplastic insulated stranded copper wire.

#### Label the blocks and associated brackets as specified in this specification.

### Horizontal Cable Terminations

#### Install one (1) CAT 6 / 48-port patch panel for every 48 horizontal cables.

#### Mount the 48-port patch panels on rack mount bracket frames.

#### Horizontal cables are to be routed neatly on overhead cable runway to equipment racks; exit cable runway into vertical rack cabling management and proceed to the patch panels.

### Fiber Cable Termination

#### Terminate fiber strands of riser links or OSP links per ANSI/TIA/EIA-568-B.1, sub-clause 10.3.2 inclusive. This means the Contractor shall implement a termination system such as 568SC A-B : B-A orientation or accomplish the same polarity crossing by using reverse pair positioning.

#### Install fiber connectors per the manufacturer’s instructions.

#### Install connectors on outside plant single-mode and multimode fiber strands and on single-mode riser fiber strands.

### Fiber Optic Cable Panels

#### Install 19-inch rack mount optical fiber connector housings sized and equipped with connector housing adapter panels. Housing size and adapter panel configurations are provided in the contract drawings.

#### For each optical fiber connector housing, the equipment rack and mounting location within the equipment rack are specified in the contract drawings.

#### For the outside plant (OSP) install a 25-foot to 30-foot service loop in the outside plant (OSP) optical entrance cable and securely fasten the service loop to the wall of the telecommunication room.

#### Service loops are not required for the optical fiber riser cable. Leave 6 to 10 feet of slack at both ends of the fiber riser cable.

## adjustments

### Comply with section 270000.

END OF SECTION 271119