Network Equipment

Vendor	Part Number	Description	Qty
		Catalyst 4506 Switch Modules	
Cisco	WS-X4548-GB-RJ45V=	Catalyst 4500 PoE 802.3af 10/100/1000, 48-Ports (RJ45)	6
		Catalyst 3560 48-PS Switches	
Cisco	WS-C3560-48PS-S	Catalyst 3560 48 10/100 PoE + 4 SFP Standard Image	3
Cisco	CAB-AC	Power Cord,110V	3
Cisco	GLC-SX-MM=	GE SFP, LC connector SX transceive	3
Cisco	CON-SNT-356048PS	SMARTNET 8X5XNBD Catalyst 3560 48 10/	3
		Catalyst 3560 24-PS Switches	
Cisco	WS-C3560-24PS-S	Catalyst 3560 24 10/100 PoE + 2 SFP Standard Image	16
Cisco	CAB-AC	Power Cord,110V	16
Cisco	GLC-SX-MM=	GE SFP, LC connector SX transceive	16
Cisco	CAB-SFP-50CM=	Catalyst 3560 SFP Interconnect Cable, 50cm	8
Cisco	CON-SNT-356024PS	SMARTNET 8X5XNBD Catalyst 3560 24 10/100	16
		Patch Cords	
Cablestogo	24350	RJ-45 (M) - 3 ft - (CAT 5e) - blue (pack of 100)	6
Cablestogo	24360	RJ-45 (M) - 6.6 ft - (CAT 5e) - blue (pack of 100)	3
Cablestogo	24370	RJ-45 (M) - 10 ft - (CAT 5e) - blue (pack of 100)	3
Cablestogo	33154	3' Fiber patch LC-SC multi-mode 62.5 / 125 micron	19
		APC UPS	
APC	SC1500	APC SmartUPS SC 1500	19
		Professional Services	
		Professional Services - Installation & Project Management	

Email and Voicemail

Vendor	Part Number	Description	Qty
		Microsoft Windows and Exchange Software Assurance	
Microsoft	P73-00355	SA WINDOWS SERVER 2003 STD ACAD-6.0	10
Microsoft	R18-00202	SA WINDOWS SERVER 2003 DEVICE CAL-Academic OLP	300
Microsoft	312-02305	SA EXCHANGE SERVER ACAD-6.0	2
Microsoft	381-03306	SA EXCHANGE STANDARD DEVICE CAL	300
		Microsoft Exchange Enterprise User CALs	
Microsoft	9MB-00190	EXCHANGE ENT CAL WO SVC SNGL LIC/SA OLP NL AE USER CAL	100
		Voicemail Licensing to enable Message Waiting Indicator between MS Exchange 2007 Unified Messaging and Cisco Unified Communications Manager	
MWI2007	MWISRV	MWI Voicemail Server Licensing	1
MWI2007	MWILIC	MWI Voicemail User Licensing	100
MWI2007	MWISUP	MWI Voicemail Annual Support	1
MWI2007	MSIREMOTE	MWI Voicemail Remote Installation Support	1
		Professional Services	
		Professional Services - Installation & Project Management, upgrade from Exchange 2003 to Exchange 2007 with Unified Messaging for 100 users, email for 300 users, and integrate with Cisco Unified Communications Manager 6.x/7.0	

Cisco Wireless Access Points

Vendor	Part Number	Description	Qty
		Cisco 1131 Access Point 802.11a/b/g	
Cisco	AIR-LAP1131AG-A-K9	802.11ag LWAPP AP Integrated Antennas FCC Cnfg	14
Cisco	AIR-PWR-CORD-NA	AIR Line Cord North America	14
Cisco	AIR-PWR-A	Pwr Sply In:100-240VAC Out:48VDC 380mA -1100, 1130AG, 1200	14
Cisco	S11RK9W-12311JX	Cisco 1100 Series IOS WIRELESS LAN LWAPP RECOVERY	14
Cisco	CON-SNT-LAP1131A	SMARTNET 8X5XNBD 802.11ag LWAPP AP Intg Ant FCC Cfg	14
		Professional Services (priced by units)	
		Professional Services for Installation of Access Points - Includes power injector or PoE setup, IOS update, configuration, mounting, connection and testing - does not include cabling or custom mounting	14
		Wireless Site Survey	
		Project Management	

Network Cabling

Description

Bill of Materials

Horizontal Communications Cabling
Faceplates & Jacks & Testing
Patch Cords
Closet Termination Hardware
Closet Build Out Installation
Grounding
Copper Cabling Between Trailers
Fiber Optic Building
OSP Copper
Communications Cabling Trailer
Conduit Sleeves in Trailers & Fire Stop, Caulking
General Hardware, Pull String, Mule Tape, Velcro
General Conditions, Customer Meetings, Eng, Mobilization
Trenching, Admin To Trailer #4 & Trailer To Trailer

Pricing

Materials
Labor
Contingency (6%)

Description

Bill of Materials

	QUANTITY
Horizontal Communications Cabling	8
Faceplates & Jacks & Testing	64
Patch Cords	100
Closet Termination Hardware	8
Closet Build Out Installation	8
Grounding	8
Copper Cabling Between Trailers	4
Fiber Optic Building	2 in each
OSP Copper	2 in each
Communications Cabling Trailer	2 in each
Conduit Sleeves in Trailers & Fire Stop, Caulking	as needed
General Hardware, Pull String, Mule Tape, Velcro	as needed
General Conditions, Customer Meetings, Eng, Mobilization	as needed
Trenching, Admin To Trailer #4 & Trailer To Trailer	approx. 500ft

Pricing

Materials
Labor
Contingency (6%)

Networking Scope of Work

Description

Vendor Responsibilities

1 Install network switching modules in the proposal into two existing Cisco Catalyst 4506 switch chassis and configure according to customer specifications.

2 Install, rack mount, and configure all network switching and UPS equipment in this proposal, according to customer specifications.

3 Install and connect all copper and fiber optic patch cords in this proposal to switches listed in this proposal.

4 Install, mount, and configure each wireless access point, after performing basic wireless site survey to determine optimal install location, and integrate with existing Cisco 4404 Wireless LAN Controller.

5 Provide as-built documentation for each network component provided.

Customer Responsibilities

1 Provide adequate rack space, cooling, and electrical power needed for each network component proposed.

2 Provide suitable ceiling or wallmount installation location for proposed wireless access points.

2 Ensure that adequate physical access be afforded to vendor technicians.

3 Customer shall provide a lead technical resource that shall be the point of contact for all technical questions.

4 Pricing is based upon all work being performed as a single (1) phase.

Cabling Scope of Work

Description

Overview

Supply labor and materials to complete a communications cabling system to support the voice and data communications requirements for the modular trailers.

1 **Fiber Optic Communication Cabling**

1.1. Vendor will provide 50/125, multi-mode fiber optic cable for the communication subsystem.

1.2. Provide and install (1) 6-strand, 50/125, OFNR, loose tube, multi-mode fiber optic cable from the MDF to trailer # 4.

1.3. Provide and install (1) 2-strand, 50/125, OFNR, tight buffer, multi-mode fiber optic cable from the Trailer #4 to Trailers, 1, 2, 3, 5, 6, 7 & 8.

1.4. Provide and install an 1RMU rack mount fiber optic distribution cabinet in the MDF and in Trailer # 4. This cabinet will be installed in the existing MDF equipment rack.

1.5. Provide and install 6 port LC adapter panels for the fiber optic distribution cabinets.

1.6. Provide and install LC, 50/125 connectors on the fiber optic cables.

1.7. Provide labor to test the fiber optic cable to the manufacturer's standards.

2 **Horizontal Communications Cabling**

2.1. Provide and install a category-5e Structured Connectivity Solution for the trailer deployment. Each trailer will receive 22, category 5e cables.

2.2. Provide and install (32) locations with (4) category-5e, 4-pair, PVC, communication cables for communications for the modular trailers. (2) 4-port locations per classroom.

2.3. Provide and install (16) locations with (2) category-5e, 4-pair, PVC, communication cables for communications for the modular trailers. (1) 2-port locations per classroom.

2.4. Provide and install (16) locations with (2) category-5e, 4-pair, PVC, communication cables for communications for the modular trailers. (1) 1-port locations per classroom. (Wireless Access Point)

2.5. Provide and install (1) 24-port, category-5e patch panel in each modular trailer.

2.6. Provide and install (176) category-5e, modular jacks, (Color TBD).

2.7. Provide labor to test each cable to the manufacturers standards

3 **Copper Backbone Cabling**

3.1. Provide and install a 12-pair PE-89 cable from the MDF to Trailer #4.

3.2. Provide and install a 12-pair building entrance protection block in the MDF and Trailer #4.

3.3. Provide and install building entrance solid state module for the termination block.

4 **Wall Mount Cabinets**

4.1. Provide and install a (1) Hubbell, RE-4B, hinged wall mount cabinet in each of the (8) modular trailers. This will house the communications cabling as well as the active components. Note (Electrical in the cabinet will need to be taken into consideration when placing the cabinet in the classroom).

4.2. Provide and install (1) #6 AWG, green ground wire for the cabinet with 2 hole compression connectors.

5 **Information Technology Room Buildout (MDF)**

5.1. Vendor will install the necessary cable support for each cable pathway following the industry standard practices of BICSI and the NEC Code.

5.2. All of the cabling will be routed independently throughout the ceiling and labeled accordingly to protect and identify each system.

5.3. Provide and install # 12 AWG for cable supports.

5.4. Provide and install ¾" wide based J-hooks to support the fiber optic communication cable through the existing buildings.

5.5. Provide and install TL25 loop wide based J-hooks to support the main communication cable.

5.6. Provide and install (2) 1-inch and (1) 1 1/2 conduit between the MDF building and the modular trailer #4 for communications cabling.

5.7. Provide and install (2) 1-inch conduits from modular trailer #4 to the each of the other modular trailers.

5.8. Provide stub ups into the Administration building and to each trailer with the conduit.

6 **Communication Cable Pathway**

6.1. Others to perform the connectivity of the active components by patching all of the data connections into networking hardware.

6.2. The following fiber optic patch cords have been included in this proposal.

6.2.1. Provide (1) 1-meter, 50/125, duplex, LC-LC multimode fiber optic patch cords.

6.2.2. Provide (1) 2-meter, 50/125, duplex, LC-LC multimode fiber optic patch cords.

6.2.3. Provide (176) 3-foot, category-5e, patch cords.

6.2.4. Provide (176) 5-foot, category-5e, patch cords.

7 **Labeling and Documentation**

7.1. Vendor will label all cables with permanent wrap-around type computer generated labels in the MDF and at the station location.

7.2. P-touch type labels will be placed on every faceplate in the field, patch panels, racks, and fiber optic enclosures.

7.3. Specific Customer numbering schemes will be discussed prior to the commencement of project.

7.4. Vendor will also complete as build prints and test documentation packets for Telecommunications Infrastructure System.

7.5. Soft copy test result packets will verify the communication output in the system. CAD or Visio to be supplied to vendor for the redline updates or just redline drawings will be provided.

Access

Vendor to provide all necessary hardware for properly supporting cabling, accept that provided by the onsite electrical contractor. No conduit or concrete coring is included in this bid package at this time, unless stated otherwise. It is the responsibility of the customer to ensure that reasonable access exists for all communications cabling.

Project Management

Vendor will assign a project manager throughout the duration of the cabling installation. The project manager will coordinate the logistics of the installation, the size of the installation crew, and will ensure the work provided by vendor's installation technicians is of a professional quality and installed in a professional manner. He will approve any additional work that is required outside the scope of project and schedule changes that may affect the critical dates.

Clarifications and Exceptions

Site Conditions – Vendor assume that proposed site conditions will permit the completion of all aspects of this scope of project without undue additional cost to the contractor. Imperfections in construction conditions, which adversely affect vendor's ability to execute its scope of project, may result in additional costs to the customer.

Access – No conduit installations or coring within the buildings are provided for in this proposal at this time.

Trenching – It has been assumed that the trench pathway does not cross any utilities, pavement, concrete etc. This has been assumed to be classified as a soft dig. Note: The school is required to coordinate Blue stake for identification of the utilities.

Change Orders – No changes, either adds or deletions to the agreed upon scope of project will take place without written approval of the designated customer contact and written acknowledgment of the vendor's Project Manager. All changes will be submitted on an vendor's Project-Change order prior to any changes occurring, and only the changes on these forms will be recognized.

Work Hours – All work to be preformed during normal business hours. There is no overtime allotted for in this proposal at this time.

Asbestos – It has been assumed the building are free from asbestos.

Drop Ceiling – It has been assumed the buildings have drop ceilings. If conduit or latch duct is required to conceal the communications cables then a change order will be issued.

GCCS-Proposed Plan for New Classrooms
Total 8 new classrooms