

BIDDERS COMPANY NAME

REQUEST FOR PROPOSAL

#6151

STRUCTURED WIRING

SERVICES

FOR

WASHTENAW COUNTY

Prepared By:

Washtenaw County Purchasing
Administration Building
P.O. Box 8645
220 N. Main B-35
Ann Arbor, MI 48107

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WASHTENAW COUNTY

Finance Department

Purchasing Division

P.O. Box 8645, 220 N. Main, Ann Arbor, MI 48107-8645
Phone (734) 222-6760, Fax (734) 222-6764

REQUEST FOR PROPOSAL # 6151

June 21, 2004

Washtenaw County Purchasing Division on behalf of Washtenaw County Information and Technology Services Development is issuing a sealed RFP #6151 for installation of voice and data communication structured wiring services.

Sealed Proposals: Vendor will deliver one (1) original and two (2) copies which are clearly marked as such and must contain one original signature to the following address:

**Washtenaw County
Administration Building
Purchasing Division
220 N. Main St. Room B-35
P.O. Box 8645
Ann Arbor, MI. 48107**

by 2:00 p.m. on WEDNESDAY AUGUST 11, 2004

This submission shall include the entire Request For Proposal document, requested attachments, and any amendments if issued.

Proposals received after the above cited time will be considered a late bid and are not acceptable unless waived by the Purchasing Manager.

- Please use the attached self-addressed label or the envelope must be clearly marked "**SEALED RFP # 6151**".
- Please direct purchasing and procedural questions regarding this RFP to Robert Devault at **734-222-6760** or devaultb@ewashtenaw.org
- Please direct technical questions regarding this RFP to Steve Farat at **734-222-6544** or farats@ewashtenaw.org

Thank you for your interest.

WASHTENAW COUNTY INFORMATION & TECHNOLOGY SERVICES

INTRODUCTION

Washtenaw County is soliciting bids for installation of voice and data communication structured wiring services.

The selected Contractor will be required to provide voice grade, copper riser, station distribution, 62.5 multi mode fiber, single mode fiber and Category5e data cabling distribution to support voice and data communications in all existing County owned and leased buildings.

This bid will involve the selection of vendors to fill multiple positions available in the County vendor pool for structured wiring services. Bid price will be on an hourly basis. The hourly price, and all work, will be based on the requirements detailed in this proposal. This bid is open to only union affiliated businesses and their membership.

SITE LOCATIONS

See **ADDENDA "A"** for list of locations.

1.1 PROPOSAL TERMS AND RFP INSTRUCTIONS

1. This bid will involve the selection of vendors to fill multiple positions available in the County vendor pool for structured wiring services.
2. Washtenaw County reserves the right to reject any and all proposals received as a result of this RFP. If a proposal is selected it will be the most advantageous regarding price, quality of service the Contractors qualifications and capabilities to provide the specified service, and other factors which Washtenaw County may consider. The County does not intend to award a contract fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a contract would be awarded, and negotiations would be undertaken with that Contractor whose proposal is deemed to best meet the County's specifications and needs.
3. The County reserves the right to reject any or all bids, to waive or not waive informalities or irregularities in bids or bidding procedures, and to accept or further negotiate cost, terms, or conditions of any bid determined by the County to be in the best interests of the County even though not the lowest bid.
4. An official authorized to bind the Contractor to its provisions for at least a period of 90 days shall sign proposals. Failure of the successful bidder to accept the obligation of the contract may result in the cancellation of any award.
5. In the event it becomes necessary to revise any part of the RFP, addenda will be provided. Deadlines for submission of RFPs may be adjusted to allow for revisions. The **entire** response with any addenda amendments **MUST** be returned in **triplicate**. To be considered, original proposal and two copies must be at the County Purchasing Division on or before the date and time specified.

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6. All bids in response to this request for proposal (RFP) **MUST** comply with the following instructions. Failure to do so may result in disqualification.
7. Bid documents should be prepared simply and economically, providing a concise delineation of the capabilities of the contractor to satisfy the requirements of the RFP. Completeness and clarity of content should be emphasized. Unnecessarily elaborate bindings, brochures, descriptions, or other presentations are not required.
8. This RFP, with any subsequent addendum and the Bid submitted by the selected Contractor, with approved changes, will become part of the contract between the County and selected Contractor.
9. Contractors submitting Bids to this RFP may be required, at the request and option of Information and Technology Services, to make an oral presentation or provide written clarification. These presentations or written clarifications will provide an opportunity for the Contractors to clarify but not modify their Bid.
10. The Bids should be submitted on 8 1/2" by 11" paper single-sided, clearly labeled to show the Bidder's name. The Bidder is responsible for the full-page count of Bids submitted in 3-ring binders. All pages are to be CLEARLY marked and in sequential order.

1.3 REQUIRED INFORMATION

1. All required information must be provided and attached as **Attachment "A"**.
2. Performance and bid bond.
3. Proof of insurance as stated in Article VII, Insurance Requirements. Attach insurance certificate.
4. Detailed graphical network rendering of proposed installation showing all components and locations involving service requested.
5. List the number and names of individuals that will be participating in the installation of structured wiring as called out in this RFP.
6. Provide the name, title and telephone number of the project manager responsible for the project.
7. State the number of factory-trained personnel authorized to install, troubleshoot and test the structured wiring mentioned in this RFP. Include certifications as part of this response.
8. List three (3) references, 500 locations voice & data locations or larger, in South Eastern Michigan for which the company has installed and is currently maintaining structured wiring (CAT 5, Fiber, Voice) requested in this RFP. List contact name and telephone number.
 - a.- Each reference must be a paying customer external to the Bidder's organization.
 - b.- The Bidder must have installed the infrastructure for with the past 12 months.

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- c.- The installed infrastructure and terminations must be comparable to the services requested in this bid (Fiber, CAT 5e, Voice etc.).
9. Indicate telephone number and project manager for this bid
 10. Indicate the contact person and telephone number for the second level contact in the event that acceptable response has not been made by above project manager.
 11. State the address of the primary service location, which will serve as the installation address in this RFP. Location must be within a 50-mile radius of the installation sites.
 12. Indicate the address from which personnel would be dispatched if different from above. Location must be within a 50-mile radius of the installation sites.
 13. Indicate address of parts inventory. Location must be within a 50-mile radius of the installation sites.
 14. Provide the Contractors' qualifications:
 - a.- total years in business, years in the communications business under the name stated on the Signature Page (at the end of the RFP)
 - b. number of individuals employed in the installation and design of the services outlined in this RFP.
 - c. If the Contractor has less than five (5) years of communications experience, provide a list of three customers in each year of business you have been established in which you have installed and maintained the proposed equipment.
 15. Detail the number of years and experience the Contractor has in the design, installation and testing of fiber optic networks.
 16. Does your company have on staff a certified cable engineer? If so please state name, number of years holding this certification, and number of years employed with the company.
 17. Will your company outsource any of the services requested in this RFP. Detail exactly what services would be out sourced and to whom? State company name, contact number, and location.
 18. Provide information pertaining to any previously held or current government contracts for related services and the agencies provided these services. Include name of contact and phone number of agency.

1.4 FINANCIAL DATA

1. All financial information is to be attached as **Attachment "B"**
2. Provide Dun and Bradstreet number for your business. If unavailable, provide financial statement, Annual Report, and any other pertinent financial data relating to the company.
3. Provide bank reference in which the vendor maintains a business financial relationship. Include contact name, phone number of contact, address and name of institution.

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1.5 HOURS OF OPERATION

1. County normal business hours will be from 8:30 am to 5:00 PM Monday through Friday.
2. Off-hours or after hours work is permitted however all after hours work must be approved by the Washtenaw County Network Operations Manager. Coordination of daily work and schedule is to be confirmed and cleared by the Support Services project managers.

1.6 SUBCONTRACTORS

Subcontracting of any services requested under this bid is prohibited, unless those services requested exceed the scope of this bid and are required to effect timely completion of requested service and are agreed to by the County in advance of contract initiation and start of work.

1.7 INSPECTION OF FACILITIES:

The Manager of the Purchasing Division reserves the right before making an award to have the premise of the bidder inspected, or to take any other action necessary to determine fitness, reliability and ability to perform. The inspection could check the physical location, facilities, equipment, spare parts and/or equipment for ability to comply with conditions of the bid.

1.8 EXTRA CHARGES:

1. No changes shall be made, nor will bills for extra charges, alterations, modifications, deviations, and extra orders made by the Contractor be paid for except upon written work/change order from the County.
2. The County will not authorize payment for changes, alterations, modifications, deviations, or extra orders made except upon written order from the County. The County will not authorize payment for changes, alterations, modification, deviations, etc. that are the result of Contractor error in performance of system maintenance or additions/reconfigurations to existing equipment.

1.9 PERMITS AND CERTIFICATES

The Contractor shall obtain and pay for all necessary permits, certificates and licenses required and necessary for performance of the work; and shall post all notices required by law and comply with laws and ordinance applicable.

1.10 MATERIALS AND APPLIANCES

Unless otherwise stipulated, Contractor shall provide and pay for all materials, labor, tools, equipment, transportation and other facilities necessary for the performance and completion of the work. **All special handling equipment charges shall be paid by the Contractor.**

1.11 CORRECTED WORK

The County will on occasion make checks and measurements of material to determine if physical and electrical characteristics and specifications are being met. If the County deems it expedient to correct or replace materials not in accordance with the characteristic or specifications as ordered, the Contractor shall make such corrections or replacements at no additional expense to the County within 10 days.

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1.12 AWARD

1. Washtenaw County reserves the right to reject any and all proposals received as a result of this RFP. If a proposal is selected it will be the most advantageous regarding price, quality of service, the Contractors qualifications and capabilities to provide the specified service and other factors which Washtenaw County may consider. The County does not intend to award a contract fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a contract would be awarded, and negotiations would be undertaken with that Contractor whose proposal is deemed to best meet the County's specifications and needs.
2. The County intends to award this bid to multiple contractors.

1.13 PURCHASE ORDERS

Will be issued to the successful bidder(s) throughout the period of the contract as and when required by the County.

1.14 CONTINGENT FEES

The Contractor promises that it has not employed or retained any company or person, other than bona fide employees working solely for the Contractor, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than bona fide employees working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this contract. For breach of this promise, the County may cancel this contract without liability or, at its discretion, deduct the full amount of the fee, commission, percentage, brokerage fee, gift or contingent fee from the compensation due the Contractor.

1.15 APPLICABLE CODES

The following list of codes and regulations establish the minimum requirements applied to work done at the County. Where applicable local building and installation codes exceed or differ for national codes, local codes shall be followed.

BOCA Basic Building Code
NFPA National Fire Code
National Electrical Code (NEC Code)
State of Michigan Plumbing Code
State of Michigan Elevator Law
State of Michigan Occupational Safety Standards Act
State of Michigan Energy Code

1.16 TERM OF CONTRACT/PRICE INCREASES

1. The contract is for a period of one (1) year from the date a purchase order is issued. If both the County and Contractor agree, the contract could be extended for one (1) additional year with the same terms and conditions.
2. The successful Contractor will be permitted annual increases in the labor prices bid for the additional year after the first year of the contract. This increase shall be in accordance with the change in the National Consumer Price Index for the previous twelve month period and shall not exceed any other customer's rates.

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- 3. The successful Contractor will be permitted price increases for parts and materials if they receive price increases from manufacturers or distributors. These price increases must be requested in writing to the Purchasing Manager and be supported by copies of catalogs or invoices from the manufacturer or distributor showing the price increase.

1.17 CONTRACT PROVISIONS

If a contract is awarded, the selected Contractor will be required to adhere to a set of general contract provisions, which will become a part of any formal agreement. These provisions are general principles, which apply to all Contractors of service to Washtenaw County such as the following:

**SERVICE CONTRACT
(NAME OF CONTRACTOR)**

AGREEMENT is made this _____ day of _____, 2004, by the COUNTY OF WASHTENAW, a municipal corporation, with offices located in the County Administration Building, 220 North Main Street, Ann Arbor, Michigan 48107("County") and **(NAME OF CONTRACTOR)** located at **(CONTRACTOR'S ADDRESS)** ("Contractor").

In consideration of the promises below, the parties mutually agree as follows:

ARTICLE I - SCOPE OF SERVICES

The Contractor will **(SPELL OUT SCOPE OF SERVICE)**

ARTICLE II - COMPENSATION

Upon completion of the above services and submission of invoices the County will pay the Contractor an amount not to exceed **(SPELL OUT DOLLAR AMOUNT)**.

ARTICLE III - REPORTING OF CONTRACTOR

Section 1 - The Contractor is to report to **(DEPARTMENT HEAD TITLE)** and will cooperate and confer with him/her as necessary to insure satisfactory work progress.

Section 2 - All reports, estimates, memoranda and documents submitted by the Contractor must be dated and bear the Contractor's name.

Section 3 - All reports made in connection with these services are subject to review and final approval by the County Administrator.

Section 4 - The County may review and inspect the Contractor's activities during the term of this contract.

Section 5 - When applicable, the Contractor will submit a final, written report to the County Administrator.

Section 6 - After reasonable notice to the Contractor, the County may review any of the Contractor's internal records, reports, or insurance policies.

ARTICLE IV - TERM

This contract begins on **(MONTH, DAY, YEAR)** and ends on **(MONTH, DAY, YEAR)**.

ARTICLE V - PERSONNEL

Section 1 - The contractor will provide the required services and will not subcontract or assign the services without the County's written approval.

Section 2 - The Contractor will not hire any County employee for any of the required services without the County's written approval.

Section 3 - The parties agree that the Contractor is neither an employee nor an agent of the County for any purpose.

ARTICLE VI - INDEMNIFICATION AGREEMENT

The contractor will protect, defend and indemnify Washtenaw County, its officers, agents, servants, volunteers and employees from any and all liabilities, claims, liens, fines, demands and costs, including legal fees, of whatsoever kind and nature which may result in injury or death to any persons, including the Contractor's own employees, and for loss or damage to any property, including property owned or in the care, custody or control of Washtenaw County in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or non-performance of work in connection with this contract resulting in whole or in part from negligent acts or omissions of contractor, any sub-contractor, or any employee, agent or representative of the contractor or any sub-contractor.

ARTICLE VII - INSURANCE REQUIREMENTS

The Contractor will maintain at its own expense during the term of this Contract, the following insurance:

1. Workers' Compensation Insurance with Michigan statutory limits and Employers Liability Insurance with a minimum limit of \$100,000 each accident for any employee.
2. Comprehensive/Commercial General Liability Insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage. The County shall be added as "additional insured" on general liability policy with respect to the services provided under this contract.
3. Automobile Liability Insurance covering all owned, hired and nonowned vehicles with Personal Protection Insurance and Property Protection Insurance to comply with the provisions of the Michigan No Fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each accident for bodily injury and property damage.

Insurance companies, named insureds and policy forms shall be subject to the approval of the Washtenaw County Administrator. Such approval shall not be unreasonably withheld. Insurance policies shall not contain endorsements or policy conditions which reduce coverage provided to Washtenaw County. Contractor shall be responsible to Washtenaw County or insurance companies insuring Washtenaw County for all costs resulting from both financially unsound insurance companies selected by Contractor and their inadequate insurance coverage. Contractor shall furnish the Washtenaw County Administrator with satisfactory certificates of insurance or a certified copy of the policy, if requested by the County Administrator.

No payments will be made to the Contractor until the current certificates of insurance have been received and approved by the Administrator. If the insurance as evidenced by the

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certificates furnished by the Contractor expires or is canceled during the term of the contract, services and related payments will be suspended. Contractor shall furnish the County Administrator's Office with certification of insurance evidencing such coverage and endorsements at least ten (10) working days prior to commencement of services under this contract. Certificates shall be addressed to the County Administrator, P. O. Box 8645, Ann Arbor, MI, 48107, and shall provide for 30 day written notice to the Certificate holder of cancellation of coverage.

ARTICLE VIII - COMPLIANCE WITH LAWS AND REGULATIONS

The Contractor will comply with all federal, state and local regulations, including but not limited to all applicable OSHA/MIOSHA requirements and the Americans with Disabilities Act.

ARTICLE IX - INTEREST OF CONTRACTOR AND COUNTY

The Contractor promises that it has no interest which would conflict with the performance of services required by this contract. The Contractor also promises that, in the performance of this contract, no officer, agent, employee of the County of Washtenaw, or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested or has any personal or pecuniary interest. However, this paragraph does not apply if there has been compliance with the provisions of Section 3 of Act No. 317 of the Public Acts of 1968 and/or Section 30 of Act No. 156 of Public Acts of 1851, as amended by Act No. 51 of the Public Acts of 1978, whichever is applicable.

ARTICLE X - CONTINGENT FEES

The Contractor promises that it has not employed or retained any company or person, other than bona fide employees working solely for the Contractor, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than bona fide employees working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this contract. For breach of this promise, the County may cancel this contract without liability or, at its discretion, deduct the full amount of the fee, commission, percentage, brokerage fee, gift or contingent fee from the compensation due the Contractor.

ARTICLE XI - EQUAL EMPLOYMENT OPPORTUNITY

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief (except as it relates to a bona fide occupational qualification reasonably necessary to the normal operation of the business).

The Contractor will take affirmative action to eliminate discrimination based on sex, race, or a handicap in the hiring of applicant and the treatment of employees. Affirmative action will include, but not be limited to: Employment; upgrading, demotion or transfer; recruitment advertisement; layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship.

The Contractor agrees to post notices containing this policy against discrimination in conspicuous places available to applicants for employment and employees. All solicitations or advertisements for employees, placed by or on the behalf of the Contractor, will state that all qualified applicants will receive consideration for employment without regard to race, creed, color,

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sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief.

ARTICLE XII - PREVAILING WAGE RATES

The Contractor agrees that all craftsmen, mechanics and laborers it employs to work on this project shall, at a minimum, receive the prevailing wages and fringe benefits of the Building Trade Department for corresponding classes of craftsmen, mechanics and laborers for the Washtenaw County area, as determined and published by the Davis-Bacon Division of the United States Department of Labor. Contractor agrees that all subcontracts entered into by the Contractor shall contain a similar provision covering any sub-contractor's employees who perform work on this project.

ARTICLE XIII - EQUAL ACCESS

The Contractor shall provide the services set forth in Article I without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, physical handicap, or age.

ARTICLE XIV - OWNERSHIP OF DOCUMENTS AND PUBLICATION

All documents developed as a result of this contract will be freely available to the public. None may be copyrighted by the Contractor. During the performance of the services, the Contractor will be responsible for any loss of or damage to the documents while they are in its possession and must restore the loss or damage at its expense. Any use of the information and results of this contract by the Contractor must reference the project sponsorship by the County. Any publication of the information or results must be co-authored by the County.

ARTICLE XV - ASSIGNS AND SUCCESSORS

This contract is binding on the County and the Contractor, their successors and assigns. Neither the County nor the Contractor will assign or transfer its interest in this contract without the written consent of the other.

ARTICLE XVI - TERMINATION OF CONTRACT

Section 1 - Termination without cause. Either party may terminate the contract by giving thirty (30) days written notice to the other party.

ARTICLE XVII - PAYROLL TAXES

The Contractor is responsible for all applicable state and federal social security benefits and unemployment taxes and agrees to indemnify and protect the County against such liability.

ARTICLE XVIII - PRACTICE AND ETHICS

The parties will conform to the code of ethics of their respective national professional associations.

ARTICLE XIX- CHANGES IN SCOPE OR SCHEDULE OF SERVICES

Changes mutually agreed upon by the County and the Contractor, will be incorporated into this contract by written amendments signed by both parties.

ARTICLE XX - CHOICE OF LAW AND FORUM

This contract is to be interpreted by the laws of Michigan. The parties agree that the proper forum for litigation arising out of this contract is in Washtenaw County, Michigan.

ARTICLE XXI - EXTENT OF CONTRACT

This contract represents the entire agreement between the parties and supersedes all prior representations, negotiations or agreements whether written or oral.

2.1 VOICE CABLE AND DISTRIBUTION CABLE

1. The installation of all premises, distribution, cross connect, patch, backbone and horizontal wiring are to comply with all local code authority and the following EIA/TIA and ANSI specifications and or standards:

ANSI/EIA/TIA 568-A Standard, Commercial Building Telecommunications Wiring Standard

EIA/TIA 569 Standard, Commercial Building Standards for Telecommunications Pathways and Spaces.

ANSI/ICEA S-83-596-1988, Standard For Fiber Optic Premises Distribution Cable

All premises wiring required to complete installation of the services requested in this RFP will be the responsibility of the Contractor. Premises wiring are defined as intra and inter building data and voice wiring necessary for the project. This includes fiber patches and data patch connections.

2. **Manufacturers Material Specification sheets are required for all installation materials used in this bid if alternate materials are chosen for cable products. This material is to be attached as Attachment "C" to the balance of the response.**
3. All cabling must be designed for the purpose as outlined in article 800 of the NEC code. Contractor is to determine the proper use of either PVC or Teflon conductor insulation depending on the air handling requirements of the building or as applicable wiring and building codes require. All voice and data wiring must be band striped with the color of the mating insulated conductor of the assemble pair. Telephone industry standard 10 basic color code is to be used. Conductors will be twisted into pairs and assembled into a cylindrical core. Cables having more than 25 pairs will be coded into industry standard 25 pair color groups being bound with a unique color binder.
4. All wiring and termination materials employed in the installation of this system must fully comply with all applicable requirements under FCC Part 68 subpart J and be recognized or listed by a national recognized testing laboratory (NRTL).
5. All new wiring in common areas or office environments must be enclosed in metal raceway (i.e., wire mold) when locations are not provided or served via already provided in wall voice & data conduit and electrical boxes.

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6. All new voice station runs are to be 2 pair twisted cable terminated on certified voice grade RJ45 8 position jacks.

Cable type: Twisted two (2) pair, unshielded (UTP).
UL Style: CMR, CM, CMP
AWG: Min. 24 AWG
Composition: Solid
Nominal Impedance (ohms): 100
Nominal Capacitance (pf/ft):16-18
Preferred Vendor: Beldon, Berktec

7. All new data runs are to be certified 4 pair twisted, Category 5e terminated on certified Category 5e RJ45 8 position jacks.

Cable type: Twisted four (4) pair, unshielded (UTP).
UL Style: CMR, CM, CMP
AWG: Min. 24 AWG
Composition: Solid
Nominal Impedance (ohms):100
Nominal Capacitance (pf/ft):16-18
Preferred Vendor: Belden, Berktec

2.2 FIBER OPTIC CABLE

1. Fiber cable to be supplied is to be multimode 62.5/125 micron, 850nm. Accepted manufacturers for this product is: Siecor, ADC Telecommunications, AT&T, 3M, Berktec.
2. All fiber optic cables and connection means are to be designed and manufactured to all applicable ANSI/EIA/TIA specifications.
3. End connections for fiber cable must be ST. Station end termination may be either ST or SC depending on design designation.

2.3 VOICE, DATA and FIBER TERMINATION'S

1. Voice termination's are to be made on standard single RJ-45 jacks with a minimum of 50 micro inches of gold surface plating on the contact wires and plugs, The County currently employs Leviton Quick Port Snap Modules
2. Data termination's are to be made on standard single Category 5e RJ-45 8 position jack with a minimum of 50 micro inches of gold surface plating on the contact wires and plugs. The County currently employs Leviton Quick Port Snap Modules. **Wiring standard for Category 5 wiring termination is T568B.**
3. Data modular jack housings are to be orange in color, flush mount and is to be located on the same face plate as the voice termination whenever possible.
4. Equipment room MDF and IDF terminations for voice applications are to be made on standard 110 type termination blocks and associated mounting brackets and hardware specifically designed for the purpose. The use and or combination of cable trays, backboards, wall frames, and stand-alone frames are expected to be utilized in providing a logical and proper layout to equipment spaces and IDF locations. Accepted manufacturers of frame equipment: Homaco, Northern Telecom, CPI Dracon, Leviton.

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5. The following voice grade and Category 5e terminations, face plates and associated hardware **shall** be used:

Description	Manufacturer	Part Number	Color
6 - Port Wall Plate	Leviton	41080-6WP	White
12- Port Wall Plate	Leviton	42080-12W	White
Quick Port Voice Grade USOC	Leviton	41108-RW8	White
Quick Port CAT 5 RJ45	Leviton	41108-RO5	Orange

Description	Manufacturer	Part Number	Color
Snap-in Blank Module	Leviton	41084-BWB	White
Quick Port MOS Single Gang Wall Plate	Leviton	41290-SMW	White
Quick Port MOS Dual Gang Wall Pate	Leviton	41290-DMW	White
Fiber Storage/ Spacer Ring	Leviton	41290-DRW	White
Blank Module	Leviton	41294-2QW	White
1 Duplex ST Coupling	Leviton	41294-2TB	Blue
1 Dulpex SC Coupling	Leviton	41294-PCB	Blue
2 Port Quick Port Adaptor	Leviton	41294-2QW	White

6. The following Category 5e 110 patch panels and associated hardware are to be used:

Description	Manufacturer	Part Number	Wiring Config.	Color
12 Port	Leviton	59484-U12	T568B	Black
24 Port	Leviton	59485-U24	T568B	Black
48 Port	Leviton	59485-U48	T568B	Black
64 Port	Leviton	59485-U64	T568B	Black
96 Port	Leviton	59485-U96	T568B	Black
12 Port Patch Block	Leviton	59484-U89	T568B	Black
Standard Cord Manager	Leviton	49253-BCM		Black
3" Vertical Manager Ring	Leviton	49260-MR3		Black
6" Vertical Manager Ring	Leviton	49260-MR6		Black

7. The following data frames or equivalent* are to be used for closet hardware mounting:

* Must meet specifications exactly.

Description	Manufacturer	Part Number	Color
Wall Frame	Homaco	19-35-T25DHYDT*B	Black
19 " Equipment Shelf	Homaco	ES-19-3	Black

8. The following fiber rack mount enclosures and associated hardware are to be used:

<u>Description</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Color</u>
LANscape rack mount fiber enclosure	Corning	CCH-01U	Black
LANscape rack mount fiber enclosure	Corning	CCH-02U	Black
LANscape rack mount fiber enclosure	Corning	CCH-03U	Black
LANscape ST Compatible Adapter	Corning	CCH-CP06-15T	Black
LANscape ST Compatible Adapter	Corning	CCH-CP06-19T	Black
LANscape SC Compatible Adapter	Corning	CCH-CP06-C3	Black
LANscape SC Compatible Adapter	Corning	CCH-CP06-56	Black
LANscape ST Compatible Adapter	Corning	CCH-CP08-15T	Black
LANscape ST Compatible Adapter	Corning	CCH-CP08-19T	Black
LANscape SC Compatible Adapter	Corning	CCH-CP08-C6	Black
LANscape SC Compatible Adapter	Corning	CCH-CP08-39	Black
LANscape ST Compatible Adapter	Corning	CCH-CP12-97	Black
LANscape ST Compatible Adapter	Corning	CCH-CP12-98	Black
LANscape MTRJ Compatible Adapter	Corning	CCH-CP16-97	Black
LANscape MTRJ Compatible Adapter	Corning	CCH-CP16-98	Black

2.4 INSTALLATION

1. The Contractor will coordinate with the County any interruption to existing telephone\data communications. Any interruptions are to be minimized and be performed after-hours, on weekends or holidays.
2. Regarding installation activity that is potentially disruptive (i.e. drilling, running cable, mounting frames, raceway, etc.) to administrative activity, the Contractors will notify the Support Services Project manager of potential disturbance prior to beginning work.
3. Contractors are to supply their own tools and equipment, especially brooms, dustpans, ladders etc.
4. Contractor will be required to broom clean work areas at the end of each shift or workday.
5. Installation equipment, materials, and product will ONLY be allowed to be kept in specified areas. Hallways, office areas lobbies etc. are not suitable for storage and the County will **NOT** be held liable for missing or stolen equipment.
6. Wiring to all outlets to run above the ceiling shall be fastened to the building structure at eight (8) foot intervals through the combined use of, but not limited to, bridal rings, beam clamps, D-rings, and hangers. **At no time are voice or data drops/homeruns to be directly tie wrapped to the building structure above ceiling without the use of cable supports.** Cabling above ceiling shall be sectioned off, bundled and tied, and routed back to intermediate or master wiring closets using a star configuration. All wiring shall run continuously from the outlet to the wiring closet without breaks or splices. Cable supports shall be employed every eight (8) feet. **Cable supports (bridle rings, D-Rings, J Hooks etc.) shall be sized 50% larger than needed to allow for future growth.**
7. In areas where ceiling tiles are removed for cable pulling, or ceiling tiles are damaged as a result of cable pulling, the Contractor shall replace tiles with like tiles.

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8. All boxes, equipment and cable shall be firmly secured in place. Boxes, jacks and blocks shall be plumb and square. Consideration will be given for overall aesthetic factors. **Sample installation diagrams and layouts are to be followed at all times. Deviations due to design and or building structural considerations must be cleared with Support Services project manager.**
9. Any new or replacement premises wiring shall be clearly labeled. The Contractor and County will work to design a structured method of designating all cabling involved with the project.
10. The Contractor will observe all applicable departmental safety and security regulations established.
11. The Contractor is responsible for repair of damage to the building due to carelessness of their workmen, and exercise reasonable care to avoid any damage to property. The Contractor must report to the County any damage to the building that may exist or may occur during the occupancy of the quarters.
12. The Contractor must run all jumpers and wiring, including line jumpers connected to lightning or surge protectors, as may be required to properly interconnect the system parts to each other and to the common carrier network(s).
13. The Contractor must promptly correct all defects for which the Contractor is responsible.
14. Upon completion of the work, the Contractor must remove his tools, equipment and all rubbish and debris from the premises and must leave the premises clean and neat.
15. The Contractor will obtain the County's (Information & Technology Services) permission before cutting into or through any part of the building structure such as beams, girders, concrete, or tile floors, partitions and ceilings. The Contractor shall restore any girders, beams, floors, partitions, ceilings, fire partitions and walls to their original condition.
16. The Contractor will coordinate all work with the County (Information & Technology Services).
17. Cable pulling tension shall not exceed 110N (25lbf) for UTP horizontal four pair cables.
18. Installed bend radius shall not exceed four (4) times the outer cable diameter for horizontal UTP cables, ten (10) times the outer cable diameter for multi-pair backbone UTP cable.
19. Installed bend radius shall not exceed fifteen (15) times the outer diameter of the fiber cable being installed. Or minimum bend radius as specified per manufacturers installation specifications. Minimum bend radius is to be maintained at all times.
20. Optical fiber connecting hardware shall be installed to provide well-organized installation and cable management and always in accordance with manufacturer's guidelines.
21. Core boring set up is to be handled in such a way as to minimize interference with daily operations and with minimal impact to the work environment.
22. A temporary structure/enclosure is to be erected to contain all indoor core-boring locations. Cleanup of debris related to boring is the responsibility of the contractor. Work area is to be cleaned and returned to an as found condition. This will include but not be limited to water control and abatement, floor washing, vacuuming, carpet cleaning,

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- furniture dusting, furniture cleaning and furniture washing by a professional cleaning service as needed.
23. Fiber optic cable service loops are to be provided at all fiber termination points. Wiring closet loops are to be a minimum of 15ft. End termination or main termination point loop is to be a minimum of 30ft.
 24. Category 5 and Category 3 horizontal cabling shall have a minimum two (2) foot service loop for each cable above ceiling. Service loop is to be neatly dressed and secured.
 25. Category 5 patch panel terminations are to maintain cable jacket and twist a minimum of one half inch from point of termination. End station terminations are to maintain cable jacket and twist up to the edge of the jack housing. Dust caps must always be used to provide pair protection and strain relief.
 26. All indoor/outdoor splices and distribution must be enclosed in an enclosure designed for the purpose and able to provide maximum protection to splices and protection from environmental effects.
 27. All splices must be impervious to environmental effects and mechanical shock.
 28. Splice trays must protect all fiber splices.
 29. All inside distribution and outside plant fiber cabling must be strain relieved to hinder the possibility of breakage and connection failure.
 30. **The use of inner duct is mandatory in ALL situations where fiber is being installed.** Buried or aerial fiber optic cable must be approved and designed to specific standards intended for aerial or buried application. In general, all fiber must run in inner duct to its termination point (fiber patch panel).
 31. Installation work will involve performing installation duties in an operational, production data center. The utmost care is to be exercised in the installation of requested services. At no time will installation work be permitted without on site supervision provided by the County's Information & Technology Services Department.
 32. County may elect also to implement other changes of its own accord. Should County elect to make its own changes, County shall assume responsibility for the operation integrity of the structured wiring as it is directly affected by such changes by County. Upon request, the Contractor shall research all reported physical installation & performance problems or errors and correct them to the County's satisfaction. If the problem or error resulted from design changes made by County, the charge for correction shall be computed using the rates for standard T & M charges as requested in this bid.

2.5 TESTING AND ACCEPTANCE

GENERAL

1. Inspection of the installed systems shall be made by the staff of Information and Technology Services (ITS). If items from the bid have been omitted or need changing as per requirements stated herein, they shall be noted in a deviation list. This deviation list will be given to the Contractor who is expected to complete all items within the time specified by ITS. Prior to any payment being due thereunder, the system must be delivered, installed and accepted by ITS, as stated herein.

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2. Installation of structured horizontal wiring, cable riser, voice and data drops, raceway, terminations, fiber riser, fiber distribution, coring, and peripheral equipment must be completed.
3. The County will make inspection as it deems necessary when notified by the Contractor that the services requested, or any part thereof, is ready for acceptance.
4. After cutover of any portion of the system, the Contractor shall conduct acceptance tests outlined in this section for fiber and copper cabling.
5. Performance and quality tests shall be conducted as specified in this section.
6. Successful testing by the Contractor with written report of results to ITS project manager of all performance and quality incorporating the full range of testing specified.
7. Implementation of any and all deviation list items which may result from inspections by the ITS department project manager must be completed.
10. Written certification signed by an authorized representative of the Contractor indicating the satisfactory completion of the above outlined items.
11. Acceptance of the services requested shall be granted after all equipment has passed the tests required in the RFP, and has been in operation thirty (30) consecutive days without a major failure. The event of a major failure, the County reserves the right to extend the acceptance date until a time the installation complies with the thirty (30) day major fault free requirement.
12. Following verification by ITS that the installation conforms to all the requirements stated herein, and that the system is 100% operational, a letter of acceptance will be issued to the Contractor.
13. Final payment is contingent on signed acceptance of services from the County.

VOICE GRADE WIRE TESTING

The following tests shall be run on all voice grade runs:

The tests shall be run from end to end between **all** termination points. Station jack to intermediate termination, riser to main equipment room etc.

- 1) Continuity. (all pairs)
- 2) Wire Map. (test must include open pairs, shorts, and crossed pairs)

CATEGORY 5e WIRE TESTING

The following tests shall be run on all installed Category 5e data runs:

Testing shall be end to end, patch panel to jack including patch cables. (Total run length not to exceed 316ft. With patch cables 328ft).

- 1) Length test. All four pairs are to be documented.
- 2) NEXT. Limit: 27.1dB or greater @ 100Mhz
- 3) Attenuation. Limit: 24.0 dB or less @100Mhz
- 4) Wire Map. (test must include open pairs, shorts, and crossed pairs)

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5) Auto Test. (If auto test employed it must encompass all tests listed previously at a minimum) Test results shall be presented in an Excel spreadsheet, version 5.0 or greater, detailing cable port location (building, closet etc.) and all requested test data for the run.

62.5 MULTI MODE FIBER TESTING

The following tests shall be run on **all** installed fiber stands:

- 1) Testing is to be end to end with all terminations and splices involved for each strand tested. OTDR, Both directions. Test results shall be presented in an Excel spreadsheet, version 5.0 or greater, detailing cable detailing cable port, location (building, closet etc.) length and attenuation in dB. Additionally, each test is to include a graphical representation of the test, measurement results, and cable information and set up parameters. See OTDR test results sample in **Attachment "D"**.
- 2) **End to End testing losses are not to exceed .5 dB for all installed fiber. Testing is to include all splices and end terminations.**

3.1 PRICING

The estimated total quantity indicated in the schedule is an approximation of the number of items anticipated to be ordered during the contract period, and is not binding on the County. The County has the right to order any quantity during the term of the contract which the Manager of the Purchasing Department deems necessary. The County also reserves the right to purchase materials separately through alternate vendors.

Pricing is to be provided in the format outlined below. The overall summary of costs per requested is to be documented in areas as provided in this section

COST SUMMARY

Description	Manufacturer	Part Number	Quantity	Unit	Total
6 - Port Wall Plate	Leviton	41080-6WP	10	_____	_____
12- Port Wall Plate	Leviton	42080-12W	10	_____	_____
Quick Port Voice Grade USOC	Leviton	41108-RW8	5	_____	_____
Quick Port CAT 5 RJ45	Leviton	41108-RO5	5	_____	_____
Snap-in Blank Module	Leviton	41084-BWB	10	_____	_____
Quick Port MOS Wall Plate	Leviton	41290-SMW	10	_____	_____
Quick Port MOS Wall Plate	Leviton	41290-DMW	10	_____	_____
Blank Module	Leviton	41294-2QW	10	_____	_____

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Description	Manufacturer	Part Number	Quantity	Unit	Total
1 Duplex ST Coupling	Leviton	41294-2TB	10	_____	_____
1 Duplex SC Coupling	Leviton	41294-PCB	10	_____	_____
2 Port Quick Port Adaptor	Leviton	41294-2QW	10	_____	_____
Wall Frame	Homaco 1	9-35-T25DHYDT*B	1	_____	_____
19 " Equipment Shelf	Homaco	ES-19-3	1	_____	_____
LANscape rack mount fiber enclosure	Corning	CCH-01U	1	_____	_____
LANscape rack mount fiber enclosure	Corning	CCH-02U	1	_____	_____
LANscape rack mount fiber enclosure	Corning	CCH-03U	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP06-15T	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP06-19T	1	_____	_____
LANscape SC Compatible Adapter	Corning	CCH-CP06-C3	1	_____	_____
LANscape SC Compatible Adapter	Corning	CCH-CP06-56	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP08-15T	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP08-19T	1	_____	_____
LANscape SC Compatible Adapter	Corning	CCH-CP08-C6	1	_____	_____
LANscape SC Compatible Adapter	Corning	CCH-CP08-39	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP12-97	1	_____	_____
LANscape ST Compatible Adapter	Corning	CCH-CP12-98	1	_____	_____
LANscape MTRJ Compatible Adapter	Corning	CCH-CP16-97	1	_____	_____
LANscape MTRJ Compatible Adapter	Corning	CCH-CP16-98	1	_____	_____
Certified Cat 5e 3 foot patch cable			25	_____	_____
Certified Cat 5e 6 foot patch cable			25	_____	_____
Certified Cat 5e 10 foot patch cable			25	_____	_____

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Description	Manufacturer	Part Number	Quantity	Unit	Total
Certified Cat 5e 15 foot patch cable			25	_____	_____
Certified Cat 5e 25 foot patch cable			25	_____	_____
Cat 5e data cabling, plenum			1000ft	_____	_____
Cat 5e data cabling, non plenum			1000ft	_____	_____
Cat 5e data cabling, plenum			5000ft	_____	_____
Cat5e data cabling, non plenum			5000ft	_____	_____
Voice grade cabling, plenum			1000ft	_____	_____
Voice grade cabling, non plenum			1000ft	_____	_____
Voice grade cabling, plenum			5000ft	_____	_____
Voice grade cabling, non plenum			5000ft	_____	_____
Voice grade 25 pair plenum riser			1000ft	_____	_____
Voice grade 25 pair non plenum riser			1000ft	_____	_____
Voice grade 100 pair plenum riser			1000ft	_____	_____
Voice grade 100 pair non plenum riser			1000ft	_____	_____

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3.2 TIME AND LABOR COSTS

Please provide pricing for the following items.

1. Minimum Labor charge Per _____ \$ _____
2. Additional Labor
(Specify billing increments) Per _____ \$ _____
3. Minimum overtime labor charge Per _____ \$ _____
4. Additional Overtime Labor Charge Per _____ \$ _____
5. Overtime charge begins _____ and ends _____ M, Tu, W, Th, F
6. Overtime charge begins _____ and ends _____ Sat, Sun

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4.1 SIGNATURE PAGE

SIGNATURE PAGE

_____ Signature	_____ Company Name
_____ Print Name	_____ Company Address
_____ Title	_____ Company Address
_____ Date	_____ City St. Zip
_____ Telephone #	_____ Fax #
_____ Federal Tax ID #	<u>CHECK ONE</u> Partnership _____ Non Profit Corp. _____ Profit Corp. _____ Other _____

The above individual is authorized to sign on behalf of company submitting proposal.

Proposals must be signed by an official authorized to bind the provider to its provisions for at least a period of 90 days or until the contract is signed.

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ADDENDA "A"

Locations:

Address	City
4100 Clark	Ann Arbor
220 North Main Street	Ann Arbor
200 North Main Street	Ann Arbor
101 East Huron	Ann Arbor
312 West Huron	Ann Arbor
2260 Platt Road	Ann Arbor
2270 Platt Road	Ann Arbor
415 West Michigan Avenue	Ypsilanti
555 Towner	Ypsilanti
2940 Ellsworth Road	Ann Arbor
3800 Packard	Ann Arbor
304 Harriett	Ypsilanti
4133 Washtenaw	Ann Arbor
4135 Washtenaw	Ann Arbor
2155 Hogback Road	Ann Arbor
2201 Hogback Road	Ann Arbor
7200 South Huron River Drive	Ypsilanti Twp.
8050 Main Street	Dexter
120 South Clinton Street	Manchester
3040 North Prospect	Superior Twp.
1055 North Zeeb Road	Scio Twp.
2140 Ellsworth Road	Ann Arbor
122 South Main Street	Chelsea
1405 Holmes Road	Ypsilanti
202 East Huron	Ann Arbor
3951 Varsity Drive	Ann Arbor