

Attachment:DCI Cabling

DESERT COMMUNICATIONS INC.

**STATEMENT OF WORK FOR
CABLING SERVICES**

AT

EL PASO INDEPENDENT SCHOOL DISTRICT

JANUARY 28, 2003

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STATEMENT OF WORK

Introduction

This section describes the Services that DCI will provide under the terms of the DCI Master Customer Agreement (MCA) and this Statement of Work (SOW). Specifically, DCI will provide El Paso Independent School District (EPISD) with a set of customized e-ratable services, with supporting documentation. The details of the Services to be provided are described in this section. These Services will be provided at all eligible EPISD locations in El Paso, Texas. DCI will provide the cabling installation, and functional testing to EPISD to support moves, adds and changes for the existing cable plant.

This Statement of Work is comprised of the following sections:

1. Assumptions
2. DCI Responsibilities
3. EPISD Responsibilities
4. Deliverable Materials - Documentation
5. Project Schedule
6. Completion Criteria
7. Charges
8. Project Warranty

The following are incorporated in and made part of this Statement of Work:

- Appendix A, Deliverable Materials - Documentation
- Appendix B, Project Change Control Procedure
- Appendix C, Wiring Installation Standards
- Appendix D, Cabling Installation and Testing Specifications
- Appendix E, Equipment Listing
- Appendix F, Signature Page

Changes to this Statement of Work will be processed in accordance with the procedure described in Appendix B, "Project Change Control Procedure." The investigation and the implementation of changes may result in modifications to the Schedule, Charges or other terms of this Statement of Work.

This proposal will expire February 28, 2004 unless this date is extended by DCI and in writing.

1.0 ASSUMPTIONS

This SOW is based on the following assumptions:

1.1 General Scope Description

1. Only those components specified in this SOW are to be supplied and installed by DCI. Additional components can be specified via the Project Change Control Procedure detailed in Appendix B.
2. Work to be performed at specific sites will be mutually agreed to and scheduled with DCI and EPISD at least ten (10) business days prior to the commencement of the work.
3. DCI will provide up to 7,500 cable drops, which includes moves, adds and changes.
4. No new/additional networking equipment is needed in the EPISD Network Operations Center.
5. DCI and our subcontractor must have unlimited, unrestricted access to all buildings. Any security requirements inclusive of guards, security codes/access codes, lighting and internal access and/or central monitoring are the responsibility of EPISD.
6. DCI will be provided with access badges, keys and combinations or escorts to perform the work described in this SOW. Any delay encountered due to unavailability of buildings may result in additional charges being incurred by EPISD. If this situation arises, it will be addressed via the Project Change Control Procedure detailed in Appendix B.
7. Adequate wall space/wiring closet space will be made available to DCI for the purpose of placing MC/IC products and equipment installed under this agreement. It is understood by DCI and EPISD that any delay encountered due to insufficient wall space/insufficient wiring closet space may result in time delays and additional charges incurred by EPISD. If this situation arises, it will be addressed via the Project Change Control Procedure detailed in Appendix B.
8. It is understood by EPISD and DCI that this SOW is based upon the Start Date provided below. In the event this date is not achieved, DCI reserves the right to extend the projected project End Date on a working day for working day basis, and as mutually agreed upon by DCI and EPISD via the Project Change Control Procedure detailed in Appendix B.

1.2 Exclusions from this Statement of Work

9. As a part of SOW, DCI will provide identification and correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If DCI should discover any safety and/or code violations during the course of this project, DCI will notify EPISD of the problem and work with EPISD to develop an appropriate remedial action. DCI will not be required to proceed with its work under this SOW until EPISD remedies such violation or authorizes DCI to remedy such violation, nor will DCI be responsible for delays to the work caused by such violation.
10. DCI will not be responsible for the detection or removal of asbestos, hazardous waste or other pollutants.
11. It is specifically understood by EPISD and DCI that all matters relating to detection and/or abatement or removal of asbestos, hazardous waste or other pollutants are beyond the scope of this contract and that DCI shall not be liable for any delay or additional cost incurred as a result of such detections and/or abatement. If asbestos, hazardous waste or other pollutants are uncovered during the course of the work on the contract, then EPISD shall be responsible for retaining the experts necessary to remove such asbestos, hazardous waste or pollutants from the site. EPISD shall also be responsible for any testing and corresponding with appropriate government authorities.
12. Relocation and testing of existing computers, telecommunications, or CCTV equipment(s) or systems are not required as part of this SOW, but may be provided to EPISD under the moves, adds and changes portion of this agreement.
13. Removal of existing telecommunications or CCTV cabling is required as part of this project.
14. Installation of any hardware, software and network electronics not specified in this SOW (e.g., workstations, servers, printers, routers, DSUs/CSUs, repeaters, modulators) are the responsibility of EPISD. Pursuant to a separate purchase order, DCI can perform work on these excluded items.
15. Under the terms of this Statement of Work we are not responsible for 1) your products, 2) a third party's products (including products you license from our subcontractors) or 3) DCI's previously installed Products, ("Other Products") to correctly process or properly exchange accurate data with the Products or deliverables we provide. We will be relieved of our obligations under this Statement of Work due to the inability of such Other Products to correctly process or properly exchange accurate data with the Products or deliverables we provide to you.
16. It is understood by EPISD and DCI that all matters relating to physical construction of new wiring closets/equipment locations and retrofits for existing wiring closets/equipment locations, (general construction buildout, HVAC, electrical, lighting, construction permits) is the responsibility of EPISD.

2.0 DCI RESPONSIBILITIES

2.1 Project Management

Task Description: The objective of this task is to provide technical direction, maintain project control and to establish a framework for reporting, procedural, and contractual activity for the DCI tasks described. This task consists of the following activities and documentation:

- Establish procedures and coordinate DCI efforts with the EPISD Project Manager.
- Develop and maintain work plans for the performance of DCI responsibilities.
- Administer the Project Change Control Procedures.
- Review the project progress with the EPISD Project Manager and team members during Bi-Weekly status meetings.
- Prepare and submit written Bi-Weekly Status Reports of DCI activities EPISD.

Completion Criteria: This task will be considered complete when the other tasks identified under DCI Responsibilities have been complete and Final Status Report has been delivered to the EPISD Project Manager.

Deliverables / Documentation: Bi-Weekly Status Reports

2.2 Perform Site Survey

Description: The objective of this task is to visit the EPISD locations and perform the site survey using materials and processes jointly developed by EPISD and DCI:

The subtasks are:

1. Verify and/or correct site general information
2. Identify and document site's special considerations:
 - Site's labor requirements and works restrictions (e.g. union vs. Non-union environments, works hours, access restrictions, special condition or limitations) that may affect the site's rollout.
 - Safety regulations - as may apply from municipalities
 - Site security requirements
 - Any unusual site conditions (e.g., site to be closed in one week)
3. Identify Equipment Room locations and requirements as it pertains to the equipment to be installed.
 - Isolated electrical power circuit availability
 - Heating and air-conditioning
 - True earth ground availability
 - Access security
 - Fiber/Telephone circuit connection – DS3, T1, ISDN

Completion: This task will be complete for a EPISD location when DCI delivers one (1) copy of the Site Survey Documentation to the EPISD Project Manager.

Deliverable: Site Survey Documentation

2.3 Install and Test Cabling

Task Description: DCI will install and test cabling in support of the adds, moves, and changes to the cabling plant at El Paso ISD per the specifications contained in Appendix C and Appendix D. The sub-tasks are:

- Provide moves, adds and changes to the existing cable plant. It is understood that moves of cable drops will be to a point closer to the communication closet. The cable drops moved will be tested to verify that they meet specification requirements. Estimated additional drops for moves, adds and changes is a maximum quantity of 7,500.
- Provide cabling connections between the main building at a campus and new buildings, which are not portables or cottages for the purpose of delivering signal to their ICs.
- Provide cabling to attach designated portable buildings moved between campuses as required based on the terms outlined in the contract. Estimated number of portables to be cabled is a maximum quantity of 421.
- Build portable ICs for portables moved between campuses as required based on the terms outlined in the contract.
- Install specified data drops including the installation of a 2' cabinet rack in District computer labs, MCs, and ICs and HC's.
- Build MCs and ICs facilities as defined in Appendix D.
- Provide testing for the cabling installed under this SOW as defined in appendix D.
- Develop "As Built" drawings to document the cabling installation provided - documentation.
- Compile a Project Cabling Test Book - documentation.

Completion Criteria: This task will be considered complete when DCI delivers one (1) set of "As Built" drawings and one (1) copy of the Project Cabling Test Book to EL PASO ISD.

Deliverables: Documentation:

"As Built" drawings

Project Cabling Test Book

3.0 EPISD RESPONSIBILITIES

The responsibilities listed in this section are in addition to those responsibilities specified in the DCI Customer Agreement and are to be provided at no charge to DCI. DCI's performance is predicated upon the following responsibilities being fulfilled by EPISD.

3.1 Project Management

Provide a Project Manager for the duration of the project to whom DCI and EPISD communications can be addressed and who has the authority to act on behalf of EPISD on all aspects of the project.

- Manage and perform the EPISD Responsibilities contained in Section 3.0.
- Provide liaison between project participants.
- Manage the Project Change Control Procedure for EPISD.
- Respond within two (2) business days to any request by DCI unless mutually agreeable by EPISD and DCI.
- EPISD is responsible for all permits and associated fees.
- Help resolve project issues with the EPISD organization.
- Provide full access to all School locations as EPISD required under this SOW.
- Communicate with appropriate EPISD personnel at your location of the work to take place and obtain their approval if necessary.
- Provide floor diagrams of affected campus locations in 8 1/2 x 11 hardcopy format.
- Provide all the necessary closet and/or equipment areas for location of network electronics, racks and cabinets as described within this SOW.
- Provide all necessary power and environmental support to accommodate all DCI and EPISD provided equipment.
- Inform DCI of any change in network requirements in accordance with the DCI Project Change Control Procedure, Appendix B.
- Provide required conduit and trenching within the project schedule timeframe should EPISD require DCI to utilize buried or underground conduit that does not currently exist.
- Provide personnel to witness and authorize standard testing of each school building as the installation/testing activities are completed.
- Locate and mark all water, gas, electrical or any other underground pipes or cabling in the path required for the trenching for the fiber connection, before trenching can be started.
- Permit posting of any notifications required by applicable law for Services provided at your locations.

3.2 Space, Facilities and Utilities

- Provide installation facilities for all equipment. EPISD is responsible for space allocation, HVAC and electrical considerations. EPISD is responsible for providing power, light and water necessary in performance of this project.
- DCI and our subcontractor will have 24x7 access to all buildings to perform the DCI Responsibilities specified in this Statement of Work. Any security requirements inclusive of guard, security codes/access codes, lighting and internal access and/or central monitoring are the responsibility of EPISD.
- Adequate space will be made available for the installation of all products related to this project.

3.3 Security and Laws

EPISD will identify and make the interpretation of any applicable federal, state, and local laws, regulations and statutes to see that the services provided by DCI comply.

4.0 DELIVERABLE MATERIALS/ DOCUMENTATION

The following items will be delivered to EPISD under this Statement of Work. See Appendix A, "Deliverable / Documentation Guidelines" for a description of each deliverable/documentation.

- Bi- Weekly Status Reports
- Site Survey Document
- "As-built" drawings
- Project Cabling Test Results

5.0 PROJECT SCHEDULE

5.1 Project Dates

- Start Date – July 1, 2003.
- End Date – June 30, 2004. (Unless extended by SLD to September 30, 2004.)

5.2 Project Delays

DCI will not be responsible for delays or additional requirements imposed by any government agencies or unforeseen conditions such as delays in the progress of the project by your acts or neglect or the acts or neglect of your employees or separate contractors employed by you, by changes ordered in the project not caused by the fault of DCI, by labor disputes, fire, unusual delays in transportation, adverse weather conditions not reasonably anticipatable, unavoidable casualties or other causes beyond DCI's control or by another cause which you and DCI agree is justifiable, the contract time shall be reasonably extended and the charges adjusted, if necessary, by Change Authorization.

6.0 COMPLETION CRITERIA

DCI shall have fulfilled its obligations under this Statement of Work when any one of the following occurs:

- DCI accomplishes the tasks described in section 2.0, "DCI Responsibilities,"
- EPISD terminates the Project in accordance with the provisions of the DCI Customer Agreement.
- The End Date for the contract is reached.

7.0 CHARGES

The Services Charge stated here represents the maximum allowable charges for all services that may be provided under this Statement of Work. DCI understands that the decision to implement this project is contingent upon award to the District of funding under the E-rate program. DCI will not begin work on this project without written notification from EPISD that funding has been approved and that work should begin. If such notification has not been received by February 28, 2004, at DCI's option, DCI may terminate this Statement of Work or implement an extension of this Statement of Work, as well as changes in pricing or other terms and conditions as may be required, via the Project Change Control Procedure outlined in Appendix B.

Or this amount may be extended upon mutual agreement between EPISD and DCI as defined in the section titled Project Change Control Procedure. Should EPISD not receive the requested funding for E-rate 6 or should EPISD receive only partial funding, DCI will work with EPISD to incorporate those portions of E-rate 6 funding that can be accomplished based upon available funding.

It is understood by EPISD and DCI that this SOW and its associated pricing is based upon DCI receiving written approval from EPISD to proceed with E-rate 6 no later than February 28, 2004. In the event this approval is not received by this date, DCI reserves the right to restructure the SOW to incorporate on those tasks that can be successfully completed by DCI prior to June 30, 2004.

<Cabling and Installation Service Charges>

● Cabling of 421 Portable Buildings.....	\$1,633,200.00
● Provide Moves, adds and changes cabling (7500 drops).....	\$1,500,000.00
● Turnkey Five Schools (Basset, Irvin, Telles Mid, Putnam, Whitaker)...	<u>\$1,031,300.00</u>
TOTAL.....	\$4,164,500.00

E-rate Invoicing: Prior to commencing work, DCI requires:

- 1) a fully signed contract signature sheet;
- 2) submittal of USAC Form 486
- 3) a P.O. in the amount that the E-rate program is not funding (e.g. non-discounted portion of the eligible costs plus the non-eligible costs), and;
- 4) a copy of the USAC's Funding Commitment Decision letter.

As a service to the school district, DCI will perform dual billing per E-rate terms and conditions. First, DCI will invoice the school district monthly, as work is completed, for the 'non-discounted' portion of the ELIGIBLE items. Secondly, under separate invoice, DCI will invoice the E-rate FCC for the remaining discounted portion of the ELIGIBLE items. Payment is due as specified in the invoice. Please note that although DCI will bill the school for the 'non-discounted' portion and other charges not eligible under the E-rate program, the school district assumes responsibility for the entire contract services charge.

Excluded from the Services Charge are items involving, but not limited to; repairs to the Location for correcting existing code deficiencies, painting, asbestos removal, plumbing, heating and ventilation, air conditioning work, etc.

DCI Service Provider Identification Number (SPIN): 143005691.

8.0 PROJECT WARRANTY

DCI warrants to the Owner that materials and equipment furnished under this Agreement will be new and that Work will be of good quality, free from improper workmanship and defective materials in conformance to applicable drawings and specifications. DCI agrees to correct Network Cabling work performed under this Agreement which proves to be defective in material (material) and/or workmanship for a period of sixteen (16) years.

DCI does not guarantee or warrant, express or implied, the materials used in workmanship of supplies, materials, equipment or machinery manufactured by third parties and furnished and installed under this Agreement. DCI shall endeavor to obtain from all vendors and suppliers and assign to Owner the customary warranties and guaranties of such vendors and suppliers with respect thereto. DCI shall render reasonable assistance to Owner when requested in order to enable the Owner to enforce such warranties and guaranties by third party manufacturers and suppliers.

There are no other warranties, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

APPENDIX A DELIVERABLE / DOCUMENTATION GUIDELINES

A.1 Bi-Weekly Status Reports

Purpose: DCI will provide Status Reports Bi-Weekly during the project to describe the activities, which took place during that period. Significant accomplishments, milestones and problems will be described.

Delivery: One (1) hard copy will be delivered to the EPISD Project Manager within five (5) working days following the reporting period.

Content: The report will consist of the following, as appropriate:

- Activities performed during the reporting period
- Activities planned for the next reporting period
- Project change control summary
- Problems, concerns, and recommendations
- Billing summary

A.2 Site Survey Document—Documentation

Purpose

DCI will provide a Site Survey Document for the EPISD location detailing locations, requirements, and special considerations.

Delivery

One (1) hard copy of the document and on (1) electronic copy will be delivered to the EPISD Project Manager.

Content

The report will consist of the following, as appropriate:

- Site general information
- Site special considerations
- Equipment room locations and requirements

A.3 Documentation: "As Built" Drawings

Purpose: DCI will provide 8 1/2" x 11" "As-built" drawings, marked-up plan views showing drop and MC/IC equipment locations.

Delivery: One (1) hard copy will be delivered to the EPISD Project Manager within thirty (30) working days following the completion of the project.

Content: The report will show drop and MC/IC equipment locations.

A.4 Documentation: Project Cabling Test Results

Purpose: DCI will deliver one (1) copy of the Project Cabling Test Results. This will be a copy of the Cable Test Forms for Category 5e data cabling and fiber optic cabling.

Delivery: One (1) hard copy will be delivered to the EPISD Project Manager within thirty (30) days of project completion.

Content: The report will show cable tests results for all cable installed on this project.

APPENDIX B

B1 Project Change Control Procedure

When both of us agree to a change in this Statement of Work, a written description of the agreed change (called a "Change Authorization") will be prepared, which both parties must sign. The Change Authorization will describe the change, the rationale for the change, and specify any change in the charges, schedule or other terms. Depending on the extent and complexity of the requested changes, DCI may charge for the effort required to analyze it. When charges are necessary in order to analyze a change, DCI will provide a written estimate and begin the analysis on written authorization. The terms of a mutually agreed upon Change Authorization will prevail over those of this Statement of Work or any previous Change Authorization.

APPENDIX C WIRING INSTALLATION STANDARDS

El Paso I.S.D.

Telecommunications wiring standards and practices

Foreword

The purpose of this section is to set forth standards for the installation of low voltage wiring typically used for telephone or data communications in any and all facilities of the El Paso I.S.D. This document is intended to establish acceptable installation practices in all El Paso ISD buildings and should be used as a contract addendum for all projects done by contract involving such wiring. As such, this document binds any contractor awarded work involving low voltage wiring to conform to the specifications herein.

Specifications

Placement/appearance

- All wiring should be placed in ceilings and walls, with only a jack (or other connector) on a faceplate establishing a connection point in all classrooms, offices, and other public areas. Data communications jacks are normally RJ45 and fiber optic cable terminations are normally ST connectors (either crimped or UV curved). These jacks and terminators will reside preferably on the same faceplate in a classroom or office. External control devices which would normally be placed on interior surfaces in a commercial building, must conform to UL standards and be listed by UL.
- Inside wiring closets, data connections can be made to patch panels, or (if the specifications so state) to surface mount faceplates with exposed wiring, with said wiring being bundled, and appropriately labeled. Patch cables connecting equipment must be contained in cable management trays, or wire wrapped to ensure the serviceability of the cable plant. Connection of fiber optic cable must be housed in conduit (either flexible or rigid), and be appropriately labeled. All conduit containing fiber optic cable and all patch panels and cross connecting devices must be labeled Warning - Fiber Optic Cable.
- Low voltage wiring terminating at other equipment (, multimedia distribution equipment, etc.) must conform to the connection standards of the equipment manufacturer. All such wiring must be appropriately labeled and if the wire is run into a classroom, library, multimedia room, or lab, it must be neatly installed with cables either bundled or installed into cable management devices.
- The use of Raceway TM, Wiremold TM, or other surface mount cable channel in any classroom, hallway, or other public area is expressly prohibited without prior authorization from the El Paso ISD.
- All wiring in the ceiling is to be bundled appropriately and labeled to ensure maintainability and serviceability. Said bundles are to be securely attached to the roof support structure and should not be attached to any other wire, pipe, HVAC fixture, ceiling supports, etc. Cable paths must avoid interfering with the serviceability of all existing facilities above the ceiling.

Standards

The El Paso ISD follows the EIA/TIA 568B standards for data communications cable, and all new data communications cable installed must be category 5e compliant, and be certified as such by testing with electronic scanners. All data cable compliance certifications must be delivered to the El Paso ISD prior to completion of the installation. All fiber optic cable installed must also be tested for compliance with standards and certification of such compliance must be reported to the El Paso ISD prior to the completion of the project.

Documentation

The district has a structured wiring plan in place; all additional wiring installed must be labeled appropriately. Labeling designations can be obtained from the Network Service Group of the Division of Technology. It is strongly recommended that any wiring installations be coordinated with the Network Services Group and the Facilities Departments.

Working in the campuses

Unless prior arrangements have been made with campus and District personnel, any wiring work must be performed during non-school hours. Most campus' classes are scheduled between 7:00 a.m. and 4:00 p.m. Therefore, as a general rule, all wiring work must be done at night, on weekends, or during school holidays.

Unless other arrangements are made in advance, all classrooms, hallways, and other public areas must be restored to their normal appearance at the end of each work shift. Ceiling fans must be replaced, wall plates must be installed, and the area must be left clean in preparation for the next school day. No wiring ends, supply leftovers, or any other residue is to be left at the campus. Communication closets can be left in the work in progress stages so long as it does not interfere with the serviceability of the network and communications equipment in these rooms.

At the completion of the wiring project, all ceiling tiles must be securely in place, all access points must be covered and be cosmetically and structurally complementary of the existing building. All supplies, equipment, and tools are to be removed from the building.

Firewalls

It is the responsibility of the wiring installer to ensure that any firewall penetrations are properly sealed and conform to building codes regulating firewalls and the sealing of penetrations.

Final Walkthrough

Every wiring job will be subject to a final walk through to establish conformance with these standards. The wiring contractor is obligated to provide personnel to accompany District personnel on such inspection, if requested. Any discrepancies with these standards must be corrected before the project can be considered complete. Acceptance of the contracted work by the district will be accomplished at the final walkthrough, and is a prerequisite to payment of any invoice for services.

APPENDIX D CABLING INSTALLATION AND TESTING SPECIFICATIONS

D1 Installation - General Descriptions and Definitions

INSTALLATION OF A NEW MC

Furnish and install Main Cross Connect (M.C.) that all data connections may be cross connected from. This M.C. will be furnished and installed as per the Specifications Document and will contain the following:

- a) (1) 4' x 8' x .75" Virgin Plywood backboard that has been fire retardant treated at least 3 times with an approved treatment and firmly attached to the wall
- b) (1) 7' x 19" communications rack firmly attached to floor or 6 ft. cabinet.
- c) (1) Ladder tray/stabilizer firmly attached to wall and proceeding up wall into ceiling for a complete cabling pathway for distribution
- d) (1) Ceiling interface with ladder tray to give a good aesthetic appearance and protection of cabling
- e) (1) Grounding and bonding to existing TMGB, or the installation of a new TIA/EIA 607 Grounding and Bonding System.
- f) (2) 48 Port Modular Patch Panels Labeled for Data
- g) (1) 24 Port Modular Patch Panel Labeled for Data
- h) (1) Wall mounted 100pr 110 Labeled for Voice
- i) (1) 72 port rack mounted light-guide interface unit loaded with ST loads
- j) (2 -6) Wire Managers as needed
- k) (qty) SC to ST 3meter multi-mode fiber patch cables
- l) (qty) 1 and/or 3meter enhanced category 5see color coded data patch cables

INSTALLATION OF A NEW IC

Furnish and install an Intermediate Cross Connect listed as (I.C.#_) located in the Telecommunications Closet (Room _) located in the computer storage area that all data connections may be cross connected from. This I.C. will be furnished and installed as per the Specification Document and will contain the following:

- a) (1) 4' x 4' x .75" Virgin Plywood backboard that has been fire retardant treated at least 3 times with an approved treatment and firmly attached to the wall
- b) (1) 3' x 19" x 18" Wall mounted black swing away rack (double hinged) or 2' or 4' cabinet.
- c) (1) Ladder tray proceeding up wall into ceiling for a complete cabling pathway for distribution
- d) (1) Ceiling interface with ladder tray to give a good aesthetic appearance and protection of cabling
- e) (1) Grounding and bonding to existing TMGB, or the installation of a new TIA/EIA 607 Grounding and Bonding System.
- f) (3) 48 Port Modular Patch Panels Labeled for Data
- g) 1 (24) Port Modular Patch Panel Labeled for Data
- h) (1) 100pr Wall Mounted 110 block Labeled for Voice
- i) (1) 24 port rack mounted light-guide interface unit loaded with ST loads
- j) (2 - 6) Wire Managers as needed.
- k) (qty) ST to SC 3meter multi-mode fiber patch cables
- l) (qty) 1 and/or 3meter enhanced category 5e color coded data patch cables

Additional Work to MC (Re-Work, Clean-Up)

Each MC (Main Cross Connect) required for additional work will have the following possible corrections:

Re-locate existing rack and all attached media cables connected and terminated onto the rack;
Re-test some or all existing circuits for test certification; Re-label some or all existing cabling circuits. Confirm or provide a qualified TGB for proper earthing and bonding of the MC.

Additional Work to IC (Re-Work, Clean-Up)

Each IC (Intermediate Cross Connect) required for additional work will have the following possible corrections:

Re-locate existing rack and all attached media cables connected and terminated onto the rack;
Re-test some or all existing circuits for test certification; Re-label some or all existing cabling circuits. Confirm or provide a qualified TGB for proper earthing and bonding of the IC.

Connecting Campus MC to Campus IC (Inside Plant 12-strand fiber optic cable only)

All MC to IC design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.

Furnish and install up to five hundred feet (500') of 12-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable in Plenum Inner-duct from the MC to the IC. The Fiber will be terminated onto Siemon Anaerobic ST Fittings.

Furnish and install up to one (1) 24 port Siemon L.I.U. (Light Guide Interface Unit) with 12 ST Loads at the IC.

Furnish and install into existing MC Fiber Cabinet the new terminated ST connections and loads for a final pathway to IC.

Furnish and install two - (2) duplex 1 meter Fiber Optics Patch ST-SC JumperCables.

- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant Cat 3 UTP voice distribution FEEDER cable only)

Furnish and install up to five hundred feet (500') 100-pair Telephone Plenum Backbone Cable from the MC to the IC and punch down.

Furnish and install one ¾" plywood backboard that has been fire retardant treated and firmly attached to the wall area.

Furnish and install two (2) Siemon 110 blocks with legs and C-4's one at the MC Backboard and one at the IC backboard for punch-down of telephone backbone cable.

The Backbone cable pathway will be held by the use of Caddy Cat.32 "J" Hooks installed not more than 5' apart on red metal or on ceiling points not on ceiling grids or ceiling wire.

- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Campus IC (Inside Plant) (Turn-Key)

- All MC to IC design will be of the indoor type with a maximum length of 500' with not more than 3 inside cores through what may be firewalls to deliver pathway.
- Furnish and install up to five hundred feet (500') of 12-Strand multimode (62.5x125um) Plenum Indoor Fiber Optics Cable in Plenum inner-duct from the MC to the IC. The Fiber will be terminated onto Siemon Anaerobic SC Fittings.
- Furnish and install up to five hundred feet (500') 100-pair Telephone Plenum Backbone Cable from the MC to the IC and punch down.
- Furnish and install one (1) 4' x 19" Swing Away Rack onto a ¾" plywood backboard that has been fire retardant treated and firmly attached to the wall area.
- Furnish and install two (2) Siemon 110 blocks with legs and C-4's one at the MC Backboard and one at the IC backboard for punch-down of telephone backbone cable.
- Furnish and install up to one (1) 24 port Siemon L.I.U. (Light Guide Interface Unit) with 12 ST Loads at the IC.
- Furnish and install into existing MC Fiber Cabinet the new terminated ST connections for a final pathway to IC.
- Furnish and install two -(2) duplex 1 meter Fiber Optics Patch ST to SC Cables.
- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Single Cable Drops

- Each single drop location will be serviced by the following cables: one (1) each category 5ee, 4-pair cable. The number of locations will be determined by DCI, and El Paso ISD prior to

installation. Each Single Drop is priced using existing pathway only – existing pathway definition means DCI will not have to core through walls, add conduit, or add Raceway.

- The following is the dual drop termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable:

Work Area Outlet:

Cable	Termination
Category 5e Data or Voice	RJ45 Category 5e 568B Insert

Telecom Room:

Cable	Termination
Category 5e Data or	Rack mounted 48-port Cat 5e RJ45 568B high density patch panel
Category 5e Voice	Simon's Wall mounted 110 block

- DCI We will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on work to be performed will be supplied.

Dual Cable Drops

- Each dual drop location will be serviced by the following cables: two (2) each category 5e, 4-pair cables. The number of locations will be determined by DCI and El Paso ISD prior to installation. Each Dual Drop is priced using existing pathway only – existing pathway definition means DCI will not have to core through walls, add conduit, or add Raceway.

- The following is the dual drop termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable:

Work Area Outlet:

Cable	Termination
Category 5e Data	RJ45 Category 5e 568B Insert
Category 5e Voice	RJ45 Category 5e 568B Insert

Telecom Room:

Cable	Termination
Category 5e Data	Rack mounted 48-port Cat 5e RJ45 568B

high density patch panel
 Category 5e Voice Simon's Wall mounted 110 block

- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on work to be performed will be supplied.

Dual Data Drops

- Each dual drop location will be serviced by the following cables: two (2) each category 5e, 4-pair cables. The number of locations will be determined by DCI and El Paso ISD prior to installation. Each Dual Drop is priced using existing pathway only – existing pathway definition means DCI will not have to core through walls, add conduit, or add Raceway.
- The following is the dual drop termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable:

Work Area Outlet:

Cable	Termination
Category 5e Data	RJ45 Category 5e 568B Insert
Category 5e Data	RJ45 Category 5e 568B Insert

Telecom Room:

Cable	Termination
(2) Category 5e Data	Rack mounted 48-port Cat 5e RJ45 568B high density patch panel

- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on work to be performed will be supplied.

Composite Cable Drops

- Each classroom location drop will be serviced by a composite cable, consisting of three (3) each category 5e, 4-pair cables, and one (1) each 62.5/125 micros fiber duplex cable. The number of locations will vary per school and will be determined by DCI and El Paso ISD prior to installation. Each Composite Drop is priced using existing pathway only – existing pathway definition means DCI will not have to core through walls, add conduit, or add raceway.
- The following is the termination scheme (the equipment to be connected to is assumed to already be in place at the telecommunications closet end) for each cable within the composite cable:

Work Area Outlet:

Cable	Termination
Category 5e Data	RJ45 Category 5e 568B Insert

Category 5e Data	RJ45 Category 5e 568B Insert
Category 5e Voice	RJ45 Category 5e 568B Insert
Duplex Fiber	ST-UV Anaerobic connector in a ST insert mounted F.C.

- All termination's will reside on a single gang simplex faceplate.

Telecom Room:

Cable	Termination
(2) Category 5e Data	Rack mounted, 24 port modular patch panel
Category 5e Voice	Siemons Wall mounted 110 blocks
Duplex Fiber	ST-Anaerobic connector in a rack mounted F.C.

- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- DCI will provide AS BUILT schematics on cabling work performed.

Wiring a Lab within a Room – “In-Wall” (IW) Design

- Lab Design cable drops will not exceed 100' in length and shall not include any core or firewall penetrations for this S.O.W.
- Furnish and install up to thirty-six (36) Category 5e, 4-pair twisted, Plenum solid core copper cable drops into a single classroom (Lab). These cable drops will be through sheetrock pathways with dropped acoustical ceilings and will be suspended onto Caddy Cat.32 “J” Hooks at no more than 5' intervals on red metal or on ceiling support positions but not on ceiling grids or ceiling hanging wires.
- Furnish and install up to nine (9) Quad-Plex Faceplates of single gang construction for W.A.O. (Work Area Outlet) design to deliver service to the students. These faceplates will be flush mounted into Sheetrock walls utilized with Caddy BB-10's.
- Furnish and install one (1) 2' enclosed lockable cabinet onto a ¾" plywood that has been fire retardant treated and is firmly attached to the wall. This Bracket will be grounded to red metal as N.E.C. Code.
- Furnish and install one (1) Siemon's 48-port modular patch panel for final central Horizontal connection point.
- Furnish and install one (1) Wire Manager for neat and proper pathway placement.
- Furnish and install up to thirty-six (36) Siemon Angled Max Jacks into faceplates.
- Furnish and install up to seventy two (72) Siemon Category 5e Patch Cables in either 1 or 3 meter design for use at the W.A.O. or at the Patch Panel.
- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Wiring a Lab within a Room – “Outer-Wall” (OW) Design

- Lab Design cable drops will not exceed 100' in length and shall not include any core or firewall penetrations for this S.O.W.
- Furnish and install up to thirty-six (36) Category 5e, 4-pair twisted, Plenum solid core copper cable drops into a single classroom Lab. These cable drops will run down the outer wall with Wiremold proceeding from dropped acoustical ceilings and will be suspended onto Caddy Cat.32 "J" Hooks at no more than 5' intervals on red metal or on ceiling support positions but not on ceiling grids or ceiling hanging wires.
- Furnish and install up to nine (9) Quad-Plex Faceplates of single gang construction for W.A.O. (Work Area Outlet) design to deliver service to the students. These faceplates will be surface mounted onto the outside of the wall utilizing Wiremold and Siemon surface mounted boxes.
- Furnish and install one (1) 2' enclosed lockable cabinet onto a ¾" plywood that has been fire retardant treated and is firmly attached to the wall. This Bracket will be grounded to red metal as N.E.C. Code.
- Furnish and install one (1) Siemons 48-port modular patch panel for final central Horizontal connection point.
- Furnish and install one (1) Wire Manager for neat and proper pathway placement.
- Furnish and install up to thirty-six (36) Siemons Angled Max Jacks into faceplates.
- Furnish and install up to seventy two (72) Siemons Category 5e Patch Cables in either 1 or 3-meter design for use at the W.A.O. or at the Patch Panel.
- DCI will provide wire management to ensure a comprehensive, neat completion of work.
- AS BUILT schematics on cabling performed will be supplied.

Connecting Campus MC to Portable IC (Inside to Outside Plant)

- Core, drill and install 2 ½' EMT conduit sleeve into main building.
- Install one (1) 12" x12"x8" "J" Junction Entrance Box as an entrance to main building with connection by EMT sleeve entrance.
- Drill and install main building metal attachments (eye or rams head) for aerial figure 8 dead end.
- Drill and install on portable one (1) building metal attachments (eye or rams head) for aerial strand.
- Install one (1) 12"x12"x8" "J" Junction Entrance Box as an entrance to portable building with connection by EMT sleeve entrance.
- From the MC to the IC place one (1) 12-strand Fiber Optics 62.5/125um cable for a backbone connection.
- Furnish and install up to (150') 6mm Strand with all attachments including building aerial attachments
- Install from the MC to the exit of building one (1) 100 pair Category 3 backbone cable.
- At the exit from main building and the portable building a 100 pair primary protector box will be installed and all copper voice cable will be punched down.
- The Category 3 backbone cable will continue from the main building exit primary protectors to the IC entrance primary protectors where the backbone will be punched and then into the 110 block.
- Each IC will have Circa 100 primary pair protection on both ends, with loads.
- DCI will provide wire management to ensure a comprehensive, neat completion of work.

- AS BUILT schematics on cabling performed will be supplied.

Connecting Portable to Portable IC (Outside Plant)

- Furnish and install up to (295ft) of 4 strand Multi-mode outdoor rated fiber for the data connection.
- Furnish and install up to (150') 6mm Strand with all attachments including building aerial attachments
- Install one (1) 12"x12"x8" "J" Junction Entrance Box as an entrance to portable building with connection by EMT sleeve entrance.
- Furnish and install up to (295ft) of outdoor rated category 5 cable w/ protection for the voice connection.
- AS BUILT schematics on cabling performed will be supplied.

Existing Cable Removal

DCI will include the removal of any abandoned cable left within the schools as a result of the replacement of an existing media with the installation of a new media cable. (Data, Voice or Video)

Any abandoned cable not replaced by DCI with the installation of a new media cable will be covered with a blank faceplate and the existing cable left within the walls and or ceilings.

D.2 Functional Testing

Functional Testing will be performed in conformance with the following:

- **Fiber Meter** – Transmission and path loss testing (Fiber meter test method). DCI will perform fiber meter testing on all fiber optic cable installed under this SOW. Soft Copy test results will be provided.
- **Category 5e Cable** – Category 5e compliance testing per UL standards. DCI will perform Category 5e testing on the Category 5e cable installed under this SOW in accordance with EIA/TIA standards. Soft Copy test results will be provided.

APPENDIX E EQUIPMENT LISTING

<u>Portables</u>	<u>Unit Price</u>
Campus MC to Portable IC (turn-key)	\$ 4,200.00
Portable IC to Portable (turn-key)	\$ 3,600.00

Cable Removal - Existing abandoned ISP & OSP

Labor per hour for Installer	\$ 35.00
Labor per hour for Supervisor	\$ 45.00
Labor per hour for Project Manager	\$ 55.00

PBX crossover from old cabling to new cabling

Labor per hour for Installer	\$ 45.00
Labor per hour for Project Supervisor	\$ 55.00
Labor per hour for Project Manager	\$ 65.00

New Schools

Cabling of a new High School (turn-key)	\$ 227,000.00
Cabling of a new Middle School (turn-key)	\$ 162,000.00
Cabling of a new Elementary School (turn-key)	\$ 79,450.00

Moves, Adds and Changes

MC New Install or Repair	\$ 3,000.00
IC New Install or Repair	\$ 3,000.00
Connect Campus MC/IC to Classroom Lab IC w/ 4 strd fiber	\$ 1,800.00
Connect Campus MC to Campus IC w/12 Strand Fiber	\$ 3,600.00
Connect Campus MC to Campus IC/Feeder Cable 100 pair	\$ 2,640.00
Connect Campus MC to Campus IC (Turn Key)	\$ 9,240.00
Classroom Combination Drop	\$ 960.00
Wiring a LAB, 10 drop, inside wall	\$ 2,000.00
Wiring a LAB, 20 drop, inside wall	\$ 2,300.00
Wiring a LAB, 30 drop, inside wall	\$ 2,900.00
Wiring a LAB, 40 drop, inside wall	\$ 3,400.00
Wiring a LAB, 10 drop, outside wall	\$ 2,250.00
Wiring a LAB, 20 drop, outside wall	\$ 2,550.00
Wiring a LAB, 30 drop, outside wall	\$ 3,150.00
Wiring a LAB, 40 drop, outside wall	\$ 3,650.00
RG-6 Single Video Drop	\$ 264.00
Dual Drop Add (1-10)	\$ 370.00
Dual Drop Add (11-24)	\$ 360.00
Dual Drop Add (25- >)	\$ 350.00
Data Drop Add (1-10)	\$ 220.00
Data Drop Add (11-24)	\$ 210.00
Data Drop Add (25- >)	\$ 200.00
Fiber Drop Add (1-10)	\$ 390.00
Fiber Drop Add (11-24)	\$ 380.00

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Fiber Drop Add (25->)	\$	370.00
Fiber Jumper Cables 1 Meter	\$	54.00
Fiber Jumper Cables 2 Meter	\$	66.00
Fiber Jumper Cables 3 Meter	\$	78.00
Cat 5e Patch Cables 1 Meter	\$	6.00
Cat 5e Patch Cables 2 Meter	\$	7.20
Cat 5e Patch Cables 3 Meter	\$	8.40
Reinstall RJ45 Jack for outlets	\$	90.00
Terminate fiber for rework per strand, per connector	\$	30.00
19" x 3' swingout rack Installed	\$	195.00
19" x 4' swingout rack Installed	\$	280.00
7ft Floor Rack w/ ladder rack (Installed)	\$	234.00
24 X 24 Ceiling Access Panel (Installed)	\$	78.00
Move combination classroom drop	\$	330.00
Move dual drop	\$	270.00
Install pole for aerial cable (25ft treated)	\$	485.00
2ft wall mounted lockable cabinet (Installed)	\$	495.00
3ft wall mounted lockable cabinet (Installed)	\$	580.00
4ft wall mounted lockable cabinet (Installed)	\$	640.00
6ft wall/floor mounted lockable cabinet (Installed)	\$	1,155.00
7ft wall/floor mounted lockable cabinet (Installed)	\$	1,836.00
Primary Protector up to 100 pair (Installed)	\$	603.00
Wall or Floor Coring (per core) 1" to 2"	\$	55.00
Wall or Floor Coring (per core) 2-1/2" to 5"	\$	70.00
1" Conduit per w/fittings (per foot) (Installed)	\$	4.00
2" Conduit per w/fittings (per foot) (Installed)	\$	8.00
3" Conduit per w/fittings (per foot) (Installed)	\$	17.00
4" Conduit per w/fittings (per foot) (Installed)	\$	25.00
Wiremold 2800 series Installed (per foot)	\$	3.00
Wiremold 2900 series Installed (per foot)	\$	3.50
Data/power Pole (Installed)	\$	115.00
Data LAN Cat 5e Lightning Protectors (Installed)	\$	110.00

Labor

Labor per hour for Installer	\$	40.00
Labor per hour for Supervisor	\$	50.00
Labor per hour for Project Manager	\$	60.00
Storage/Warehousing per month	\$	1,200.00
As Built drawings per campus	\$	2,400.00
Testing, Certification, Warranty per campus	\$	5,750.00
Campus Survey and Evaluation	\$	1,800.00

APPENDIX F SIGNATURE PAGE

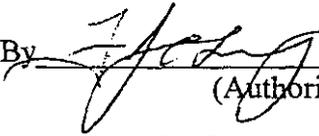
DCI (we) will provide, and EPISD (you) agree to accept, DCI Services (Services) for "Statement of Work for Cabling Services" under the terms and conditions of the DCI Customer Agreement and this Statement of Work. For Scope of Services, Completion Criteria, Charges and other applicable terms refer to the DCI Proposal for the provisions of EPISD "Statement of Work for Cabling Services", dated January 28, 2003. DCI is aware of the District's reliance on an outside source of funding (Universal Service Fund) to execute on the implementation tasks described in this SOW. Should EPISD not receive the requested funding for E-rate 6 or should EPISD receive only partial funding, DCI will work with EPISD to incorporate those portions of E-rate 6 funding that can be accomplished based upon available funding. It is specifically understood by DCI and EPISD that no E-rate 6 activity will occur prior to DCI's receipt from EPISD of written authorization to proceed. It is understood by EPISD and DCI that this SOW and its associated pricing is based upon DCI receiving written approval from EPISD to proceed with E-rate 6 no later than February 28, 2004. In the event this approval is not received by this date, DCI reserves the right to restructure the SOW to incorporate on those tasks that can be successfully completed by DCI prior to September 30, 2004.

Total Charges for cabling and installation services is \$4,164,500.00 which includes travel and living expenses without estimated state and local taxes. Both of us agree that the complete agreement between us regarding these Services will consist of 1) this Statement of Work and 2) the DCI Customer Agreement (or any equivalent agreement signed by both of us).

Agreed to:
El Paso Independent School District

Agreed to
Desert Communications, Inc.

By _____
(Authorized Signature)

By  _____
(Authorized Signature)

Name _____

Name F. J. O'Leary

Date
Customer Number
Customer Address
6531 Boeing
El Paso, TX 79925

Date 1/23/03
DCI Customer Agreement No.2003-116
DCI Office Address:
7355 Remcon Circle #102
El Paso, TX 79912

Start Date: July 1, 2003

End Date: June 30, 2004 (Unless Extended to 9-30-04)