



# CITY OF LODI

## COUNCIL COMMUNICATION

**AGENDA TITLE:** Request for Proposal for Civic Center Data/Telecommunication Cabling  
**MEETING DATE:** September 15, 1994  
**PREPARED BY:** Public Works Director

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**RECOMMENDED ACTION:** That the City Council approve the request for proposal for Civic Center data/telecommunication cabling.

**BACKGROUND INFORMATION:** The data/telecommunication cabling is part of the overall Civic Center project. It will consist of providing and installing both data and telephone cabling and connecting devices between City Hall, City Hall Annex, Carnegie Forum, Public Safety Building and four temporary trailers.

This is a two-phase project that covers both the interim time that City Hall is being remodeled and the move into final office locations. Fiber optic cable has been selected as an open ended solution for both the data cabling needs of the IBM AS/400 computer system and the personal computer local area network. Standard unshielded twisted pair cable will be used for both data and telephone within the office walls.

We originally considered and budgeted for coaxial cable, but after reviewing existing and future needs with consultants, it was clear that we should be using fiber optic.

**FUNDING:**

Originally Budgeted:	1994-95
Budgeted Fund:	121.0-350.61
Total Project Estimate:	\$120,000.00

  
Jack L. Ronsko  
Public Works Director

Prepared by: C. Mark White, Information Systems Coordinator

JLR/CMW/jit

APPROVED \_\_\_\_\_

THOMAS A. PETERSON  
City Manager



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# **CITY OF LODI Request For Proposal**

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***Civic Center Data/Telecommunication Cabling***

*DATE: September 15, 1994*

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## **PROJECT BACKGROUND**

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The data/telecommunication cabling is part of the overall Civic Center Project. Phase one will consist of the City Hall Annex (formerly called the Beckman Building) being remodeled as well as the basement of Carnegie Forum. In addition, four temporary buildings will be brought on site for additional temporary office space. Before phase one is completed conduit will be laid between buildings in preparation for fiber optic cable, additional permanent telephone cable to the City Hall Annex and temporary telephone cable to the temporary buildings. After the completion of phase one staff will vacate the City Hall building and phase two will begin.

Phase two will be the actual remodeling of the City Hall building. It should be noted that fiber optic cable run in phase one will be pulled back into the remodeled City Hall building at the completion of phase two and temporary fiber run to the temporary buildings will be re-routed from the City Hall main distribution frame (MDF) to the telecommunication room in the basement of the Public Safety building.

Timing of computer system cut-overs will be critical. The brief down-time will be restricted to coincide with a weekend, with full functionality on the following Monday morning.

The telephone PBX for the Civic Center is located in the Public Safety Building at 230 W. Elm Street.

The IBM AS/400 Model E45 is currently located in the Finance Department, Data Processing Division, in the City Hall Building basement, at 221 W. Pine Street and will be moved to the City Hall Annex at the completion of Phase 1. The AS/400 is accessed by all buildings in the Civic Center Project.

The Local Area Network (LAN) servers and hubs are currently located in the Administration Department, Information Systems Division, in the City Hall Building, 2nd floor, at 221 W. Pine Street and will be moved to the temporary buildings at the completion of Phase 1. At the Completion of Phase 2 the LAN server will be moved into the newly remodeled City Hall Building basement, adjacent to the MDF. The Civic Center LAN is accessed by all buildings in the Civic Center Project.

The LAN and the AS/400 computer systems are not currently linked in any way. There are some personal computers accessing the AS/400 via terminal emulation cards; this accounts for some office areas requiring two or more data jacks to access the two systems.

## **SECTION 1. SCOPE OF WORK**

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### **1.00 FIBER OPTIC BACKBONE (PHASE 1)**

- A. Optical Cable Corporations Fiber Optic cable, 6-strand and 12-strand, as specified in Section 4.04, will be run between buildings within conduit that either exists or will be installed by others.
- B. One (1) 12-strand and one (1) 6-strand Fiber Optic cable will run from the remodeled City Hall Annex to the transition box outside of the under construction City Hall. One Hundred Twenty (120) foot coils should be left in the Annex so that the cables can be extended into the City Hall computer room MDF during Phase 2 of the project.
- C. One (1) 6-strand Fiber Optic cable will run from the transition box outside of the under construction City Hall to three (3) other buildings. One (1) 6-strand to the Carnegie Forum, one (1) to the temporary Trailers and one (1) to the Public Safety building. In the Carnegie Forum and Public Safety buildings, One hundred twenty (120) foot coils should be left so that the Fibers can be extended into the City Hall computer room MDF during Phase 2 of the project. In the temporary Trailers a two hundred forty (240) foot coil should left for the Phase 2 extension.
- D. The Contractor will install Fiber Optic connector housings or panels in the remodeled City Hall Annex, Carnegie Forum, temporary Trailer and Public Safety Building to mount and protect the Fiber ends.
- E. Each end of each Fiber strand will be connectorized in compliance with Sections 4.04.G and 4.04.H., except in the transition box which will contain splices from the 18 strands that route from the Annex to the three sets of 6 strands that run to the other buildings.
- F. The 18 strands of Fiber that run from the remodeled City Hall Annex will connect via splices to the 6-strand Fibers that run to other buildings within the transition box.
- G. The Contractor will be responsible for cable lengths. Refer to the prints provided for distances.

### **1.01 FIBER OPTIC BACKBONE (PHASE 2)**

- A. The "MDF" that was in the remodeled City Hall Annex will move to the City Hall. This will require that all outside Fibers that were "coiled" in the remodeled City Hall Annex, Public Safety and Carnegie Forum be pulled through the transition box and into the City Hall MDF.
- B. The 6-strand Fiber that ran from the temporary buildings to the transition box shall be pulled out, re-routed and run from the City Hall MDF to the Public

Safety building. The Public Safety building will now have 12 strands of Fiber.

Refer to Section 1.01.E for connectorization procedures.

- C. A Fiber Optic connector housing or panels to accommodate a minimum of 32 Fibers will be needed in the City Hall MDF.

## 1.02 HORIZONTAL DATA STATION CABLING (PHASE 1)

- A. Phase 1 of the installation involves the running of Category 5 cables for support of a AS/400 system and a 10BaseT system. These cables will run from the "Hub" locations in the remodeled City Hall Annex, the remodeled Carnegie Forum Basement, the temporary Trailers and the Public Safety Building to "user" locations as follows:

<b>Annex</b>	<b>73 New Voice / 72 New Data Jacks</b>
	43 devices AS/400
	future devices 10BaseT (1 old 12-port hub)
<b>Carnegie Forum</b>	<b>25 New Voice / 27 New Data Jacks</b>
	3 devices AS/400
	10 devices 10BaseT (1 old 12-port hubs)
<b>Temporary Bldgs.</b>	<b>49 New Voice / 66 New Data Jacks</b>
	7 devices AS/400
	48 devices 10BaseT (1 new 48-port hub)
<b>Public Safety</b>	<b>0 New Voice / 0 New Data Jacks</b>
	57 devices AS/400 (desire capacity to support 16 Ports using existing twin-axial cable to each terminal)
	6 devices 10BaseT (1 old 12-port hub)

- B. All Data station cabling will run from a Category 5 user outlet to Category 5 patch panels that are wall or rack mounted.
- C. Also during Phase 1 there will be one Voice cable run from each Data location to a MOD-TAP 110 type or equivalent punch block in the MDF and IDF's. The one exception is that the Public Safety building will have no Voice cables.

## 1.03 HORIZONTAL DATA STATION CABLING (PHASE 2)

- A. Phase 2 of the installation involves the running of Category 5 cables in the City Hall and additional cabling in the Carnegie Forum Basement as follows:

<b>City Hall</b>	6 locations	AS/400
	58 locations	10BaseT
<b>Carnegie Forum</b>	2 locations	10BaseT

#### **1.04 ALPATH DISTRIBUTION CABLE (PHASE 1 Public Safety to City Hall Annex)**

A. The selected contractor will be required to provide and splice one 200--pair FLEXGEL filled alpath cable from the building exit point of Public Safety to the entrance point of the new City Hall Annex building. The cable is to be an AT&T WG4WR 200-pair 24 gauge cable (comcode 105 187 645). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor will verify all footage prior to quoting and ordering materials. In addition, the Contractor is required to place a 3/8 inch poly pull rope with the new cable.

B. At the Public Safety building entrance conduit to the MDF (PBX location) of the building, provide and place one 200-pair CMR riser rated cable, AT&T ARMM 200 comcode 103 562 625. The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials.

C. At the City Hall Annex building entrance conduit to the MDF of the building, provide and place one 200-pair CMR riser rated cable, AT&T ARMM 200 comcode 103 562 625. The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials. Moreover, the Contractor is not to attach cabling to the ceiling grid, but rather to the wooden supports of the building.

D. At both the Public Safety Building and City Hall Annex MDFs, terminate all distribution cable pairs of the ARMM cables on AT&T 110A connecting blocks and cap using AT&T 5-pair connecting clips.

E. Ground cable sheaths at the MDF using a #10 solid gray ground wire with 3M grounding clips. All grounding of cable sheaths is to be in accordance with EIA/TIA and NEC requirements.

F. At the entrance points of both buildings, splice the ARMM 200 to the WG4WR 200-pair cables (pair for pair) using AT&T 710 SD1 25 splice modules (comcode 103 274 xxx). After splicing, bond the cable sheaths using the proper bond braid and clamps. After the completion of bonding and splicing, place splice in a 3M riser rated splice closure and fasten securely to the wall or ceiling area. The Contractor is not to attach to the drop ceiling grid.

G. After termination and splicing, the Contractor will test all cable pairs for shorts, grounds, opens, crosses, and splits. The Contractor is to provide 100% usable

pairs. After testing, the Contractor must provide typed test results. All cables to be clearly labeled with the cable number and cable pair count using a standard cable tag.

### **1.05 ALPATH DISTRIBUTION CABLE (PHASE 1 Public Safety to Temporary Bldgs.)**

A. The selected contractor will be required to provide and place one 100-pair FLEXGEL filled ALPATH cable from the building exit point of Public Safety building to the entrance point of the new portable trailers. The cable is to be an AT&T WG4WR 100-pair 24 gauge cable (comcode 105 187 587). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor will verify all footage prior to quoting and ordering materials. In addition, the Contractor is required to place a 3/8 inch poly pull rope with the new cable.

B. At the Public Safety building entrance conduit to the MDF of the building, provide and place one 100-pair CMR riser rated cable, AT&T ARMM 100 comcode (103 562 609). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials.

C. At the Temporary building entrance conduit to the MDF of the building, provide and place one 100-pair CMR riser rated cable, AT&T ARMM 100 comcode (103 562 609). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials. Moreover, the Contractor is not to attach cabling to the ceiling grid.

D. At both the Public Safety and Temporary Buildings MDFs, terminate all distribution cable pairs of the ARMM cables on AT&T 110A connecting blocks and cap using AT&T 5-pair connecting clips.

E. Ground cable sheaths at the MDF using a #10 solid gray ground wire with 3M grounding clips. All grounding of cable sheaths is to be in accordance with EIA/TIA and NEC requirements.

F. At the entrance points of both buildings, splice the ARMM 100 to the WG4WR 100-pair cables (pair for pair) using AT&T 710 SD1 25 splice modules (comcode 103 274 577). After splicing, bond the cable sheaths using the proper bond braid and clamps. After the completion of bonding and splicing, place splice in a 3M riser rated splice closure and fasten securely to the wall or ceiling area. The Contractor is not to attach to the drop ceiling grid.

G. After termination and splicing, the Contractor will test all cable pairs for shorts, grounds, opens, crosses, and splits. The Contractor is to provide 100% usable pairs. After testing, the Contractor must provide typed test results. All cables to be clearly labeled with the cable number and cable pair count using a standard cable tag.

Section 1

**1.06 ALPATH DISTRIBUTION CABLE (PHASE 2 Public Safety to Remodeled City Hall)**

A. The selected contractor will be required to provide and place one 200-pair FLEXGEL filled ALPATH cable from the building exit point of Public Safety building to the entrance point of the newly remodeled City Hall building. The cable is to be an AT&T WG4WR 200-pair 24 gauge cable (comcode 105 187 645). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor will verify all footage prior to quoting and ordering materials. In addition, the Contractor is required to place a 3/8 inch poly pull rope with the new cable.

B. At the Public Safety building entrance conduit to the MDF of the building, provide and place one 200-pair CMR riser rated cable, AT&T ARMM 200 comcode (103 562 625). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials.

C. At the newly remodeled City Hall building entrance conduit to the MDF of the building, provide and place one 200-pair CMR riser rated cable, AT&T ARMM 200 comcode (103 562 625). The Contractor is responsible for all measurements based on the provided site drawings. The Contractor must verify all footage prior to quoting and ordering materials. Moreover, the Contractor is not to attach cabling to the ceiling grid, but rather to the wooden supports of the building.

D. At both the Public Safety and City Hall MDFs, terminate all distribution cable pairs of the ARMM cables on AT&T 110A connecting blocks and cap using AT&T 5-pair connecting clips.

E. Ground cable sheaths at the MDF using a #10 solid gray ground wire with 3M grounding clips. All grounding of cable sheaths is to be in accordance with EIA/TIA and NEC requirements.

F. At the entrance points of both buildings, splice the ARMM 200 to the WG4WR 200-pair cables (pair for pair) using AT&T 710 SD1 25 splice modules (comcode 103 274 xxx). After splicing, bond the cable sheaths using the proper bond braid and clamps. After the completion of bonding and splicing, place splice in a 3M riser rated splice closure and fasten securely to the wall or ceiling area. The Contractor is not to attach to the drop ceiling grid.

G. After termination and splicing, the Contractor will test all cable pairs for shorts, grounds, opens, crosses, and splits. The Contractor is to provide 100% usable pairs. After testing, the Contractor must provide typed test results. All cables to be clearly labeled with the cable number and cable pair count using a standard cable tag.

## SECTION 2 PROPOSAL REQUIREMENTS AND VENDOR QUALIFICATIONS

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### 2.00 SCHEDULE

- A. The schedule for this RFP is as follows:
- |  |   |
|--|---|
| ■ RFP issued                                 | September 15, 1994  |
| ■ Vendor Conference                          | September 23, 1994  |
| ■ Proposal Submission                        | October <u>17</u> 3, 1994 1:45 P.M.                       |
| ■ Proposal Opening                           | October <u>17</u> 3, 1994 2:00 P.M.                       |
| ■ Contract Award                             | <u>November 16</u> <del>October 5</del> , 1994            |
| ■ Start of Installation                      | <u>January</u> <del>November</del> 199 <u>5</u> 4         |
| ■ Completion Date Phase 1                    | <u>February 3</u> <del>December 31</del> , 199 <u>5</u> 4 |
| ■ <u>Anticipated</u> Completion Date Phase 2 | <u>May</u> <del>March 4</del> , 1996                      |

### 2.01 VENDOR INQUIRIES

- A. If additions, deletions, modifications or clarifications to this RFP become necessary, such changes to this RFP will be communicated, in writing and Faxed to all Vendors.
- B. All inquiries concerning this RFP should be directed to the following:
- Mr. Dennis Callahan  
Construction Administrator  
221 West Pine Street  
Lodi, CA 95240-1910  
(209) 333-6706 office  
(209) 333 6800 X 690 Voice Mail  
(209) 333-6795 fax

## 2.02 MANDATORY VENDORS CONFERENCE AND WALK THROUGH

- A. There will be a Mandatory Vendors conference and walk-through at 2:00 P.M. on ~~Friday~~Thursday, September 23, 1994. The conference will be held at Carnegie Forum conference room located at 305 West Pine Street, Lodi CA.
- B. The City of Lodi will assume that any Vendor not in attendance does not desire to submit a Proposalbid on this project.
- C. Any Vendor who does not attend the conference or walk-through shall adhere to Section 4.00.E which requires the return of all documents prior to the ProposalBid response date.

## 2.03 PURPOSE OF THIS DOCUMENT

- A. The purpose of this Request For Proposal (RFP) is to include all equipment materials, labor, training, and services of every and any kind ~~needed whatsoever that are necessary to, and required for,~~ the proper installation and operation of the proposed communications wire and cabling infrastructure and computer systems. The City of Lodi's desire is a total systems solution consistent with existing computer and communication hardware. The Vendor may make suggestions on existing system configuration with an eye on stream-lining computer connectivity and possible cost savings. If suggestion are made, they must include complete documentation and associated costs. The City of Lodi is not responsible for, and will not pay, any costs related to the preparation of a response to this RFP.
- B. The term "Vendor" refers to any party interested in responding to this RFP. The term "Contractor" is used to refer to the Vendor whose proposal is selected as most meeting the needs, requirements, and desires of the City of Lodi as regards the installation of the communications wiring infrastructure.

## 2.04 EQUIPMENT AND SERVICES REQUIRED

- A. The Contractor shall supply all materials, equipment, and labor, including supervision of the project, integration of existing computer systems, and connection to existing telephone system, ~~that are required to meet the specifications of this RFP for a communications wiring system.~~
- B. The Contractor is responsible for the proper installation of a fully operational system, including all copper and fiber cabling, cable hardware, terminal blocks, ties, station termination connectors and covers, and all other accessories or equipment necessary for a complete and professional installation.

## 2.05 VENDOR PROFILE

- A. Vendor shall provide information as to:
  - 1. Its organizational structure.
  - 2. Its local operations and administration.
  - 3. The experience of the personnel who will be working on this project.
    - a. Provide a brief biographical resume for key personnel.
    - b. The Project Manager for the Contractor must have a minimum of three years experience in installation of data and telecommunication systems, building distribution wiring and cable on similar projects.
- B. Each Vendor must provide a list of at least three (3) prior jobs with similar wiring requirements. The list must include a contact name, address, and phone number for each reference.
- C. Vendors responding to this RFP shall have demonstrated the ability to:
  - 1. Install and maintain communications wiring systems similar to those submitted for consideration in response to this RFP.
  - 2. Set up local area networks or campus-wide networks and have experience with IBM AS/400 systems.
  - 3. Provide any maintenance, servicing, and training required for the proposed system.
- D. Only those Vendors that have proven their capability in the area of ongoing maintenance, service, and support will be considered. Ongoing support is critical to any data and telecommunications system, and the City of Lodi, recognizing this fact, considers that such support is an important consideration in the selection of a Contractor.
- E. Any Vendor responding to this RFP is hereby notified that all buildings, grounds or any other facilities under the ownership or control of the City of Lodi are considered to be a "Drug Free Workplace."

## 2.06 SUBCONTRACTORS

- A. All requirements and qualifications to be met by the Contractor shall be met by any Subcontractors whom the Contractor uses.
- B. Vendors shall list all Subcontractors in their proposals.
- C. If a Subcontractor is withdrawn for a reason other than the City of Lodi's request, the Contractor shall notify the City of Lodi within three (3) working days as to the fact and the reason(s).

## 2.07 WARRANTIES

- A. The installed communications system will be warranted for the following:
  - 1. Against all defects of wire, cable, electronic components and other materials in the system at cut-over.

2. To meet any and all specifications stated in this RFP and as presented in all system documentation.
- B. All components shall be warranted for a minimum of one (1) year after cut-over, or to the extent of any expressed or implied warranties, whichever is longest. In addition, Vendors may offer an extended warranty, please detail the length and cost of the warranty in your response to this RFP on Pricing Information Sheet #3.
  - C. The City of Lodi is aware of equipment suppliers that offer a fifteen (15) year warranty. This RFP lists the MOD-TAP products that will be required to complete the installation. The MOD-TAP products are preferred, alternatives can be proposed and if so, detail sheets shall be provided.
  - D. The proposal shall detail all components for which the warranty is less than one year. The period of each warranty so specified shall be included, as shall the cost to extend each warranty to a full year.
  - E. The Contractor agrees to repair or replace all defective components of the system. Any replaced component shall carry the full warranty from the date that the City of Lodi accepts its replacement.
  - F. The City of Lodi shall have the right to require the replacement, at the Contractor's expense, of any component that fails more than twice in the one-year period following acceptance of the system.

## 2.08 TRAINING

- A. The Contractor shall provide all training required by the City of Lodi to meet the requirements of the City of Lodi. The Contractor shall propose a training plan as part of the RFP response, and this proposal will be discussed with the Contractor and agreed to by all parties.
- B. There shall be no additional charges for equipment, cabling, or documentation required to provide training to the City of Lodi personnel.
- C. The vendor of the networking hubs, fiber hubs and transceivers shall provide eight (8) hours of configuration, orientation and training of City staff to ensure a minimum of down time.
- D. The contractor will provide (8) hours of configuration, orientation and training for the IBM AS/400 system for City staff to ensure a minimum of down time.

## 2.09 SYSTEM ACCEPTANCE

- A. The Contractor and the City of Lodi will establish a timetable for acceptance testing of the wiring system. Prior to this activity the Contractor will submit a plan for acceptance testing of all components of the new system. The City of Lodi reserves the right to amend this plan by requesting additional tests. All parties involved in the installation will review the system operation after cut-over to establish its acceptability.

- B. The Contractor shall correct all problems and malfunctions immediately after cut-over and before the final payment.
- C. For a designated warranty period from the day of acceptance the Contractor will, in accordance with the Warranty, correct any problems and malfunctions that appear and are not the result of mistreatment or malfeasance. This will be done without additional charge to the City of Lodi.

## 2.10 MAINTENANCE

- A. Vendor may submit, at their option, a Maintenance Proposal in accordance with the criteria and requirements of the Maintenance Section of this RFP (3.02.9). The maintenance of the entire system for the one-year warranty period is assumed to be part of the contract price proposal.

### 3. SUBMITTAL AND SELECTION PROCESS

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#### 3.00 PROPOSAL FORMAT

- A. Proposals shall be in two sections, General/Technical and Pricing. No pricing information should be included in the General/Technical Proposal which is to cover Sections 1-7 of this RFP. All pricing and other information requested in Section 8 of the RFP shall be included in the Pricing Proposal which shall be sealed in a separate envelope and clearly marked with the Vendor's name and the words "Pricing Proposal for the City of Lodi Wiring System Project."
- B. Both sections of the proposal (General/Technical and Pricing) must have vendor's name and the signature of an authorized officer. Refer to the Signature page at the end of Section 8.
- C. The General/Technical proposal response must follow the topic and numbering format of the RFP.
- D. All answers should be clear and complete, avoiding unnecessary technical jargon. It is the responsibility of the vendor to define any terms specific to the company or industry unless such terms have already been defined in this RFP.
- E. The proposal should clearly present the vendor's willingness or disinclination to provide the service or equipment stated in each item of this RFP and related specification and amendments. Any "Yes" or "No" answers will be taken to mean that the vendor agrees or does not agree to provide/comply with the item in its entirety.
- F. Omissions or deficiencies in required information will cause the proposal to be considered incomplete. An incomplete proposal may be grounds for disqualification.
- G. Four (4) sealed copies of the bid-proposal response-must be submitted on or before  
1:45 P.M. Monday October 1703, 1994 to the following address:

The City of Lodi  
221 West Pine Street  
Lodi, CA 95241-1910  
Attn: Purchasing Officer

#### 3.01 BASIS FOR SELECTION OF SYSTEM AND CONTRACTOR

- A. Selection of the system and Contractor will be made on the basis of a number of factors. The overall concern is for a system that will meet the

needs both now and in the future, yet be simple to maintain, and for a Contractor that can work with the City of Lodi to attain the objectives of a flexible information system that can grow, adapt, and adjust to the City of Lodi's environment as it changes.

- B. This contract will not be awarded solely on the basis of the lowest cost proposal that appears to meet the specifications and requirements of this RFP. Incomplete or unclear pricing proposals may be cause for rejection.
- C. Both long-term and initial cost benefits should be addressed.
- D. The quality and completeness of the proposals that the Vendors provide will also be a component in the evaluation and eventual selection of the successful Contractor.

### 3.02 PROPOSAL SECTIONS

#### 1. *Executive Summary*

This section shall describe:

- The Vendor's general approach to the project.
- Significant aspects or features of the proposal.
- Other elements that the Vendor feels would be of significance to the City of Lodi.

#### 2. *Vendor Requirements*

This section must answer all items in Section 2 of this RFP. In addition, the Vendor may include at the end any additional information that may be appropriate to this section.

#### 3. *Technical Specifications*

This section must answer all items and meet all requirements for documentation as requested in Section 4 of this RFP. The Vendor may include at the end any additional information that may be appropriate to this section.

#### 4. *Labeling Plan*

The Vendor is asked to propose a cable labeling scheme for approval by the City of Lodi as part of their proposal response. This scheme will also roll into the cable data base described elsewhere in this RFP.

5. *Quality Assurance Plan*

The quality assurance plan must describe the Vendor's approach to ensuring the establishment and maintenance of quality control and assurance for the entire project. The quality assurance plan should specify the tests to be performed, the equipment to be utilized, and the deliverables/results that can be expected.

The quality assurance plan should also specify the pin-outs and color-coding scheme of all connections running from a workstation connection to a Termination in an IDF or MDF. This pre-defined strategy for pin-outs will be reviewed and approved by the City of Lodi prior to contract award.

6. *Acceptance Plan*

The Vendor should propose an acceptance testing plan that is consistent with the high quality expectations and criticality of the communications infrastructure design of the City of Lodi buildings. The acceptance testing plan should be clearly stated with expected deliverables.

7. *Training Plan*

The Vendor shall propose, as part of their response to this RFP, a training plan for the City of Lodi staff to ensure The City of Lodi's capability to understand and manage the new communications infrastructure.

8. *Documentation Plan*

The Vendor shall detail in this part of the proposal all documentation to be provided as part of the project including, but not limited to, all specific documentation requirements specified elsewhere in the RFP.

9. *Maintenance Proposal*

The Vendor is requested (at their option) to provide maintenance options and proposals for the one or two year periods following the one-year warranty period after the acceptance of the wiring system.

## 4. TECHNICAL SPECIFICATIONS

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### 4.00 SUMMARY

- A. The Proposal shall provide for the installation of cable and wire in accordance with the hardware and cable specifications in this section of the RFP.
- B. The City of Lodi's Electrical Contractor will install all conduits, and other pertinent cable routing parts as shown on the prints.
- C. The building floor plans, which include the legends and locations for the communications outlets and locations of IDF's, the MDF and other information required by the Wiring Contractor are an integral part of this RFP.
- D. All plans, drawings, and sketches provided to the interested vendors are to be treated with the same confidentiality as this RFP as they are considered to be proprietary information. The drawings include sheets DC 1-3, E6-8, A-E2, B-E2, and C-E1.
- E. All drawings provided to vendors shall remain the property of the City of Lodi and are to be returned to the City of Lodi with the proposal. Any Vendor choosing not to submit a proposal must return all drawings and all copies of this RFP prior to the proposed RFP response date.
- F. The Contractor shall furnish their best skill and judgment in performing the services requested. The Contractor further agrees to use the best efforts to furnish an adequate supply of technicians and materials at all times, and to do the work in the most appropriate, expeditious, and economical manner that is consistent with the interests of the City of Lodi. This includes, but is not limited to: all labor, services, materials, installation, hoisting, supplies, insurance, equipment, tools, storage, and any other facilities and items of every kind and description required for the prompt and efficient completion of the work.

### 4.01 CONTRACTOR RESPONSIBILITIES

- A. ~~While complying with the requirements detailed elsewhere in this RFP, the~~ Contractor's primary responsibility is the installation of the necessary equipment and wiring; with an emphasis on a total systems solution consistent with existing computer and communication hardware.
- B. Any items not mentioned but required for the installation of a fully operational communications wiring system shall be provided. The Contractor shall immediately bring to the attention of the City of Lodi any omission of items necessary to the installation of the system.

- C. The Contractor shall obtain the approval of the City of Lodi for the final layout of the of the Equipment/Computer Room, the Cable Entrance Closet, and all other Closets, especially as this relates to placement of the Main Distribution Frame (MDF) and the Intermediate Distribution Frames (IDFs).
- D. Materials to be provided include, but are not limited to:
  - 1. Main Distribution Frame(s) (MDF) - racks and/or panels.
  - 2. Intermediate Distribution Frames (IDF) - racks and/or panels.
  - 3. All copper and Fiber termination equipment.
  - 4. Cross-connect fields for copper (wire) and Fiber Optic terminators.
  - 5. All copper and Fiber Optic cable, including backbone cable, horizontal distribution cable, workstation cabling, termination panels and workstation outlets.
  - 6. All support materials required for the wire and cable, such as wire and cable supports (including racks and rings), J hooks, etc.
- E. The Contractor is also responsible for:
  - 1. Fire-stopping of all penetrations according to all fire-related code(s).
  - 2. Labeling and documentation, including drawings designating logical-diagrams of data cabling and as-built drawings.
  - 3. Acceptance testing, including testing of Fiber Optic cable while cable is still on the reel and once the cable is placed in the walls as part of the Acceptance Testing Plan.
  - 4. Notifying the City of Lodi immediately if any errors, problems or omissions in the installation are discovered before or during the installation of the cable and wiring.
  - 5. Removal of all trash and debris associated with the work for which the Contractor is responsible.

#### 4.02 GENERAL TECHNICAL REQUIREMENTS

The following requirements are applicable to all systems where appropriate.

- A. All cable shall meet or exceed the specifications of the equipment vendor(s) for cable attached to their equipment. Contractor shall notify the City of Lodi of any cable runs shown on the drawings that exceed the limits specified by cable manufacturers.
- B. All cable must be installed within the manufacturers' specified limits for mechanical (tensile) strength and minimum bend radius.
- C. Contractor is responsible for assuring that the length of the cable run plus slack does not cause the transmission limits of the cable to be exceeded. Contractor shall immediately notify the City of Lodi of any situations where this does, or may, occur.

- D. Vendors are responsible for reviewing details of the installation layout on the blueprints.
- E. Pull strings shall be left in each conduit for future cable/wire additions.
- F. All Fiber connection points must be easily accessible, and must be preferably located in communication equipment room(s), wiring closets, or other locations authorized by the City of Lodi.
- G. All Fiber connection points must be clearly indicated on the as-built drawings.
- H. All cable pairs will be twisted and color coded in accordance with the EIA standards and terminated in accordance with other pertinent EIA/TIA 568 and BICSI standards.
- I. The City of Lodi has sole authority to decide if a cable proposed as an equivalent to the specifications of this RFP is acceptable.
- J. The Vendor will submit samples and specification sheets of all equivalent cables proposed for review by the City of Lodi as part of the Proposal Bid.

#### 4.03 STANDARDS

- A. Installation of all cable installed shall be in accordance with existing and emerging standards.
- B. Material and test standards include, but are not limited to, standards published by the following:
  - American National Standards Institute (ANSI)
  - American Society for Testing and Materials (ASTM)
  - Electronic Industries Association (EIA)
  - Telecommunications Industries Association (TIA)
  - Institute of Electrical and Electronic Engineers (IEEE)
  - National Electrical Manufacturers Associations (NEMA)
  - Underwriters Laboratories (UL)
  - National Fire Protection Association (NFPA)
  - International Electrotechnical Commission (IEC)
  - International Standards Organization (ISO)
  - International Telegraph and Telephone Consultative Committee (CCITT)
  - National Electrical Code (NEC)
  - Federal Communications Commission (FCC)
  - Occupational Safety and Health Administration (OSHA)
  - International Code of Building Officials (ICBO)

- Applicable codes and regulations of the Government of the State of California and the City of Lodi.

In the event of a conflict between the aforesaid laws, standards, codes, ordinances and documents, and the City of Lodi's specification, the Contractor shall immediately bring the conflict to the attention of the City of Lodi.

- C. Fiber optic cable must meet current/proposed Fiber Distributed Data Interface (FDDI) standards.
- D. Copper cable and the installation practices must adhere to EIA/TIA 568B.
- E. In addition to being in compliance with existing materials and manufacturing standards, or standards that will be established within the 90 days following the submittal date for proposals, all wiring shall meet NEC, state and city codes.

#### 4.04 FIBER OPTIC CABLE SPECIFICATIONS

- A. Each Fiber in the Fiber Optic cable shall be multi-mode graded index cable with a nominal 62.5/125 um core/cladding diameter.
- B. Each Fiber must conform to EIA/TIA specifications for 62.5 um Core Diameter/125 Cladding Diameter Class Ia Multimode, Graded Index Optical Waveguide Fiber for On-Premises Applications. The glass used in the Fiber cable shall be 100k PSI. The physical characteristics of the Fiber cable shall include a pressure extruded jacket that is UV, corona and fungus resistant and has a UL rating. The preferred cable for the Outside and Inside Plant is Optical Cable Corporations part number DX06-055D-W3SB- 1UC/900-OFNR 6-strand or DX12-065D-W3SB-1UC/900-OFNR 12-strand.
  - 1. Maximum attenuation for each Fiber shall be 3.75 dB/km @ 850 nm and 1.5 dB/km @ 1300 nm. Any cable that states the attenuation as an average of the fibers within that cable will not be deemed acceptable.
  - 2. Each fiber will have a maximum bandwidth of 160 Mhz/km @ 850 nm and 500 Mhz/km @ 1300 nm. Any cable that states the bandwidth as an average of the fibers within that cable will not be deemed acceptable.
  - 3. Numerical aperture, as measured by EIA 455-47, will be .275 +/- .015.
  - 4. Coating diameter will be 900 micrometers +/- 50 microns
  - 5. Operating temperature range for each fiber will be:  
40 deg. C. to +85 deg. C.
  - 6. Impact resistance will be 1,500 impacts
  - 7. Crush resistance shall be 1,800 N/CM using testing method EIA 455-41.
  - 8. Flex resistance shall be 2,000 cycles

- C. Each Fiber in each cable installed shall meet all specifications and shall be usable according to the City of Lodi's and/or industry standard specifications. The more stringent requirement shall prevail.
- D. Mechanical specifications for the Fiber cable to be installed per this RFP are:

	<u>6-Fiber</u>	<u>12-Fiber</u>
Max. Outside diameter	5.5 mm	6.5 mm
Max. tensile load	1,400 N	1,800 N
Min. loaded bend radius	20 times cable diameter	
Min. unloaded bend radius	10 times cable diameter	

- E. Alternate Fiber cable will only be considered if it meets the specifications above. A sample of any alternate cable must also be submitted for consideration.
- F. The Contractor is responsible for insuring that the cable packaging for shipping/storage purposes meets or exceeds the following requirements:
1. One continuous length of cable per shipping reel.
  2. The results of the 100% attenuation and bandwidth tests conducted at the factory shall accompany each reel and the test results shall be provided to the Construction Administrator of The City of Lodi.
- G. Contractor is required to replace, at no cost to the City of Lodi, any Fiber Optic cables that contain one or more faulty strands that are not in compliance with the specifications of this RFP.
- H. The Contractor shall propose ST-compatible connectors that can be installed in the field. Said connectors shall be approved by the City of Lodi prior to installation. These connectors and the method used to install them shall provide both low loss values and excellent reliability. AT&T STII or 3M 6100 Hot Melt Fiber Optic connectors are acceptable. Characteristics for the connectors are:
1. Attenuation: .6 dB typical at 1300 nm per mated pair
  2. Tensile strength: dB +/- .2 dB loss with 22 lb loss w/o adhesive (FOTPG).
  3. Thermal shock will be +/- .2 dB @ -40 deg. C to +60 deg. C, 5 cycles, loss measured at room temperature after 12 hours.
  4. Durability will be dB loss +/- .2 dB for 1,000 insertions (if cleaned every 25<sup>th</sup> insertion).
- I. The connectors shall be constructed as follows:
1. Type: ST compatible (physical contact)
  2. Fiber size: 125 um cladding diameter
  3. Ferrule construction: Zirconia ceramic
  4. Housing construction: molded plastic
  5. Strain Relief Method: Kevlar retention or epoxy

6. Fiber Retention: Adhesive (UV cured)
7. Connector Assembly Time: +/- 10 minutes
8. Insertion Loss: 0.6 dB (typical)  
(Loss is computed per two mated connectors)
9. Durability: dB loss +/- .2 dB for 1,000 insertions

#### 4.05 EQUIPMENT - AS/400 HUBS / H.P. AdvanceStack HUBS /

##### FIBER TRANSCEIVERS/MUX's/BALUNS

- A. Pricing Information Sheets #5 and #6 list the materials required for this installation.
- B. Galcom products have been specified on the Price Sheet #5, however alternate products may be proposed. Any alternates that are proposed must be supported with specification sheets and be equal or superior in performance to those products specified.
- C. Vendors wishing to propose any alternate must propose equipment and pricing in a format that is similar to that used on the Pricing Information Sheet #5.
- D. Hewlett-Packard equipment and other parts have been specified on Price Sheet #6. In order to match existing equipment, this Price Sheet is specific and alternates will not be considered.

#### 4.06 MDF - CLOSETS / IDF-CLOSETS

- A. The Main Distribution Frame (MDF) will be initially located in the ANNEX.
- B. The City of Lodi will provide conduits to link all buildings as shown on the prints.
- C. Contractor will install all terminating equipment and frames (free-standing and/or wall-mounted) according to the floor plan provided. Any changes shall be authorized by the City of Lodi in writing prior to the change.
- D. The Contractor shall ensure that the installation of the frames and backboards is conducive to growth in a manner that is orderly, timely and economical. The arrangement of equipment, panels, cross-connect fields, and backboards shall allow easy access.
- E. At each IDF and the MDF a 1,000 ft. reel of 1-pair Category 3 cross connect wire 24 AWG twisted shall be supplied and wall mounted.
- F. At MDF and IDF locations, cables shall be properly secured every 10 inches, or less if appropriate.
- G. LIU's or equivalent equipment shall to be provided by the contractor in each Closet and in the MDF for the fiber patching, for the active equipment, etc.
- H. The MDF and IDF Closets are transition points between the Fiber Optic Backbone Cables and the Horizontal Cabling. These closets will contain the

cable cross connection fields and/or panels, the associated cabling/wiring, and the electronics associated with the Fiber Optic cabling.

#### 4.07 BACKBONE CABLING

- A. For the purpose of this RFP, the term "backbone" refers to cable runs between distribution points, i.e., between MDF and IDFs. The system will make use of conduit and sleeves. For Fiber Optic cable, 1" innerduct is required and will be run.
- B. All backbone cables entering buildings shall be supported so as to insure that mechanical integrity of each cable is maintained over the long term.
- C. Additional materials to be supplied by the Contractor to support the backbone cable shall include, but are not limited to:
  1. Backbone cable as specified.
  2. Light Interface Units.
  3. ST compatible connector.
  4. Cross-connect field.
  5. Wire distribution rings.
  6. Firestopping materials.
  7. All incidental material such as screens, tie wraps, anchors, support hardware and labels.
- D. The Vendor shall specify in the proposal the exact cables being proposed for each component of the City of Lodi backbone system - specifications, number of strands, etc.

#### 4.08 HORIZONTAL DISTRIBUTION SYSTEM

- A. For the purposes of this RFP, Horizontal Wiring refers to that part of the wiring system that extends circuits from an IDF or MDF directly, home run, to the end user.
- B. The cable length from any workstation location to the termination in the associated Closet shall be equal to or less than 275 ft. This maximum length includes all wiring in the run. Any deviation from this requirement of maximum length shall be brought immediately to the attention of the City of Lodi.
- C. The Horizontal Distribution System requires that the following be run and properly terminated to work locations and/or outlets specified on the job drawings:
  1. (1) 4-pair 24 AWG Category 5 PVC cable for DATA.
  2. (1) 4-pair 24 AWG Category 3 PVC cable for VOICE.

- D. The typical wallplate configuration shall provide for one (1) Voice outlet, one (1) Data outlet and a minimum of two (2) blank outlets for future needs, unless otherwise specified on the plans.
- E. All building horizontal distribution wiring shall be 24-gauge wire that meets or exceeds EIA Category 3 or Category 5 respectively.
- F. Cables must be routed and dressed so as to: avoid congestion, ensure accessibility, and guarantee proper maintenance clearance between cable/wire terminals.
- G. Horizontal Distribution cables will be "home run" and have a physical star configuration.
- H. J-hooks or other appropriate support equipment shall be supplied by the Contractor and will be used to support the Horizontal Cabling. J-hook strap edges must be rolled to prevent damage to the cable sheathing.
- I. Each J-hook or support wire shall be placed no further than six (6) feet apart and must be able to support no more than twenty (20) 4-pair cables. J-hooks will also carry fiber to the IDF or MDF locations.

#### 4.09 WORKSTATION LOCATIONS

- A. Vendors shall take careful note of the fact that certain locations may be voice/fax only or data only as shown on the plans. Note that the Public Safety building has need for connection to a 10BaseT Hub in the MDF, but no actual data or voice locations.
- B. Wall connection outlets will be Category 5 type for the DATA and Category 3 for VOICE.
- C. Each workstation outlet will be directly home run to the appropriate panel or block in the nearest IDF Closet. This star configuration will be maintained for the entire horizontal distribution system.
- D. Each workstation cable shall be labeled and identified as specified in Section 4.18 of this RFP. Labels shall be no more than 12 in. from the end of the cable.

#### 4.10 TERMINATIONS AND CROSS CONNECTIONS

- A. All connection blocks for VOICE in the MDF and IDF will be MOD-TAP 110 type modular type (high-density, punch-down) that:
  - 1. Must be color-coded and labelled in accordance with the approved labelling plan.
  - 2. Terminate up to 25 pairs per block.
  - 3. Allow connection of 22 AWG or 24 AWG wires.
  - 4. Support up to 200 insertion/removals without compromising the electrical or mechanical integrity of the connection.

5. Have insulation material that fully insulates each block from any neighboring block(s).
  6. Are partitioned in such a way that the conductors terminated on the modules are also partitioned.
- B. A Fiber termination patch system shall be provided in IDF Closets. All backbone fiber strands will be connectorized and terminated in the fiber termination housings with ST compatible connectors.
- C. Fiber housings will be modular to allow for the addition or deletion of components or internal routing of jumpers.
- D. Vendors shall propose Optical Jumpers (to be approved by the City of Lodi) which will be needed to connect the electronic equipment with the optical transmission cable. In Section 8 of the Proposal, each Vendor shall provide a unit price for various lengths and conforming to the following specifications:
1. Fiber type: multimode Corning LNF CSB4
  2. Core size: 62.5 um
  3. Construction: Zipcord (2 fibers) duplex fiber
  4. Strength member: Kevlar
  5. Connector type: ST
  6. Connector loss: 0.3 dB (typical)
  7. Color: Multimode orange
  8. Lengths: 1.5 meter to 3 meters

#### 4.11 MATERIALS (SUGGESTED)

- A. Following is a list of the products that MOD-TAP offers that will, if used in conjunction with the Fiber specified in this RFP and MOD-TAP certified copper cable, be eligible for a fifteen (15) year warranty. The City of Lodi desires this kind of warranty period. Vendors should propose a solution that is in the best interest of the City of Lodi. If alternates are proposed, they shall be either AT&T or Northern Telecom. Alternate pricing shall be listed on Pricing Information Sheet #7

- B. Workstation outlets and Drop cables.

Part #	Description
17-0121-01	Bezel - Almond
17-5234-01	Unifit Mod for Cubicles - Almond
17-0433-01	Single position blank - Almond
17-51-80-61	Single WE8W USOC CAT 3 Jack
17.2B.011.B0031	Single WE8W 568B CAT 5 Jack
S-2282	ST TP CAT 5 568 8W-10' Kyd - Blue

- C. Patch Panels, Patch cables and organizers.

Part #	Description
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27.2B.241.B001G	24 Port 110 Panel 568B - CAT 5
27.2B.481.B001G	48 Port 110 Panel 568B - CAT 5
45.0B.017.B018H	ST TP CAT 5 568 8W-5' - Blue
25.B016G	Single position Ring Run

D. Distribution Frames and Accessories.

Part #	Description
25.B0044	Open Bay Rack
25.222	Mod Strut Mounting Kit
25.B0374 (optional)	14 POS Deep Wall Mount Rack
25.B027G	Rack Mount Power Supply

E. Fiber Interconnect Components and Accessories.

Part #	Description
17.B1014	Fiber Management System
30.B012G	24 Port ST Panel ½ loaded - MM
15.B0116G	24 Port Wall Mount Fiber Box
15-303-MM	ST Connector Adapter - (6) MM
15-302-00	Blank Adapter Plate
91-3112-01	1.5 Meter Duplex ST Patch Cord
91-3112-03	3.0 Meter Duplex ST Patch Cord

F. Vendor should provide unit pricing on Pricing Information Sheet #7 for the following MOD-TAP alternates to some of the Galcom parts.

Part #	Description
88-X637-01	Active Star Hub 14 Port - USOC
88-810-80-000	Twinax Balun - USOC

#### 4.12 FIRESTOPPING

- A. All firestopping associated with the communications transport system shall comply with all existing applicable laws, regulations, standards, and codes.
- B. Firestopping requirements:
1. Contractor shall seal all penetrations of rigid conduit or sleeves using approved materials installed according to the manufacturer's specifications.
  2. All slot or chase-type penetrations placed at time of casting shall be firestopped.
  3. All individual cable or wire penetrations that are not in conduit shall be firestopped. For larger clearance openings, and for openings containing pipes subject to movement, sleeves shall be anchored to both membrane surfaces of the wall and an approved firestop material shall be installed between the pipe and sleeve for the full thickness of the wall.
  4. Through penetrations in gypsum board wall for cable trays shall be boxed-out with gypsum board and sealed with a design-tested

firestopping system installed per the manufacturer's specifications and instructions.

#### 4.13 SAFETY

Contractor is responsible for providing protection from falling material related to the installation of the cable/wiring system for all personnel.

#### 4.14 DOCUMENTATION

- A. As part of the services provided under the contract of which this RFP is a part, the Contractor shall provide complete cable/wire documentation using both plans in an AUTO-CAD format and text, refer to Section 4.13.G.3.
- B. The City of Lodi reserves the right to review and approve all plans and documentation to ascertain their compliance with RFP requirements.
- C. The Contractor shall give the Construction Administrator all installation, configuration and operation manuals provided with any parts or equipment.
- D. Label Requirements
  - 1. All cables and wires shall be labeled at the time of installation. These labels shall conform to the labelling plan agreed to by the City of Lodi and the Contractor.
  - 2. At a minimum, the label on each cable/wire shall indicate:
    - a. End points (terminations) of the individual cable.
    - b. Type of cable.
  - 3. Voice and data jacks must be labeled differently.
  - 4. Each wall plate shall be labeled with the same number(s) as the Cable(s) terminating at it.
  - 5. Cross-connect field appearances, when used, shall be labeled with the appropriate cable number(s).
  - 6. All station-type cabling must be labeled within 6 inches of its termination point at the work location.
- E. A cable record system shall be established. At a minimum the Cable Record (or schedule) shall include the following information:
  - 1. Cable Number
  - 2. Cable Runs From
  - 3. Cable Runs To
  - 4. Length of Cable Run
  - 5. Additional information shall be included whenever appropriate. For example:

Distribution Panel/IDF/MDF Jumpers - to identify where a cable is connected, such as to another cable, a controller, or some piece of equipment.

- F. The City of Lodi shall provide the Contractor with a complete set of architectural drawings, including drawings showing the conduit system installed by the Electrical Contractor.
- G. Not more than four (4) weeks after completion of the installation and before any final payment will be made by the City of Lodi, the Contractor shall provide the City of Lodi with:
  - 1. A complete database on electronic media, MS Excel or DBF format, in accordance with specifications provided by the City of Lodi above, of all cable and wire installed.
  - 2. Two (2) hard-copy sets of "as-built" drawings for the installed wiring system.
  - 3. Auto-CAD Release 12 or later on 3.5" diskettes for all documentation drawings.
- H. At least two copies of cable records shall be maintained by the Contractor during the project. One in the appropriate work location, and one off-site.

#### 4.15 TESTING

The following notes are samples of components that should be included in the Vendor's proposed Quality Assurance Plan and the Acceptance Test Plan, but are not intended to be inclusive, only suggestive.

- A. Each Vendor shall develop a media and system Test and Acceptance Plan to be included in the Proposal. This plan, and all evaluation and test criteria, shall be reviewed by the City of Lodi. Amendments or changes will be negotiated before the award of the contract.
- B. The proposal will include both pre-and post-installation test procedures and detail the test equipment to be used. The procedure must describe the tests to be done, the personnel responsible and the test equipment to be used.
- C. All test equipment shall be supplied by the Contractor. The proposal must include a list of the test equipment to be used, including description of the equipment and their current calibration status reports.
- D. Post-installation acceptance testing must be completed within two (2) weeks of the installation. The system shall not be considered installed until the acceptance testing has been completed and the system accepted in writing by the City of Lodi.
- E. Within four (4) weeks of the award of the contract, the Contractor shall submit a test schedule for the City of Lodi's approval.
- F. All Acceptance testing will be conducted under the supervision of the Contractor's Project Manager and the City of Lodi. Testing will include

inspection of the physical attributes of the system, including, but not limited to, connections and terminations of the equipment and cable/wire infrastructure.

**G. Test Plan and Reports;**

1. Shall be based on "as built" drawings.
2. Report of test results must include, as a minimum:
  - a. Name of test and test number
  - b. Expected and actual results
  - c. Date of test
  - d. Name of person conducting the test

**H. Minimum tests will include:**

1. Testing of each Fiber Optic strand for continuity, insertion loss and anomalies.
2. Testing each Data pair for NEXT, attenuation, wire map, length, impedance, loop resistance and capacitance with a certified Category 5 test unit. Test results should be printed and consistent with EIA/TIA specifications.
3. Testing each Voice pair for shorts, opens, grounds, polarity and split pairs.

**I. Testing by tone is not acceptable.**

## **5. PROJECT MANAGEMENT PLANS, POLICIES AND PROCEDURES**

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### **5.00 OVERVIEW**

- A. The Contractor shall submit a Project Schedule (Gantt chart) that details the tasks involved in the project and their projected completion.
- B. Project Management for this project is understood to include, but is not limited to, planning, scheduling, controlling and supervising all activities required for the successful completion of this project.
- C. The Contractor will review all schedules relating to the installation with the City of Lodi.

### **5.01 PROJECT MANAGER**

- A. The Contractor shall assign a Project Manager to this project. This person will have the responsibility and authority to make the necessary decisions to ensure a successful installation.
- B. A written project status report shall be submitted at a weekly Project Meeting by the Project Manager or a representative of the Project Manager or as required by the City of Lodi.
- C. The Project Manager shall be on-site for at least two hours per day during the installation of this wiring system. During the acceptance and testing phase of this system, the Project Manager shall be on-site for the entire period.
- D. The City of Lodi will appoint a Construction Administrator. This person will coordinate all the City of Lodi activities with regard to the installation.
- E. All communications that concern this project in any manner, including changes, shall be through the City of Lodi Construction Administrator. No changes or additions will be made during the last two weeks preceding cutover unless the reason is critical.

### **5.02 PROJECT MANAGER RESPONSIBILITIES**

- A. The Project Manager will notify the City of Lodi immediately of any matters which will, or may, interfere with the project schedule or compliance with the RFP requirements.
- B. The Contractor shall be totally responsible for any personnel assigned to work on the installation of the selected system. This responsibility includes any subcontractors or any outside technical or training assistance that may be required or contracted for by the Vendor.
- C. The Contractor shall restore any damage or changes made to the City of Lodi's physical plant to the original condition.

- D. The Contractor shall ensure that the copper wire installation is coordinated with drywall, ceiling and other trades.
- E. Remove all trash associated with the installation of the communications system(s), including all packing materials. Contractor must obtain the City of Lodi's approval before using the City of Lodi trash facilities for these items. This removal shall be done consistently during the installation process, or as required by the City of Lodi's procedures and policies.

### **5.03 THE CITY OF LODI RESPONSIBILITIES AND RIGHTS**

- A. The City of Lodi will provide the Contractor with all information required to complete this system installation, providing that such information is available. This information includes, but is not limited to:
  - 1. AUTO CAD (DOS) Release 12 or later Plans of the physical plant on a Disk.
  - 2. Network design.
  - 3. Interface requirements for other types of communications-related systems.
  - 4. Other applicable information.
- B. The City of Lodi retains the right to approve or disapprove the Contractor's choice of Project Manager(s). The City of Lodi may request the replacement of a Project Manager for any reason.
- C. The City of Lodi will acquire all permits and licensing required to complete this project.
- D. Disputes will be resolved under the laws of the state of California.

## 6 INSURANCE AND BONDING

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### 6.00 INSURANCE

- A. The Contractor shall, before any part of the work on the job site is commenced and at the Contractor's sole expense, cause to be issued and maintain during the entire project insurance coverages set forth below.
- B. Worker's Compensation in accordance with the provisions of the applicable worker's compensation law or similar laws of the country, state or other entity having jurisdiction over the employee.
- C. Employer's Liability insurance with a minimum limit of liability of \$100,000 for each occurrence.
- D. Automobile Liability insurance covering the use of all owned, non-owned and hired vehicles with a combined single limit of liability of not less than \$1,000,000 combined single limit for bodily injury and property damage.
- E. Commercial General Liability insurance including Contractual liability, broadform property damage, XCU (explosion, collapse and underground) exclusions deleted, cross liability endorsement and independent contractors liability. Limits of liability of not less than \$1,000,000 combined single limit for bodily injury and property damage and \$1,000,000 for contractual liability.
- F. The City of Lodi is to be named on the Commercial General Liability policies as an additional insured for Work performed for this contract. The Certificate or policy endorsement shall clearly state: "This is primary insurance without recourse to similar insurance maintained by the City of Lodi, if any." A 30day Notice of Cancellation shall be required with the provision that the City of Lodi City Attorney will be notified in the event of any cancellation, intention of the insurer not to renew or any material change in the insurance contract or coverages afforded. This Contract with the City of Lodi must be specifically referred to in the Certificate of Insurance or endorsement to the policy.

### 6.01 BONDING - Security for Faithful Payment, Performance and Completion

- A. Executed payment and performance bonds with labor and material clauses in a form meeting the City of Lodi's approval, in an amount not less than one hundred percent (100%) of the total Contract Price. The Contractor shall submit original bonds to the City of Lodi as soon as the Contractor obtains the bonds, but in any event within three weeks after Contract execution.

## 7. PRICING

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### 7.00 GENERAL

- A. Complete pricing information shall be provided. All pricing shall be on a per item or per component basis, i.e., unit pricing.
- B. All discount information will be clearly stated and the discount structure described in detail. The proposal will indicate the items/components to which discounts do and do not apply.
- C. Proposal shall clearly indicate the items/components to which the discount structure applies and those to which discounts do not apply.
- D. Proposal shall state whether or not the discounts also apply to materials purchased after the signing of the contract but prior to cutover.
- E. Proposal shall state whether or not the discounts also apply to materials purchased after Acceptance of the system.
- F. Proposal shall clearly state the conditions/situations under/in which discounts do not apply.
- G. Unless otherwise specified, all preparation and packaging shall be assumed to be included in the pricing given. If this is not so, it must be clearly stated and the costs for preparation and/or packaging must be provided as an additional item.
- H. All pricing shall include delivery to the job site. State any applicable taxes separately with the associated item.
- I. The proposal must clearly indicate those instances where one-year warranty does not apply and must clearly state the charges associated with first-year maintenance for those items not covered by a full year's warranty.
- J. Prices should be given for purchase only, leasing does not apply to this project. Pricing should be provided separately for the equipment and for the labor to install it.

### 7.01 PRICING SHEETS

- A. The Price Information Sheets in this section cover the cable/wiring items in the RFP as well as the equipment that will be required. Vendor should include costs of all additional materials to be used in the installation in broad categories which are:
  - 1. Support materials.
  - 2. Cable fastening materials.
  - 3. Workstation location termination materials.
  - 4. Optional information requested in the RFP.

5. Additional IDF material.
  6. Additional MDF material.
  7. Firestopping materials.
  8. Miscellaneous material required for a proper installation. Pricing information on these non-cable materials should be provided in the format sample included with this RFP.
- B. Additional information is welcome, but should be in a similar, if not identical, format.
  - C. It is the Vendor's responsibility to include pricing on all materials and equipment required to install the wiring system, whether they are specifically stated in this section or not. If they are not, the Vendor must include them in blank spaces on the Pricing Sheets.
  - D. In the blanks provided on each Pricing Sheet, the Vendor shall indicate the manufacturer of the item for which the pricing is provided.
  - E. A completely blank sheet is included for reproducing and using for additional pricing information.
  - F. Incomplete or unclear pricing proposals may be cause for rejection.

#### **7.02 PRICING FOR CABLE AND WIRE**

Except where noted otherwise, pricing shall be provided on a per-foot basis.

## 8. PRICING SHEETS

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### ALTERNATIVE PRICING INFORMATION SHEET 1A

Installation

Material/Item/Equipment

Cost

#### PHASE 1

Fiber Optic Outside Plant Cable

Multimode

Mfg. \_\_\_\_\_

1. 12-strand OSP fiber \_\_\_\_\_
2. 6-strand OSP fiber \_\_\_\_\_

Estimated number of feet required:

1. 12-strand OSP fiber \_\_\_\_\_
2. 6-strand OSP fiber \_\_\_\_\_

Cost of All Fiber Optic connectors,  
LIU enclosures, splices, protective  
innerduct and associated parts. \_\_\_\_\_

Labor: \_\_\_\_\_

Total cost of Phase 1 Fiber cabling: \_\_\_\_\_

Unit Price for Dual Fiber jumpers

1. 1.5 meter \_\_\_\_\_
2. 3.0 meter \_\_\_\_\_

**ALTERNATIVE PRICING INFORMATION SHEET 2A**

Installation

Material/Item/Equipment

Cost

**PHASE 2**

Fiber Optic Cable Inside Plant

Multimode

Mfg. \_\_\_\_\_

- 1. 12-strand fiber \_\_\_\_\_
- 2. 6-strand fiber \_\_\_\_\_

Cost of All Fiber Optic connectors,  
Fiber enclosures, protective innerduct  
and associated parts. \_\_\_\_\_

Unit Cost for Dual Fiber Jumpers

- 1. 1.5 meter \_\_\_\_\_
- 2. 3.0 meter \_\_\_\_\_

Total cost of Phase 2 Fiber cabling: \_\_\_\_\_

**PRICING INFORMATION SHEET 1**

Installation

Material/Item/Equipment

Cost

**PHASE 1**

Fiber Optic Inside/Outside Plant Cable

Multimode

Mfg. \_\_\_\_\_

- 1. 12-strand fiber \_\_\_\_\_
- 2. 6-strand fiber \_\_\_\_\_

Estimated number of feet required:

- 1. 12-strand fiber \_\_\_\_\_
- 2. 6-strand fiber \_\_\_\_\_

Cost of All Fiber Optic connectors,  
LIU enclosures, splices, protective  
innerduct and associated parts.

\_\_\_\_\_

Labor:

\_\_\_\_\_

Total cost of Phase 1 Alternative  
Fiber cabling:

\_\_\_\_\_

Unit Price for Dual Fiber jumpers

- 1. 1.5 meter \_\_\_\_\_
- 2. 3.0 meter \_\_\_\_\_

**PRICING INFORMATION SHEET 2**

Installation Material/Item/Equipment	Cost
---	------

**PHASE 2**

Cost of All Fiber Optic connectors,  
LIU enclosures, protective innerduct  
and associated parts.

\_\_\_\_\_

Unit Cost for Dual Fiber Jumpers

1. 1.5 meter \_\_\_\_\_
2. 3.0 meter \_\_\_\_\_

Total cost of Phase 2 Alternative  
Fiber cabling:

\_\_\_\_\_

**PRICING INFORMATION SHEET 6**

Part Number	Description	Quantity	Cost Each	Extension
<b>PHASE 1</b>				
J2602A	HP AdvanceStack 48-port 10BaseT Hub	1 ea.	_____	_____
J2606A	HP AdvanceStack Internal Fiber Optic Transceiver	1 ea.	_____	_____
28682A	HP Fiber Optic Hub Plus	1 ea.	_____	_____
28683A	External Fiber Optic Transceiver	3 ea.	_____	_____
J2540A	HP Router PR	2 ea.	_____	_____
J2540A opt.001	V.35 Cable	2 ea.	_____	_____
<b>TOTAL COST OF HEWLETT-PACKARD EQUIPMENT:</b>				_____

**PRICING INFORMATION SHEET 3**

Installation

Material/Item/Equipment

Cost

**PHASE 1**

Copper Cable, 24AWG VOICE

Mfg. \_\_\_\_\_

1. EIA Category 3:

4-pair

\_\_\_\_\_

Copper Cable, 24AWG DATA

Mfg. \_\_\_\_\_

1. EIA Category 5

4-pair

\_\_\_\_\_

Cost of wallplates, patch panels,  
blocks, racks, brackets, seismic  
bracing, line cords, patch cords  
and other associated parts.

\_\_\_\_\_

Labor:

\_\_\_\_\_

Total cost of Voice and Data cabling:

\_\_\_\_\_

Length of warranty: \_\_\_\_\_

Cost of Extended Warranty:

\_\_\_\_\_

**PRICING INFORMATION SHEET 4**

**PHASE 2**

Installation

Material/Item/Equipment

Cost

Copper Cable, 24AWG VOICE

Mfg. \_\_\_\_\_

1. EIA Category 3:

4-pair

\_\_\_\_\_

Copper Cable, 24AWG DATA

Mfg. \_\_\_\_\_

1. EIA Category 5

4-pair

\_\_\_\_\_

Cost of wallplates, patch panels,  
blocks, racks, brackets, seismic  
bracing, line cords, patch cords  
and other associated parts.

\_\_\_\_\_

Labor:

\_\_\_\_\_

Total Phase 2 Voice and Data cabling:

\_\_\_\_\_

**PRICING INFORMATION SHEET 5**

Part Number	Description	Quantity	Cost Each	Extension
<b>PHASE 1</b>				
4561-G3	Galcom 8-port MUX System Side	2 ea.	_____	_____
5500-G1FNT	Galcom 4-port MUX	1 ea.	_____	_____
5500-G1FNU	Galcom 4-port MUX	4 ea.	_____	_____
5591-G1UU	Galcom 7 device Active Star	3 ea.	_____	_____
5592-G1UU	Galcom 14 device Active Star	7 ea.	_____	_____
4562-G3	Galcom 8-port MUX Device Side	2 ea.	_____	_____
5021-GX	Galcom TWX Balun	90 ea.	_____	_____
<b>PHASE 2</b>				
5591-G1UU	Galcom 7 device Active Star	1 ea.	_____	_____
5592-G1UU	Galcom 14 device Active Star	1 ea.	_____	_____
5021-GX	Galcom TWX Balun	18 ea.	_____	_____

TOTAL COST OF ALL EQUIPMENT: \_\_\_\_\_







**VENDOR ACCEPTANCE FORM**

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**VENDOR ACCEPTANCE**

Name of Authorizing Officer: \_\_\_\_\_

Title: \_\_\_\_\_

Name of Firm: \_\_\_\_\_

Address: \_\_\_\_\_

City, State & Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

I, \_\_\_\_\_ accept the General/Technical specification  
(PRINT NAME)

as outlined in this RFP for \_\_\_\_\_,  
(PRINT COMPANY/FIRM NAME)

and am proposing an appropriate system which will meet its mandatory requirements or have noted clearly any exceptions. It is my understanding that my proposal, if accepted, will become a part of our contract and that the quoted pricing is valid and will remain in effect for and will not be withdrawn for ninety (90) days from the Contractor award date.

\_\_\_\_\_  
Authorized Signature - Date

\_\_\_\_\_  
Title

---

**PROJECT:** Civic Center Data/Telecommunication Cabling

Notice is hereby given that the plans and specifications for the above referenced project have been revised as follows:

1. All references to the word "bid" have been replaced by the word "proposal".
2. Section 2.00 Schedule is revised as follows:
  - A. The schedule for this RFP is as follows:

■ RFP issued	September 15, 1994
■ Vendor Conference	September 23, 1994
■ Proposal Submission	October 17, 1994 1:45 P.M.
■ Proposal Opening	October 17, 1994 2:00 P.M.
■ Contract Award	November 16, 1994
■ Start of Installation	January 1995
■ Completion Date Phase 1	February 3, 1995
■ Anticipated Completion Date Phase 2	May 1, 1996
3. Section 2.03 is revised to read as follows:
  - A. The purpose of this Request For Proposal (RFP) is to include all equipment materials, labor, training, and services of every and any kind needed for the proper installation and operation of the proposed communications wire and cabling infrastructure and computer systems. The City of Lodi's desire is a total systems solution consistent with existing computer and communication hardware. The Vendor may make suggestions on existing system configuration with an eye on stream-lining computer connectivity and possible cost savings. If suggestion are made, they must include complete documentation and associated costs. The City of Lodi is not responsible for, and will not pay, any costs related to the preparation of a response to this RFP.
4. Section 2.04 is revised to read as follows:
  - A. The Contractor shall supply all materials, equipment, and labor, including supervision of the project, integration of existing computer systems, and connection to existing telephone system, required to meet the specifications of this RFP.
5. Section 2.05 is revised to read as follows:
  - A3b The Project Manager for the Contractor must have a minimum of three years experience in installation of data and telecommunication systems, building distribution wiring and cable on similar projects.

5. Section 2.05 (continued):

- C2. Set up local area networks or campus-wide networks and have experience with IBM AS/400 systems.
- C3. Provide any maintenance, servicing, and training required for the proposed system.
- D. Only those Vendors that have proven their capability in the area of ongoing maintenance, service, and support will be considered. Ongoing support is critical to any data and telecommunications system, and the City of Lodi, recognizing this fact, considers that such support is an important consideration in the selection of a Contractor.

6. Section 3.00, G. is revised to read as follows:

- G. Four (4) sealed copies of the proposal must be submitted on or before 1:45 P.M. Monday October 17, 1994.

7. Section 4.01 is revised to read as follows:

- A. The Contractor's primary responsibility is the installation of equipment and wiring; with an emphasis on a total systems solution consistent with existing computer and communication hardware.

8. Section 4.02 is revised to read as follows:

- F. All Fiber connection points must be easily accessible, and must be located in communication equipment room(s), wiring closets, or other locations authorized by the City of Lodi.

Dated: September 23, 1994

Ordered by:

*Wes Supton*  
for: Jack L. Ronko  
Public Works Director

CITY OF LODI  
PUBLIC WORKS DEPARTMENT

RECEIPT OF ADDENDUM

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PROJECT: Civic Center Data/Telecommunication Cabling

Received from the City of Lodi ADDENDUM NO. 1 to the plans and specifications for the above referenced project.

Date: \_\_\_\_\_

\_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_

NOTE: This acknowledgment must be submitted with the Proposal.

SEPT 23, 1994  
DATA/COMM. MANDATORY VENDORS CONF.

<u>PRINT NAME</u>	<u>FIRM</u>
Andrew L. Litz	EVER-GREEN Comm. Svcs Inc (707-649-8002 FAX 707-649-8016)
Demian Seeley	Hewlett-Packard
Cecy Syrovatka	Hewlett-Packard
JASON G LUEDTKE	MAVERICK COMMUNICATIONS
NORM DE ORIANI	IBM
JAN LOCKY	T&R COMMUNICATIONS INC PH. 916 638 5700 FAX 916 638 5797
DAVID HERRICK	VALLEY COMMUNICATIONS 916 341 8511 X 349
Steve Johnson	COMPEL CORPORATION. (510) 463-3020.
DENISE PARDINI	FIBRONICS (510) 430-1180 X 24
ALEX HENTHORN	FIBRONICS (510) 430-1180 X 25

MARK WHITE  
DENNIS CAWATHAN  
ROY TODD

CITY OF LODI  
"  
"

\*NOTE: ALL ABOVE PEOPLE RECEIVED ADDENDUM #1

**STEVE JOHNSON**  
Regional Manager

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PHONE (916) 433-5707  
FAX (510) 463-3584  
LICENSE NO. 392623

**COMPEL**

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**Gregg Syrovatka**  
Support Sales Consultant



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**Denise Pardini**  
Account Manager

**Fibronics**

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**Alex Henthorn**  
Systems Engineer

**Fibronics**

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**COMMUNICATIONS, INC.**  
Integrated Voice and Data  
Distribution Systems

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General Manager

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**Norm DeOrion**  
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916 326 3885  
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Pager 916 326 2248

**IBM**

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Phone 344-8811 ext. 349  
FAX 344-0835  
CCL# 508319

**David J. Herrick**  
Sales Engineer



Valley  
Communications  
A Division of IBM

San Francisco Bay Area Sacramento Valley Southern California

**EVER-GREEN**  
COMMUNICATIONS SERVICES, INC.  
1125 BENICIA ROAD, P.O. BOX 5663, VALLEJO, CA 94591  
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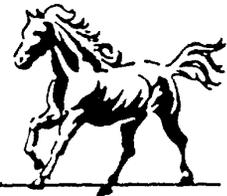
**ANDREW LITZ**  
VICE PRESIDENT

PBX • VOICE-DATA • OUTSIDE PLANT • CABLE SPLICING • FIBER OPTICS

**MAVERICK**  
Communications, Inc.

Professional service and installation  
Fiber optic, Data, Voice, and Video

**Jason Luedtke**  
Administrative Manager/  
Project Coordinator



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