Project A: South Cable Plant

**MISD prefers Contractors to be Commscope certified for SYSTIMAX and Uniprise Solutions**

**MISD cabling infrastructure, modules, faceplates, patch panels are currently standardized Commscope standards. Bidders should provide a full-compatible solution. Scoring of bids will reflect compatibility with our current district cabling standards.**

**MC (Main Cross-Connect )**

This main closet is the central distribution point for a facility. The MC will be furnished and installed as per EIA/TIA standards. Based upon facility need, the closet will contain a maximum.

1. (1) 4’ × 8’ × ¾” fire-treated plywood backboard
2. (2) 7’ × 4**’** four post communications rack(APC NetShelter SX Enclosure with doors and side, or equivalent) firmly attached to the floor.
3. (4) APC Rack PDU(AP8841) or equivalent
4. (4) Ladder tray/stabilizer firmly attached to wall and proceeding up wall into ceiling for a complete cabling pathway for distribution
5. (4) Ceiling interface with ladder tray to give a good aesthetic appearance and protection of cabling
6. (2) Grounding and bonding to existing TMGB, or the installation of a new

TIA/EIA-607 Grounding and Bonding System

1. (12) 48-Port Modular Patch Panels, labeled for Data/Voice (CPP-UDDM-M-2U-48(760207282)) or equivalent)
2. (4-12) Wire Managers as needed
3. (576) 1 ft category 6 color-coded data patch cables
4. (576) cable runs for eligible E-Rate usage, installed up to two hundred and eighty feet.
5. (100) cable runs for ineligible E-Rate usage, installed up to two hundred and eighty feet.
6. Total of 576 cable runs for eligible E-Rate usage

**Backbone/ Tie Cable Installation**

Based upon facility need, the installation will contain a maximum, though not necessarily all of the following components for the SOW quoted price. The pricing is in 500' increments.

* **Indoor Fiber Optic Cable**

1. For MC to IC connections, furnish and install up to five hundred feet (500') per increment of 12-Strand multimode Plenum Indoor Fiber Optic Cable. No more than 3
2. For MC to HC connections, furnish and install up to five hundred feet (500') per increment of 6-Strand Single Mode Plenum Indoor Fiber Optic Cable. No more than 3
3. All installed fiber strands will be terminated using manufacturer anaerobic fittings/connectors. Unless otherwise requested, LC terminations are the recommended connector of choice for all new installations.
4. There should be no more than 5 inside cores through what may be firewalls to deliver pathways.
5. Furnish and install into the existing MC Fiber Tray the terminated fiber connectors and loads for a final link to IC/HC.
6. Interface Unit with 12 adapters at the IC.
7. The HC fiber shelf will be a 1RU with the appropriate count of fiber adapters.
8. Wire management is provided to ensure a comprehensive, neat completion of work.
9. Furnish two (4) duplex 1 meter fiber optic jumper cables.
10. As-built drawings showing pathway and termination points.

* **Horizontal Cabling**

Horizontal cable is considered to include the cable, terminations and above-ceiling pathway. Surface mounted raceway may be required for some installations.

* **Single Cable Drop**

A single drop location will be defined using the following cable quantities and description.

1. Qty. of (1) each category 6 4-pair plenum UTP Commscope (or equivalent) cable, furnish and install up to two hundred and eighty feet.
2. The number of locations will be determined by MISD and the Contractor prior to installation. Each Single Drop is priced using existing pathway only (existing pathway is defined as an existing structure for which Contractor will not have to core through walls, add conduit, or add Surface Mount Raceway).
3. The following is the single drop termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable.
4. At the telecommunications closet, the data terminations will be in a rack-mounted 48-port category 6 patch panel.
5. The work area outlet will be an RJ45 category 6 UNJ600-BL jack insert, or equivalent, for either voice or data.
6. A compatible faceplate will be provided and installed accordingly by the Contractor.
7. As-built drawings will be provided showing drop locations, pathways and labeling by Contractor.

* **Dual Cable Drops**

Each dual drop location will be serviced by the following cables:

1. Qty. of (2) each category 6, 4-pair plenum UTP Commscope cables (or equivalent), furnish and install up to two hundred and eighty feet.
2. The number of locations will be determined by MISD and the Contractor prior to installation. Each dual drop is priced using existing pathways only.
3. The closet terminations for either data or voice will be the same as those described under the single drop heading.
4. The work area outlet will be a quantity of (2) RJ45 category 6 UNJ600-BL (or equivalent) jack inserts for either voice or data.
5. A compatible faceplate will be provided and installed accordingly by the Contractor.
6. As-built drawings will be provided showing drop locations, pathways and labeling by Contractor.

* **Functional Testing**

Functional Testing will be performed in conformance with the following:

• Fiber Testing - Transmission and path loss testing (Fiber meter test method). Contractor will perform fiber meter testing on all fiber optic cable installed under the SOW. Soft Copy test results will be provided.

• Category 6 Cable - Category 6 compliant testing per UL standards. Contractor will perform

Category 6 testing on the Category 6 cable installed under the SOW in accordance with EIA/TIA standards. Soft Copy test results will be provided.

* Relabeling of 1D and 1E closet racks and cable drops and change to 1B and 1C
* **Scheduling and Equipment**

Contractors must supply their own lift if needed. Scheduling must comply with MISD school hours. The possibility of working alternate shifts such as nights.

Project B: South Cabling Abatement and Removal

**Removal**

• Contractor will include the removal of any abandoned cable left within the Customer location(s) as a result of the replacement of an existing network cabling with the installation of a new network cabling infrastructure. Any abandoned cable not replaced by Contractor with the installation of a new network cable will be covered with a blank faceplate and the existing cable left within the walls and or ceilings.

• Contractor will not remove existing pathway components, i.e. surface mount raceway, conduit, etc. during cable removal.

Project C: UPS Refresh

We need (90) 2U 1500VA units and (78) 1U 1500VA units.

We want power conditioning (sinewave or pure sinewave preferred) in all units if possible.

All units need network connectivity for monitoring the UPS as well as environmental monitoring options (AP9641, for instance).

We need at least (4) Nema 5-15R outlet receptacles and (1) Nema 5-15P power inlet plugs on all units

Example units

2U 1500VA - SRT1500RMXLA with AP9641 network management card

1U 1500VA - SMT1500RM1UC with AP9641 network management card