EXHIBIT G

Comparison of Contract Terms from
AEKO's January 2004 Response to Request for Information with
AEKO's April 2005 Contract

Row	Term found in OUSD's Request for Proposal ("RFP") (Exhibit H), or AEKO's January 2004 Response to Request for Information ("Response") (Exhibit I) or Response to Request for Additional Information ("Response II") (Exhibit J)	Term found in AEKO's April 2005 Master Agreement ("MA") (Exhibit E) and/or Statement of Work ("SOW") (Exhibit F)
1	Totals from Response II pp. 1-2 (Group 1 and 2 schools only): -including bridging solution, excluding sales tax: $1,776,600.94, or -including trenching solution, excluding sales tax: $2,255,786.08. Electrical: $101,307.	Total including services, cable materials, and electronics, excluding sales tax: $1,905,324.66. SOW at p. 15. Electrical work is not included in this agreement. SOW at p. 2.
2	[No equivalent provision]	AEKO may charge Customer interest on overdue amounts from the date such amount became due at the lesser of the rate of one and one-half percent (1-1/2%) per month or the maximum interest rate permitted by applicable law. SOW at p. 8.
3	Activities or tasks fundable under the E-Rate program during the period of July 1, 2004 through June 30, 2005 are included. Response at p. 15.	Activities or tasks fundable for the period between March 2005 to June 30, 2006 are included in the SOW. SOW at p. 14.
4	[No equivalent provision]	AEKO warrants each unit of Equipment to be free from defects in material and workmanship under normal use and operating conditions for a period of ninety (90) days, or such other warranty period as may be indicated on the SOW, after the applicable Equipment Installation Date. MA at p. 2.
5	[No equivalent provision]	The initial Equipment Maintenance Service term for the Equipment shall be thirty-six (36) months. MA at p. 3. In the event AEKO elects to discontinue Equipment Maintenance Service for any or all item(s) of Equipment, AEKO may terminate Equipment Maintenance Service for such Equipment provided Customer receives six (6) months' prior written notice. MA at p. 3.

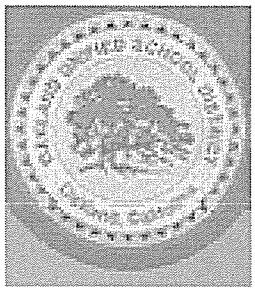
6	Substitutions will only be allowed with written approval from the Technology Services Department. RFP at p. 8.	AEKO may make Equipment substitutions and modifications provided that such substitutions and modifications are substantially equivalent or better in performance and capabilities to the Equipment originally ordered; provided however, that AEKO will not make any Equipment substitutions or modifications without the prior written approval of Technology Services and the Schools and Libraries Davison (SLD) [of USAC]. SOW at p. 1.
7	Cabinets in CDFs with specifications as follows: one 24" high x 24" wide x 24" deep 16 gauge wall mount cabinet with dual hinged lockable solid doors (front and back), 250 cfm exhaust fan, drilled EIA standard hole spacing, and vented side panels for mounting equipment at the CDF. Response at p. 7.	Small cabinets in IDF with specifications as follows: one 16-gauge wall-mount cabinet with dual hinged lockable solid doors (front and back), having minimum dimensions of 36" high x 24" wide x 24" and maximum dimensions of 48" high x 24" wide x 24", 250 cfm exhaust fan, drilled EIA standard hole spacing, and vented side panels for mounting equipment at the small IDF. SOW at p. 5.
8	Wireless hardware in multi-purpose rooms will be Cisco API1200 with 802.11g. Response at p. 9.	Wireless hardware in multi-purpose rooms will be Cisco API1200 with 802.11g. Wireless access point, antenna and antenna cabling shall be installed in an area not visible to public access whenever possible, such as within the ceiling or a secured utilities closet. When a wireless access point must be installed in a public access area such as a hallway, it must be positioned at least 10 feet above floor level or installed in a secure, locking cabinet. Wireless bridges to connect portables to the data network will be installed, and shall be Cisco AP1300 with 802.11g and IOS Wireless LAN support. All Cisco equipment installed will include Cisco SmartNet 8xSxNBO warranty. SOW at pp. 6-7.

EXHIBIT H

Oakland Unified School District

Request for Information

Internal Wiring and Network Installation and Configuration for Modernization Project – Group 1 Schools (Year 7 E-Rate Program)



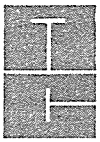
Submitted by
AEKO Consulting

January 14, 2004

AEKO Consulting
Solutions Integrators

AEKO Consulting
1939 Harrison Street Suite 420
Oakland, California, USA, 94612

Phone (510) 763-2356
Telex (510) 763-0720
Fax (510) 763-0720



AEKO CONSULTING
Solutions Integrators

January 13, 2004

Mr. Edgar Rakestraw, Jr.
Oakland Unified School District
Office of the State Administrator
1025 2nd Avenue, Suite 301
Oakland, CA 94606

Dear Mr. Rakestraw, Jr.,

AEKO Consulting, Inc. is very pleased to submit this response to the Oakland Unified School District (OUSD) Request for Information (RFI) for Internal Wiring & Network Configuration for Modernization. It is our understanding that the District intends to use the result of this process to apply for Year 7 E-rate funding and that these services will be delivered during the Year 2004 E-rate cycle beginning July 1, 2004 through June 30, 2005.

AEKO is a local and minority owned business with a long tradition of furnishing good services to the District. In fact, AEKO is the last local firm to provide any service to the District under the E-rate program for Year 4 in 2001. Our Spin Number is 143020111.

For this opportunity, AEKO has teamed with RK Electric, a nationwide electrical and data systems contractor with a major portfolio in the education industry to design a solution that delivers the requested functionality and configuration. This solution is designed to provide a cost effective, technically sound, scalable, reliable and manageable approach.

It is important to note that AEKO is very knowledgeable of the Schools and Library Department (SLD) process and we are currently managing the E-rate program for the West Contra Costa Unified School District. Hence, should we be chosen by the District for this project, we would assist the District in maintaining compliance with SLD requirements as well as facilitating the processing of all requests.

Being local and very involved in the community, we understand the importance of acquiring external funds to shore up the fragile fiscal condition of our community and would work diligently with the District to achieve that end. Hence, our Principal-In-Charge, Gboyega Aladegbami, would manage all activities related to furnishing the District with all documents required for processing the 471 application while one of our Senior Engineers with good working relationship with most departments in the District, Ismael Okunade, has been designated as the Project Manager. The former will handle all contractual matters and can be reached at 510-763-2356 x13 or by e-mail at Gboyega@aeko.com.

Sincerely,

AEKO Consulting, Inc.
Solutions Integrators

Gboyega Aladegbami
Principal Consultant

Park Plaza, 1939 Harrison Street, Suite 325, Oakland, CA 946120 • (510) 763-2356 • Fax: (510)763-0720
www.aeko.com

Table of Contents

Introduction

AEKO Consulting is partnering with RK Electric, Inc. to provide the Oakland Unified School District with a complete Network Hardware and Cabling Installation solution as specified in the District's Request for Information under the Year 7 E-rate program.

AEKO CONSULTING

AEKO Consulting is a solutions integration firm specializing in the development, implementation, and maintenance of secure network/internet infrastructure. The firm has been based in Oakland since its inception in 1994.

Mission

Our goal is to enhance the client's productivity and ultimately maximize returns from technology investments. This is achieved by furnishing expertise and tools needed for each situation or opportunity. This focus is truly embodied in our name, AEKO (**A**ssociates using **E**ducation to impart **K**nowledge and achieve **O**ptimization).

Services

AEKO offers end-to-end solutions integration services that combine the attributes of traditional management consulting with systems integration. Our services are organized under four distinct, but complimentary strategic business units (SBUs): Network Infrastructure, Systems Services, Enterprise Resource Planning (ERP), and Training. Our partnerships with industry leading vendors including Microsoft, Cisco, Peoplesoft and SAP have been leveraged to provide innovative solutions to a full spectrum of clients in the education, healthcare, government and business sectors.

OUSD and K12 School Experience

We have a longstanding relationship with the District, spanning a period of over six years, encompassing a wide range of projects and the provision of a broad of spectrum value added services including the design of a directory enabled network infrastructure for the District intranet, enterprise application (IFAS Financial modules) implementation support and the provision of on-going maintenance services in support of District network and systems infrastructure. AEKO is also currently serving as the Master IT Consultant for the West Contra Costa Unified School District (WCCUSD) with responsibility for the development of IT Strategy and oversight of the implementation of WCCUSD's information and educational technology roadmap.

RK ELECTRIC

RK Electric, Inc. is a national cabling company founded in 1985 and has a major presence in the San Francisco Bay Area. The company's full complement of licensed cabling professionals leverage a wealth of experience encompassing a broad range of structured, electrical, voice and data cabling projects across the education, telecommunications, business and government sectors as well as an in-depth understanding of environmental impact issues for the provision of unique, cost effective, value added design and installation services in every engagement.

Solution Overview

AEKO is pleased to offer this response to OUSD's Request for Information in respect of the Internal Wiring and Network Configuration for Modernization Project for Group 1 (Washington, Golden Gate, Long Fellow, Carter and Emerson) schools under the Year 7 E-rate Program.

The solution proposed covers both Data and Wiring components of the RFI and specifies best of breed hardware, network, wireless and cabling equipment from industry leading vendors, implemented according to District/Industry standards and best practice installation specifications. The services identified in the scope of work are offered at a fixed price.

Wireless bridges have been recommended for the connection of outlying classroom building to the rest of the campus network at Carter and Emerson schools due to cost advantages over the trenching option and this is reflected in the total cost for the proposal. In line with the District's requirements, the cost of implementing the trenching option at these schools has also been provided.

The cost of electrical circuits to be installed for the MDF, IDF and CDFs have been provided as a distinct item, separate from the total project cost as required in the district's Request for Information document.

This proposal also specifies the following:

1. That copper, fiber or coaxial cable will not be installed aerially.
2. The cost of the complete replacement and cleanup of network wiring, including removal and disposal of old wiring is included in the total project cost.
3. The performance of final, industry standard testing on all installed fiber and copper cables at a 100% pass rate.

Scope of Work

AEKO will perform the underlisted services in accordance with the outlined specifications conveyed in the design review document and relevant industry practices.

1. Project Management and Technical Supervision.
2. Materials and Interoperability verification services.
3. Hardware Procurement and Installation Services.
4. Cabling Installation Services.
5. Cable and Hardware Installation Testing Services.
6. Completion Verification.
7. Design Documentation.

Project Management and Technical Supervision

AEKO will provide project management services for the tasks described in this scope of Work including the responsibility for the establishment of a framework for project communications, reporting, procedure and contractual activity. The project manager designated by AEKO will perform the following tasks:

1. Review the SOW and contractual responsibilities of both parties with the OUSD Project Manager.

2. Maintain project communications through the OUSD Project Manager.

3. Establish documentation and procedural standards for the development of the project.

4. Prepare a detailed Project Implementation Plan for performance of this SOW that defines the detailed tasks and schedule responsibilities.

5. Measure and evaluate progress against the Project Implementation Plan.

6. Resolve deviations from the Project Implementation Plan.

7. Prepare and submit monthly Status Reports to the OUSD Project Manager.

8. Review and administer the Project Change Control Procedure with the OUSD Project Manager.

9. Coordinate and manage the technical activities of AEKO and subcontractor project personnel.

Materials and Interoperability

AEKO will furnish, install, connect and test the networking system, including all components, cabinets, terminals, conduits and cabling system in accordance with design services provided under the specification document.

Hardware Procurement and Installation

AEKO will coordinate hardware ordering, shipping and billing, title transfer for the cabling, network and other equipment procured for the completion of the tasks outlined in this scope of work. The items to be procured are listed in Appendix 3.

Installation of Racks and Cabinets (MDF, IDF, CDF)

AEKO will install, connect and test the racks and associated electrical and safety equipment cabinets in accordance with the design reviewed services provided under this specification document.

Racks in MDF

1. Install 84" high by 19" wide, floor-mounted, double-sided aluminum rack in MDF. Minimum of one rack per MDF.
2. Properly mount and ground all racks.
3. Install 19" rack-mounted horizontal patch cord/cable organizers for cable management in MDF.
4. Install vertical jumper retainer cable organizers mounted to front of rack, on sides of rack frame (two per rack), running the full height of rack.
5. Install 18" wide ladder rack between the top of rack and backboard with associated hanger supports and seismic bracing.
6. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in MDF.
7. Install one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in MDF. One power strip per rack.
8. Install center weighted shelves for district supplied servers, keypads and monitor with associated seismic straps. Minimum of one shelf per rack.
9. Install a minimum of two dedicated 20 Amp circuit quadplex receptacle outlet in MDF.

Racks in IDF

1. Install 84" high by 19" wide, floor mounted, double sided aluminum rack in IDF. Minimum of one rack per IDF.
2. Properly mount and ground all racks.
3. Install 19" rack mounted horizontal patch cord/cable organizers for cable management in IDF.
4. Install vertical jumper retainer cable organizers mounted to front of rack, on sides of rack frame (two per rack), running the full height of rack.
5. Install 18" wide ladder rack between the top of rack and backboard with associated hanger supports and seismic bracing.
6. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in IDF.
7. Install a minimum of one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in IDF. Install a minimum of one power strip per rack.
8. Install a minimum of one dedicated 20 Amp circuit quadplex receptacle outlet at each IDF location.

Cabinets in CDF

1. Install one 24" high x 24" wide x 24" deep 16 gauge wall mount cabinet with dual hinged lockable solid doors (front and back), 250 cfm exhaust fan, drilled EIA standard hole spacing, and vented side panels for mounting equipment specified herein at the CDF.
2. Properly mount and ground all cabinets.
3. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in CDF. Install SC couplings for termination of fiber cables.
4. Install a minimum of one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in CDF.
5. Install a minimum of one dedicated 20 Amp circuit for every two CDF locations with a quadplex receptacle outlet at each CDF location.

Network Hardware Configuration and Installation

AEKO will test, configure and install the network equipment listed in Appendix 3 in the school MDF, IDF and CDFs. The following subtasks will be performed.

Network Hardware Testing and Configuration

1. Unpack and inventory equipment.
2. Perform power-on testing.
3. Configure equipment listed in Appendix 3 with appropriate configuration as approved by AEKOAEKO and OUSD.
4. Perform connectivity checks once installed.

Network Hardware Installation in MDF.

1. Install one Cisco 3725 Router with the minimum of two 1-port T1/Fractional T1 DSU/TSU WAN Interface Card in MDF and 2 10/100 Ethernet ports.
2. Install minimum of one Cisco Catalyst 3550-12G multilayer switch at MDF.
3. Install minimum of one Cisco Catalyst WS-C3550-24PWR-SMI multilayer switch at MDF.
4. Install Cisco WS-G5484 1000BASE-SX "Short Wavelength" GBICs (Multimode Only) in all GBIC ports.
5. Install 2 meter SC to SC Multimode Fiber Patch Cables in all fiber ports.
6. Install one rack-mounted UPS for all switches and servers 1 hour minimum up time and appropriately rated for equipment in MDF.

Networking Hardware in IDF

1. Install minimum of one Cisco Catalyst WS-C3550-24PWR-SMI multilayer switch at IDF.
2. Install minimum of one Cisco Catalyst 3550-12G multilayer switch in IDF.
3. Install Cisco WS-G5484 1000 BASE-SX "Short Wavelength" GBICs (Multimode Only) in all GBIC ports.
4. Install 2 meter SC to SC Multimode Fiber Patch Cables in all fiber ports.
5. Install one rack-mounted UPS for all switches and servers (1 hour) in IDF.

Networking Hardware in CDF

1. Install minimum of one Cisco Catalyst WS-C2950-SX-24 multilayer switch in CDF.
2. Install Cisco WS-G5484 1000 BASE-SX "Short Wavelength" GBICs (Multimode Only) in all GBIC ports at CDF.
3. Install 2 meter SC to SC Multimode Fiber Patch Cable in all fiber ports.

Wireless Equipment

AEKO will install, test and configure industry standard IEEE 802.11a and b compliant wireless access points in the school Auditoriums/Multipurpose rooms in accordance with the design services provided in the specification document. The following subtasks will be performed.

Wireless Hardware in Auditoriums/Multi-purpose Rooms

1. Install minimum of two Cisco AIR-AP1200 access points in auditoriums/multi-purpose rooms.
2. Install Power-over-Ethernet modules as needed.
3. Access points shall support both 802.11a and 802.11b clients simultaneously.
4. Access points shall support IEEE 802.3af Power-over-Ethernet.
5. Access points shall be installed to industry standards.
6. Install 20 Amp circuit receptacle outlets at each access point location.

Wireless Hardware in Computer Labs

1. Install minimum of two Cisco AIR-AP 1200 access points in each computer laboratory.
2. Install Power-over-Ethernet modules as needed.
3. Access points shall support both 802.11a and 802.11b clients simultaneously.
4. Access points shall support IEEE 802.3af Power-over-Ethernet.
5. Access points shall be installed to industry standards.
6. Install 20 Amp circuit receptacle outlets at each access point location.

Cabling Installation

AEKO will perform cabling in OUSD's Group 1 Schools, as listed in Appendix 3 and in conformance with the specifications outlined below.

Conduit

AEKO will utilize conduits for all fiber runs and all building-to-building copper cable runs. AEKO will install at the minimum, two 2" conduits to house fiber and copper cabling. Additional conduit or larger conduit shall be specified as necessary.

Fiber Cables

AEKO will install Fiber optic cables in accordance with the design specification below and standard industry practice.

1. Install 12-strand multi-mode outside plant Fiber Optic cable from the MDF to each IDF.
2. Install one 12-strand multi-mode outside plant Fiber Optic cable from the IDF to each CDF.
3. Fiber Optic cable shall have continuous sheath continuity.
4. Each Fiber Optic cable shall be identified with a pre-established uniform numbering system. Identification will be securely attached to the cable at each end, whenever it enters or leaves a conduit, and at the MDF, IDF and CDF.
5. Fiber Optic cable must be installed in 1" corrugated type innerduct (orange in color) when running in shared conduit. Armored fiber is an acceptable alternative.
6. Terminate all 12 fiber strands at each end of the cable with SC type connectors.
7. Labeling of all terminations will be done to industry standards.

Category 6 Cables

AEKO will install Category 6 Cables in accordance with the design specification below and standard industry practice.

1. Install 10 new PVC rated Category 6 cables for each classroom. All cables will route through newly installed pathways.
2. 8 data cables are for student use and 2 data cables are for teacher use.
3. Install 3-channel metal (aluminum model AL4000 or steel model 4000) wiremold for the accommodation of new data cables and new AC electrical cable in the classroom. A total of 36 feet of wiremold per classroom.
4. The CAT 6 4-pair cable will meet EIA/TIA Commercial Building Telecommunications Wiring Standards.
5. Terminate the new Category 6 station cable on jacks at the station end and at the patch panel at the CDF end.
6. Maintain the outer jacket of all Category 6 cables up to the leading edge of the wiring block at both ends of the cable.
7. All jacks will use the EIA/TIA-568B wiring configuration.
8. Maintain twists on all Category 6 cables up to the edge of the termination point of the data jack.
9. Labeling of all terminations will be done to industry standards.
10. Furnish Category 6 patch cords in varying lengths (1, 3, 5, 7, and 10 feet) as needed. Provide one patch cord for each switch port.
11. Install two new Category 6 cables for each auditorium/multi-purpose room access points. Data jacks for access points are to be installed to industry standards. All cables will route through newly installed pathways.
12. Install three new Category 6 cables for each computer laboratory. Data jacks for access points are to be installed to industry standards. Two cables are for access points and one cable for network printer. All cables will route through newly installed pathways.

13. Install a minimum of two new Category 6 cables in each private administrative office.
14. Install a minimum of one Category 6 cable per workstation in shared administrative work area.
15. Install a minimum of one Category 6 cable for network printers.
16. Install a minimum of one Category 6 cable for network copiers.

Testing

AEKO will test all installed fiber optic and category 6 cables in accordance with the requirements outlined below:

1. Testing of all new copper and fiber cable at a 100% pass rate.
2. Testing for copper cables will include continuity, shorts, crosses, grounds, attenuation, impedance, near-end-cross talk (NEXT) and distance.
3. Testing all fibers, using a Power Meter and light source, at 850 nm and 1300 nm.
4. Pre-testing of all fibers prior to removing the cable from the reel to install.
5. These test results will be provided to OUSD Technology Services Department in soft (cd-rom) and hard copy form when testing is completed.

Completion

AEKO will perform all installation, configuration and Testing services in accordance with the specifications of this design document and the relevant industry practices. Each school installation will be considered complete after the following tasks have been accomplished:

1. All system testing has been completed
2. Installer assures that entire system is in working order
3. All Cable Test Forms have been submitted to the District in both hard and soft copy.
4. All ceiling panels previously removed have been put back in place.
5. All system labels have been put in place.
6. All construction debris and scrap materials have been removed from project site.
7. All marked up, project record documents have been returned to the District.
8. All unused customer material has been returned to the District.
9. The District has successfully completed acceptance testing of the network installation.
10. The District's Technology Services Department-Office of Technology Support Coordinator has inspected and accepted the installation.
11. Documentation, to include as-builts, along with required soft copies and completed cable management database has been turned over to the District.

Design Documentation

AEKO will provide the following deliverables to fulfill the Design Documentation requirements of the Request for Information:

1. Drawing of logical network configuration both in hard and soft copy format which includes:
    - All SNMP managed devices
    - IP addresses of all network equipment
    - Location of equipment
    - Riser diagram to include cable types and counts
    - Drop types and counts
2. A material list specifying quantity and part/specification and serial numbers on a CDF, IDF, and MDF room-by-room basis.
3. Coordinate cable runs and rack equipment locations with the Technology Services Department during the initial design of the cable installation. Agree with Technology Services as to the final location of all devices and the cable plant design.
4. Complete set of floor plans indicating entire system configuration, both in hard copy and in soft copy format. Floor plans have to include existing and new installation.
5. Cable Management Program that will operate on a MS Windows platform, including:
    a. Circuit identifications and locations.
    b. Cable schedule and routing.
    c. Cross-connect table for electronics to patch panel interconnections.
    d. Cable test forms and test results.
    e. Cable labels.
    f. Networking Planning Charts.
    g. Diskettes containing design database.

OUSD Responsibilities

AEKO's performance is dependent upon the following responsibilities being fulfilled by OUSD.

Oakland Unified School District (OUSD) Project Manager

Prior to the start of the SOW, OUSD will designate an authorized representative, called the OUSD Project Manager, who will be the focal point for all AEKO communications relative to the project and will have the authority to make binding decisions and act on behalf of OUSD in matters regarding this project. The OUSD Project Manager's responsibilities would include, but are not limited to the following:

1. Review the SOW and the contractual responsibilities of both parties with the AEKO Project Manager.
2. Serve as the interface between AEKO and all OUSD departments participating in the project.
3. Attend project meetings.
4. Obtain and provide information, data, documents, decisions and approvals within three (3) working days of AEKO's request unless the OUSD Project Manager and the AEKO Project Manager agree in writing to a different response time for each specific case.
5. Schedule and ensure participation of all the OUSD subject matter experts and technical personnel for all required interviews and work sessions.
6. Provide the information, access and system requirements necessary for AEKO to perform the tasks described within the SOW in a timely manner so as not to delay the progress of work.
7. Provide network architecture reports, diagrams, and additional planning information, such as contact names and telephone numbers, locations, and network services required at OUSD.
8. Resolve deviations from the estimated schedule, which may be caused by OUSD, its entities, employees, contractors, subcontractors, suppliers, and vendors, or any other agency, organization or persons beyond AEKO's control.
9. Help resolve project issues and escalate issues within the OUSD as necessary.
10. With the AEKO Project Manager, administer Project Change Control in accordance with "Appendix 1. Project Change Control Procedure."
11. Review with the AEKO Project Manager any OUSD invoice or billing requirements. Such requirements that deviate from AEKO's standard invoice format or billing procedures may have an effect on price, and will be managed through the procedure described in "Appendix 1. Project Change Control Procedure".
12. Provide early feedback to alert the designated AEKO representative if there are concerns that AEKO personnel are not performing satisfactorily.
13. Ensure that knowledgeable OUSD staff members are made available to AEKO for data gathering efforts.

Key Assumptions

AEKO's pricing to perform is based on the SOW and the following key assumptions.

1. AEKO and the OUSD Project Manager will work together to establish the schedule of equipment ordering, requested delivery dates, and shipment to a designated location.
2. AEKO will be available to provide services under this SOW during the agreed business hours on Monday through Friday, except AEKO holidays, unless otherwise mutually agreed.
3. AEKO may use subcontractors in the performance of its responsibilities under this SOW.
4. Services provided under this SOW will be performed at the OUSD in Oakland California, California and the outlying areas, and at off-site locations, including AEKO offices.
5. OUSD has personnel with technical skills needed to participate in this project and will make these resources available to AEKOAEKO to assist in performing the tasks described in this SOW.
6. The timeline and costs of this project are dependent upon the completeness, accuracy, currency, and availability of necessary OUSD supplied data, and the availability of *key* OUSD personnel for interviews. AEKO is not responsible for project delays caused by incomplete, inaccurate, untimely, or unavailable information.
7. Pricing assumes that OUSD selects the Cisco Smartnet offering. All Smartnet-related issues will be addressed directly to Cisco by the OUSD. Smartnet is part of Cisco's Hardware maintenance offering.
8. For Cisco Smartnet services, AEKO is acting solely as an agent to Cisco in facilitating the Smartnet transaction and has no ongoing obligations or liabilities related to such transaction. Should OUSD elect to modify or extend these Cisco Smartnet services procured on behalf of the OUSD, it will be the responsibility of OUSD to initiate such transaction
9. Installation services will cover the type of hardware listed in Appendix 3.
10. The Charges and payment schedule are based upon continuous performance according to the project schedule contained in the Project Implementation Plan delivered to the OUSD Project Manager at the commencement of AEKO's performance under this SOW. AEKO will invoice to both the district and USAC accordingly to for the appropriate portions. OUSD will pay AEKO as its Service Provider directly for the undiscounted portion of the bill. If there is a delay or break in performance caused by anything beyond AEKO's control, then AEKO will be relieved of any remaining obligations under this SOW unless the parties sign a Change Authorization.
11. OUSD will provide suitable office as needed Desk space, telephones, LAN connections and storage space to properly support AEKO's activities in this SOW. This office will be made available prior to initiation of the services described in this SOW.

12. Adequate access through firewalls and concrete walls will be provided by Oakland Unified School District (OUSD).
13. There is no asbestos or lead paint present. Oakland Unified School District (OUSD) will provide all hazardous materials abatement for the existing buildings.
14. Prior to the start of work on-site, all design documentation will be reviewed and approved by AEKO and OUSD Technology Services Department.
15. The AEKO Overall Project Manager will be responsible for all AEKO project communications related to this SOW.
16. AEKO staffing assumptions are based on this SOW. The OUSD will make available appropriate NETC resources for interaction, feedback, and advice so as to facilitate AEKO's ability to respond to scope changes efficiently as the environment changes over the period of performance of this Statement of Work.
17. Services will be performed onsite and offsite.
18. With the exception of electrical installation services, only activities or tasks fundable under the E-Rate program during the period of July 1, 2004 through June 30, 2005 are included
19. Quantities exceeding those identified in Appendix 3 will require a Project Change Request (PCR).
20. All work at a site will be done continuously (subject to working hours) until completed. Work stoppages outside AEKO's control may incur additional time, material & travel charges.
21. If work must be rescheduled, OUSD must provide adequate verbal or written notice to the AEKO Project Manager. If AEKO incurs additional expenses as a result of such changes, OUSD will be billed for additional expenses incurred by AEKO
22. The pricing provided by AEKO in respect of the tasks to be performed in this SOW does not include Sales Tax.

APPENDIX 1- Project Change Control Procedure

The following provides a detailed process to follow if a change to this SOW is required.

A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change; the rationale for the change and the effect the change will have on the project. The designated Project Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party.

Both Project Managers will review the proposed change and approve it for further investigation or reject it. AEKO will specify any charges for such investigation. If the investigation is authorized, the Project Managers will sign the PCR, which will constitute approval for the investigation charges. AEKO will invoice OUSD for any such charges. The joint investigation will determine the effect that the implementation of the PCR will have on price, schedule and other terms and conditions of the Agreement between OUSD and AEKO. A written Change Authorization and/or Project Change Request (PCR) must be signed by both parties to authorize implementation of the investigated changes.

APPENDIX 2 – Deliverables Guidelines

The following deliverables shall be provided over the duration of the project.

MONTHLY STATUS REPORT

Purpose: These reports will facilitate communication about project status, progress, direction, issues, and risks.
Content:

- Activities performed during the reporting period;
- Activities planned for the next reporting period;
- Project change control summary;
- Issue management including description, impact, recommendations, activity, and assigned person; and
- Other items of importance.

Delivery: One (1) copy of the Monthly Status Report will be delivered to the OUSD Project Manager within a reasonable interval following the reporting period.

PROJECT IMPLEMENTATION PLAN

Purpose: The purpose of this document is to outline the project resources, timelines and tasks. This file may be continuously updated throughout the course of the project.
Content:

- Tasks and resources;
- Major Milestones;
- Key Checkpoints; and
- Project Timeline.

Delivery: *AEKO* will deliver one (1) copy of this document in reproducible format to the OUSD Project Manager at the commencement of AEKO's provision of services under the SOW.

DRAWING OF LOGICAL NETWORK CONFIGURATION

Purpose: The purpose of this document is to outline and record the actual cabling installation.

Content:

- All SNMP managed devices
- IP Address of all network equipment
- Location of equipment;
- Riser diagram to include cable types and counts; and
- Drop types and counts.

Delivery: *AEKO* will deliver one (1) copy of this document in reproducible format to the OUSD Project Manager within a reasonable interval after AEKO's completion of cabling installation.

MATERIALS LIST

Purpose: The purpose of this document is to record the actual quantities of equipment installed.
Content:

- Listing by quantity and part/specification and serial number of installed equipment; and
- Shown by MDF, IDF and CDF.

Delivery: *AEKO* will deliver one (1) copy of this document in reproducible format to the OUSD Project Manager within a reasonable interval after AEKO's completion of hardware installation.

CABLE TEST CERTIFICATION REPORT

Purpose: The purpose of this document is to record the cabling test results.

Content:

- Listing by cable showing testing results using industry standard test device.

Delivery: *AEKO* will deliver one (1) copy of this document in hard and soft copy format to the OUSD Project Manager within a reasonable interval of AEKO's completion of cabling installation.

CABLE MANAGEMENT PROGRAM

Purpose: The purpose of this item is to facilitate the management of records of information about cabling installation at the District's schools on a computer application running on a MS Windows Platform.

Capabilities:

The Cable Management Program will have the capability to maintain the following information:

- Circuit identifications and locations
- Cable schedule and routing.
- Cross-connect table for electronics to patch panel interconnections.
- Cable test forms and test results.
- Cable labels.
- Network Planning Charts.
- Diskettes containing design database.

Delivery: *AEKO* will deliver one (1) copy of this document in reproducible format to the OUSD Project Manager within a reasonable interval of AEKO's completion of cabling installation.

APPENDIX – 3 List of Equipment

The following table lists the hardware and cabling equipment to be provided by AEKO:

Equipment	Equipment Description	QTY
Data Wiring		
Cable	Cat-6 cable copper 4 pr pvc	203520
Cable	Cat-6 jacks rj45	1098
Face Plate	Face plate 2-port	549
Cabinet	CDF Cabinets per spec	46
Rack	19" rack MDF & IDF1 Spec	12
LIU	Fiber LIU 12 port 19" rack	104
Power Stip	Horizontal 12 port pwr strp	12
Wire Manager	Panduit Wire manager Vert	24
Wire Manager	Panduit wire manager Hori	46
Ladder Rack	18" ladder rack sticks	12
Plate	Top plate 18"	12
Shelf	MDFf Server shelf	5
Tray	MDF Keyboard tray	5
Shelf	MDF Monitor shelf	5
Bracket	18" "L" bracket	12
Cabinet Power Strip	Horizontal power strp cabinet	46
Innerduct	1" fiber innerduct	11400
Fiber	12 strand fiber pvc	11400
Fiber tags	Fiber Ident tags	88
Connectors	Sc connectors	1176
Patch cable	Patch cords c6 3ft CDF	1098
Patch Cable	Patch cords c6 10ft CDF	1098
Patch Cable	24 port c6 Patch panels	49
SC-SC Fiber patch	Sc to Sc patch 2 meter	100
Plywood	4x4 3/4 plywood	46
Panel	Fiber coupling panel Dual SC	204
Other Kit	Ground Kit	58
Wiremold	36' Steel Wiremold / Class Room	104
Demolition		
Remove Existing Cables		1
Network Equipment		
CISCO3725 -	3700 Series, 2-Slot, Dual FE, Multiservice Access Router	5
WIC-1DSU-T1-V2	Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	10
	10 GBIC ports and 2-10/100/1000BaseT	

	ports	
Cisco - WS-C3550-24PWR-SMI	24-10/100 inline power + 2 GBIC ports: SMI	12
Cisco- WS-C2950SX-24	24 10/100 ports w/2 1000BASE-SX ports, Standard Image only	56
Cisco - WS-G5484=	1000BASE-SX Short Wavelength GBIC (Multimode only)	144
Cisco - AIR-AP1200	AP Platform, Cardbus and MPCI Slots (no radio), Enet Uplink	26
Cisco - AIR-MP20B-A-K9	2.4GHz 11Mbps Access Point Mini-PCI Module, FCC Cnfg	26
Cisco - AIR-RM20A-A-K9	802.11a CardBus Radio Mod w/ Dual Int Ant,FCC Cnfg	26
SmartNet	CISCO3725 -	0
SmartNet	Cisco -WS-C3550-12G	0
SmartNet	Cisco - WS-C3550-24PWR-SMI	0
SmartNet	Cisco- WS-C2950SX-24	0
UPS (1500W)	MDF UPS I Hr Minimum Uptime	5
UPS(1200W)	MDF UPS 1 Hr Minimum Uptime	2
UPS(1000W)	IDF UPS I Hr Minimum Uptime)	5
Wireless Bridging Equipment		
Cisco AIR-BR350-A-K9	Aironet 350 Wireless Bridge	8
N/M RTMC/F SOI	Wireless Bridge Jumpers	8
Antenna	12dBi Omni Antenna	2
Antenna	8dBi Linear Patch Antenna	6
Cable	75 feet 3/8 Coaxial cable	8
Trenching Option (Trenching between Portables and Main Building)		
Carter		80
Emerson		310
AEKO Professional Services		
Professional Services	Installation, Patching, Configuration, Testing	1
Project Management	Overall Project Management	1
Design, Drawings and Documentation	Final Design and as-installed documentation	1
Storage and Transportation	Storage and Transportation of Network Components	1
Software	Cable Management	1
Electrical		

Quad 20amp	Washington CDF Quad 20 amp	6
Quad 20amp	Golden Gate CDF Quad 20 Amp	9
Quad 20amp	LongFellow CDF Quad 20 amp	10
Quad 20amp	Carter Quad CDF 20 amp	8
Quad 20amp	Emerson CDF Quad 20 amp	10
Single gang 20 amp	Washington MDF & IDF Single Gang 20 amp	2
Single gang 20 amp	Golden Gate MDF & IDF Single Gang 20 Amp	3
Single gang 20 amp	LongFellow MDF & IDF Single Gang 20 amp	4
Single gang 20 amp	Carter Quad MDF & IDF Single Gang 20 amp	2
Single gang 20 amp	Emerson MDF & CDF Single Gang 20 amp	2

APPENDIX 4 – Project Cost

The pricing for the wireless bridge component of the recommended solution is enclosed below along with the total cost of the proposal.

Wireless Bridge	$7642.60
Total Cost:	**$1,062,348.22**
Wireless Bridge Option (Recommended)	

Per the requirements of the district as specified in the Request for Information, the cost of adopting the trenching option in Carter and Emerson schools is enclosed below along with a total cost reflecting the incorporation of this option.

Trenching	$30,498.00
Total Cost	**$1,085,203.62**
Trenching Option	

The cost of electrical circuits to be installed in the MDF, IDF and CDFs is enclosed below:

Electrical Circuits	**$25,455.00**

EXHIBIT I

Oakland Unified School District

Request for Additional Information

Internal Wiring and Network Installation and Configuration for Modernization Project (Year 7 E-Rate Program)

Submitted by
AEKO Consulting

January 21, 2004

AEKO Consulting
Solutions Integrators

AEKO Consulting
1939 Harrison Street Suite 420
Oakland, California, USA, 94612

Phone (510) 763-2356
Telex (510) 763-0720
Fax (510) 763-0720

AEKO CONSULTING
Solutions Integrators

January 21, 2004

Mr. Edgar Rakestraw, Jr.
Oakland Unified School District
Office of the State Administrator
1025 2nd Avenue, Suite 301
Oakland, CA 94606

Re: OUSD E-Rate Year 7 - Request for Additional Information

Dear Mr. Rakestraw, Jr.,

Please find enclosed our response to your Request for Additional Information concerning the Year 7 E-Rate Program. The information is organized so that the details for all the schools in each group are provided on a single page.

As mentioned in our response to the RFI, our numbers did not include the Sales Tax for all purchases. Hence, we have provided all expected Sales Tax for each of the schools on the last row of each page. To file a 471 Form to Schools and Library Division (SLD) of Universal Service Administrative Company (USAC), it is important to include the Sales Tax figures.

We look forward to continue our long relationship with the District and should you have any questions or comments on this presentation, please feel free to contact me at 510-763-2356 x13 or by e-mail at Gboyega@aeko.com.

Sincerely,

AEKO Consulting, Inc.
Solutions Integrators

Gboyega Aladegbami
Principal Consultant

	GROUP 1									
	Washington		Golden Gate		Long Fellow		Carter		Emerson	
Description	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost
Network Materials										
3700 Series, 2-Slot, Dual FE, Multiservice Access Router	1	$5,184.84	1	$5,184.84	1	$5,184.84	1	$5,184.84	1	$5,184.84
Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	2	$1,225.19	2	$1,225.19	2	$1,225.19	2	$1,225.19	2	$1,225.19
SmartNet (1Yr) Onsite	1	$0.00	1	$0.00	1	$0.00	1	$0.00	1	$0.00
10 GBIC ports and 2-10/100/1000BaseT ports	2	$12,181.63	3	$18,272.45	2	$12,181.63	2	$12,181.63	3	$18,272.45
SmartNet (1 Yr) Onsite	2	$0.00	3	$0.00	2	$0.00	2	$0.00	3	$0.00
24-10/100 inline power + 2 GBIC ports: SMI	2	$4,330.51	3	$6,495.77	2	$4,330.51	2	$4,330.51	3	$6,495.77
SmartNet (1 Yr) Onsite	2	$0.00	3	$0.00	2	$0.00	2	$0.00	3	$0.00
24 10/100 ports w/2 1000BASE-SX ports, Standard Image only	6	$6,625.93	13	$14,356.19	12	$13,251.86	13	$14,356.19	11	$12,147.54
SmartNet (1 Yr) Onsite	6	$0.00	13	$0.00	12	$0.00	13	$0.00	11	$0.00
1000BASE-SX Short Wavelength GBIC (Multimode only)	24	$7,016.42	36	$10,524.63	24	$7,016.42	24	$7,016.42	36	$10,524.63
AP Platform, Cardbus and MPCI Slots (no radio), Enet Uplink	4	$1,979.31	6	$2,968.96	6	$2,968.96	4	$1,979.31	6	$2,968.96
2.4GHz 11Mbps Access Point Mini-PCI Module, FCC Cnfg	4	$367.76	6	$551.64	6	$551.64	4	$367.76	6	$551.64
802.11a CardBus Radio Mod w/ Dual Int Ant,FCC Cnfg	4	$1,235.52	6	$1,853.28	6	$1,853.28	4	$1,235.52	6	$1,853.28
Smartnet for AP Platform	4	$0.00	6	$0.00	6	$0.00	4	$0.00	6	$0.00
Smartnet for 2.4GHz AP	4	$0.00	6	$0.00	6	$0.00	4	$0.00	6	$0.00
Smartnet for 802.11a AP	4	$0.00	6	$0.00	6	$0.00	4	$0.00	6	$0.00
		$0.00		$0.00		$0.00		$0.00		$0.00
MDF UPS I Hr Minimum Uptime	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19
MDF UPS 1 Hr Minimum Uptime	0	$0.00	1	$2,330.76	0	$0.00	0	$0.00	1	$2,330.76
IDF UPS I Hr Minimum Uptime)	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19
Total for Network Materials		**$44,041.49**		**$67,658.08**		**$52,458.72**		**$51,771.74**		**$65,449.44**
Cabling Materials										
cat-6 cable copper pvc	23600	$1,789.72	52960	$4,016.25	37660	$2,855.97	48300	$3,662.86	41000	$3,109.26
cat-6 jacks	123	$652.42	292	$1,548.84	227	$1,204.06	236	$1,251.80	220	$1,166.94
face plate 2-port	61	$72.64	146	$173.85	114	$135.75	118	$140.51	110	$130.98
CDF Cabinets 24h24w24d 16 ga	5	$1,662.97	10	$3,325.93	10	$3,325.93	11	$3,658.53	10	$3,325.93
19" rack MDF/IDF1	2	$192.69	3	$289.03	2	$192.69	2	$192.69	3	$289.03
Fiber LIU 12 port 19" rack	12	$1,534.05	26	$3,323.77	22	$2,812.42	22	$2,812.42	22	$2,812.42
Horizontal 12 port pwr strp	2	$118.09	3	$177.13	2	$118.09	2	$118.09	3	$177.13
Panduit Wire manager Vert	4	$419.26	6	$628.89	4	$419.26	4	$419.26	6	$628.89
Panduit wire manager Hori	7	$183.90	12	$315.26	2	$52.54	13	$341.53	0	$0.00
18" ladder rack	2	$124.59	3	$186.88	2	$124.59	2	$124.59	3	$186.88
top plate 18"	2	$40.08	3	$60.13	2	$40.08	2	$40.08	3	$60.13
mdf Server shelf	1	$63.92	1	$63.92	1	$63.92	1	$63.92	1	$63.92
mdf Keyboard tray	1	$47.07	1	$47.07	1	$47.07	1	$47.07	1	$47.07
mdf Monitor shelf	1	$149.50	1	$149.50	1	$149.50	1	$149.50	1	$149.50
18" "L" bracket	2	$30.01	3	$45.01	2	$30.01	2	$30.01	2	$30.01
horizontal power strp cabinet	5	$295.22	10	$590.43	10	$590.43	11	$649.48	10	$590.43
1" fiber innerduct	1100	$226.24	2800	$575.89	3000	$617.03	3000	$617.03	1500	$308.51
12 strand fiber pvc	1100	$991.25	2800	$2,523.17	3000	$2,695.43	3000	$2,703.40	1500	$1,351.70
Fiber Ident tags	10	$17.88	26	$46.48	16	$28.75	16	$28.60	10	$17.88
Sc connectors	168	$800.82	312	$1,487.24	192	$915.23	192	$915.23	312	$1,487.24
Patch cords c6 3ft CDF	123	$290.49	292	$689.63	227	$536.11	236	$557.37	212	$500.69
patch cords c6 10ft CDF	123	$442.90	292	$1,051.44	227	$817.39	236	$849.80	212	$763.38
Patch panels	6	$645.01	13	$1,397.53	10	$1,075.02	10	$1,075.02	10	$1,075.02
sc to sc patch 2 meter	12	$135.85	26	$294.35	20	$226.42	16	$181.14	26	$294.35
4x4 3/4 plywood	5	$81.25	10	$162.50	10	$164.13	11	$178.76	10	$162.50
Fiber coupling panel Dual SC	12	$326.31	52	$1,414.01	44	$1,196.47	44	$1,196.47	52	$1,414.01
Ground Kit	7	$75.84	13	$140.84	10	$108.34	13	$140.84	13	$140.84
Conduit 2 inch	0	$0.00	0	$0.00	0	$0.00	680	$7,154.89	0	$0.00
Junction box 6x6x4	0	$0.00	0	$0.00	0	$0.00	12	$363.72	0	$0.00
Test & document	223	$0.00	380	$0.00	283	$0.00	332	$0.00	272	$0.00
Fiber Doc	1	$819.45	1	$684.14	1	$806.46	1	$866.00	1	$877.91
36' - 4000 Wiremold (Metal)	14	$49,980.00	25	$89,250.00	21	$74,970.00	23	$82,110.00	21	$74,970.00
Total for Cabling Materials		**$62,209.43**		**$114,659.14**		**$96,319.10**		**$112,640.59**		**$96,132.56**
Sub-Total for Materials		**$106,250.91**		**$182,317.22**		**$148,777.81**		**$164,412.34**		**$161,582.00**
Material Handling		**$7,703.19**		**$13,218.00**		**$10,786.39**		**$11,919.89**		**$11,714.69**
TOTAL FOR MATERIALs		**$113,954.11**		**$195,535.22**		**$159,564.21**		**$176,332.23**		**$173,296.69**
Installation and Configuration Services		**$33,953.90**		**$38,036.40**		**$30,010.25**		**$52,233.31**		**$42,291.75**
PROJECT MANAGEMENT		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**
Cable Management Software		**$500.00**		**$500.00**		**$500.00**		**$500.00**		**$500.00**
TOTAL BEFORE TRENCHING/BRIDGING		**$155,808.01**		**$241,471.61**		**$197,474.46**		**$236,465.55**		**$223,488.44**
Wireless Bridging Solution										
Aironet 350 Wireless Bridge	0	$0.00	0	$0.00	0	$0.00	3	$2,437.33	5	$4,060.00
Smartnet for Aironet 350	0	$0.00	0	$0.00	0	$0.00	3	$0.00	5	$0.00
Wireless Bridge Jumpers	0	$0.00	0	$0.00	0	$0.00	3	$73.50	5	$122.50
12dBi Omni Antenna	0	$0.00	0	$0.00	0	$0.00	1	$132.30	1	$132.30
8dBi Linear Patch Antenna	0	$0.00	0	$0.00	0	$0.00	2	$70.00	4	$140.00
75 feet 3/8 Coaxial cable	0	$0.00	0	$0.00	0	$0.00	3	$178.50	5	$297.50
Total for Bridging		**$0.00**		**$0.00**		**$0.00**		**$2,891.63**		**$4,752.30**
SOLUTION WITH BRIDGING		**$155,808.01**		**$241,471.61**		**$197,474.46**		**$239,357.18**		**$228,240.74**
Total Trenching Option							80	**6256**	310	**24242**
SOLUTION WITH TRENCHING		**$155,808.01**		**$241,471.61**		**$197,474.46**		**$242,721.55**		**$247,730.44**
Electrical										
20 amp Quad CDF	6	$3,120.00	9	4680	11	5600	8	4160	10	5200
20 amp MDF/IDF	2	$490.00	3	735	2	490	2	490	2	490
Total for Electrical		**$3,610.00**		**$5,415.00**		**$6,090.00**		**$4,650.00**		**$5,690.00**
Sales Tax		$9,699.04		$16,578.39		$13,666.47		$15,169.59		$15,158.47

	GROUP 2									
	Lafayette		Lowell		MLK		Cole		Prescott	
Description	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost
Network Materials										
3700 Series, 2-Slot, Dual FE, Multiservice Access Router	1	$5,184.84	1	$5,184.84	1	$5,184.84	1	$5,184.84	1	$5,184.84
Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	2	$1,225.19	2	$1,225.19	2	$1,225.19	2	$1,225.19	2	$1,225.19
SmartNet (1Yr) Onsite	1	$0.00	1	$0.00	1	$0.00	1	$0.00	1	$0.00
10 GBIC ports and 2-10/100/1000BaseT ports	2	$12,181.63	2	$12,181.63	2	$12,181.63	2	$12,181.63	2	$12,181.63
SmartNet (1 Yr) Onsite	2	$0.00	2	$0.00	2	$0.00	2	$0.00	2	$0.00
24-10/100 Inline power + 2 GBIC ports: SMI	2	$4,330.51	3	$6,495.77	2	$4,330.51	2	$4,330.51	2	$4,330.51
SmartNet (1 Yr) Onsite	2	$0.00	3	$0.00	2	$0.00	2	$0.00	2	$0.00
24 10/100 ports w/2 1000BASE-SX ports, Standard Image only	13	$14,356.19	16	$17,669.15	10	$11,043.22	11	$12,147.54	15	$16,564.83
SmartNet (1 Yr) Onsite	13	$0.00	16	$0.00	10	$0.00	11	$0.00	15	$0.00
1000BASE-SX Short Wavelength GBIC (Multimode only)	24	$7,016.42	26	$7,601.12	24	$7,016.42	24	$7,016.42	24	$7,016.42
AP Platform, Cardbus and MPCI Slots (no radio), Enet Uplink	2	$989.65	18	$8,906.89	4	$1,979.31	8	$3,958.62	4	$1,979.31
2.4GHz 11Mbps Access Point Mini-PCI Module, FCC Cnfg	2	$183.88	18	$1,654.93	4	$367.76	8	$735.53	4	$367.76
802.11a CardBus Radio Mod w/ Dual Int Ant,FCC Cnfg	2	$617.76	18	$5,559.83	4	$1,235.52	8	$2,987.56	4	$1,235.52
Smartnet for AP Platform	2	$0.00	18	$0.00	4	$0.00	8	$0.00	4	$0.00
Smartnet for 2.4GHz AP	2	$0.00	18	$0.00	4	$0.00	8	$0.00	4	$0.00
Smartnet for 802.11a AP	2	$0.00	18	$0.00	4	$0.00	8	$0.00	4	$0.00
		0		0		$0.00		$0.00		0
MDF UPS I Hr Minimum Uptime	1	$1,947.19	0	$0.00	1	$1,947.19	1	$1,947.19	1	$1,947.19
MDF UPS 1 Hr Minimum Uptime	0	$0.00	1	$2,330.76	0	$0.00	0	$0.00	0	$0.00
IDF UPS I Hr Minimum Uptime)	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19	1	$1,947.19
Total for Network Materials		**$49,980.45**		**$70,757.31**		**$48,458.78**		**$53,662.21**		**$53,980.39**
Cabling Materials										
cat-6 cable copper pvc	46620	$3,535.46	53280	$4,040.52	40000	$3,033.42	42000	$3,185.10	48000	$3,640.11
cat-6 jacks	252	$1,336.67	288	$1,527.62	224	$1,188.15	223	$1,182.85	257	$1,363.19
face plate 2-port	126	$150.03	144	$171.47	112	$133.36	112	$133.36	129	$153.61
CDF Cabinets 24h24w24d 16 ga	11	$3,658.53	12	$3,991.12	11	$3,658.53	10	$3,325.93	11	$3,658.53
19" rack MDF/IDF1	2	$192.69	2	$192.69	2	$192.69	2	$192.69	2	$192.69
Fiber LIU 12 port 19" rack	22	$2,812.42	28	$3,579.44	26	$3,323.77	24	$3,068.09	22	$2,812.42
Horizontal 12 port pwr strp	2	$118.09	3	$177.13	2	$118.09	2	$118.09	2	$118.09
Panduit Wire manager Vert	4	$419.26	4	$419.26	4	$419.26	4	$419.26	4	$419.26
Panduit wire manager Hori	13	$341.53	12	$315.26	12	$315.26	12	$315.26	11	$288.99
18" ladder rack	2	$124.59	2	$124.59	2	$124.59	2	$124.59	2	$124.59
top plate 18"	2	$40.08	2	$40.08	2	$40.08	2	$40.08	2	$40.08
mdf Server shelf	1	$63.92	1	$63.92	1	$63.92	1	$63.92	1	$63.92
mdf Keyboard tray	1	$47.07	1	$47.07	1	$47.07	1	$47.07	1	$47.07
mdf Monitor shelf	1	$149.50	1	$149.50	1	$149.50	1	$149.50	1	$149.50
18" "L" bracket	2	$30.01	2	$30.01	2	$30.01	2	$30.01	2	$30.01
horizontal power strp cabinet	11	$649.48	12	$708.52	10	$590.43	10	$590.43	11	$649.48
1" fiber innerduct	2750	$565.61	5000	$1,028.38	5000	$1,028.38	3000	$617.03	5000	$1,028.38
12 strand fiber pvc	2750	$2,478.12	5000	$4,505.67	5000	$4,505.67	3000	$2,703.40	5000	$4,505.67
Fiber Ident tags	22	$39.33	28	$50.05	22	$39.33	24	$42.90	24	$42.90
Sc connectors	264	$1,258.44	336	$1,601.65	312	$1,487.24	288	$1,372.84	288	$1,372.84
Patch cords c6 3ft CDF	252	$595.16	288	$680.18	224	$529.03	223	$526.67	257	$606.97
patch cords c6 10ft CDF	252	$907.41	288	$1,037.04	224	$806.59	223	$802.98	257	$925.41
Patch panels	11	$1,182.53	12	$1,290.03	10	$1,075.02	10	$1,075.02	11	$1,182.53
sc to sc patch 2 meter	22	$249.07	28	$316.99	26	$294.35	24	$271.71	24	$271.71
4x4 3/4 plywood	11	$178.76	12	$195.01	11	$178.76	10	$162.50	11	$178.76
Fiber coupling panel Dual SC	44	$1,196.47	56	$1,522.78	52	$1,414.01	48	$1,305.24	44	$1,196.47
Ground Kit	13	$140.84	14	$151.67	13	$140.84	12	$130.00	13	$140.84
Conduit 2 inch	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Junction box 6x6x4	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Test & document	384	$0.00	432	$0.00	336	$0.00	334	$0.00	391	$0.00
Fiber Doc	1	$880.07	1	$620.99	1	$1,082.50	1	$714.58	1	$982.91
36' - 4000 Wiremold (Metal)	25	$89,250.00	26	$92,820.00	20	$75,000.00	22	$82,500.00	27	$101,250.00
Total for Cabling Materials		**$112,591.11**		**$121,398.64**		**$101,009.85**		**$105,211.12**		**$127,436.90**
Sub-Total for Materials		**$162,571.56**		**$192,155.94**		**$149,468.62**		**$158,873.33**		**$181,417.29**
Material Handling		**$11,786.44**		**$13,931.31**		**$10,836.48**		**$11,518.32**		**$13,152.75**
TOTAL FOR MATERIALs		**$174,358.00**		**$206,087.25**		**$160,305.10**		**$170,391.65**		**$194,570.04**
Installation and Configuration Services		**$40,547.22**		**$47,115.97**		**$42,238.93**		**$40,030.99**		**$43,704.86**
PROJECT MANAGEMENT		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**
Cable Management Software		**$500.00**		**$500.00**		**$500.00**		**$500.00**		**$500.00**
TOTAL BEFORE TRENCHING/BRIDGING		**$222,805.22**		**$261,103.22**		**$210,444.03**		**$218,322.64**		**$246,174.90**
Wireless Bridging Solution										
Aironet 350 Wireless Bridge	0		2	$1,624.82	0	$0.00	0	$0.00	3	$2,437.33
Smartnet for Aironet 350	0		2	$0.00	0	$0.00	0	$0.00	3	$0.00
Wireless Bridge Jumpers	0		2	$49.00	0	$0.00	0	$0.00	3	$73.50
12dBi Omni Antenna	0		0	$0.00	0	$0.00	0	$0.00	1	$132.30
8dBi Linear Patch Antenna	0		2	$70.00	0	$0.00	0	$0.00	2	$70.00
75 feet 3/8 Coaxial cable	0		2	$119.00	0	$0.00	0	$0.00	3	$178.50
Total for Bridging		**$0.00**		**$1,862.82**		**$0.00**		**$0.00**		**$2,891.63**
SOLUTION WITH BRIDGING		**$222,805.22**		**$262,966.04**		**$210,444.03**		**$218,322.64**		**$249,066.53**
Total Trenching Option	**0**	0	150	11730	**0**	0	**0**	0	**0**	0
SOLUTION WITH TRENCHING		**$222,805.22**		**$272,833.22**		**$210,444.03**		**$218,322.64**		**$246,174.90**
Electrical										
20 amp Quad CDF	11	5720	13	6760	11	5720	10	5200	11	5720
20 amp MDF/IDF	2	490	4	980	2	490	2	490	2	490
Total for Electrical		**$6,210.00**		**$7,740.00**		**$6,210.00**		**$5,690.00**		**$6,210.00**
Sales Tax		$14,896.86		$17,794.43		$13,737.50		$14,526.74		$16,802.91

	GROUP 3									
	West Lake		Foster		Bella vista		Mandela		College Prep	
Description	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost
Network Materials										
3700 Series, 2-Slot, Dual FE, Multiservice Access Router	1	$5,184.84	1	$5,184.84	1	$5,184.84	1	$5,184.84	0	$0.00
Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	2	$1,225.19	2	$1,225.19	2	$1,225.19	2	$1,225.19	0	$0.00
SmartNet (1Yr) Onsite	1	$0.00	1	$0.00	1	$0.00	1	$0.00	0	$0.00
10 GBIC ports and 2-10/100/1000BaseT ports	2	$12,181.63	1	$6,090.82	2	$12,181.63	1	$6,090.82	1	$6,090.82
SmartNet (1 Yr) Onsite	2	$0.00	1	$0.00	2	$0.00	1	$0.00	1	$0.00
24-10/100 inline power + 2 GBIC ports: SMI	2	$4,330.51	1	$2,165.26	2	$4,330.51	1	$2,165.26	1	$2,165.26
SmartNet (1 Yr) Onsite	2	$0.00	1	$0.00	2	$0.00	1	$0.00	1	$0.00
24 10/100 ports w/2 1000BASE-SX ports, Standard Image only	18	$19,877.80	9	$9,938.90	17	$18,773.47	7	$7,730.25	7	$7,730.25
SmartNet (1 Yr) Onsite	18	$0.00	9	$0.00	17	$0.00	7	$0.00	7	$0.00
1000BASE-SX Short Wavelength GBIC (Multimode only)	24	$7,016.42	12	$3,508.21	24	$7,016.42	12	$3,508.21	12	$3,508.21
AP Platform, Cardbus and MPCI Slots (no radio), Enet Uplink	12	$5,937.93	6	$2,968.96	4	$1,979.31	0	$0.00	2	$989.65
2.4GHz 11Mbps Access Point Mini-PCI Module, FCC Cnfg	12	$1,103.29	6	$551.64	4	$367.76	0	$0.00	2	$183.88
802.11a CardBus Radio Mod w/ Dual Int Ant,FCC Cnfg	12	$3,706.56	6	$1,853.28	4	$1,235.52	0	$0.00	2	$617.76
Smartnet for AP Platform	12	$0.00	6	$0.00	4	$0.00	0	$0.00	2	$0.00
Smartnet for 2.4GHz AP	12	$0.00	6	$0.00	4	$0.00	0	$0.00	2	$0.00
Smartnet for 802.11a AP	12	$0.00	6	$0.00	4	$0.00	0	$0.00	2	$0.00
		0		$0.00		0		$0.00		0
MDF UPS I Hr Minimum Uptime	0	$0.00	1	$1,947.19	1	$1,947.19	1	$1,947.19	0	$0.00
MDF UPS 1 Hr Minimum Uptime	1	$2,330.76	0	$0.00	0	$0.00	0	$0.00	0	$0.00
IDF UPS I Hr Minimum Uptime)	1	$1,947.19	0	$0.00	1	$1,947.19	0	$0.00	1	$1,947.19
Total for Network Materials		**$64,842.11**		**$35,434.28**		**$56,189.03**		**$27,851.75**		**$23,233.02**
Cabling Materials										
cat-6 cable copper pvc	66000	$5,699.08	30000	$2,590.49	60000	$5,180.98	25000	$2,158.74	24000	$2,072.39
cat-6 jacks	381	$2,020.92	170	$901.72	338	$1,792.84	142	$753.20	140	$742.60
face plate 2-port	191	$258.45	85	$115.02	167	$225.97	71	$96.07	70	$94.72
CDF Cabinets 24h24w24d 16 ga	15	$5,383.71	7	$2,512.40	14	$5,024.79	7	$2,512.40	7	$2,512.40
19" rack MDF/IDF1	2	$192.69	1	$96.34	2	$192.69	1	$96.34	1	$96.34
Fiber LIU 12 port 19" rack	16	$2,207.26	7	$965.68	15	$2,069.31	8	$1,103.63	7	$965.68
Horizontal 12 port pwr strp	1	$63.72	2	$127.43	2	$127.43	1	$63.72	1	$63.72
Panduit Wire manager Vert	2	$226.22	1	$113.11	2	$226.22	1	$113.11	1	$113.11
Panduit wire manager Hori	20	$578.70	9	$260.42	18	$520.83	8	$231.48	7	$202.55
18" ladder rack	1	$67.22	1	$67.22	2	$134.45	1	$67.22	1	$67.22
top plate 18"	1	$21.63	1	$21.63	2	$43.26	1	$21.63	1	$21.63
mdf Server shelf	1	$68.98	1	$68.98	1	$68.98	1	$68.98	1	$68.98
mdf Keyboard tray	1	$50.79	1	$50.79	1	$50.79	1	$50.79	1	$50.79
mdf Monitor shelf	1	$161.34	1	$161.34	1	$161.34	1	$161.34	1	$161.34
18" "L" bracket	1	$16.18	1	$16.18	2	$32.37	1	$16.18	1	$16.18
horizontal power strp cabinet	15	$885.59	7	$413.28	14	$826.55	7	$413.28	7	$413.28
1" fiber innerduct	5000	$1,028.38	2000	$411.35	3000	$617.03	2000	$411.35	2000	$411.35
12 strand fiber pvc	5000	$4,817.13	2000	$1,926.85	3000	$2,890.28	2000	$1,926.85	2000	$1,926.85
Fiber Ident tags	16	$30.83	7	$13.49	15	$28.90	8	$15.41	7	$13.49
Sc connectors	384	$1,974.48	168	$863.84	360	$1,851.08	168	$863.84	168	$863.84
Patch cords c6 3ft CDF	381	$969.22	170	$432.46	333	$847.11	142	$361.23	140	$356.14
patch cords c6 10ft CDF	381	$1,468.26	170	$655.13	333	$1,283.28	142	$547.23	140	$539.52
Patch panels	20	$2,320.01	10	$1,160.01	18	$2,088.01	8	$928.01	7	$812.00
sc to sc patch 2 meter	32	$390.74	16	$195.37	30	$366.32	16	$195.37	16	$195.37
4x4 3/4 plywood	15	$263.05	7	$122.76	15	$263.05	7	$122.76	7	$122.76
Fiber coupling panel Dual SC	64	$1,877.49	28	$821.40	60	$1,760.15	32	$938.74	28	$821.40
Ground Kit	15	$175.37	8	$93.53	16	$187.06	1	$11.69	8	$93.53
Conduit 2 inch	0	$0.00	0	$0.00			0	$0.00		
Junction box 6x6x4	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Test & document	381	$0.00	170	$0.00	338	$0.00	142	$0.00	140	$0.00
Fiber Doc	1	$1,013.76	1	$621.98	1	$986.77	1	$896.91	1	$854.77
36' - 4000 Wiremold (Metal)	34	$121,380.00	15	$53,550.00	31	$110,670.00	16	$57,120.00	14	$49,980.00
Total for Cabling Materials		**$155,611.17**		**$69,350.17**		**$140,517.81**		**$72,267.49**		**$64,653.93**
Sub-Total for Materials		**$220,453.28**		**$104,784.45**		**$196,706.85**		**$100,119.24**		**$87,886.95**
Material Handling		**$15,982.86**		**$7,596.87**		**$14,261.25**		**$7,258.64**		**$6,371.80**
TOTAL FOR MATERIALs		**$236,436.14**		**$112,381.33**		**$210,968.09**		**$107,377.88**		**$94,258.75**
Installation and Configuration Services		**$68,041.93**		**$27,082.23**		**$65,154.73**		**$34,156.61**		**$25,980.61**
PROJECT MANAGEMENT		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**		**$7,400.00**
Cable Management Software		**$500.00**		**$500.00**		**$500.00**		**$500.00**		**$500.00**
TOTAL BEFORE TRENCHING/BRIDGING		**$312,378.07**		**$147,363.56**		**$284,022.82**		**$149,434.50**		**$128,139.36**
Wireless Bridging Solution										
Aironet 350 Wireless Bridge	3	$2,437.33	0	$0.00	5	$4,060.00	0	$0.00	2	$1,624.82
Smartnet for Aironet 350	3	$0.00	0	$0.00	5	$0.00	0	$0.00	2	$0.00
Wireless Bridge Jumpers	3	$73.50	0	$0.00	5	$122.50	0	$0.00	2	$49.00
12dBi Omni Antenna	1	$132.30	0	$0.00	1	$132.30	0	$0.00	0	$0.00
8dBi Linear Patch Antenna	2	$70.00	0	$0.00	4	$140.00	0	$0.00	2	$70.00
75 feet 3/8 Coaxial cable	3	$178.50	0	$0.00	5	$297.50	0	$0.00	2	$119.00
Total for Bridging		**$2,891.63**		**$0.00**		**$4,752.30**		**$0.00**		**$1,862.82**
SOLUTION WITH BRIDGING		**$315,269.70**		**$147,363.56**		**$288,775.12**		**$149,434.50**		**$130,002.18**
Total Trenching Option	**85**	19941	**0**	0	110	8602	**0**	0	60	4692
SOLUTION WITH TRENCHING		**$332,319.07**		**$147,363.56**		**$292,624.82**		**$149,434.50**		**$132,831.36**
Electrical										
20 amp Quad CDF	15	7800	7	3640	14	7280	7	3640	7	3640
20 amp MDF/IDF	3	735	2	490	3	735	3	735	2	490
Total for Electrical		**$8,535.00**		**$4,130.00**		**$8,015.00**		**$4,375.00**		**$4,130.00**
Sales Tax		$20,448.68		$9,612.18		$18,458.17		$9,219.61		$8,270.75

	GROUP 4							
	Edna Brewer		Manzanita		Roosevelt		Urban Promise	
Description	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost	Unit(s)	Cost
Network Materials								
3700 Series, 2-Slot, Dual FE, Multiservice Access Router	1	$5,200.61	1	$5,200.61	1	$5,200.61	1	$5,200.61
Updated 1-Port T1/Fractional T1 DSU/CSU WAN Interface Card	2	$1,228.91	2	$1,228.91	2	$1,228.91	2	$1,228.91
SmartNet (1Yr) Onsite	1	$0.00	1	$0.00	1	$0.00	1	$0.00
10 GBIC ports and 2-10/100/1000BaseT ports	3	$18,328.03	3	$18,328.03	2	$12,218.68	1	$6,109.34
SmartNet (1 Yr) Onsite	3	$0.00	3	$0.00	2	$0.00	1	$0.00
24-10/100 inline power + 2 GBIC ports: SMI	3	$6,515.53	3	$6,515.53	2	$4,343.68	1	$2,171.84
SmartNet (1 Yr) Onsite	3	$0.00	3	$0.00	2	$0.00	1	$0.00
24 10/100 ports w/2 1000BASE-SX ports, Standard Image only	16	$17,722.90	20	$22,153.62	26	$28,799.70	13	$14,399.85
SmartNet (1 Yr) Onsite	16	$0.00	20	$0.00	26	$0.00	13	$0.00
1000BASE-SX Short Wavelength GBIC (Multimode only)	36	$10,556.64	36	$10,556.64	24	$7,037.76	12	$3,518.88
AP Platform, Cardbus and MPCI Slots (no radio), Enet Uplink	6	$2,977.99	6	$2,977.99	12	$5,955.99	4	$1,985.33
2.4GHz 11Mbps Access Point Mini-PCI Module, FCC Cnfg	6	$553.32	6	$553.32	12	$1,106.64	4	$368.88
802.11a CardBus Radio Mod w/ Dual Int Ant,FCC Cnfg	6	$1,858.91	6	$1,858.91	12	$3,717.83	4	$1,239.28
Smartnet for AP Platform	6	$0.00	6	$0.00	12	$0.00	4	$0.00
Smartnet for 2.4GHz AP	6	$0.00	6	$0.00	12	$0.00	4	$0.00
Smartnet for 802.11a AP	6	$0.00	6	$0.00	12	$0.00	4	$0.00
		$0.00		0		$0.00		$0.00
MDF UPS I Hr Minimum Uptime	1	$1,953.11	1	1953.108834	1	$1,953.11	1	$1,953.11
MDF UPS 1 Hr Minimum Uptime	0	$0.00	0	0	0	$0.00	0	$0.00
IDF UPS I Hr Minimum Uptime)	2	$3,906.22	2	3906.217669	1	$1,953.11	0	$0.00
Total for Network Materials		**$70,802.17**		**$75,232.90**		**$73,516.04**		**$38,176.04**
Cabling Materials								
cat-6 cable copper pvc	60000	$5,180.98	65000	$5,612.73	75000	$6,476.23	37000	$3,194.94
cat-6 jacks	340	$1,803.45	369	$1,957.27	430	$2,280.83	210	$1,113.89
face plate 2-port	170	$230.03	185	$250.33	215	$290.92	105	$142.08
CDF Cabinets 24h24w24d 16 ga	13	$4,665.88	16	$5,742.62	20	$7,178.27	11	$3,948.05
19" rack MDF/IDF1	2	$192.69	2	$192.69	2	$192.69	1	$96.34
Fiber LIU 12 port 19" rack	13	$1,793.40	16	$2,207.26	20	$2,759.08	11	$1,517.49
Horizontal 12 port pwr strp	2	$127.43	2	$127.43	2	$127.43	1	$63.72
Panduit Wire manager Vert	19	$2,149.10	2	$226.22	2	$226.22	1	$113.11
Panduit wire manager Hori	2	$57.87	21	$607.64	25	$723.38	13	$376.16
18" ladder rack	2	$134.45	2	$134.45	2	$134.45	1	$67.22
top plate 18"	2	$43.26	2	$43.26	2	$43.26	1	$21.63
mdf Server shelf	1	$68.98	1	$68.98	1	$68.98	1	$68.98
mdf Keyboard tray	1	$50.79	1	$50.79	1	$50.79	1	$50.79
mdf Monitor shelf	1	$161.34	1	$161.34	1	$161.34	1	$161.34
18" "L" bracket	2	$32.37	2	$32.37	2	$32.37	1	$16.18
horizontal power strp cabinet	13	$767.51	16	$944.63	20	$1,180.79	11	$649.44
1" fiber innerduct	3000	$617.03	4000	$822.70	6000	$1,234.05	4000	$822.70
12 strand fiber pvc	3000	$2,890.28	4000	$3,853.70	6000	$5,780.55	4000	$3,853.70
Fiber Ident tags	13	$25.05	10	$19.27	16	$30.83	11	$21.20
Sc connectors	360	$1,851.08	120	$617.03	480	$2,468.10	264	$1,357.46
Patch cords c6 3ft CDF	340	$864.92	369	$938.69	430	$1,093.87	210	$534.21
patch cords c6 10ft CDF	340	$1,310.26	369	$1,422.02	430	$1,657.09	210	$809.28
Patch panels	19	$2,204.01	21	$2,436.01	25	$2,900.02	13	$1,508.01
sc to sc patch 2 meter	32	$390.74	12	$146.53	24	$293.05	12	$146.53
4x4 3/4 plywood	13	$227.97	16	$280.58	20	$350.73	11	$192.90
Fiber coupling panel Dual SC	52	$1,525.46	64	$1,877.49	88	$2,581.55	44	$1,290.77
Ground Kit	15	$175.37	18	$210.44	20	$233.82	12	$140.29
Conduit 2 inch	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Junction box 6x6x4	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Test & document	340	$0.00	369	$0.00	1	$0.00	210	$0.00
Fiber Doc	1	$896.89	1	$996.31	1	$1,034.56	1	$894.81
36' - 4000 Wiremold (Metal)	32	$114,240.00	35	$124,590.00	43	$153,510.00	21	$71,400.00
Total for Cabling Materials		**$144,678.56**		**$156,570.75**		**$195,095.22**		**$94,573.20**
Sub-Total for Materials		**$215,480.73**		**$231,803.65**		**$268,611.26**		**$132,749.24**
Material Handling		**$15,622.35**		**$16,805.76**		**$19,474.32**		**$9,624.32**
TOTAL FOR MATERIALs		**$231,103.08**		**$248,609.42**		**$288,085.58**		**$142,888.75**
Installation and Configuration Services		**$64,819.62**		**$69,693.27**		**$67,161.64**		**$47,514.38**
PROJECT MANAGEMENT		**$9,250.00**		**$9,250.00**		**$9,250.00**		**$9,250.00**
Cable Management Software		**$625.00**		**$625.00**		**$625.00**		**$625.00**
TOTAL BEFORE TRENCHING/BRIDGING		**$305,797.71**		**$328,177.68**		**$365,122.22**		**$200,278.13**
Wireless Bridging Solution								
Aironet 350 Wireless Bridge	0	$0.00	5	$4,062.05	3	$2,437.33	0	$0.00
Smartnet for Aironet 350	0	$0.00	5	$0.00	3	$0.00	0	$0.00
Wireless Bridge Jumpers	0	$0.00	5	$122.50	3	$73.50	0	$0.00
12dBi Omni Antenna	0	$0.00	1	$132.30	1	$132.30	0	$0.00
8dBi Linear Patch Antenna	0	$0.00	4	$140.00	2	$70.00	0	$0.00
75 feet 3/8 Coaxial cable	0	$0.00	5	$297.50	3	$178.50	0	$0.00
Total for Bridging		**$0.00**		**$4,754.35**		**$2,891.63**		**$0.00**
SOLUTION WITH BRIDGING		**$305,797.71**		**$332,932.03**		**$368,013.85**		**$200,278.13**
Total Trenching Option	**0**	0	265	20723	300	23460	**0**	$0.00
SOLUTION WITH TRENCHING		**$305,797.71**		**$348,900.68**		**$388,582.22**		**$200,278.13**
Electrical								
20 amp Quad CDF	13	6760	16	8320	14	7280	11	$5,720.00
20 amp MDF/IDF	4	980	3	735	3	735	2	$490.00
Total for Electrical		**$7,740.00**		**$9,055.00**		**$8,015.00**		**$6,210.00**
Sales Tax		$19,704.55		$21,649.55		$24,666.86		$12,300.65

EXHIBIT J

Oakland Unified School District
Technology Services Department

District Standard for Data Wiring & Network Configuration for New Construction and Modernization Projects

General

This specification describes all necessary elements for new Oakland Unified School District (OUSD) local area networks (LANs) and supporting cabling infrastructure. This specification provides product performance requirements, general design considerations, and installation guidelines. The Contractor will be required to furnish all labor, project management and field supervision, tooling, miscellaneous mounting hardware, and consumables for all systems installed. In addition, the Contractor will provide design-build, integration services, and certification/testing documentation for individual schools to achieve LAN connectivity for all classrooms, computer laboratories, libraries, and instructional areas and work areas, as specified by the OUSD Technology Services Department. It is the vendor's responsibility to propose any and all items required for a complete and operational system.

All documents and other supporting material is posted on the OUSD website at http://webportal.ousd.k12.ca.us/vendorInformation.aspx.

All written responses must be submitted to:

Edgar Rakestraw, Jr.
Oakland Unified School District
Office of the State Administrator
1025 2nd Avenue, Suite 301
Oakland, CA 94606

by 12 Noon on December 22, 2003.

Please submit two written copies, sealed in one envelope, of all responses. It is strongly recommended to limit your responses to twenty five (25) pages per RFI/RFP. If you need further information or have questions contact the District at:
erate_year7@secmail.ousd.k12.ca.us

1. All acceptable responses must include proposals for **both** data wiring and network equipment.
2. All acceptable responses must include costs for required trenching. Where technically feasible, building-to-building wireless bridges may be acceptable alternatives to trenching. In this case please provide cost estimates for both the trenching and wireless bridge options.
3. All acceptable responses must include costs for complete replacement and

cleanup of network wiring, including removal and disposal of old wiring and equipment.

4. All acceptable responses must allow for flexible, non-overtime working hours from 7 AM to 11 PM. Actual schedule to be arranged in collaboration with the District.
5. All acceptable responses must agree to conduct final, industry standard testing for all fiber and copper cables with a 100% pass rate.
6. All acceptable responses must include a fixed price proposal. Modifications or changes will be permitted at the sole discretion of the District.
7. All acceptable responses must include estimates for the cost of required electrical circuits as detailed in "District Standard for Data Wiring & Network Configuration for New Construction and Modernization Projects" posted on the OUSD website at http://webportal.ousd.k12.ca.us/vendorInformation.aspx. **Important:** These costs are **not** covered by e-rate and must be clearly separated in the vendor response from costs covered by e-rate.

Design Documentation

The Contractor is required to provide the following documentation:

1. Drawing of logical network configuration both in hard and soft copy format which includes:
    - All SNMP managed devices
    - IP addresses of all network equipment
    - Location of equipment
    - Riser diagram to include cable types and counts
    - Drop types and counts
2. A material list specifying quantity and part/specification and serial numbers on a CDF, IDF, and MDF room-by-room basis.
3. Contractor must coordinate cable runs, rack equipment locations with the Technology Services Department during the initial design of the cable installation. Contractor and Technology Services have to agree as to the final location of all devices and the cable plant design.
4. Complete set of floor plans indicating entire system configuration, both in hard copy and in soft copy format. Floor plans have to include existing and new installation.
5. Cable Management Program that will operate on a MS Windows platform, including:
    a. Circuit identifications and locations.
    b. Cable schedule and routing.
    c. Cross-connect table for electronics to patch panel interconnections.
    d. Cable test forms and test results.
    e. Cable labels.
    f. Networking Planning Charts.
    g. Diskettes containing design database.

Materials and Interoperability

The Contractor has to furnish, install, connect, and test the networking system, including all components, cabinets, terminals, conduits and cabling system in accordance with design services provided under this specification document.

Project Management and Technical Supervision

The Contractor has to provide the Project Management Team and all technical supervision necessary to design and install a complete and operational system.

Conduit

1. Conduit shall be utilized for all fiber runs and all building-to-building copper cable runs. Install minimum of two 2" conduits to house fiber and copper cabling. Additional conduit or larger conduit shall be specified as necessary.

Racks in MDF

1. Install 84" high by 19" wide, floor-mounted, double-sided aluminum rack in MDF. Minimum of one rack per MDF.
2. Properly mount and ground all racks.
3. Install 19" rack-mounted horizontal patch cord/cable organizers for cable management in MDF.
4. Install vertical jumper retainer cable organizers mounted to front of rack, on sides of rack frame (two per rack), running the full height of rack.
5. Install 18" wide ladder rack between the top of rack and backboard with associated hanger supports and seismic bracing.
6. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in MDF.
7. Install one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in MDF. One power strip per rack.
8. Install center weighted shelves for district supplied servers, keypads and monitor with associated seismic straps. Minimum of one shelf per rack.
9. Install a minimum of two dedicated 20 Amp circuit quadplex receptacle outlet in MDF.

Racks in IDF

1. Install 84" high by 19" wide, floor mounted, double sided aluminum rack in IDF. Minimum of one rack per IDF.
2. Properly mount and ground all racks.

3. Install 19" rack mounted horizontal patch cord/cable organizers for cable management in IDF.
4. Install vertical jumper retainer cable organizers mounted to front of rack, on sides of rack frame (two per rack), running the full height of rack.
5. Install 18" wide ladder rack between the top of rack and backboard with associated hanger supports and seismic bracing.
6. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in IDF.
7. Install a minimum of one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in IDF. Install a minimum of one power strip per rack.
8. Install a minimum of one dedicated 20 Amp circuit quadplex receptacle outlet at each IDF location.

Cabinets in CDF

1. Install one 24" high x 24" wide x 24" deep 16 gauge wall mount cabinet with dual hinged lockable solid doors (front and back), 250 cfm exhaust fan, drilled EIA standard hole spacing, and vented side panels for mounting equipment specified herein at the CDF.
2. Properly mount and ground all cabinets.
3. Install one 12-port 19" rack mountable, one unit high combination patch panel LIU. (One LIU for each 12-strand fiber cable). LIU shall contain rear fiber entry slots, wire retainers, fiber storage drum, slide out rails for front access, and jumper trough for cable management in CDF. Install SC couplings for termination of fiber cables.
4. Install a minimum of one 19" surge protected rack-mounted 3-wire electrical power strip with a minimum of 12-single outlets, mounted horizontally in CDF.
5. Install a minimum of one dedicated 20 Amp circuit for every two CDF locations with a quadplex receptacle outlet at each CDF location.

Fiber Cables

1. Install 12-strand multi-mode outside plant Fiber Optic cable from the MDF to each IDF.
2. Install one 12-strand multi-mode outside plant Fiber Optic cable from the IDF to each CDF.
3. Fiber Optic cable shall have continuous sheath continuity.
4. Each Fiber Optic cable shall be identified with a pre-established uniform numbering system. Identification will be securely attached to the cable at each end, whenever it enters or leaves a conduit, and at the MDF, IDF and CDF.
5. Fiber Optic cable must be installed in 1" corrugated type innerduct (orange in color) when running in shared conduit. Armored fiber is an acceptable alternative.
6. Terminate all 12 fiber strands at each end of the cable with SC type connectors.

7. Labeling of all terminations will be done to industry standards.

Category 6 Cables

1. Install 10 new PVC rated Category 6 cables for each classroom. All cables will route through newly installed pathways.
2. 8 data cables are for student use and 2 data cables are for teacher use.
3. Install 3-channel metal (aluminum model AL4000 or steel model 4000) wiremold for the accommodation of new data cables and new AC electrical cable in the classroom. A total of 36 feet of wiremold per classroom.
4. The CAT 6 4-pair cable will meet EIA/TIA Commercial Building Telecommunications Wiring Standards.
5. Terminate the new Category 6 station cable on jacks at the station end and at the patch panel at the CDF end.
6. Maintain the outer jacket of all Category 6 cables up to the leading edge of the wiring block at both ends of the cable.
7. All jacks will use the EIA/TIA-568B wiring configuration.
8. Maintain twists on all Category 6 cables up to the edge of the termination point of the data jack.
9. Labeling of all terminations will be done to industry standards.
10. Furnish Category 6 patch cords in varying lengths (1, 3, 5, 7, and 10 feet) as needed. Provide one patch cord for each switch port.
11. Install two new Category 6 cables for each auditorium/multi-purpose room access points. Data jacks for access points are to be installed to industry standards. All cables will route through newly installed pathways.
12. Install three new Category 6 cables for each computer laboratory. Data jacks for access points are to be installed to industry standards. Two cables are for access points and one cable for network printer. All cables will route through newly installed pathways.
13. Install a minimum of two new Category 6 cables in each private administrative office.
14. Install a minimum of one Category 6 cable per workstation in shared administrative work area.
15. Install a minimum of one Category 6 cable for network printers.
16. Install a minimum of one Category 6 cable for network copiers.

Networking Hardware in MDF

1. Install one Cisco 3725 Router with the minimum of two 1-port T1/Fractional T1 DSU/TSU WAN Interface Card in MDF and 2 10/100 Ethernet ports.
2. Install minimum of one switch with the following capabilities:
   10 GBIC-based Gigabit Ethernet ports and 2 10/100/1000 ports
   1.5 rack unit (RU) stackable, multilayer Gigabit Ethernet switch
   Power-over-Ethernet

Layer III Capabilities

3. Install minimum of one switch with the following capabilities:
   24 10/100 ports and 2 GBIC-based Gigabit Ethernet ports
   1 rack unit (RU) stackable, multilayer switch upgradeable to full dynamic IP routing
   Power-over-Ethernet
   Layer III Capabilities
4. Install GBICs (Multimode Only) in all GBIC ports.
5. Install 2 meter SC to SC Multimode Fiber Patch Cables in all fiber ports.
6. Install one rack-mounted UPS for all switches and servers 1 hour minimum up time and appropriately rated for equipment. in MDF.

Networking Hardware in IDF

1. Install minimum of one switch with the following capabilities:
   10 GBIC-based Gigabit Ethernet ports and 2 10/100/1000 ports
   1.5 rack unit (RU) stackable, multilayer Gigabit Ethernet switch
   Power-over-Ethernet
   Layer III Capabilities
2. Install minimum of one switch with the following capabilities:
   24 10/100 ports and 2 GBIC-based Gigabit Ethernet ports
   1 rack unit (RU) stackable, multilayer switch upgradeable to full dynamic IP routing
   Power-over-Ethernet
   Layer III Capabilities
3. Install GBICs (Multimode Only) in all GBIC ports.
4. Install 2 meter SC to SC Multimode Fiber Patch Cables in all fiber ports.
5. Install one rack-mounted UPS for all switches and servers (1 hour) in MDF.

Networking Hardware in CDF

1. Install minimum of one switch with the following capabilities:
   24 10/100 ports and 2 GBIC-based Gigabit Ethernet ports
   1 rack unit (RU) stackable, multilayer switch upgradeable to full dynamic IP routing
   Layer III Capabilities
2. Install GBICs (Multimode Only) in all GBIC ports at CDF.
3. Install 2 meter SC to SC Multimode Fiber Patch Cable in all fiber ports.

Wireless Hardware in Auditoriums and Multi-purpose Rooms

1. Install minimum of two access points in auditoriums/multi-purpose rooms.
2. Install Power-over-Ethernet modules as needed.
3. Access points shall support both 802.11a and 802.11b clients simultaneously.

4. Access points shall support IEEE 802.3af Power-over-Ethernet.
5. Access points shall be installed to industry standards.
6. Access points that support only 802.11a or 802.11b exclusively can be installed with approval by the Technology Services Department at OUSD.
7. Install 20 Amp circuit receptacle outlets at each access point location.

Wireless Hardware in Computer Laboratories

1. Install minimum of two access points in each computer laboratory.
2. Install Power-over-Ethernet modules as needed.
3. Access points shall support both 802.11a and 802.11b clients simultaneously.
4. Access points shall support IEEE 802.3af Power-over-Ethernet.
5. Access points shall be installed to industry standards.
6. Access points that support only 802.11a or 802.11b exclusively can be installed with approval by the Technology Services Department at OUSD.
7. Install 20 Amp circuit receptacle outlets at each access point location.

Testing

1. Testing of all new copper and fiber cable.
2. Testing for copper cables will include continuity, shorts, crosses, grounds, attenuation, impedance, near-end-cross talk (NEXT) and distance.
3. Testing all fibers, using a Power Meter and light source, at 850 nm and 1300 nm.
4. Pre-testing of all fibers prior to removing the cable from the reel to install.
5. These test results will be provided to OUSD Technology Services Department in soft (cd-rom) and hard copy form when testing is completed.

Completion

Each school installation will be considered complete after the following have been accomplished:

1. All system testing has been completed
2. Installer assures that entire system is in working order
3. All Cable Test Forms have been submitted to the District in both hard and soft copy.
4. All ceiling panels previously removed have been put back in place.
5. All system labels have been put in place.
6. All construction debris and scrap materials have been removed from project site.
7. All marked up, project record documents have been returned to the District.
8. All unused customer material has been returned to the District.
9. The District has successfully completed acceptance testing of the network installation.
10. The District's Technology Services Department-Office of Technology Support Coordinator has inspected and accepted the installation.
11. Documentation, to include as-builts, along with required soft copies and completed cable management database has been turned over to the District.

Notes

1. Each CDF will support 2 classrooms unless the need to feed three classrooms is required. If third classroom is added to CDF:
    a. Install additional switches as needed.
    b. Install additional GBICs (Multimode Only) in each GBIC fiber port.
    c. Install additional 2 meter SC to SC Multimode Fiber Patch Cables in each fiber port.
    d. Install additional Category 6 patch cords in varying lengths (1, 3, 5, 7, and 10 feet) as needed. Provide sufficient quantities to match switch ports.
2. No copper, fiber, or coaxial cable shall be installed aerially.
3. Substitutions will only be allowed with written approval from the Technology Services Department.
4. Design and implementation services have to be in accordance with applicable TIA and EIA Standards.