

BIDDERS COMPANY NAME

**REQUEST FOR PROPOSAL
#6353
Washtenaw County
Wide Area Fiber Network (WAN)**

**Washtenaw County Government
220 North Main Street
Ann Arbor, Michigan 48107**

September 2007

Prepared by:

Washtenaw County Purchasing
Administration Building
220 N. Main Street
Ann Arbor, MI 48107

Robert G. Devault, C.P.M.
Purchasing Manager
Phone: (734) 222-6760

Consultant:

Plante & Moran, PLLC
27400 Northwestern Highway
P.O. Box 307
Southfield, MI 48037

William O'Reilly
Phone: (248) 223-3401
FAX: (248) 233-8982



TABLE OF CONTENTS

SECTION A: GENERAL TERMS AND CONDITIONS..... 5

1.0 INTENT 5

2.0 SCHEDULE OF EVENTS 5

3.0 DEADLINE FOR PROPOSALS..... 5

4.0 CLARIFICATIONS..... 6

5.0 BID BONDS..... 6

6.0 PERFORMANCE AND PAYMENT BONDS..... 6

7.0 CONFIDENTIAL INFORMATION..... 7

8.0 RIGHT TO REQUEST ADDITIONAL INFORMATION 7

9.0 RIGHT OF REFUSAL..... 7

10.0 QUOTATION PREPARATION COSTS..... 7

11.0 SYSTEM DESIGN COSTS 7

12.0 PRICING ELIGIBILITY PERIOD 7

13.0 ADDITIONAL CHARGES 8

14.0 CONTRACT REQUIREMENTS 8

15.0 NONDISCRIMINATION BY VENDORS OR AGENTS OF VENDOR 8

16.0 SUBCONTRACTORS 8

17.0 EFFECT OF REGULATION 8

18.0 PROJECT MANAGEMENT STAFF DESIGNATION..... 9

19.0 ASSIGNMENTS 9

20.0 VENDOR AS INDEPENDENT CONTRACTOR..... 9

21.0 NOTICES CLAUSE 9

22.0 GENERAL INDEMNIFICATION 9

23.0 TERMINATION..... 9

24.0 STANDARD FORMS AND CONTRACTS..... 10

25.0 SELECTION CRITERIA 10

26.0 PREVAILING WAGES 11

27.0 PATENTS, COPYRIGHTS, AND PROPRIETARY RIGHTS 11

28.0 SPECIAL NOTES..... 11

29.0 SAFETY REGULATIONS..... 11

30.0 REQUIRED DOCUMENTATION..... 12

31.0 PROPOSAL SUBMISSION FORMAT 12

32.0 ADDITIONAL EXPENSES / CHARGES..... 13

33.0	MATERIALS AND APPLIANCES.....	13
34.0	APPLICABLE CODES.....	13
35.0	ACCESS, AUTHORITY AND STOPPAGE	13
36.0	PROJECT CLOSEOUT.....	14
SECTION B: PROJECT REQUIREMENTS & SPECIFICATIONS.....		15
37.0	PROJECT SCOPE / OVERVIEW.....	15
38.0	ADMINISTRATIVE REQUIREMENTS	18
38.3	SCHEDULING.....	21
39.0	SITE SPECIFIC REQUIREMENTS.....	22
39.1	SAFETY OF PERSONS AND PROPERTY – PRECAUTIONS & PROGRAMS ...	22
39.2	ASBESTOS	23
39.3	SITE PREPARATION / ALTERATION	23
39.4	IDENTIFICATION.....	23
40.0	PROJECT REQUIREMENTS AND QUALITY ASSURANCE REQUIREMENTS	24
40.1	MEETINGS AND REPORTS.....	24
41.0	CABLE DOCUMENTATION.....	24
41.1	CABLE DOCUMENTATION SYSTEM AND AS-BUILTS	24
42.0	COMMUNICATION EQUIPMENT ROOMS	25
42.1	EQUIPMENT RACK / CABINET / SHELVES.....	25
42.2	FIBER OPTICS PATCH PANELS	25
43.0	MAIN DISTRIBUTION FRAMES AND SERVICE ENTRANCE.....	26
43.1	SPLICE AND TERMINATION POINTS.....	26
44.0	EXTERIOR COMMUNICATION PATHWAYS.....	26
44.1	SPECIFICATIONS AND REQUIREMENTS.....	26
44.2	AERIAL SPECIFICATIONS.....	27
44.3	UNDERGROUND SPECIFICATIONS.....	28
45.0	BACKBONE CABLING REQUIREMENTS.....	30
45.1	FIBER BACKBONE – OUTSIDE PLANT	30
45.2	FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS	30
45.3	MANUFACTURER – FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS	31
45.4	INSTALLATION – FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS.....	31
45.5	INSTALLATION – FIBER OPTIC CONNECTOR.....	32
46.0	TESTING, IDENTIFICATION, AND ADMINISTRATION.....	33
46.1	TESTING REQUIREMENTS.....	33
46.2	TEST EQUIPMENT.....	33

46.3	TEST PROCESS.....	34
46.4	STANDARDS COMPLIANCE AND TEST REQUIREMENTS.....	34
46.5	REQUIRED DOCUMENTS	35
46.6	ACCEPTANCE.....	35
47.0	ANNUAL COSTS	36
47.1	MAINTENANCE COSTS	36
47.2	OTHER ANNUAL RECURRING COSTS	38

APPENDICES:

- APPENDIX A: REQUIRED RESPONSE FORMS
- APPENDIX B: DRAWINGS AND NETWORK REQUIREMENTS & INFORMATION
- APPENDIX C: SAMPLE CONTRACT



WASHTENAW COUNTY FINANCE DEPARTMENT

Purchasing Division

220 N. Main, Ann Arbor, MI 48104
Phone (734) 222-6760, Fax (734) 222-6764

REQUEST FOR PROPOSAL #6353

SECTION A: GENERAL TERMS AND CONDITIONS

1.0 INTENT

Washtenaw County Purchasing Division on behalf of the Washtenaw County Information and Technology Services Department (hereinafter referred to as the "Owner" or "County") is issuing a Sealed Request for Proposal (RFP) # 6353 for the purchase and implementation of wide area fiber network (WAN). The base proposal for this network will connect five (5) Washtenaw County building in a ring topology. The add alternatives to the base proposal will add sites that belong to the county as spokes off of the five (5) ring hub sites.

The terms "Vendor" and "Contractor" are interchangeable in this document and are used to define the entity submitting a proposal in response to this RFP.

2.0 SCHEDULE OF EVENTS

- **Pre-Proposal Mtg. Date:** A non-mandatory pre-bid meeting will be held at 10:00 am, Thursday, October 4, 2007
- **Meeting Location:** LLRC Building, County Service Center, Room B, 4135 Washtenaw Avenue, Ann Arbor, MI, 48108
- **Question Deadline:** October 11, 2007 – 12:00 Noon Local Time

3.0 DEADLINE FOR PROPOSALS

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

Vendor will deliver one (1) original and four (4) copies to the following address:

Washtenaw County
Administration Building
Purchasing Division
220 N. Main St. Room B-35
Ann Arbor, MI 48104

By 2:00 p.m. on Thursday, October 18, 2007

A public opening of these proposals will take place at that time. Proposals received after the cited time will be considered a late bid and are not acceptable unless waived by the Purchasing Manager. The envelope should be clearly marked "SEALED RFP # 6353".

4.0 CLARIFICATIONS

Only written statements in response to inquiries are considered a formal binding response thus no verbal statements will be considered part of this RFP process. Therefore all inquires should be in writing (electronically, via fax, or hard copy format) and be directed to:

- Please direct purchasing and procedural questions regarding this RFP to Robert G. Devault C.P.M. at **734-222-6760** or devaultb@ewashtenaw.org.
- Please direct technical questions regarding this RFP to Bill O'Reilly, Plante & Moran at FAX: **248-233-8982** or bill.oreilly@plantemoran.com

To allow sufficient time for all vendors to submit their proposals in time, requests for clarification must be submitted by the question deadline indicated above.

5.0 BID BONDS

Every proposal shall be accompanied by either a certified check on a solvent bank or by a bond executed by a surety company authorized to do business in the State of Michigan. If submitting a **Bid Bond**, it **must be equal to 5%** of the total base proposal price. If submitting a **Certified/Cashiers Check**, it **must be equal to 5%** of the total base proposal price.

Such check or bond shall name the County as recipient. The amount of such bid bond or certified check shall be forfeited as liquidated damages, costs and expenses incurred by the County if the vendor, after given an award as successful vendor, shall fail within thirty (30) days after the notice of such award to enter into appropriate contract with the County.

6.0 PERFORMANCE AND PAYMENT BONDS

The County will require the selected vendor(s) to provide a performance bond upon award of the contract. The associated cost of the performance bond is to be included in the base proposal but shown as a separate line item. The surety company used shall have a Best rating of A-VII or higher and be authorized to do business in the State of Michigan and be based in the United States. **This bond shall be equal in amount to the total price to the County of purchased equipment, cabling, and services.** The Surety of the bond shall remain in effect for one year after all acceptance of purchased equipment, cabling, and services have been executed by the County. In the event that the vendor(s) fails to perform its obligations under any contract between the vendor(s) and the County, the bond shall be paid to the County. The vendor(s) further agrees to save and hold harmless the County and agents from all liability and damages of every description in connection with any subsequent contracts. Payment bonds shall be required under the following conditions: project award exceeds \$50,000 and project involves construction, alteration, or repair to County owned facilities.

All bonds must be executed by a Surety or Sureties listed on the Federal Register and authorized to write insurance in the State of Michigan. The County, however, reserves the right to reject any Surety or Sureties.

If, in the County's opinion, the financial position of the Surety or Sureties issuing any of the bonds listed above shall become such that the best interest of the County and the public will not be adequately protected, the County may require the Contractor to provide a new Surety or Sureties acceptable to the County. The Contractor shall not be reimbursed for such substitution of Surety or Sureties.

7.0 CONFIDENTIAL INFORMATION

As a public entity, the County is subject to the Michigan Freedom of Information Act (FOIA). Information contained in the vendor's proposal may be subject to FOIA requests.

8.0 RIGHT TO REQUEST ADDITIONAL INFORMATION

The County reserves the right to request any additional information that might be deemed necessary after opening the proposals.

9.0 RIGHT OF REFUSAL

The County reserves the right to reject any and all proposals received as a result of this RFP. The selected proposal will be the most advantageous regarding price, quality of service, the vendor's qualifications and capabilities to provide the specified service, and other factors which the 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 vendor whose proposal is deemed to best meet the County's specifications and needs.

The County reserves the right to unbundle any or all proposals and award multiple contracts based on price, availability, and services when in its judgment best serves the County. The County reserves the right to purchase additional or fewer quantities at the unit prices provided in vendor's proposal.

The County reserves the right to waive or not waive informalities or irregularities in proposals or the RFP procedures, and to accept or further negotiate cost, terms, or conditions of any proposal determined by the County to be in the best interests of the County even though not the lowest proposal.

10.0 QUOTATION PREPARATION COSTS

The vendor is responsible for any and all costs incurred by the vendor or their subcontractors in responding to this request for proposal.

11.0 SYSTEM DESIGN COSTS

The successful vendor shall be responsible for all design, information gathering, and required programming to achieve a successful implementation.

12.0 PRICING ELIGIBILITY PERIOD

All vendor proposals are required to be offered for a term not less than **ninety (90) calendar days** in duration. A proposal may not be modified, withdrawn or cancelled by vendor during the **ninety (90)** day time period following the time and date designated for the receipt of proposals. It is anticipated that the majority of the equipment will be acquired in a single phase. The only exception would be the equipment for facilities that

are under construction and not expected to be in operation in the next six months. For such situations, a multiphase procurement may be involved and the pricing and/or discount structure submitted will be extended for the duration of the project.

Proposals shall be signed by an official authorized to bind the Contractor to its provisions for at least a period of ninety (90) days. Failure of the successful vendor to accept the obligation of the contract may result in the cancellation of any award.

13.0 ADDITIONAL CHARGES

No additional charges, other than those listed on the price breakdown sheets, shall be charged to the County.

14.0 CONTRACT REQUIREMENTS

The County considers this RFP legally binding and will require that this Request for Proposal and the resulting vendor proposal be incorporated by reference into any subsequent contracts between the vendor(s) and the County. It should be understood by the vendor(s) that this means that the County expects the vendor(s) to satisfy substantially all requirements and reports listed herein. Exceptions should be explicitly noted in the vendor proposal. Lack of exceptions listed on the attached Comply / Exception Form will be considered acceptance of all of the specifications as presented in this RFP. A sample of the contract which is expected to be used with this project is attached. Any exceptions to the contract must be noted in the Comply / Exception Form.

15.0 NONDISCRIMINATION BY VENDORS OR AGENTS OF VENDOR

Neither the Vendor nor anyone with whom the Vendor shall contract shall discriminate against any person employed or applying for employment concerning the performance of the Vendor responsibilities under this agreement. This discrimination prohibition shall apply to all matters of initial employment, tenure and terms of employment, or otherwise with respect to any matter directly or indirectly relating to employment concerning race, color, sex, religion, age, national origin, or ancestry. A breach of this covenant may be regarded as a default by the Vendor of this agreement.

16.0 SUBCONTRACTORS

Vendors may use subcontractors in connection with the work performed under this agreement. When using subcontractors, however, the Vendor must identify them and their activities in their proposal. If during implementation, the selected vendor desires to use a subcontractor not identified in their proposal, the vendor must obtain written prior approval from the County for activities or duties to take place on their site. In using subcontractors, the Vendor agrees to be responsible for all their acts and omissions to the same extent as if the subcontractors were employees of the Vendor.

17.0 EFFECT OF REGULATION

Should any local, state, or national regulatory authority having jurisdiction over the project enter a valid and enforceable order upon County which has the effect of changing or superseding any term or condition of this agreement, such order shall be complied with, but only so long as such order remains in effect and only to the extent actually necessary under the law. In such event, this agreement shall remain in effect, unless the effect of the order is to deprive the County of a material part of its agreement with the Vendor. In the event this order results in depriving the County of materials or

raising their costs beyond that defined in this agreement, The County shall have the right to rescind all or part of this agreement (if such a rescission is practical) or to end the agreement term upon thirty (30) days written prior notice to the Vendor. Should the agreement be terminated under such circumstances, the County shall be absolved of all penalties and financial assessments related to cancellation of the agreement.

18.0 PROJECT MANAGEMENT STAFF DESIGNATION

The Vendor understands that the successful installation, testing, and operation of the service that is the subject of this agreement shall be accomplished by a cooperative effort. To most effectively manage this complicated process, the Vendor shall designate a single representative to act as project manager who shall have the authority to act on behalf of the Vendor on all matters pertaining to this agreement. In the event that an employee of the Vendor is, in the opinion of the County, uncooperative, incompetent, or otherwise unacceptable, the Vendor agrees to remove such persons from responsibility in the project. In the event of such a removal, the Vendor shall, within fifteen (15) days, fill this representative vacancy in conjunction with the County. Regardless of whom the Vendor has designated as the representative, the Vendor organization remains the ultimate responsible party for performing the tasks and responsibilities presented in this agreement. In their Proposal, the vendor shall identify the anticipated project manager and describe the individual's level of experience.

19.0 ASSIGNMENTS

The County and the Vendor each bind them, their partners, successors, and other legal representatives to all covenants, agreements, and obligations contained in this agreement.

20.0 VENDOR AS INDEPENDENT CONTRACTOR

It is expressly agreed that the Vendor is not an agent of the County but an independent Contractor. The Vendor shall not pledge or attempt to pledge the credit of the County or in any other way attempt to bind the County.

21.0 NOTICES CLAUSE

All notices or communications required or permitted as a part of the agreement shall be in writing. Further requirements are detailed in the sample contract in the appendices section of this RFP.

22.0 GENERAL INDEMNIFICATION

See sample contract in appendices section of this RFP for details and requirements.

23.0 TERMINATION

Each Party shall have, in addition to all other remedies available to it, the right to terminate this agreement upon written notice to the other party that the other party has committed a material breach of any of its obligations herein and such material breach shall not have been cured or corrected within fifteen (15) days following written notice for the same. Upon termination of this agreement by either party for breach of default of the other party, each party shall be entitled to exercise any other right remedy, or privilege which may be available to it under applicable law or proceed by appropriate court action to enforce the terms of the agreement or to recover damages for the breach of this agreement.

24.0 STANDARD FORMS AND CONTRACTS

Any forms and contracts the Vendor(s) propose to include as part of any agreement resulting from this Proposal between Vendor(s) and the County must be submitted as part of its proposal submission. Any forms and contractors not submitted as part of the vendor proposal and subsequently presented for inclusion may be rejected. While Vendor(s) may submit a suggested form of contract with its proposal, the award of the proposal is subject to the negotiation of a contract to the reasonable satisfaction of a representative for the County, incorporating the terms and conditions of the RFP, and subject to the review and approval by the County's legal counsel.

25.0 SELECTION CRITERIA

As noted above in section 9.0, The County reserves the right to reject any and all proposals received as a result of this RFP. In terms of selection, the selected vendor must be a well-established, financially stable firm committed to technology, will have a commitment to attracting and retaining an excellent staff of technical and product support personnel, and will have a proven track record of support from installation planning through implementation and ongoing use. There should also be evidence of responsiveness to clients' suggestions for improvements. Finally, there must be a good fit between vendor staff and the County's staff to assure a good working relationship.

The Vendors will be evaluated based on the following selection criteria:

1. Compliance to Specifications
2. Technical Requirements
3. Implementation Support
4. Proposal Requirements
5. Bid bond
6. Submission deadline compliance
7. Proposal format
8. Proposal summary
9. Completeness of information supplied
10. Complete "bill of material"
11. Cost of the proposal solution (Base, Add Alternates etc.)
12. Total Cost of Ownership
13. Warranty Period
14. Commitment of Local Personnel
15. Implementation Time Frame
16. Availability of Local Off-site Development Support
17. Technical Training
18. User Training

Vendors submitting proposals may be required, at the request and option of the County, to make an oral presentation or provide written clarification. These presentations or written clarifications will provide an opportunity for the vendor to clarify but not modify their proposal. Meeting with one vendor will not obligate the County to meet with all vendors.

The County reserves the right, before making an award, to inspect the facilities of the vendor, 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 RFP.

26.0 PREVAILING WAGES

See Appendix C, Service Contract, Article XII for further details. The vendor is responsible for obtaining the current schedules. Among the sources for the current Prevailing Wage Schedules is this State of Michigan website: <http://www.dleg.state.mi.us/bwuc/bsr/wh/asp/search.asp>

27.0 PATENTS, COPYRIGHTS, AND PROPRIETARY RIGHTS

See sample contract in appendices section of this RFP for details and requirements.

28.0 SPECIAL NOTES

Failure to include in the Proposal all information required in this RFP may be cause for rejection.

A Purchase Order(s) will be issued to the successful vendor(s) throughout the period of the contract as and when required by the County. Billing is to be submitted in the standard AIA format to Plante Moran for review and approval before submission to the County for payment.

The Vendor will obtain the County's (Support Services I.T. department) permission before engaging in any activity which may interrupt any current voice or data traffic processing capabilities or disruption of existing voice or data communications service.

29.0 SAFETY REGULATIONS

The Vendor will be responsible to repair or replace all materials they damage due to accidents or negligence on the job site. Such damages are to be reported to the County.

- Vendor will be responsible to replace ceiling tiles and ceiling grids they damage due to accidents or negligence on the job site.
- The vendor shall provide all liability insurance for any and all requirements of issues for permits or other liability requirements by local, state, or national bodies governing this project. The County and Plante Moran, LLC shall be held harmless due to vendor neglect and/or actions.
- Smoking on building premises or at building functions. Smoking or the use of tobacco products shall not be permitted in and County buildings. Smoking or the use of tobacco products shall not be permitted on any County grounds, except those specifically designated as "smoking permitted" during the time periods specifically designated.
- Employee Identification – All on-site employees of the successful vendor and, if appropriate, sub-contractors of the successful vendor, shall wear visible photo identification badges and/or uniforms which clearly show the name of the vendor's firm.
- It is to be understood that no on-site work is to take place during normal business hours without the expressed approval of the County.
- Vendor is responsible for delivery / receipt of all project related components.
- Vendor shall clean up and secure their work area(s) before they leave each day.

Vendor is responsible for disposal of all project related trash, including boxes and shipping / packaging materials.

30.0 REQUIRED DOCUMENTATION

The Successful Vendor(s) shall not commence work until they has obtained the required insurance. These requirements are detailed in the attached Service Contract in Appendix C. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverage shall be with insurance carriers acceptable to the County.

- Proof of Insurance Coverage – The Successful Vendor shall provide to the County certificates and policies as listed below:
 - Two (2) copies of Certificate of Insurance for Worker's Compensation Insurance;
 - Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance
 - Two (2) copies of Insurance for Vehicle Liability Insurance;
 - Original Policy, or original Binder pending issuance of policy, for County's and Contractor's Protective Liability Insurance;
 - If so requested, Certified Copies of all policies mentioned above will be furnished.
- If any of the above coverage expires during the term of the project, the vendor shall deliver renewal certificates and/or policies to the County at least ten (10) days prior to the expiration date.

31.0 PROPOSAL SUBMISSION FORMAT

The information provided in the RFP will be the property of the County and would be treated in the same way as any other information held. **Vendors are to supply 1 original and 4 complete copies of their proposal responses.** Proposals must:

- Be submitted in duplicate in 3-ring binders.
- **Include the completed submission forms (in Excel) submitted in hard copy and on a labeled CD or floppy diskette** – Do not e-mail the forms!
- Be clearly labeled on the outside of the package the title of this RFP.

In the event it becomes necessary to revise any part of the RFP, addenda will be provided. Deadlines for submission of RFPs may, at the sole discretion of the County, be adjusted to allow for revisions.

Proposal documents should be prepared simply and economically, providing a concise delineation of the capabilities proposed 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.

The proposals should be submitted on 8 1/2" by 11" paper, single-sided, single-spaced using 12 point type, clearly labeled to show the vendor's name. All pages are to be CLEARLY marked and in sequential order.

32.0 ADDITIONAL EXPENSES / CHARGES

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.

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 preparation of a system configuration that does not meet the intent of the RFP specification.

33.0 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.

34.0 APPLICABLE CODES

The following list of codes and regulations establish the minimum requirements applied to work done at the County. Where the specifications or plans exceed the applicable code, the specifications and plans shall be followed.

- BOCA Basic Building Code
- NFPA National Fire Code
- National Electrical Code (NEC Code)
- State of Michigan Occupational Safety Standards Act

35.0 ACCESS, AUTHORITY AND STOPPAGE

The work shall be available for inspection at any time by representative(s) designated by the County. All materials and work not in conformity with County specifications shall be subject to rejection. All rejected work or materials shall be immediately replaced to conform to specifications. Designated County representatives shall have the right to order the work of the Contractor or any sub-Contractor wholly or partially stopped, if in their judgment, the materials and services furnished for the work being done are not in strict accordance with the provisions and specifications, or until any objectionable worker or material is removed from the premises; and shall have the right to declare the contract forfeited for non-performance when not being executed according to the intent and meaning of the contract specifications. Such stoppage, suspension or forfeiture shall not in any way invalidate any terms of the contract, and no extra charge will allow the Contractor by reason of such stoppage or suspension.

In the event of any work stoppage, either by unionized employees of the County or the Contractor, the Contractor assures that the County will suffer no delays in service or claims as result.

36.0 PROJECT CLOSEOUT

- Upon notification the project is completed, an electronic copy of the punch list will be prepared and presented to the vendor.
- All punch list items will be resolved with the date the item(s) was completed, documented and be returned to the Project Manager in electronic format.
- The vendor's documentation package must be submitted to, and accepted by the Project Manager before building signoff and final payment is made. The documentation package shall consist of the minimal following items: Manufacturer warranty certificate and manuals.
- The Project Manager will present Sign Off / Closeout documents to the vendor and County for signatures. A copy of the document will be given to the Vendor.

**** END OF SECTION A ****

SECTION B: PROJECT REQUIREMENTS & SPECIFICATIONS

37.0 PROJECT SCOPE / OVERVIEW

37.1 It is the intent of this project for Washtenaw County Government and its partners (hereafter referred to as the Owner) to create a wide area fiber optic network. This RFP requests the construction of the following fiber networks:

- i. **Base Proposal:** Connect five (5) Washtenaw County buildings in a ring topology. For this base proposal, there are two (2) options; Option A would require twenty-four (24) strands and Option B would require forty-eight (48) strands of singlemode fibers on the ring backbone. These sites in general are referred to as the Washtenaw County Hub sites.
- ii. **Base Proposal [Add Alt-I]:** Connect ten (10) Washtenaw County buildings to the closest Washtenaw County Hub Site in a star or point-to-point topology using twelve (12) strands of singlemode fibers. These sites in general are referred to as the Washtenaw County Spoke sites.
- iii. **Base Proposal [Add Alt-II]:** Connect two (2) Washtenaw County Hub sites in a star or point-to-point topology. For this base proposal alternate, there are two (2) options; Option A would require twenty-four (24) strands and Option B would require forty-eight (48) strands of singlemode fibers between these two sites. The two sites are specifically identified in the drawings and spreadsheets associated with this add alternate. **It is important to note that the service entrance at these two buildings should be different from the service entrance used by the ring topology constructed by the Base Proposal** e.g. if the ring topology fibers enter the building on the south side of the building, point-to-point topology would need to enter the building at a different point. In addition, to reduce the risk of a complete network outage, this point-to-point connectivity between the buildings should be routed using a geographically diverse path. **There should be no fiber route overlap between this (Base Proposal [Add Alt-II]) build and the Base Proposal fiber build.**
- iv. **Add Alt-III:** Connect the Washtenaw County Admin building (Washtenaw County Hub site) to the identified building located in South Lyon in a star or point-to-point topology using twelve (12) strands of singlemode fibers. Fibers at the South Lyon building will be terminated on a patch panel. This connectivity in general is referred to as the Washtenaw – Oakland County connectivity. The two sites are specifically identified in the drawings and spreadsheets associated with this add alternate.
- v. **Add Alt-IV:** Connect eight (8) Merit buildings to the identified Merit Hub Site in a star or point-to-point topology using twelve (12) strands of singlemode fibers. These sites in general are referred to as the Merit sites. The Merit sites are specifically identified in the drawings and spreadsheets associated with this add alternate.

- vi. **Add Alt-V:** Connect two (2) Eastern Michigan University (EMU) buildings in a point-to-point topology using twelve (12) strands of singlemode fibers. This connectivity in general is referred to as the EMU connectivity. The two sites are specifically identified in the drawings and spreadsheets associated with this add alternate.
- vii. **Add Alt-VI:** Connect twenty six (26) Washtenaw County CVT/LUG buildings to the closest Washtenaw County Hub Site in a star or point-to-point topology using twelve (12) strands of singlemode fibers. These sites in general are referred to as the Washtenaw County LUG/CVT Spoke sites.
- viii. **Add Alt-VII:** Connect Nineteen (19) State of Michigan buildings to the identified State of Michigan Hub Site in a star or point-to-point topology using 12 strands of singlemode fibers. These sites in general are referred to as the State of Michigan sites. The State of Michigan sites are specifically identified in the drawings and spreadsheets associated with this add alternate.

Vendors are required to respond to the Base Proposal fiber network before they can respond to the add alternatives (I – VII).

- 37.2 Vendors responding to any of the specific fiber networks (base, add alternate I – VII) they must provide a response to all of the sites and options associated with that network. All add alternate proposal costs must be shown as **INCREMENTAL** cost from the Base proposal.
- 37.3 **The Owner will accept proposals for either a private and / or a condominium approach to building the network.**
- 37.4 A **private** build is defined as a fiber network where the Owner would own the fiber sheath and all of the fiber strands within the sheath. A **condominium** build is one where the vendor would own the fiber sheath and some fiber strands and the Owner would own some fiber strands within the sheath.
- 37.5 This proposal is for singlemode aerial / burial fiber optics cable, installation, termination, building entry, innerduct, testing and certification of the fiber optics network.
- 37.6 The proposals must provide all fiber cable, cable support materials, underground conduit, innerduct, rigid metal conduit, aerial/underground components, connectors, termination components, patch panels, splice trays, cabinets, labor and any, or all other components to install a fiber network at each site and between sites.
- 37.7 Building entry points, fiber routes and final fiber termination locations within the buildings have not been determined at this time.
- 37.8 The list of buildings (with addresses) associated with the project is located in "Appendix A: Site Addresses".

- 37.9 The following forms are mandatory for submission of the RFP. These forms can be found in Appendix A of this RFP.
- i. Appendix A: Vendor's Signed Acceptance Form
 - ii. Appendix A: Vendor Questionnaire Form
 - iii. Appendix A: Comply / Exception Form
 - iv. Appendix A: References
 - v. Appendix A: Warranties (Materials and Workmanship)
 - vi. Appendix A: Price Summary Form
 - vii. Appendix A: Total Cost of Ownership
 - viii. Appendix A: Time and Materials Rate Schedule
 - ix. Appendix A: Per Foot Aerial & Underground Costs

Proposals submitted without these necessary forms may be considered incomplete and disqualified

- 37.10 For the each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, the following forms associated with that proposal must be submitted:
- i. Appendix A: <Proposal> Network Construction and Make Ready Costs
 - ii. Relevant portions of Appendix A: Estimated Distance and db Loss
 - iii. Relevant portions of Appendix A: Vendor's Project Scope & Schedule. For each proposal, please include a route map.
 - iv. Relevant portions of Appendix A: Estimated Annual Recurring Costs
 - v. Relevant portions of Appendix A: Annual Maintenance Service Costs

Proposals submitted without these necessary forms may be considered incomplete and disqualified

- 37.11 For the each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, please provide your pricing using the form 'Appendix A: <<Proposal>> Network Construction and Make Ready Costs'. In these forms, the Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. In-Building work is defined as the aerial or underground path from the utility right of way to the fiber termination point within the building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The Capped Make Ready costs must be provided and shown as a cost for the Base Proposal and an incremental cost for each Add Alternate.

- 37.12 For the each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, the estimated distance and db losses (1310nm and 1550 nm) for each point-to-point segment of the network must be provided. This information will be presented using the form "Appendix A: Estimated Distance and db Loss".

- 37.13 For the each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, the vendor is required to provide a verbal description on the work being proposed. Along with the verbal description, the vendor must provide a route map. If the vendor requires that the submitted map and distances be kept confidential, please mark the map as "Confidential Proprietary Intellectual Property". An estimated project schedule must also be provided. The verbal description can be presented using the form "Appendix A: Vendor's Project Scope & Schedule".
- 37.14 For each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) information on annual recurring costs would need to be provided. This cost is to include both annual maintenance and any other vendor identified annually recurring costs to the County. Please refer to the "Annual Costs" section for more details.
- 37.15 The proposal shall include all costs for any design, mapping, permits, right-of-way acquisitions, and any other applicable requirements not already provided or separately identified herein. It shall include all permits and application fees, make ready costs, and other incidental fees and charges that may occur prior to, or during, the construction of this project. The sole exception is long-term pole attachment fees.
- 37.16 These specifications will be used to determine the suitability of the proposed products and required quantities. Misrepresentation of product capabilities or performance may be cause for disqualification. If an exception is requested, the vendor(s) shall submit a written explanation of how the proposed product characteristics meet or exceed the requested specification(s). The "Appendix A: Comply/Exception Form" must be included with all proposal responses. Submission of this form is mandatory even if no exceptions are taken. All products proposed shall meet or exceed the specifications stated in this section of the document.
- 37.17 Where pre-formatted forms are provided, the vendor must use these pre-formatted forms unless stated otherwise. Failure to submit the mandatory forms in the requested format may be cause for rejection of the proposal. A check list of all the forms that require submission is listed in "Appendix A: Required Response Forms". All preformatted forms are available for download as noted "Section A: General Terms and Conditions".

38.0 ADMINISTRATIVE REQUIREMENTS

38.1 SUBMITTALS

All vendors are required to provide the information requested below. The information provided is the property of Owner and would be treated in the same way as any other information held by the Owner.

- 38.1.1 The base proposal must provide all Cable, Cable Support Materials, Connectors, Panels, Termination Components and Labor to install the outside/inside cable plant.
- 38.1.2 The vendor is required to show experience in commercial or public funded projects dealing with: vendor and sub-vendor relationships, architectural, engineering firms, and project management firms.

- 38.1.3 The vendor must show experience and capabilities in the installation of Outside Cable Plants.
- 38.1.4 **Vendor must be certified by the fiber cable manufacturer to install and warranty the product they will provide.** Vendor must provide proof of current manufacturer certification by submitting a certification certificate with partner ID number. **Failure to do so may be grounds for rejection of proposal.**
- 38.1.5 **Vendor must provide proof of Outside Plant training at the time of proposal response, by means of a current certification certificate for the onsite supervisor, each member of the splicing/termination crew and for the Company installing the products. Failure to do so may be grounds for rejection of proposal.**
- 38.1.6 The vendor will provide at least three (3) references where installation and certification were provided for structured cable plants.
- 38.1.7 The materials and labor for the Wide Area Fiber Network must be shown as separate components. The materials and labor costs for the In-Building work must be identified specifically by each building. **A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage.**
- 38.1.8 **Vendor must provide specification sheets for all products** Fiber cables, Termination Components (Jacks, Faceplates, LIU, Blanks, Patch Panels etc.), Firestop, Cable Support, etc. that are offered as part of the proposal response. Part numbers must be clearly indicated on the specification sheet by highlighting, underlined or use of an asterisk (*). Failure to provide specification sheets may be grounds for rejection of proposal.
- 38.1.9 The vendor must provide a **minimum of one (1) year warranty** on material and labor / workmanship. A **minimum (five) 5-year warranty on the Fiber Optics cable / components** from the manufacturer is required.
- 38.1.10 The vendor must state the nature of the Vendor and Manufacturer warranty on the material(s) used in this project along with the labor (workmanship). Manufacturer warranty certificates must be provided for Fiber Optics Cable.
- 38.1.11 All engineering information supplied with this proposal is believed to be accurate. However, all field measurements shall be conducted and verified by the vendor prior to proposal submittal. No contract adjustment shall be made after an award unless the Owner changes buildings or adds buildings to the project
- 38.2 **PERMITS, LICENSE INSPECTIONS AND FEES**
- 38.2.1 It is the vendors' responsibility to obtain any utility company, federal, state, county, city or local permits required for complete installation of this project.
- 38.2.2 Vendor shall be familiar with all "Local Codes" pertaining to Outside Cable Plants and regulations

- 38.2.3 Copies of all permit applications and permits issued for the project shall be presented to the Owner and copies of permits shall also be available onsite while constructing the Outside Plant.
- 38.2.4 The proposal shall include all costs for any design, mapping, permits, right-of-way acquisitions, and any other applicable requirements not already provided or separately identified herein. It shall include all permits and application fees, make ready work, and other incidental fees and charges that may occur prior to, or during, the construction of this project. The sole exception is the long-term pole attachment fees. **ALL MAKE READY COSTS MUST BE INCLUDED IN THE PROPOSAL AND CAPPED.** Failure to do so may be grounds for rejection of proposal.
- 38.2.5 The County reserves the right to put aside the vendor's proposed make ready costs and to pay these costs directly to the appropriate parties. Such a decision would be made after the proposals are evaluated but before contract award.
- 38.2.6 The vendor also is responsible for all interface, permit procedures, and coordination with all local units of government. All expenses incurred by this interface shall be the vendor's responsibility and included in the base proposal.
- 38.2.7 The vendor is responsible for all interface and coordination with utilities when performing make ready surveys and requests. All expenses incurred by this interface shall be the vendor's responsibility and included in the base proposal. The vendor shall be responsible for all "Utility Location Service" requirements and be liable for any damage incurred during underground construction procedures.
- 38.2.8 The vendor is responsible for all interface, joint use meetings, "Utility Location Service", or other requirements set forth by utilities, municipalities, or other governing or licensing bodies.
- 38.2.9 The building (where fiber will be terminated) as-built, building floor plans, county map with pole count, address, easements, right of ways, construction loops, splice locations, dark fibers, testing results and other information relative to maintenance and operation of the system shall be provided by the vendor. A separate splice schedule (including address location or road intersection) with typical detail drawings of each location shall be included. The Owner shall be provided with all necessary drawings, schedules, completed filing forms, and all other documents needed to register the fiber plant with the State's "Utilities Location Service". The extent of the Owner's obligation shall be limited to the following:
- 38.2.10 Executing the "pole attachment" agreement with local utilities as necessary.
- 38.2.11 Cooperating with the vendor in seeking any necessary permission from the municipalities to the extent of the requirements of utility pole attachment agreements or otherwise.
- 38.2.12 Review and execute any documents relative to obtaining private easement rights from property Owners where required. If it is discovered that private easements exist in the routes it shall be the vendors responsibility to initially notify property owners of the intent of the Owner and to assist the Owner in obtaining permission to utilize said easements

to the extent of notifying property Owners and preparing all necessary paperwork, including non-professional survey drawings based on registered plat drawings. Any private or public property owner easement payments that may become necessary will be made by the Owner as applicable.

38.2.13 The Owner shall be responsible for all ongoing pole rental expenses, relative to obtaining private easement rights from property owners where required.

38.3 SCHEDULING

38.3.1 Vendors must provide a full installation schedule showing the work flow using a graphical representation i.e. Gantt chart or similar. This will be submitted along with the required project scope document. Any work scheduled inside of a building or the building premises will commence only as agreed to with the Owner). A detailed work schedule for each building will be developed with the Owner, Owners' representative and the vendor(s).

The construction schedule for this project (Base and Add Alternates) will be established in conjunction with potential awarded vendors during the contract negotiations.

38.3.2 Any work scheduled inside of buildings or on the building premises will be coordinated with the Owner and/or the Owner's representative.

38.3.3 The Vendors installation schedule should indicate the size of each crew working in the building on a daily basis, along with timelines for project completion of building.

38.3.4 All punch list items associated with the installation of cabling for a building must be complete by the date as provided by the vendor in their Gantt chart based on the construction/installation schedule.

38.3.5 After the award of the project, a kick off meeting will be held to review the project. This mandatory meeting shall include the vendor's account executive, project manager, onsite supervisor and lead engineer / technician

38.3.6 The closeout process for this project is as follows:

- The awarded vendor is required to be substantially complete by the completion date provided at the kick off meeting.
- Once the awarded vendor is substantially complete, an Owner's representative and the technology designer will perform a walkthrough of all installed equipment to insure all steps required in the specifications are complete, including all required documentation.
- If needed, a punch list will be created to document any items found not to be completed per the proposal specifications.
- Once this list is provided to the awarded vendor, the vendor will have ten (10) business days to complete all items on the list.
- Once the awarded vendor notifies the Owner and/or the Owner's representative that the punch list items are complete, a second inspection will take place to

confirm all items meet specifications. Should the items not be completed by this second inspection, the awarded vendor will be charged an hourly fee for any additional inspections.

- Any items not completed and found to be outside the control of the awarded vendor will be evaluated on a case-by-case basis and assigned a new completion date.
- Providing all items are complete, a meeting will be arranged with the Owner, Innovate, and all parties providing and installing equipment / materials in this section of the proposal to perform a "Final Closeout" of the project. At this time, the processing of final paperwork is to begin to release all money due each party.
- If the "Final Closeout" of this project, takes place prior to the start of use of the fiber plant and, therefore, prior to all portions of the fiber plant being tested fully, any equipment / materials found to need configuration changes to be fully operational which are the result of improper installation / configuration by the awarded vendor, shall be completed by the awarded vendor and covered under the "Warranty of Workmanship" for this product.

39.0 SITE SPECIFIC REQUIREMENTS

39.1 SAFETY OF PERSONS AND PROPERTY – PRECAUTIONS & PROGRAMS

39.1.1 Setups, empty and partial spools, and other equipment, material, or debris that must be left overnight shall be secured and clearly marked with safety cones if they are in a hazardous location. Owners of the property where equipment is to be left shall be notified by a crew foreman or supervisor and permission must be obtained. All equipment, setups, and other items left overnight shall be the responsibility of the vendor. Local, County, and State codes and regulations pertaining to working in the right of ways or on public and private property shall be observed.

39.1.2 The Owner will provide for cabinet or rack space at the WAN fiber termination point in each building. The proposal price shall include all costs pertaining to "community interface" relative to the construction process. In areas where fiber will be buried, all property owners with property adjacent to the digging shall be notified by the vendor with a written notice of the vendor's intent at least seventy-two (72) hours prior to construction. This may be accomplished through "hand bills" or US Mail. It shall be the vendor's responsibility to obtain the necessary addresses for the notices. This notice shall be submitted to the Owner for approval prior to its delivery. Additionally, the vendor shall notify local newspapers to apprise the community of the construction activities.

39.1.3 The proposal price shall include all costs for complete and full restoration to all property disturbed by construction including, if necessary, full replacement of trees, shrubs, landscaping, or other plant or tree life that must be harmed or destroyed by construction. Tree trimming will not be allowed unless written permission is obtained from the property owner and/or the local authorities governing the right of ways where the tree is located. The written agreement will be submitted to the Owner's attorney for approval prior to presenting it to homeowners.

39.1.4 The vendor shall provide a telephone number for receiving all property owner questions, concerns, and complaints. All construction vehicles shall clearly identify this number as

the point of contact for questions. A log shall be kept of all such calls including the nature of the call, the property owner's name and address, a description of the proposed work affecting the property owner, action required of or taken by the vendor, and any follow up work required by the vendor. A copy of this log shall be submitted to the Owner, on a weekly basis, during the construction process.

- 39.1.5 The vendor shall provide all liability insurance for any and all requirements of issues for permits or other liability requirements by local, state, or national bodies governing this project. The Owner shall be held harmless due to vendor neglect and/or actions.

39.2 ASBESTOS

- 39.2.1 Asbestos abatement documentation will be made available on request for all buildings in which work will be performed. It will be the responsibility of the awarded vendor to read, understand and identify areas that contained asbestos before work is started in each building. In the event that asbestos is present in the building, the asbestos will not be disturbed by the vendor under any circumstances. If any asbestos abatement work is to be performed, it will be done by the Owner.

39.3 SITE PREPARATION / ALTERATION

- 39.3.1 The County will be responsible for preparation of the equipment room to accept the new fiber termination equipment.
- 39.3.2 The County will perform construction changes to floor distribution closets as required, including providing electrical power.
- 39.3.3 The County will provide heat and general illumination in rooms in which work is to be performed.
- 39.3.4 The County will provide commercial power necessary for the installation of the new system.
- 39.3.5 The County will make alterations and repairs to buildings if it is determined by the County to be necessary for installation of equipment or services, or necessary for safe operations.

39.4 IDENTIFICATION

- 39.4.1 All contracted individuals working within a building must wear and present, if approached, a picture identification card of the individual, indicating their name and the name of the company for which they work. Failure to present company picture identification may result in immediate removal of the individual from the building.
- 39.4.2 Employee may return to the job site upon presenting identification to the Owner or the Owner's representative.

40.0 PROJECT REQUIREMENTS AND QUALITY ASSURANCE REQUIREMENTS

40.1 MEETINGS AND REPORTS

- 40.1.1 Proper support for installation and integration services is considered to be very important. The awarded vendor will be required to have a technically qualified on-site project manager available to attend monthly, bi-weekly or weekly project planning and review meetings with the Owner and the Owner's representative. The project manager(s) must also be present at the time any building is "cut-over" to the new network. A building system cut-over from the existing network to the new network must be performed during non-business hours. On-site engineering support during any cut-over period will be a requirement. On occasion, weekend cut-over may be scheduled.
- 40.1.2 A technical representative and an account representative shall be present at all project planning and review meetings.
- 40.1.3 The awarded vendor will be required to submit written reports to the Owner and their representative on the progress and estimated timelines to finish the project.

41.0 CABLE DOCUMENTATION

41.1 CABLE DOCUMENTATION SYSTEM AND AS-BUILTS

- 41.1.1 The awarded vendor must provide for two (2) sets of hard copy documentation housed in a three ring binder with an attached affidavit verifying passing execution of all tests. Both sets will be complete with the minimum following information enclosed in each package. Each set must include both electronic and hard copy. The awarded vendor must also provide an electronic copy of the following information:
- 41.1.2 Manufacturer specification sheets for each component installed in system.
- 41.1.3 Fiber optics test results using an **OTDR** and a **Power Meter**. Results must be shown in graphical and numerical listings for all fiber strands. Test results must be presented electronically and in hardcopy formats.
- 41.1.4 The Vendor will identify the fiber optics tester manufacturer, model, serial number, hardware version, and software version.
- 41.1.5 The test results will state the ID number for each strand of fiber and the test results associated with that fiber strand.
- 41.1.6 Cable route drawing, showing path of all outside fiber to each building (Exterior Fiber Route) entry point.
- 41.1.7 Cable route drawing showing path of fiber from the building entry point to fiber

termination point within the building (Interior Fiber Route).

- 41.1.8 All drawings shall be submitted in AutoCad version 2000 or higher in both hard copy and electronic format. Any spreadsheets and word processor documents should be submitted in MS-Excel and MS-Word for Windows format respectively.
- 41.1.9 Documentation package must be submitted to and accepted by the Owner and the Owner's representative before signoff and final payment is made.

42.0 COMMUNICATION EQUIPMENT ROOMS

42.1 EQUIPMENT RACK / CABINET / SHELVES

- 42.1.1 Fiber will be terminated in existing racks or on backboards at each building. Any exceptions will be on a case-by case basis determined jointly by the Owner or the Owner Representative and the Vendor prior to the cable installation for that building.

42.2 FIBER OPTICS PATCH PANELS

42.2.1 Materials

- 42.2.1.1 Rack Mounted Fiber-optic Patch Panel with personality module / bulkhead adapters and duplex SC couplers for termination of the number of fiber-optic cable strands required at each termination site. The patch panel must be capable of mounting in a standard 19" (43.2 cm) equipment rack / cabinet and on a backboard. There must be an optional wall-mounting bracket available. Patch panel duplex SC modules must be enclosed inside a metal housing, have a front hinged door constructed of metal or Plexiglas and have access to the SC modules by sliding tray. Hinge or swing-out 19" (43.2 cm) panels will **not** be accepted.

- 42.2.1.2 Wall Mounted Fiber-optic Patch Panel with personality module/bulkhead adapters and duplex SC couplers for termination of fiber-optic cable strands required at each termination site. The patch panel must mount on a backboard. Patch panel duplex SC modules must be enclosed inside a metal housing, have a front hinged door constructed of metal and have access to the SC modules by a locking door.

42.2.2 Manufacturer

- 42.2.2.1 The product shall be Avaya, Corning, Hubbell, Leviton, NORDX/CDT, Ortronics, Panduit, Siemon or equivalent.

42.2.3 Installation

- 42.2.3.1 Install all fiber-optic patch panels in accordance with manufacturer's installation specifications.

- 42.2.3.2 Install all fiber-optic patch panels with required number of personality modules and couplers at each building termination point.
- 42.2.3.3 Install duplex SC and blank filler panels as required
- 42.2.3.4 Label all patch panels with proper cable run information.

43.0 MAIN DISTRIBUTION FRAMES AND SERVICE ENTRANCE

43.1 SPLICE AND TERMINATION POINTS

- 43.1.1 All outdoor splices shall be fusion spliced. After testing of these splices has been completed, the splice shall be installed in an all weather encapsulated containment system, which is re-enterable. A minimum fifty foot (50') maintenance loop shall be provided at all fusion splice locations.
- 43.1.2 All outdoor cables shall enter each building at a predetermined service entrance point and terminate within an electrical service room or closet area (telecommunications closet). The SC connectors shall be terminated using a breakout kit within the fiber patch, termination and splice enclosure or equivalent. A minimum fifty foot (50') maintenance loop shall be maintained before the fusion splice on the outdoor cable.
- 43.1.3 Indoor cables shall be pulled continuously from the service entrance splice box to the main telecommunications equipment closet where all of the electronics (by others) shall be placed. The telecommunications closet end of the indoor cable shall be terminated with an SC type connector and connected to a patch strip within the fiber patch and termination splice enclosure or equivalent. The termination enclosure shall be mounted in an equipment cabinet or rack provided by others. A minimum fifteen foot (15') maintenance loop shall be maintained at both ends of the indoor cable.
- 43.1.4 Termination points less than fifty foot (50') from the building entry will require a maintenance loop at the closet termination point. Termination points over fifty foot (50') from building entry will require a maintenance loop at building entry splice point and the closet termination point.

44.0 EXTERIOR COMMUNICATION PATHWAYS

44.1 SPECIFICATIONS AND REQUIREMENTS

- 44.1.1 The specification and requirements section will be used to determine the suitability of the proposed products, required quantities and services. Misrepresentation of product capabilities or performance may be cause for disqualification. If an exception is requested, the vendor(s) must submit a written explanation of how the proposed product characteristics meet or exceed the requested specifications. The "Comply/Exception Form" must be included with all proposal responses.

44.2 AERIAL SPECIFICATIONS

- 44.2.1 The aerial service drop from a utility pole must be attached to a minimum four inch (4") PVC schedule 80 conduit mast or a two inch (2") rigid galvanized steel pipe mast and weather-head securely fastened to the building. A minimum 1" EMT conduit or innerduct shall be supplied to a telecommunications closet or termination point within the building. The installation must comply with the clearance and separation specifications listed in the current edition of the National Electrical Safety Code. All materials and installation procedures shall comply with Article 770 and Article 800 of the National Electrical Code.
- 44.2.2 Service entrances that are further than fifty foot (50') from the building's termination point, will be fusion spliced to plenum cable and housed in a wall mounted fiber optic splice enclosure. The fiber shall continue through the building using plenum innerduct to the telecommunications equipment room as designated, then terminated into a rack or wall mounted fiber optic patch panel.
- 44.2.3 Alternate method will be to enclose the fiber in minimum one inch (1") rigid metal tubing or EMT conduit from the service entrance to the building termination point without fusion splicing to indoor plenum cable.
- 44.2.4 Service entrances that are within fifty foot (50') of the telecommunications room may be routed directly to the rack mounted fiber optic tray without the additional wall mounted splice enclosure. Fiber shall run inside one inch (1") conduit or plenum innerduct.
- 44.2.5 All point-of-entrance stubs shall penetrate the exterior walls through a core drilled hole, be secured, then be mortared and finished to provide an adequate seal between interior and exterior spaces. Do not remove or break out bricks for this penetration. All penetration must be cleanly drilled or cored.
- 44.2.6 Subsurface point of entrances shall be finished as described herein. Additionally, they shall be sealed on the exterior surface with a moisture resistant sealant, approved by the Owner and/or the Owners representative, to prevent any possible seepage or moisture into the building.
- 44.2.7 All aerial construction shall be in accordance with industry standard practices within "heavy ice loading zones." Guying and anchoring of all runs shall conform to local utility requirements and shall be established during the pole attachment application procedures. All guy wires for the first eight feet from ground level shall be covered with a yellow PVC guy guard.
- 44.2.8 All pole attachment hardware shall be 5/8" threaded through bolts with nuts, flat washers, and three bolt suspension clamps or as directed by the pole owner.
- 44.2.9 All cable shall be lashed to a minimum ¼ inch support strand using a minimum .032 inch steel lashing wire or as directed by the pole owner. Figure eight and other self support or messenger cables will not be acceptable.
- 44.2.10 All grounding and bonding requirements will be established by owners of the utility

poles and according to other facilities attached to the pole. New vertical grounds required to be installed for this project shall be covered with black PVC molding the full length of the vertical. Molding shall be attached with approved staples or straps and lag bolts. Nails will not be accepted.

- 44.2.11 Strapping at pole crossovers shall be zinc straps with plastic spacers or black PVC tie-wrap style with attached spacers. Pole crossovers shall be marked with an orange boot for identification as a fiber optic communication cable.
- 44.2.12 Climbing space, attachment location, and other requirements regarding coexistence with other services on utility poles shall be established by the pole owner, or primary electrical utility, and adhered to by the vendor.
- 44.2.13 A minimum of 10% of the total length of fiber shall be maintained as "construction" or "maintenance" loops. Maintenance loops shall be placed at main intersections or fiber count taper points. Maintenance loops shall be overlashed to a span, utilizing a "snowshoe" type standoff to maintain the proper bend radius. Maintenance loops left coiled at the pole will not be acceptable.
- 44.2.14 If opportunities exist for over lash on some portions of the aerial fiber plant, all vendors are required to provide a per foot cost deduction if allowed to over lash on existing fiber. In areas where the vendors' fiber sheath includes fiber strands not owned by the Owner, the decision to over lash would be a joint decision between the Owner and the multiple vendors. In areas where all fibers strands in the sheath are owned by the Owner, the decision to over lash will be the Owners'. This deduct price should reflect labor, materials and make ready cost. This "per foot cost" must be shown on the "Appendix A: Per Foot Aerial & Underground Costs".

44.3 UNDERGROUND SPECIFICATIONS

- 44.3.1 As required, a minimum two inch (2") Schedule 0 PVC conduit or a two inch (2") directionally bored HDPE flexible conduit shall be supplied from a utility pole to the service entrance, or between buildings as needed. Service entrances that are further than fifty feet (50') from the building's termination point, will be fusion spliced to plenum cable and housed in a wall mounted fiber optic splice enclosure.

The fiber shall continue through the building using one inch (1") plenum rated conduit or plenum innerduct, to the telecommunications equipment room, then terminated into a rack or wall mounted fiber optic patch panel. All materials and installation procedures shall comply with Article 770 and Article 800 of the National Electrical Code.

An alternate method will be to enclose the fiber in minimum one inch (1") rigid metal tubing or EMT conduit from the service entrance to the building termination point.

- 44.3.2 Service entrances that are within fifty feet (50') of the telecommunications room may be routed from the building entry point directly to the fiber optic patch panel.
- 44.3.3 Underground service entrances to the buildings shall use a horizontal entrance through an outside wall, using an LB style coupler at the point of entrance. The LB coupler shall

- be large enough to provide adequate space for the bend radius requirements of the fiber optic cable. EMT galvanized conduit or schedule 80 PVC and two-hole galvanized straps and mounting hardware shall be used in all vertical runs on the outside of buildings.
- 44.3.4 Underground hand holes shall be provided where required, and must be sized to meet the conduit requirements. They shall be constructed of a composite fiberglass / concrete material (composite) and installed flush to the existing ground level. The hand holes shall be no more than five hundred feet (500') apart.
- 44.3.5 All underground cables required on public right of way as part of the fiber backbone route shall be installed in a minimum two inch (2") schedule 40 PVC conduit or two inch (2") directionally bored HDPE flexible conduit. Underground two inch (2") HDPE shall have a wall thickness of SDR 11.
- 44.3.6 Cables and conduits buried on the Owners property or private property shall be trenched or directional bored at a minimum depth of forty-two inches (42"). Cable and conduits buried in public easement or right of ways shall be buried a minimum depth of forty-eight inches (48"), or in accordance with regulations and requirements of the governing agency of said easement or right of way.
- 44.3.7 Underground plastic warning tape shall be installed, during backfill, at depths of eighteen inches (18") in all trenches identifying buried fiber optic cables. Detectable type warning tape must be utilized when all-dielectric cable is installed.
- 44.3.8 All underground fiber housed in PVC or HDPE shall have a detectable metal tracking tape installed within the underground fiber conduit system. Metal tape shall be grounded at both ends.
- 44.3.9 Backfill of trenches or directional bore access points shall be in accordance to local regulations or standard industry practices. The vendor shall be responsible for complete restoration of property to the original condition within thirty (30) days of backfill or bore, including any restoration or repairs that become necessary over time due to natural settling of the backfill.
- 44.3.10 Street, highway, railroad, or other directional bores will be done in accordance with the regulations and requirements of those governing agencies.
- 44.3.11 Underground conduits shall be sealed or capped at the hand hole and pole location after installation to prevent water, debris, rodents or insects from entry. Failure to seal underground conduits will result in vendor incurring additional costs to clean out debris.
- 44.3.12 All underground fiber cable installed within easements or right-of-ways shall have warning markers installed every fifteen hundred feet (1500'), or as needed, or where required by code, indicating "Warning - Buried Fiber Optics Cable." Markers shall identify the owner of fiber (Washtenaw County), with a phone number, shall extend a minimum of four inches (4') above ground level, marker shall be flexible, weather proof and orange or yellow in color.
- 44.3.13 All vendors are required to give a per foot cost for underground building entry work which is to include both materials and labor costs. This per foot cost will be used for both

additions and deducts from the contract amounts when dealing with shared building entries. This “per foot cost” must be shown on the “Appendix A: Per Foot Aerial & Underground Costs”.

45.0 BACKBONE CABLING REQUIREMENTS

45.1 FIBER BACKBONE – OUTSIDE PLANT

45.1.1 The fiber cable must be capable of supporting standard transmission methods and protocols such as (but not limited to) Ethernet, Gigabit Ethernet, FDDI, Fiber Channel, SONET, CWDM, DWDM, ATM and Analog Voice and Video.

45.1.2 No preliminary routing surveys have been conducted to determine the routing or the footage (distances) for the fiber cable. All vendors will inspect all wide area network routes, rely only on their own route assessment for determination of route feasibility, actual footage, cost, and all other material consideration.

45.2 FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS

45.2.1 The fiber cable shall be a high performance type and capable of providing open standards for the transmission of digital data, analog video, voice and broadband video networking services as required.

45.2.2 Installation shall conform to the IEEE FOIRL (Fiber Optic Inter Repeater Link) standards and the American National Standards Institute (ANSI) X3T9.5 Committee, depending on the connectivity utilized. All potential conflicts with the applicable standard must be identified and agreed to with the Owner prior to installation.

45.2.3 Total path losses of the design shall not exceed those recommended by the cable manufacturer and as stated below.

45.2.4 All fiber counts and termination locations shall be identified on the design drawings.

45.2.5 Based on design standards, operating at 1310nm and 1550nm, the following technical standards shall apply for fiber optics.

45.2.6 Signal loss shall be 0.35 dB per kilometer or less across the 1310nm window and 0.25 dB per kilometer or less across the 1550nm window for single mode fiber.

45.2.7 Any field fusion splice, measured with an OTDR in one direction, shall not exceed 0.30 dB.

45.2.8 The average splice loss of a segment (the sum of the bi-directional average values of each segment splice divided by the number of segment splices) shall not exceed .20 dB.

45.2.9 A mated pair of Fiber connections (SC connectors for Single-mode) shall be 0.75 dB of loss or less.

- 45.2.10 **All optical fibers proposed shall be 8 micron Single-mode and operational in the 1310nm/1550nm wavelength regions and 1470-1610nm wavelength regions for CWDM operation.**
- 45.2.11 Outdoor underground cable (in conduit) shall be a loose buffered cable with a Kevlar strength member, gel filled, and a dielectric sheath.
- 45.2.12 Outdoor aerial cable shall be a loose buffered cable with a Kevlar strength member, gel filled, and a dielectric sheath.
- 45.2.13 Outdoor direct-buried cable shall be loose buffered cable with a Kevlar strength member, gel filled, and a metal armored sheath.
- 45.2.14 Indoor cables shall be plenum-rated, tight buffered, non-metallic, breakout style, with a minimum NEC rating of OFNP. This cable must be installed in a plenum rated innerduct.
- 45.2.15 An alternate for indoor cable will be a plenum rated armored fiber cable that can be installed without the plenum rated innerduct.

45.3 **MANUFACTURER – FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS**

- 45.3.1 The product must be manufactured by Alcatel, Lucent Technologies, Siecor, Optical Cable Corp. or equivalent. The Owner reserves the right to accept or reject proposed equivalent cable specified based on the listed performance of the cable. The fiber optic cable must have a minimum five (5) year warranty.

45.3.2 **MANUFACTURER – FIBER OPTIC CONNECTOR**

The product shall be from Avaya, Leviton, Hubbell, NORDX/CDT, Panduit, Siemon or equivalent.

45.4 **INSTALLATION – FIBER OPTIC SPECIFICATIONS AND REQUIREMENTS**

- 45.4.1 Install all fiber-optic cable in accordance with manufacturer's bend radius and tension rating specifications.
- 45.4.2 Terminate all Single-Mode (SM) fiber-optic strands at the building termination point using dual SC connectors. Both ends of terminated fiber will be installed in fiber-optic patch panels.
- 45.4.3 The vendor is responsible for coring and sleeving through walls, floor or ceilings as necessary to route fiber-optic cable.
- 45.4.4 The vendor is responsible for fire stopping both sides of all penetrations they install in floors, ceilings or walls intended for new fiber optics cable. Vendor is also responsible to fire stop both sides of all sleeves intended for new fiber optics cable. A removable pillow

and or putty type material must be used with a minimum of two (2) hour rating.

45.4.5 All fiber strands must be labeled.

45.4.6 All cable must be run in existing cable tray where provided. All cable must run through corridors/hallways parallel to walls and ceiling and not cut across in a diagonal fashion.

45.4.7 All cable leaving a Wiring Cabinet or Equipment Rack through the ceiling must be concealed in a four inch (4") or five inch (5") chimney, duct or conduit where possible. The cable must not be visible.

45.4.8 All fiber cable will be placed inside minimum one inch (1") plenum rated conduit or plenum rated innerduct extending from the building entry point to the building termination point. A minimum fifteen feet (15') maintenance loop shall be left in the ceiling at each end. If the vendor uses the conduit method, then a suitable enclosure shall be utilized to properly manage the fifteen feet (15') service loop, ensuring proper bend radius requirements are met.

45.4.9 If cable tray is not available, the fiber optic cable will be anchored to building structure wherever possible, using industry standard attachment devices. If building structure cannot be used, cable may be attached to existing support structure for water pipes or duct work. Cable will not be attached directly to fire sprinkler pipes, ductwork or to AC power conduits.

45.4.10 Vendor shall provide J-Hooks or Bridle Rings attached to structure where no existing support is available.

45.4.11 To maintain proper cable tension, cable supports must be no more than 6 feet apart. The installed cable must exhibit some sag in hanging between supports

45.5 INSTALLATION – FIBER OPTIC CONNECTOR

45.5.1 Terminate all fiber-optic strands with Single-mode SC connector as per manufacturer's installation guidelines.

45.5.2 All SC connectors will be factory finished with pigtails and fusion spliced to the fiber cable.

45.5.3 Install all SC terminated fiber strands in patch panel with proper labeling.

45.5.4 Fiber-Optic strands and connectors will be tested using fiber **Optical Time Domain Reflectometry (OTDR)** meter in both directions and **Power Meter** in one direction at 1310nm (λ) and 1550nm (λ) as per ANSI/EIA/TIA-526-7. Test jumpers must be of the same fiber core size and the connector type as the cable system. The power meter and the light source must be set to the same wavelength. The power meter must be calibrated and traceable to the National Institute of Standards and Technology. The Source or OTDR must operate within the range of 1310+/- 10nm or 1550 +/- 20nm for single-mode testing in accordance with ANSI/EIA/TIA-526-7. Fibers will be tested for attenuation loss, distance, continuity and comply with LAN/WAN standards. Vendor will

document results and provide to customer in both graphical hard copy and electronic form.

- 45.5.5 Any fiber strands or connectors not meeting established standards and specifications shall be repaired, replaced or re-engineered at no cost to the Owner

46.0 TESTING, IDENTIFICATION, AND ADMINISTRATION

46.1 TESTING REQUIREMENTS

46.1.1 Vendor shall provide sufficient skilled labor to complete testing within specified project timelines.

46.1.2 All installers assigned by the Vendor to the installation shall have factory certification that they are qualified to install and test the provided products.

46.1.3 Vendor is responsible for supplying all of the required test equipment used to conduct acceptance tests.

46.1.4 Two hardcopy sets of documentation packages must be provided and submitted to the Owner upon completion. One electronic copy of the documentation packages must be provided and submitted to the Owner upon completion.

46.1.5 Vendor is responsible for submitting acceptance documentation as defined below.

46.1.6 As-built drawings for the building entry work must be presented to the Owner at the completion of the project. The drawings must show the fiber entry, internal building route and termination point.

46.2 TEST EQUIPMENT

46.2.1 All test equipment used must meet the performance specifications defined below.

46.2.2 Test equipment used under this contract shall be from manufacturers that have a minimum of five (5) years experience in producing field test equipment. Manufacturers must be ISO 9001 certified.

46.2.3 All test tools of a given type shall be from the same manufacturer, and have compatible electronic results output.

46.2.4 Test adapter cables must be approved by the manufacturer of the test equipment. Adapters from other sources are not acceptable.

46.2.5 Baseline accuracy of the test equipment must exceed TIA/EIA as indicated by independent laboratory testing.

46.2.6 Test equipment must be capable of storing full frequency sweep data for all tests and

printing color graphical reports for all swept measurements.

- 46.2.7 Test equipment must be able to internally group auto tests and cables in project folders for good records management.
- 46.2.8 Test equipment must make frequency measurements in compliance with TIA/EIA standards.
- 46.2.9 The measurement reference plane of the test equipment shall start immediately at the output of the test equipment interface connector. There shall not be a time domain dead zone of any distance that excludes any part of the link from the measurement.

46.3 TEST PROCESS

- 46.3.1 The Owner reserves the right to be represented during any or all of testing.
- 46.3.2 The Owner reserves the right to contract with a 3rd party vendor to conduct "spot checks" and to verify the accuracy of the fiber tests.
- 46.3.3 Testing shall be of the Basic (Fiber) Link. However, Vendor shall warrant performance based on Channel performance.
- 46.3.4 All fiber not tested strictly in accordance with these procedures shall be re-tested at no additional cost to the Owner.
- 46.3.5 100% of the installed fiber plant (OSP) must be tested. All tests must pass acceptance criteria defined below.
- 46.3.6 Test equipment shall be fully charged prior to each day's testing.

46.4 STANDARDS COMPLIANCE AND TEST REQUIREMENTS

- 46.4.1 Cabling must meet the indicated performance specifications:
- 46.4.2 All specifications and requirements listed in 17150 Backbone Cabling Requirements.
- 46.4.3 All fiber strands will be tested at 1310nm and 1550nm in both directions with OTDR and one direction with Power Meter. Vendor will document results and provide to Owner in both graphical hard copy and electronic format. Any strands not meeting standards shall be repaired or replaced at no cost to the Owner.
- 46.4.4 Test jumpers must be of the same fiber core size and the connector type as the cable system. The power meter and the light source must be set to the same wavelength. The power meter must be calibrated and traceable to the National Institute of Standards and Technology. The Source or OTDR must operate within the range of 1310+/- 10nm or 1550 +/- 20nm for single-mode testing in accordance with ANSI/EIA/TIA-526-7. Fibers will be tested for attenuation loss, distance, continuity and compliance with LAN/WAN standards. Vendor will document results and provide to Owner in both graphical hard

copy and electronic form.

46.4.5 Any fiber strands or connectors not meeting established standards and specifications will be repaired, replaced or re-engineered at no cost to the Owner.

46.5 REQUIRED DOCUMENTS

46.5.1 Test reports must be submitted in hardcopy and electronic format. Hand-written test reports will not be accepted.

46.5.2 Hardcopy reports are to be submitted in labeled, three ring binders with an attached affidavit verifying passing execution of all tests. For large installations, electronic reports with hardcopy summaries are preferred. Hardcopy summary reports shall contain the following information on each row of the report: circuit ID, test specification used, length, date of test, and pass/fail result.

46.5.3 Electronic reports are to be submitted on a CD format. If proprietary software is used, disk or CD shall contain any necessary software required to view test results. If the results are delivered in a standard format like Excel, Access, CSV files, etc. then software to read these files need not be provided. Electronic reports must be accompanied by a certificate signed by an authorized representative of the vendor warranting the truth and accuracy of the electronic report. The certificate must reference traceable circuit numbers that match the electronic record.

46.5.4 Test reports shall include the following information for each cabling element tested:

- i. Test results that indicate the fiber has no opens and end to end connectivity is achieved.
- ii. Total overall length of fiber run (in meters), wavelength tested, fiber strand ID, db loss/attenuation. Any individual test that fails the relevant performance specification shall be marked as a FAIL.
- iii. Cable manufacturer, cable model number/type
- iv. Tester manufacturer, model, serial number, hardware version, and software version
- v. Circuit ID number and project name
- vi. Test specification used
- vii. Overall pass/fail indication
- viii. Date of test

46.5.5 Test reports shall be submitted within seven (7) business days of completion of testing.

46.6 ACCEPTANCE

46.6.1 Once all work has been completed, test documentation has been submitted, and Owner is satisfied that all work is in accordance with contract documents, the Owner shall notify Vendor in writing of formal acceptance of the system.

46.6.2 Vendor must warrant in writing that 100% of the installation meets the requirements specified in this document.

- 46.6.3 Owner reserves the right to conduct a random re-test of up to five (5) percent of the outside plant to confirm documented results. Random re-testing, if performed, shall be at the expense of the Owner, using standard labor rates. Any and all failing cables identified, shall be repaired and re-tested to a pass condition at the vendor's expense. In the event more than two (2) percent of the cable plant fails during re-test, the entire cable plant shall be re-tested and restored to a passing condition at no additional cost to the Owner.
- 46.6.4 Acceptance shall be subject to completion of all work, successful post-installation testing with acceptable test results and receipt of full documentation.
- 46.6.5 All system testing shall meet or exceed the cable manufacturer's attenuation parameters. Any discrepancies found during that phase, and proven to be a problem of the installation, shall be repaired (at no cost to the Owner) by the vendor within twenty four (24) hours, or by the activation vendor and back charged to the installation vendor. Any such problems will be reviewed individually in case the problem may have been caused by other occurrences (i.e. other trades damaging the cable between installation, completion and activation).

47.0 ANNUAL COSTS

47.1 MAINTENANCE COSTS

- 47.1.1 For the each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, provide the annual maintenance cost. The proposed annual maintenance costs should include the following:
- i. A minimum of one (1) annual inspection of the cable plant / fiber constructed. An annual report of the inspection with any recommendations will be provided.
 - ii. Response time according to the terms of the response time and service classifications shown below.
 - iii. Expectation that the maintenance provider will warehouse the necessary materials and provide the necessary workforce to meet the terms of the response time and service classifications shown below.
 - iv. The actual repair work (labor and materials) will be billed at the time and materials rate. A rate schedule for the labor and materials must be provided along with this response. If the fiber segment is shared by multiple owners, the cost of the maintenance services will be appropriated to the owners based on the percentage (%) of strands owned in the sheath where the work is performed. The rate schedule for labor and materials shall be provided using the form "Appendix A: Time and Materials Rate Schedule".

47.1.2 Response Time and Service Classifications

- 47.1.2.1 Normal business hours will be from 7:30 am to 5:00 pm Monday through Friday.

47.1.2.2 All non-emergency requests will be serviced at the regular hourly rate, with any overtime work done at the County's discretion and approved by the County's designated representative.

47.1.2.3 Emergency maintenance/service must be available on a 24 hour a day, 7 days a week 365 days per year basis. The number of persons who can declare and emergency condition will be limited and their names or titles will be mutually agreed upon by the County and the Contractor.

47.1.2.4 Service Classifications:

- a) A **critical failure** is defined as the break of any physical fiber connection or fiber strand currently under use and carrying live data traffic. The only acceptable on site response time for a critical failure is **one (1) hour** onsite technical response from the time reported. This is the only acceptable response for all reported problems related to the fiber network supporting government public safety and law enforcement agencies or core back bone locations.

Servicing of any and all network fiber media and it's connections involved in the delivery of public safety or law enforcement services (police, fire, etc.) is to be **serviced onsite within one (1) hour** from the time trouble is reported.

- b) A **major failure** is defined as an event which does not presently affect the transport of live data traffic but requires immediate repairs to the fiber network in order to maintain network integrity. Failure to make repairs can or may affect the transport of data along the damaged network or segments path.
- c) A **network event** all other system problems not categorized as critical or major. Response and resolution of system failures must be made within **twenty four (24) hours** from the time reported.

47.1.2.5 Any intentional disruption of fiber transport service must be coordinated with Washtenaw County Information and Technology Services prior to the event. A minimum of 48 hours notice is required. Live contact and communication with the Washtenaw County support designate is required for valid notification to be accepted.

47.1.2.6 All other service related troubles not covered above are to be considered non-emergency in nature.

47.1.2.7 The system equipment must automatically notify the Contractor's remote diagnostic center of any major loss of service.

47.1.2.8 The Contractor must, upon receipt of a service call, for non-critical or major system failure calls, proceed to:

- i. Use best efforts to determine, by data terminal or physical inspection, the origins and solutions to the problem.
- ii. Begin a trouble report showing the time the problem was reported and nature of the problem.
- iii. Dispatch service technicians, if necessary, and proceed diligently to correct any failures.

47.1.2.9 The Maintenance Costs should be provided by using the form "Appendix A: Annual Maintenance Service Costs".

47.2 OTHER ANNUAL RECURRING COSTS

47.2.1 For each proposal (Base, Base [Add Alt-I], Base Add [Alt-II], etc) submitted, provide the annual recurring cost. At a minimum, the response should include the estimated number of utility poles, the owner(s) of the utility poles, and the annual per pole attachment fee.

47.2.2 Any other annual recurring costs or fees identified by the vendor should also be included.

47.2.3 This information for the Base Proposal and Add Alternates will be provided by using the form "Appendix A: Estimated Annual Recurring Costs".

**** END OF SECTION B ****



Appendix A: RFP Response Forms



Appendix A: Required Response Forms

Instructions: The RFP forms section contains the following documents that **need to be submitted** with your RFP response.

#	Form
BASE PROPOSAL & ADD ALTERNATE FORMS	
The following forms are to be submitted as a part of your RFP Response	
1	Appendix A: Signature Page
2	Appendix A: Vendor's Signed Acceptance Form
3	Appendix A: Vendor Questionnaire Form
4	Appendix A: Comply / Exception Form
5	Appendix A: References
6	Appendix A: Warranties (Materials and Workmanship)
7	Appendix A: Price Summary Form
8	Appendix A: Total Cost of Ownership
9	Appendix A: Base Proposal [Add Alt-I] Network Construction and Make Ready Costs
10	Appendix A: Add Alt-II Network Construction and Make Ready Costs
11	Appendix A: Add Alt-III Network Construction and Make Ready Costs
12	Appendix A: Add Alt-IV Network Construction and Make Ready Costs
13	Appendix A: Add Alt-V Network Construction and Make Ready Costs
14	Appendix A: Add Alt-VI Network Construction and Make Ready Costs
15	Appendix A: Add Alt-VII Network Construction and Make Ready Costs
16	Appendix A: Estimated Distance and db Loss
17	Appendix A: Bidder's Project Scope & Schedule
18	Appendix A: Estimated Annual Recurring Costs
19	Appendix A: Annual Maintenance Service Costs
20	Appendix A: Time and Materials Rate Schedule
21	Appendix A: Per Foot Aerial & Underground Costs

Your bid response must include a completed copy of each form above, in the order listed above, and your completed form(s) in an electronic format (.xls) also.

Failure to submit each of the above forms may be cause for rejection of the bid response.

IMPORTANT NOTE – BIDS SUBMITTED WITHOUT A BID BOND / CHECK WILL BE REJECTED AND NOT CONSIDERED FURTHER

Please Note: Response forms can be downloaded at the Plante Moran website. For a copy of the Request for Proposal or to download the forms, please visit: <http://www.plantemoran.com/apps/mcs/rfp/default.asp>. If you have not previously registered with this site, you will need to do so to access the files. Please contact the Plante & Moran person(s) listed in the RFB document, if you have questions about obtaining the RFB.



Appendix A: Signature Page

Signature

Company Name

Print Name

Company Address

Title

City / State / Zip Code

Telephone #

Fax #

Purchase Order E-mail Address

Federal Tax ID #

Contact E-mail Address

- * The above individual is authorized to sign on behalf of the company submitting this proposal.
- * Proposals must be signed by an official authorized to bind the provider to its provisions for at least a period of 90 days.
- * Please ensure that updated vendor information is on file with the County's Purchasing Division.



Appendix A: Vendor's Signed Acceptance Form

Acknowledgment of Addenda

Addendum #1:	Addendum #2:	Addendum #3:
Dated _____ Initials _____	Dated _____ Initials _____	Dated _____ Initials _____

Other Acknowledgments

On this _____ day of _____, 20____, the undersigned declares that he/she has carefully examined the Bidder's Instructions/Conditions for this Bid, enclosed a bid bond and will honor all purchase orders, prices and specifications set forth in the bid.

_____ **Bid Bond** A bid security deposit must be submitted, in the form of a Certified/Cashiers Check or a Bid Bond issued by a company authorized to do business in the State of Michigan. If submitting a **Bid Bond, it must be equal to 5%** of the total base bid price must accompany each bid. If submitting a **Certified/Cashiers Check, it must be equal to 10%** of the total base bid price.

It is further understood and agreed that the Owner reserves the right to accept or reject any part of or the complete bid and to waive any informality in this bid for any reason which it deems will be in the best interest of the Owner

Having familiarized ourselves with the local conditions affecting the cost of the project; and having attached to this bid form all required documents, we hereby propose to furnish all labor, materials, equipment, transportation, fuel and incidentals necessary for the completion of the project in a workmanlike manner in accordance with the specifications, other documents, and addenda thereto, and agree that if this bid is accepted, we will enter into a contract for the project and will fully comply with the specifications. Attach additional sheets if necessary.

Name of Company _____

Authorized Signature _____

Printed / Typed Name of Authorized Signer _____



Appendix A: Vendor Questionnaire Form

Company Name			
Contact Name			
Address			
Phone			
Fax			
E-mail / Web Address			
Project Contract: Name / Phone / E-mail			
Contracting Classification:	General ()	Sub ()	Supplier ()
Services provided by your			
Primary Services:			
Other Services:			
Business Structure:	Corporation ()	Partnership ()	Sole Proprietor ()
Number of years in business as the company named above:			
Work Force:	Administrative	Field (Avg.)	Other
Companies largest single	\$		
Annual gross volumes for last three (3) years:	2006	2005	2004
	\$	\$	\$
Name of your bonding company:			
Bonding Limits:			
Limits:	Single Project	\$	Aggregate Capacity \$
Contact who can verify limits:			
Address:			
Insurance limits:	Attach current certificate(s) copies showing limits you carry.		
Geographical area of operations for your firm:			
References by type:	Name / Address	Phone No. / E-mail	
Business:			
Business:			
Financial:			
Contracting:			
Contracting:			
Signature:			Date:
Printed Name / Title:			



Appendix A: Comply / Exception Form

Sections A: GENERAL TERMS AND CONDITIONS

Please list any exceptions and state the reason for the exception.

Section #	Exception and Reason

Section B: PROJECT REQUIREMENTS & SPECIFICATIONS

Please list any exceptions and state the reason for the exception.

Section #	Exception and Reason

Section C: CONTRACT

Please list any exceptions and state the reason for the exception.

Section #	Exception and Reason

OTHER EXCEPTIONS

Please list any exceptions and state the reason for the exception.

Section	Exception and Reason

Signature: _____

Printed Name: _____



Appendix A: References

Please provide three (3) references with configurations installed similar to that which has been proposed. Please use additional sheets if necessary. Reference must be within the last twelve (12) months

Company Name:	
Address:	
Contact Name:	
Phone Number:	
E-mail:	
Description:	
Date of Installation:	
Environment:	

Company Name:	
Address:	
Contact Name:	
Phone Number:	
E-mail:	
Description:	
Date of Installation:	
Environment:	

Company Name:	
Address:	
Contact Name:	
Phone Number:	
E-mail:	
Description:	
Date of Installation:	
Environment:	

Signature: _____

Printed Name: _____

Attach any additional experience of note following this page.

Washtenaw County
Wide Area Fiber Network RFP # 6353



<< Provide description of your workmanship warranty >>

Support Describe the available support/maintenance services for your organization. Please use additional pages if necessary

Phone Support: << Provide description of the phone support available for post sign-off services >>

On-Site Support: << Provide description of the on-site available for post sign-off services >>

Rate Schedule for emergency repair services: << Please provide this information using the form Appendix A: Time and Materials Rate Schedule>>

Other Support Service Programs: << Provide description of the phone support available for post sign-off services >>

Authorized Signature:



Appendix A: Price Summary Form

Segment (WAN, In-Building, & Capped Make Ready)	OPTION-A	OPTION-B
Base Proposal		
Base Proposal [Add Alternate - I]		N/A
Base Proposal [Add Alternate - II]		
Performance Bond <i>(Performance bond based on total for Base Bid [Option-A], Add Alt-I, and Add Alt-II only)</i>		N/A
		N/A
Total for Base Proposal [Option-A]		N/A

Add Alt. (II-VI) are INCREMENTAL costs from the Base Bid

	OPTION-A	OPTION-B
Add Alternate - III		N/A
Add Alternate - IV		N/A
Add Alternate - V		N/A
Add Alternate - VI		N/A
Add Alternate - VII		N/A

Note: If proposing on a section of a proposal (i.e. Base, Base [Add Alt-I], Add Alt-II, etc.) you must provide responses to all the options associated with that proposal. The totals for the Base Proposal and Add Alternates (if applicable) are obtained from their respective "<Proposal> Network Construction and Make Ready Costs" price response forms.

Performance Bond Cost of Every \$1,000	\$
---	----

Initial of Authorized Representative: _____

Date: _____



Appendix A: Total Cost of Ownership

Proposal ^{*2}	Annual Recurring Costs			# of Years	Estimate TCO for Stated Years ^{*1}
	Capital Cost (Build, Make Ready, Permits, etc)	Pole Attachment Fees and any Other Recurring Fees	Service Level Agreement (See RFP for req.)		
Base Proposal [Option-A]				5	
Base Proposal [Add Alternate - I]				5	
Base Proposal [Add Alternate - I]				5	
Add Alternate - III				5	
Add Alternate - IV				5	
Add Alternate - V				5	
Add Alternate - VI				5	
Add Alternate - VII				5	

Note: 1: Estimate TCO for Stated Years is to be calculated using the formula: Capital Cost + # of Years * Est. Annual Recurring Cost

Note: 2: All add alternate proposal costs must be shown as INCREMENTAL cost from the Base proposal.

Initial of Authorized Representative: _____

Date: _____



Appendix A: Definition of Terms

Wide Area Fiber Network

Wide Area Fiber Network costs are defined as the costs for the outside cable plant. This includes the cost for fiber (star network and where applicable the ring network) between the source building and the destination building, access to the building from the final power pole (routing aerial or underground), penetration of the wall to enter the building, up to 50 feet of fiber pull in the building, splice box, termination, testing, and documentation.

In-Building Work

In building work cost is the cost for each building including all costs beyond the 50 feet splice box termination point (as defined in the Wide Area Fiber Network above) to the building MDF. This includes all the materials, labor, splice boxes, terminations, testing and documentation.

Capped Make Ready Cost

The make ready cost shown for each segment in the bid response shall include all costs for any design, mapping, permits, right-of-way acquisitions, and any other applicable requirements not already provided or separately identified herein. It shall include all permits and application fees, make ready work, and other incidental fees and charges that may occur prior to, or during, the construction of this project. The sole exception is the long-term pole attachment fees. All make ready costs must be included in the bid response and capped - not subject to increase.

Notes

- 1 If the MDF in a building is located within a 50 foot fiber run from the building entry point, the exterior cable will be extended to the MDF and terminated in a rack or wall mount termination box. This cost is to be included in the "Wide Area Fiber Network" section of the appropriate price response forms.
- 2 If the MDF in a building is NOT located within a 50 foot fiber run from the building entry point, the exterior cable must be transitioned to an Interior Plenum rated cable at a splice box at or near the building entry point (max. of 50 feet distance). The interior plenum rated cable will be carried in a innerduct to the building MDF and terminated in a rack or wall mounted termination box as described in Appendix B. This cost from the transition point (splice box) to the MDF is to be included in the appropriate price response form for that building.
Option: The exterior cable can be run within the building to the MDF if encased in a metal conduit.

Washtenaw County
Wide Area Fiber Network RFP # 6353



Appendix A: Site Addresses

Bldg #	Site Information	
	Building	Address
Base Bid: Washtenaw County Sites		
1	County Administration	220 North Main Street, Ann Arbor
2	Service Center (Zeeb Road)	705 Zeeb Road
3	Human Services (Towner)	555 Towner Road, Ypsilanti
4	Mental Health (Ellsworth)	2140 Ellsworth Road, Ann Arbor
5	Service Center (Hogback)	2201 Hogback Road, Ann Arbor
Base Bid [Add Alt-I]: Washtenaw County Sites		
1	Head Start (Ypsilanti)	1661 Leforge, Ypsilanti
2	Delonis Center	312 W. Huron, Ann Arbor
3	ETCS	302 Harriet Street, Ypsilanti
4	ECGC	415 W. Michigan Avenue, Ypsilanti
5	Ypsilanti Court Bldg	7200 Huron River Drive, Ypsilanti Twp.
6	Parks & Rec.	2230 Platt Road, Ann Arbor
7	Juvenile Court	2270 Platt Road, Ann Arbor
8	HVCG	2940 Ellsworth Road, Ann Arbor
9	Chelsea Court	122 S. Main Street, Chelsea
10	Saline Court Building	750 N. Maple, Saline
Base Bid [Add Alt-II]: Washtenaw County Sites		
1	County Administration	220 North Main Street, Ann Arbor
2	Mental Health (Ellsworth)	2140 Ellsworth Road, Ann Arbor
Add Alt-III: Oakland County Connection		
1	Oakland County	South Lyon: Hand-off to Oakland County Fiber Network
Add Alt-IV: MERIT Sites		
1	University of Michigan Credit Union	333 E. William Ann Arbor, Mi. 48104
2	National Center for Manufacturing Sciences	3025 Boardwalk Ann Arbor, Mi. 48108-3266
3	Mathematical Reviews	416 Fourth St. Ann Arbor, Mi 48107
4	Saline District Library	555 North Maple Road Saline, Mi 48176
5	Cleary University	3601 Plymouth Road Ann Arbor, Mi 48105
6	Concordia University	4090 Geddes Rd Ann Arbor, Mi. 48105
7	Washtenaw Community College-Western Center	7920 Jackson Road Ann Arbor, Mi. 48103

Washtenaw County
Wide Area Fiber Network RFP # 6353



Bldg #	Site Information	
	Building	Address
8	University of Phoenix	315 E Eisenhower Pkwy Ann Arbor, MI 48108
Add Alt-V: Eastern Michigan University Sites		
1	EMU Foundation Building	1349 S. Huron St, Ypsilanti 48197.
2	Gary Owen Building	300 West Michigan Ave, Ypsilanti 48197.
Add Alt-VI: Local Units of Govt. (LUG) / City, Village, Township (CVT) Sites		
1	Ann Arbor Twp.	3792 Pontiac Trail, Ann Arbor
2	Augusta Twp.	8021 Talladay Road, Whittaker
3	Bridgewater Twp.	10990 Clinton Road, Clinton
4	Dexter Twp.	8140 Main Street, Dexter
5	Freedom Twp.	11508 Pleasant Lake Road, Manchester
6	Lima Twp.	11452 Jackson Road, Chelsea
7	Lodi Twp.	3755 Pleasant Lake Road, Ann Arbor
8	Lyndon Twp.	17751 N Territorial Road, Chelsea
9	Manchester Twp.	275 S. Macomb, Manchester Twp.
10	City of Milan	147 Wabash Street, Milan
11	Northfield Twp./ Police	8350 Main Street, Whitmaore Lake
12	Pittsfield Twp.	6201 W. Michigan Avenue, Pittsfield
13	Salem Twp.	9600 Six Mile Road, Salem
14	Scio Twp.	827 N. Zeeb Road, Scio Twp.
15	Sharon Twp.	18010 Pleasant Lake Road, Manchester
16	Superior Twp.	3040 N. Prospect, Superior Twp.
17	Sylvan Twp.	18027 Old U.S. Highway 12, Chelsea
18	Webster Twp.	5665 Webster Church Road, Webster Twp.
19	York Twp.	11560 Stoney Creek Road, York Twp.
20	City of Chelsea	305 S. Main Street, Chelsea
21	Sheriff Substation #9	3792 Pontiac Trail, Ann Arbor
22	Sheriff Substation #4	912 City Street, Manchester
23	Sheriff Substation #7	1055 North Zeeb Road, Ann Arbor
24	Sheriff Substation #6	3040 North Prospect, Ypsilanti
25	Sheriff Substation #5	11560 Stoney Creek Road, Milan
26	Sheriff Substation #8	1405 Holmes Road, Ypsilanti
Add Alt-VII: State of Michigan Sites		
1	FRS Ann Arbor	3810 Packard Rd, Ann Arbor
2	FRS Ann Arbor Probation	101 E. Huron St., Ann Arbor
3	FRS Ann Arbor Parole	738 Airport Blvd, Ann Arbor
4	FRS Branch 109	353 N. Maple, Ann Arbor

Washtenaw County
Wide Area Fiber Network RFP # 6353



Bldg #	Site Information	
	Building	Address
5	FRS FIA Ann Arbor	2121 W. Stadium Dr, Ann Arbor
6	FRS Washtenaw Cty Friend of the Court	101 E. Huron, Ann Arbor
7	FRS Waterloo Recreation Area 1	16345 McClure Rd, Chelsea
8	FRS Cassidy Lake Boat	18901 Waterloo Rd, Chelsea
9	FRS Branch 112	1113 S. Main, Chelsea
10	FRS Forensic Center	8303 Platt Rd, Saline
11	FRS Maxey Training Center	9036 M-36 East, Whitmore Lake
12	FRS Huron Valley Center	3511 Bemis Rd, Ypsilanti
13	FRS Mid Washtenaw Corner	47 N. Huron St, Ypsilanti
14	FRS Ypsilanti Clinic	555 Towner Road, Ypsilanti
15	FRS Huron Valley Men's (HVM)	3201 Bemis Rd, Ypsilanti
16	FRS Branch 113	2720 Washtenaw, Ypsilanti
17	FRS Washtenaw County (Center St)	22 Center Rd, Ypsilanti
18	MSP Ypsilanti	1501 S Huron St, Ypsilanti
19	Washtenaw Armory	7400 S. Huron River Dr, Ypsilanti



Appendix A: Base Proposal Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

BASE PROPOSAL (Ring and Point-to-Point)				Option-A	WAN Costs		In-Building Costs		Total (for building pair)
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	
1	County Admin. Building	Service Center (Zeeb Road)	Ring Segment	24					
2	Service Center (Zeeb Road)	Human Services (Towner)	Ring Segment	24					
3	Human Services (Towner)	Mental Health (Ellsworth)	Ring Segment	24					
4	Mental Health (Ellsworth)	County Service Bldg	Ring Segment	24					
5	County Service Bldg (Hogback)	County Admin. Building	Ring Segment	24					
6	County Admin. Building [Route-1]	Mental Health (Ellsworth)	Point-to-Point	24					
7	County Admin. Building [Route-2]	County Admin. Building	Point-to-Point	24					
7	Total of <u>CAPPED</u> Make Ready Costs								
Total for BASE PROPOSAL Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									
BASE PROPOSAL (Ring and Point-to-Point)				Option-B					
	Source	Destination	Topology	Strand Count					
1	County Admin. Building	Service Center (Zeeb Road)	Ring Segment	48					
2	Service Center (Zeeb Road)	Human Services (Towner)	Ring Segment	48					
3	Human Services (Towner)	Mental Health (Ellsworth)	Ring Segment	48					
4	Mental Health (Ellsworth)	County Service Bldg	Ring Segment	48					
5	County Service Bldg (Hogback)	County Admin. Building	Ring Segment	48					
6	County Admin. Building [Route-1]	Mental Health (Ellsworth)	Point-to-Point	48					
7	County Admin. Building [Route-2]	County Admin. Building	Point-to-Point	48					
7	Total of <u>CAPPED</u> Make Ready Costs								
Total for BASE PROPOSAL Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-B									

Authorized Representative Initials: _____

Page of _____

Washtenaw County
Wide Area Fiber Network RFP #6353



Appendix A: Base Proposal [Add Alt-I] Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

BASE Proposal [Add Alt-I] (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		Total (for building pair)
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	
1	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Head Start (Ypsilanti)	Point-to-Point	12					
2	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Delonis Center	Point-to-Point	12					
3	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	ETCS	Point-to-Point	12					
4	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	ECGC	Point-to-Point	12					
5	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Ypsilanti Court Bldg	Point-to-Point	12					
6	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Parks & Rec.	Point-to-Point	12					
7	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Juvenile Court	Point-to-Point	12					
8	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	HVCG	Point-to-Point	12					
9	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	City of Chelsea	Point-to-Point	12					
10	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Saline Court Building	Point-to-Point	12					
11	Total of CAPPED Make Ready Costs								
Total for BASE PROPOSAL [Add Alt-I] Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									

Authorized Representative Initials: _____

Page _____ of _____



Appendix A: Add Alt-II Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

Add Alt-II (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	Total (for building pair)
1	County Admin. Building	Mental Health (Ellsworth)	Point-to-Point	24					
	(Must have seprate service entrance from Ring topology; Route should be geographically diverse that the ring topology)								
2	Total of CAPPED Make Ready Costs								
Total for Add Alt-II Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									
Add Alt-II (Point-to-Point)				Option-B					
1	County Admin. Building	Mental Health (Ellsworth)	Point-to-Point	48					
	(Must have seprate service entrance from Ring topology; Route should be geographically diverse that the ring topology)								
2	Total of CAPPED Make Ready Costs								
Total for Add Alt-II Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-B									

Authorized Representative Initials: _____

Page _____ of _____



Appendix A: Add Alt-III Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

Add Alt-III (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		Total (for building pair)
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	
1	County Admin. Building	South Lyon (Hand-off to Oakland Co Network)	Point-to-Point	12					
2	Total of CAPPED Make Ready Costs								
Total for Add Alt-III Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									

Authorized Representative Initials: _____

Page _____ of _____



Appendix A: Add Alt-IV Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

Add Alt-IV (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	Total (for building pair)
1	County Admin. Building	University of Michigan Credit Union	Point-to-Point	12					
2	County Admin. Building	National Center for Manufacturing Sciences	Point-to-Point	12					
3	County Admin. Building	Mathematical Reviews	Point-to-Point	12					
4	County Admin. Building	Saline District Library	Point-to-Point	12					
5	County Admin. Building	Cleary University	Point-to-Point	12					
6	County Admin. Building	Concordia University	Point-to-Point	12					
7	County Admin. Building	Washtenaw Community College-Western Center	Point-to-Point	12					
8	County Admin. Building	University of Phoenix	Point-to-Point	12					
9	Total of CAPPED Make Ready Costs								
Total for Add Alt-IV Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									

Authorized Representative Initials: _____

Page _____ of _____



Appendix A: Add Alt-V Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

Add Alt-V (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		Total (for building pair)
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	
1	EMU Foundation Building	Gary Owen Building	Point-to-Point	12					
9	Total of CAPPED Make Ready Costs								
Total for Add Alt-V Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									

Authorized Representative Initials: _____

Page of



Appendix A: Add Alt-VI Network Construction and Make Ready Costs

If you are proposing this portion (base, Add Alt.-I, II etc.), you must propose on all sites and all add alternates associated with this portion of the network. All Add Alternate costs are INCREMENTAL costs from the Base Proposal. The Wide Area Fiber Network (materials) and Wide Area Fiber Network (labor) components may be shown as a single component. However, the cost for the In-Building work must be identified specifically by each building. A detailed bill of materials for the Wide Area Fiber Network and the In-Building Work need not be submitted with the response, but will be required at a later stage. The **capped** make ready cost will only apply for that portion of network described for that Base/Add Alternate. The totals for the portion of the bid and associated alternates (if applicable) for this portion of the bid must be entered in the Price Summary Form.

Add Alt-VI (Point-to-Point)				Option-A	WAN Costs		In-Building Costs		Total (for building pair)
	Source	Destination	Topology	Strand Count	Materials	Labor	Materials	Labor	
1	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Ann Arbor Twp.	Point-to-Point	12					
2	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Augusta Twp.	Point-to-Point	12					
3	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Bridgewater Twp.	Point-to-Point	12					
4	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Dexter Twp.	Point-to-Point	12					
5	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Freedom Twp.	Point-to-Point	12					
6	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Lima Twp.	Point-to-Point	12					
7	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Lodi Twp.	Point-to-Point	12					
8	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Lyndon Twp.	Point-to-Point	12					
9	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Manchester Twp.	Point-to-Point	12					
10	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	City of Milan	Point-to-Point	12					
11	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Northfield Twp./ Police	Point-to-Point	12					
12	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Pittsfield Twp.	Point-to-Point	12					
13	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Salem Twp.	Point-to-Point	12					
14	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Scio Twp.	Point-to-Point	12					
15	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sharon Twp.	Point-to-Point	12					
16	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Superior Twp.	Point-to-Point	12					
17	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sylvan Twp.	Point-to-Point	12					

Washtenaw County
Wide Area Fiber Network RFP #6353



18	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Webster Twp.	Point-to-Point	12					
19	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	York Twp.	Point-to-Point	12					
20	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (Chelsea)	Point-to-Point	12					
21	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (?)	Point-to-Point	12					
22	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (Manchester)	Point-to-Point	12					
23	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (?)	Point-to-Point	12					
24	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (Ypsilanti)	Point-to-Point	12					
25	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (?)	Point-to-Point	12					
26	Closest Washtenaw County Hub Site on the ring: [Identify Hub Site]	Sheriff Substation (Ypsilanti-2)	Point-to-Point	12					
27	Total of CAPPED Make Ready Costs								
Total for Add Alt-VI Enter this total in the "Section 00100: Price Summary Form" for the appropriate section - OPTION-A									

Authorized Representative Initials: _____

Page of

Washtenaw County
Wide Area Fiber Network RFP #6353



Appendix A: Estimated Distance and db Loss

Based on the route for each segment, please complete the ESTIMATED distance and ESTIMATED db loss for each fiber run. For example **the estimated distance and db loss from source node to the destination node** e.g. Wash Co (County Admin) to Service Center (Zeeb Road) site: estimated distance in feet is 27,474 with an estimated db loss of 13.2db @1310nm and 10.45 @1550nm.

#	Star / Ring Source Site	Star / Ring Destination Site	Strands	Estimated	Estimated db Loss		Owner / Proposalder Remarks
				Distance	1310nm	1550nm	
Base Proposal: Washtenaw County Hub Sites (Ring)							
1	County Admin. Building	Service Center (Zeeb Road)	24 / 48				
2	Service Center (Zeeb Road)	Human Services (Towner)	24 / 48				
3	Human Services (Towner)	Mental Health (Ellsworth)	24 / 48				
4	Mental Health (Ellsworth)	County Service Bldg	24 / 48				
5	County Service Bldg	County Admin. Building	24 / 48				
Base Proposal [Add Alt-I]: Washtenaw County Spoke Sites (Point-to-Point)							
1	< State Wash Co. Ring Site>	Head Start (Ypsilanti)	12 / -				
2	< State Wash Co. Ring Site>	Delonis Center	12 / -				
3	< State Wash Co. Ring Site>	ETCS	12 / -				
4	< State Wash Co. Ring Site>	ECGC	12 / -				
5	< State Wash Co. Ring Site>	Ypsilanti Court Bldg	12 / -				
6	< State Wash Co. Ring Site>	Parks & Rec.	12 / -				
7	< State Wash Co. Ring Site>	Juvenile Court	12 / -				
8	< State Wash Co. Ring Site>	HVCG	12 / -				
9	< State Wash Co. Ring Site>	City of Chelsea	12 / -				
10	< State Wash Co. Ring Site>	Saline Court Building	12 / -				
Base Proposal [Add Alt-II]: Washtenaw County Hub Sites (Point-to-Point)							
1	County Admin. Building	Mental Health (Ellsworth)	48 / 96				
Add Alt-III: Washtenaw Co. - Oakland Co. (Point-to-Point)							

Washtenaw County
Wide Area Fiber Network RFP #6353



#	Star / Ring Source Site	Star / Ring Destination Site	Strands	Estimated	Estimated db Loss		Owner / Proposalder Remarks
				Distance	1310nm	1550nm	
1	County Admin. Building	South Lyon	12 / -				
	Add Alt-IV: MERIT Sites (Point-to-Point)						
1	County Admin. Building	University of Michigan Credit	12 / -				
2	County Admin. Building	National Center for	12 / -				
3	County Admin. Building	Mathematical Reviews	12 / -				
4	County Admin. Building	Saline District Library	12 / -				
5	County Admin. Building	Cleary University	12 / -				
6	County Admin. Building	Concordia University	12 / -				
7	County Admin. Building	Washtenaw Community	12 / -				
8	County Admin. Building	University of Phoenix	12 / -				
	Add Alt-V: Eastern Michigan University (Point-to-Point)						
1	EMU Foundation Building	Gary Owen Building	12 / -				
	Add Alt-VI: LUG / CVT Sites (Point-to-Point)						
1	< State Wash Co. Ring Site>	Ann Arbor Twp.	12 / -				
2	< State Wash Co. Ring Site>	Augusta Twp.	12 / -				
3	< State Wash Co. Ring Site>	Bridgewater Twp.	12 / -				
4	< State Wash Co. Ring Site>	Dexter Twp.	12 / -				
5	< State Wash Co. Ring Site>	Freedom Twp.	12 / -				
6	< State Wash Co. Ring Site>	Lima Twp.	12 / -				
7	< State Wash Co. Ring Site>	Lodi Twp.	12 / -				
8	< State Wash Co. Ring Site>	Lyndon Twp.	12 / -				
9	< State Wash Co. Ring Site>	Manchester Twp.	12 / -				
10	< State Wash Co. Ring Site>	City of Milan	12 / -				
11	< State Wash Co. Ring Site>	Northfield Twp./ Police	12 / -				
12	< State Wash Co. Ring Site>	Pittsfield Twp.	12 / -				
13	< State Wash Co. Ring Site>	Salem Twp.	12 / -				

Washtenaw County
Wide Area Fiber Network RFP #6353



#	Star / Ring Source Site	Star / Ring Destination Site	Strands	Estimated	Estimated db Loss		Owner / Proposalder Remarks
				Distance	1310nm	1550nm	
14	< State Wash Co. Ring Site>	Scio Twp.	12 / -				
15	< State Wash Co. Ring Site>	Sharon Twp.	12 / -				
16	< State Wash Co. Ring Site>	Superior Twp.	12 / -				
17	< State Wash Co. Ring Site>	Sylvan Twp.	12 / -				
18	< State Wash Co. Ring Site>	Webster Twp.	12 / -				
19	< State Wash Co. Ring Site>	York Twp.	12 / -				
20	< State Wash Co. Ring Site>	City of Chelsea	12 / -				
21	< State Wash Co. Ring Site>	Sheriff Substation #9	12 / -				
22	< State Wash Co. Ring Site>	Sheriff Substation #4	12 / -				
23	< State Wash Co. Ring Site>	Sheriff Substation #7	12 / -				
24	< State Wash Co. Ring Site>	Sheriff Substation #6	12 / -				
25	< State Wash Co. Ring Site>	Sheriff Substation #5	12 / -				
26	< State Wash Co. Ring Site>	Sheriff Substation #8	12 / -				
Add Alt-VII: State of Michigan Sites (Point-to-Point)							
1	FRS Ann Arbor	County Admin. Building	12 / -				
2	FRS Ann Arbor Probation	County Admin. Building	12 / -				
3	FRS Ann Arbor Parole	County Admin. Building	12 / -				
4	FRS Branch 109	County Admin. Building	12 / -				
5	FRS FIA Ann Arbor	County Admin. Building	12 / -				
6	FRS Washtenaw Cty Friend of	County Admin. Building	12 / -				
7	FRS Waterloo Recreation Area	County Admin. Building	12 / -				
8	FRS Cassidy Lake Boot	County Admin. Building	12 / -				
9	FRS Branch 112	County Admin. Building	12 / -				
10	FRS Forensic Center	County Admin. Building	12 / -				
11	FRS Maxey Training Center	County Admin. Building	12 / -				
12	FRS Huron Valley Center	County Admin. Building	12 / -				
13	FRS Mid Washtenaw Corner	County Admin. Building	12 / -				
14	FRS Ypsilanti Clinic	County Admin. Building	12 / -				
15	FRS Huron Valley Men's	County Admin. Building	12 / -				

Washtenaw County
Wide Area Fiber Network RFP #6353



#	Star / Ring Source Site	Star / Ring Destination Site	Strands	Estimated Distance	Estimated db Loss		Owner / Proposalder Remarks
					1310nm	1550nm	
16	FRS Branch 113	County Admin. Building	12 / -				
17	FRS Washtenaw County	County Admin. Building	12 / -				
18	MSP Ypsilanti	County Admin. Building	12 / -				
19	Washtenaw Armory	County Admin. Building	12 / -				

Authorized Representative Initials: _____

Page of _____



Appendix A: Bidder's Project Scope & Schedule

A summary of the project scope for each segment (Base Proposal, Base Proposal [Add Alt-1], etc) that the bidder is proposing must be submitted. It is to contain a summary of the work as understood by you, that needs to be performed for that segment. **Submission of this project scope / summary is mandatory.** Vendors must provide a full installation schedule showing the work flow using a graphical representation i.e. Gantt chart or similar.

<< Vendor may use a proprietary version of this form if necessary >>

Authorized Representative Initials:

Page of



Appendix A: Estimated Annual Recurring Costs

It is **MANDATORY** that the bidder provides the **annual maintenance costs only for the segments (Base Proposal and associated Add Alternates) that the bidder is proposing on**. A detailed description of the types of maintenance work covered for each segment (Base & Add Alternate) proposed must be attached. Use additional sheets if necessary to provide brief description of costs. For the private owned segments, the owner will be responsible for the annual maintenance costs, but on shared/condominium segments (if applicable), the owner shall be responsible for only the percentage of the cost relative to the strands owned. A bidders is also required to attach a Time and Materials Rate Schedule as a part of the response requirement. **Please note the annual recurring costs are**

Item #	Segment / Bid Response	Pole Owner(s)	# of Poles	Estimated Annual Costs			
				Per Pole Attachment Rate	Annual Pole Rental Fees	Other Identified Fees by Vendor	Total Estimated Annual Recurring Cost
1	Base Proposal						
2	Base Proposal [Add Alt-I]						
3	Base Proposal [Add Alt-II]						
4	Add Alt-III						
5	Add Alt-IV						
6	Add Alt-V						
7	Add Alt-VI						
8	Add Alt-VII						

Note: These costs should NOT be entered on the price summary form, but should be used when calculating the Total Cost of Ownership.

Authorized Representative Initials: _____

Page of _____

Washtenaw County
Wide Area Fiber Network RFP #6353



Appendix A: Annual Maintenance Service Costs

As an **option**, a bidder for a Base Proposal, Base Proposal [Add Alt-I], etc. can provide a turnkey or complete maintenance services.

Item #	Segment / Bid Response	Annual Maintenance Service Costs (See RFB for requirements)
1	Base Proposal	
2	Base Proposal [Add Alt-I]	
3	Base Proposal [Add Alt-II]	
4	Add Alt-III	
5	Add Alt-IV	
6	Add Alt-V	
7	Add Alt-VI	
8	Add Alt-VII	
<p>Note: These costs should NOT be entered on the price summary form, but should be used when calculating the Total Cost of Ownership.</p>		

Authorized Representative Initials:	Page of
-------------------------------------	------------

Washtenaw County
Wide Area Fiber Network RFP #6353



Appendix A: Time and Materials Rate Schedule

ALL BIDDERS ARE REQUIRED TO COMPLETE THIS FORM OR PROVIDE A SIMILAR FORM. The rates displayed in this materials and labor/time schedule will be used for costing "Time & Materials" based maintenance of the network.

<i>Item #</i>	<i>Description</i>	<i>Unit Cost</i>
Materials		
	<< Vendor may substitute this form with a proprietary version of their form >>	
Labor Cost		
Note: These costs should NOT be entered on the price summary form.		

Authorized Representative Initials:	
-------------------------------------	--

Washtenaw County
Wide Area Fiber Network RFP # 6353



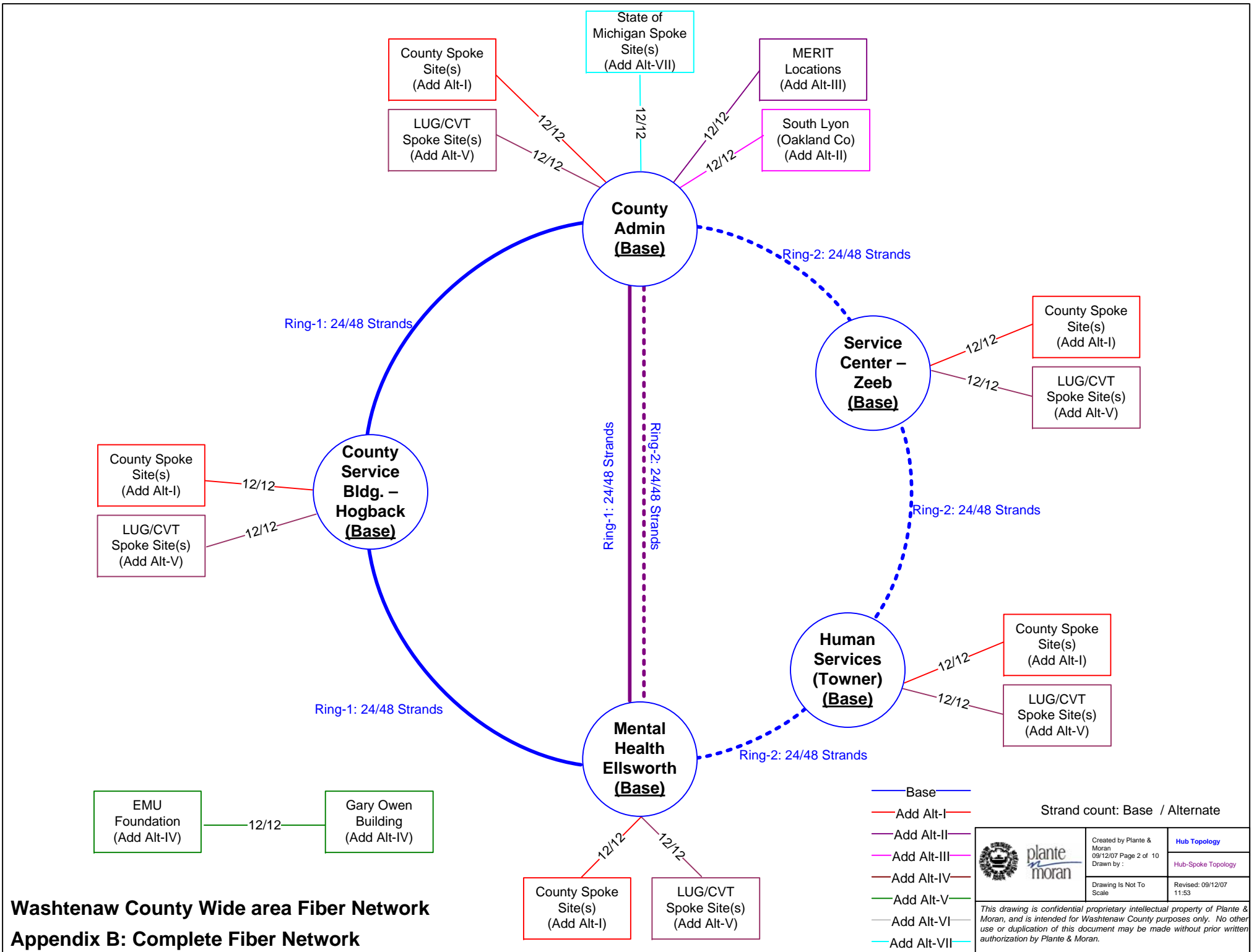
Appendix A: Per Foot Aerial & Underground Costs

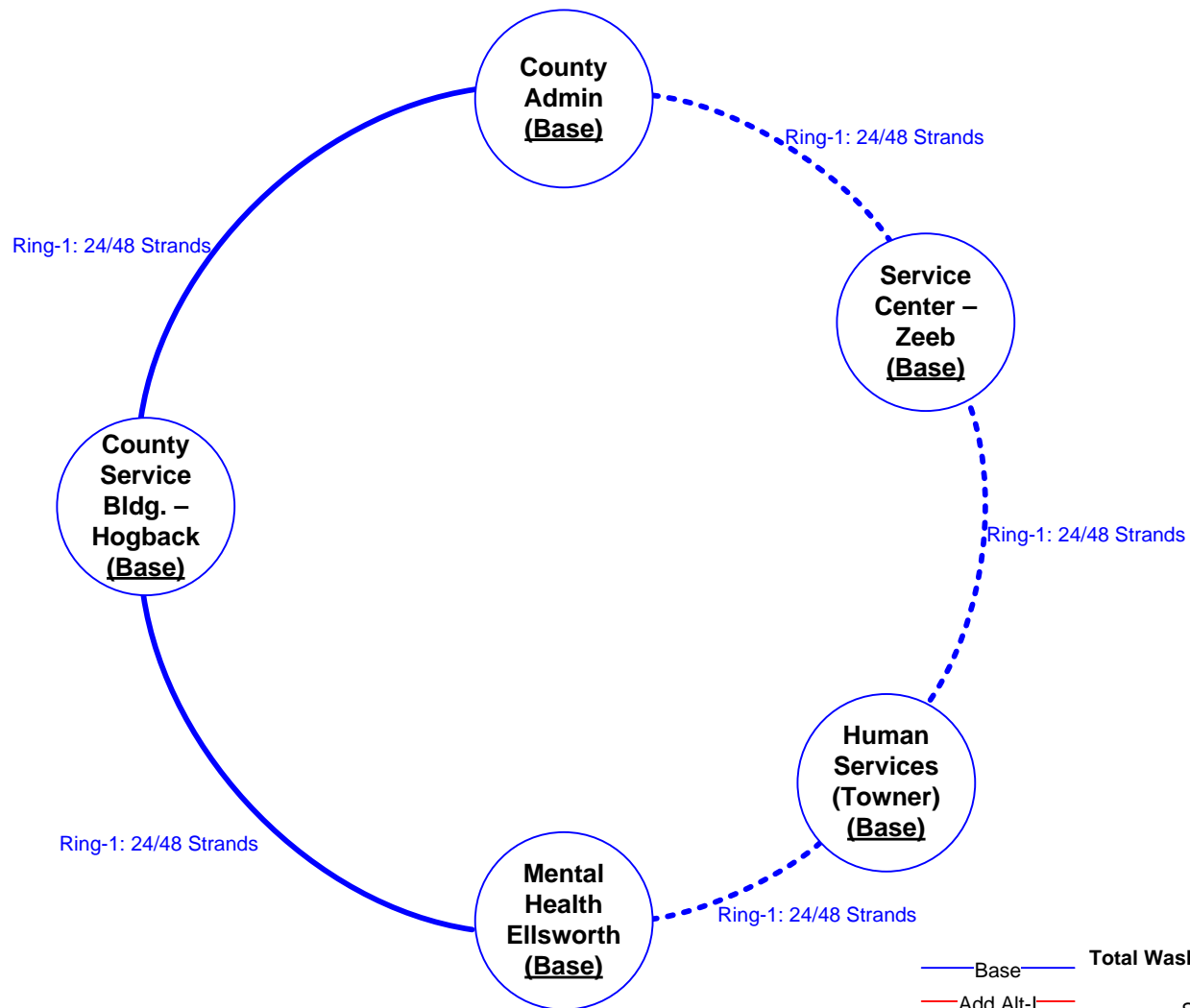
ALL BIDDERS ARE REQUIRED TO COMPLETE THIS FORM. Please refer to the Exterior Communication Pathways section of the RFP. This cost will be used for any addition(s) and/or deletion(s) for aerial or underground work.

Item #	Description	Unit Cost
Per foot cost of Aerial Work		
	Materials	
	Labor	
Per foot cost of Underground Work		
	Materials	
	Labor	
Note: These costs should NOT be entered on the price summary form.		

Authorized Representative Initials:	
-------------------------------------	--

Appendix B: Network Drawings





— Base — **Total Washtenaw County Ring Sites: 5**

— Add Alt-I —

— Add Alt-II —

— Add Alt-III —


— Add Alt-IV —

— Add Alt-V —

— Add Alt-VI —

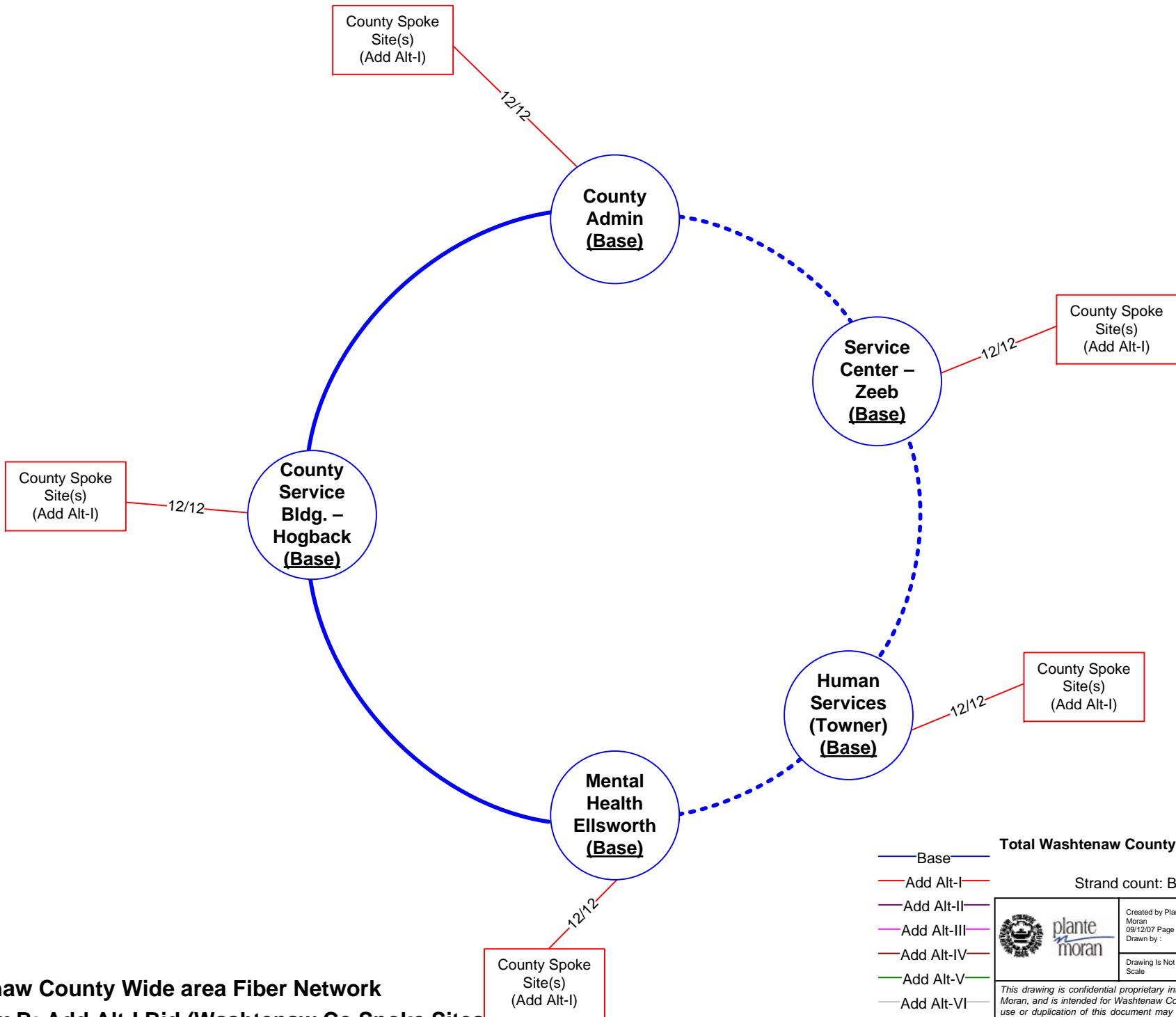
— Add Alt-VII —

Strand count: Base / Alternate

 plante moran	Created by Plante & Moran 09/12/07 Page 3 of 10 Drawn by :	Hub Topology Base
	Drawing Is Not To Scale	Revised: 09/12/07 11:53

This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.

Washtenaw County Wide area Fiber Network
Appendix B: Base Bid (Washtenaw Co Rings)



Washtenaw County Wide area Fiber Network
Appendix B: Add Alt-I Bid (Washtenaw Co Spoke Sites)

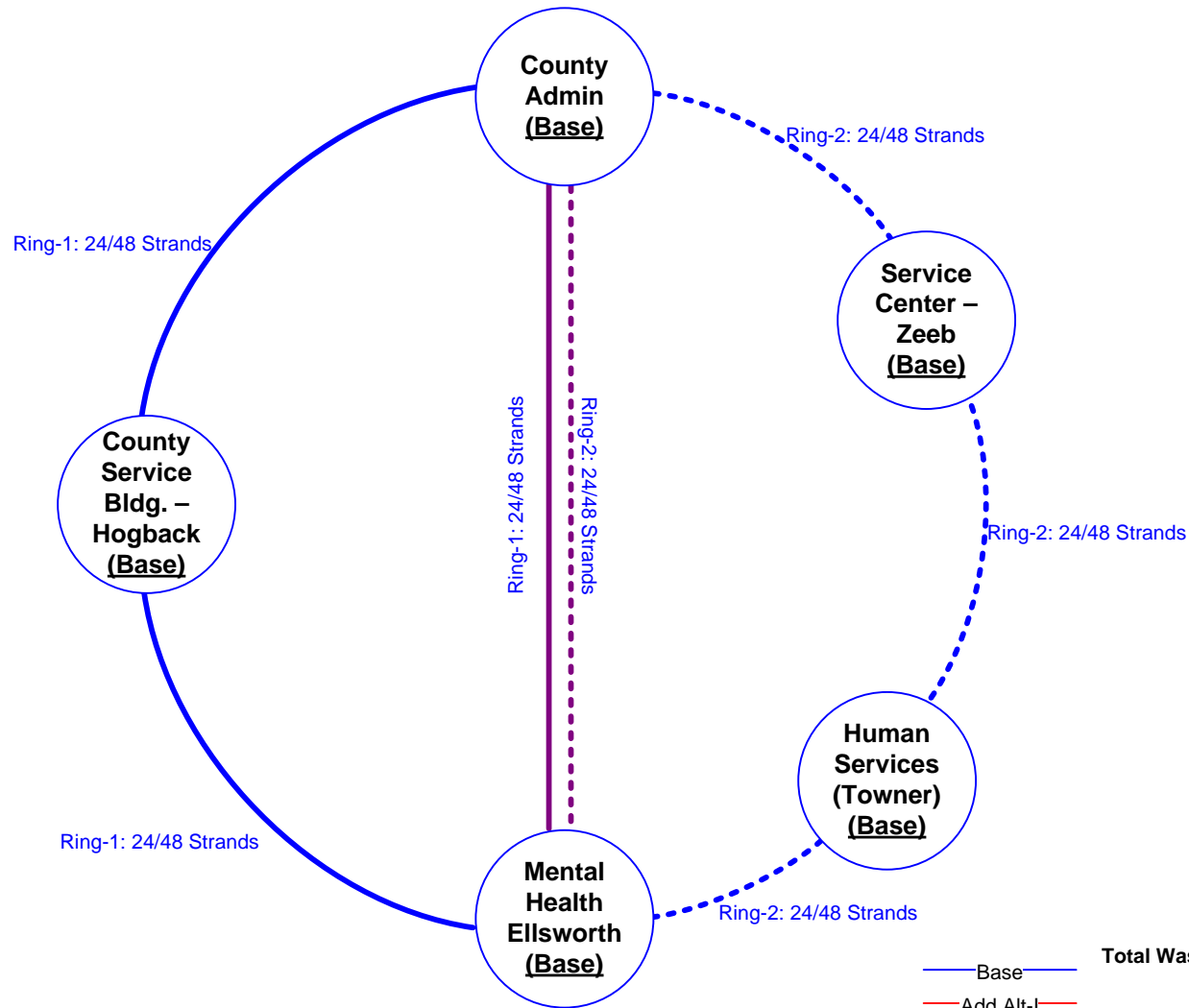
Total Washtenaw County Spoke Sites: 10

Strand count: Base / Alternate

- Base —
- Add Alt-I —
- Add Alt-II —
- Add Alt-III —
- Add Alt-IV —
- Add Alt-V —
- Add Alt-VI —
- Add Alt-VII —

	Created by Plante & Moran 09/12/07 Page 4 of 10 Drawn by :	Hub Topology Add Alt-I
	Drawing Is Not To Scale	Revised: 09/12/07 11:53

This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.



Total Washtenaw County Ring Sites: 5

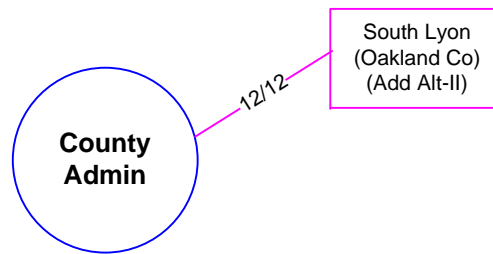
Strand count: Base / Alternate

- Base —
- Add Alt-I —
- Add Alt-II —
- Add Alt-III —
- Add Alt-IV —
- Add Alt-V —
- Add Alt-VI —
- Add Alt-VII —

	Created by Plante & Moran 09/12/07 Page 5 of 10 Drawn by :	Hub Topology Add Alt-II
	Drawing Is Not To Scale	Revised: 09/12/07 11:53

This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.

Washtenaw County Wide area Fiber Network
Appendix B: Base Bid [Add Alt-II] (Washtenaw Co Hub Point-to-Point)



Total Washtenaw – Oakland Connectivity Sites: 2

- Base —
- Add Alt-I —
- Add Alt-II —
- Add Alt-III —
- Add Alt-IV —
- Add Alt-V —
- Add Alt-VI —
- Add Alt-VII —

Strand count: Base / Alternate



plante
moran

Created by Plante & Moran
09/12/07 Page 6 of 10
Drawn by :

Hub Topology

Add Alt-III

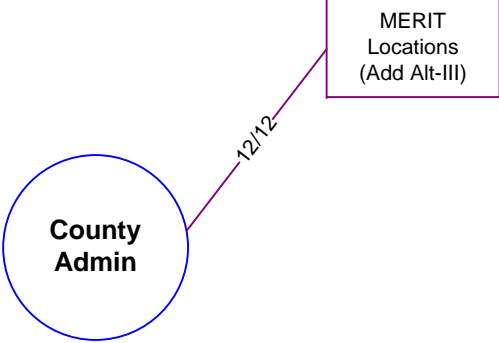
Drawing Is Not To Scale

Revised: 09/12/07
11:53

This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.

Washtenaw County Wide area Fiber Network

Appendix B: Add Alt-II Bid (Washtenaw – Oakland Connectivity)




**Washtenaw County Wide area Fiber Network
Appendix B: Add Alt-III Bid (MERIT Sites)**

Note: addition of the these sites may add additional strands on the backbone

- Base —
- Add Alt-I —
- Add Alt-II —
- Add Alt-III —
- Add Alt-IV —
- Add Alt-V —
- Add Alt-VI —
- Add Alt-VII —

Total MERIT Spoke Sites: 8

Strand count: Base / Alternate


 plante moran	Created by Plante & Moran 09/12/07 Page 7 of 10 Drawn by :	Hub Topology
	Drawing Is Not To Scale	Revised: 09/12/07 11:53
<i>This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.</i>		



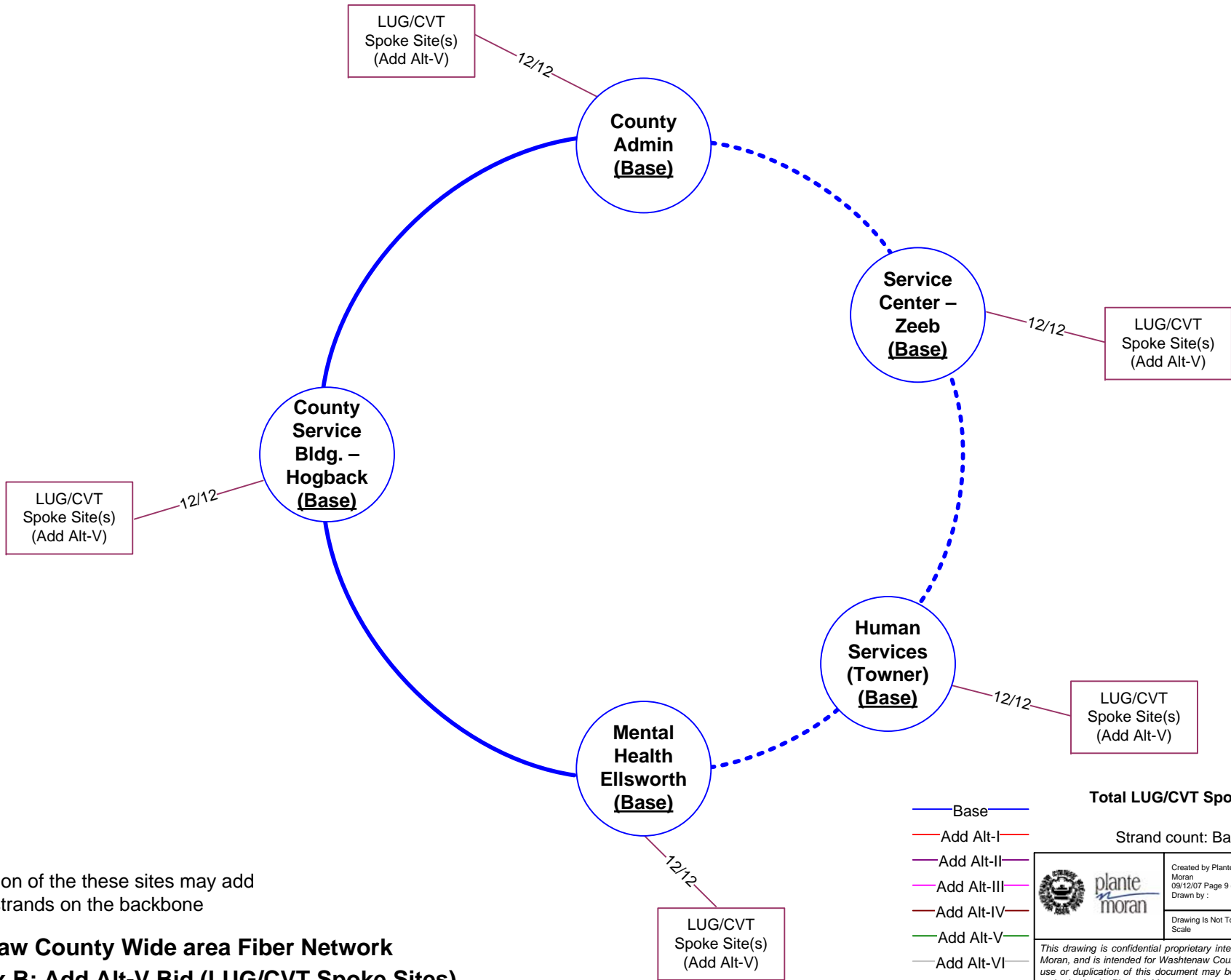
**Washtenaw County Wide area Fiber Network
Appendix B: Add Alt-IV Bid (EMU Sites)**

Note: addition of the these sites may add additional strands on the backbone

— Base —	Total EMU Sites: 2
— Add Alt-I —	Strand count: Base / Alternate
— Add Alt-II —	
— Add Alt-III —	
— Add Alt-IV —	
— Add Alt-V —	
— Add Alt-VI —	
— Add Alt-VII —	

 plante moran	Created by Plante & Moran 09/12/07 Page 8 of 10 Drawn by :	Hub Topology
	Drawing Is Not To Scale	Revised: 09/12/07 11:53

This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.




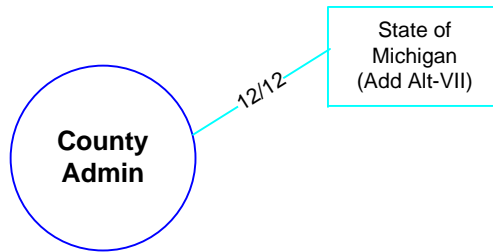
Total LUG/CVT Spoke Sites: 26

Strand count: Base / Alternate

Note: addition of the these sites may add additional strands on the backbone

**Washtenaw County Wide area Fiber Network
Appendix B: Add Alt-V Bid (LUG/CVT Spoke Sites)**

	Created by Plante & Moran 09/12/07 Page 9 of 10 Drawn by :	Hub Topology Add Alt-VI
	Drawing Is Not To Scale	Revised: 09/12/07 11:53
<small>This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.</small>		



Note: addition of the these sites may add additional strands on the backbone

Washtenaw County Wide area Fiber Network
Appendix B: Add Alt-VI Bid (State of Michigan Sites)

— Base — **Total State of Michigan Spoke Sites: 19**

— Add Alt-I — **Strand count: Base / Alternate**

— Add Alt-II —


— Add Alt-III —

— Add Alt-IV —

— Add Alt-V —

— Add Alt-VI —

— Add Alt-VII —

 plante moran	Created by Plante & Moran 09/12/07 Page 10 of 10 Drawn by :	Hub Topology Add Alt-VII
	Drawing Is Not To Scale	Revised: 09/12/07 11:53
<i>This drawing is confidential proprietary intellectual property of Plante & Moran, and is intended for Washtenaw County purposes only. No other use or duplication of this document may be made without prior written authorization by Plante & Moran.</i>		

APPENDIX C: SAMPLE CONTRACT

- ◆ Please review the attached contract – vendors should not complete the Contract for Proposal responses.
- ◆ This is an example of the contract the awarded vendor(s) will sign.
- ◆ Indicate any exceptions with the contract on the Comply / Exception Form.

SERVICE CONTRACT

(NAME OF CONTRACTOR)

AGREEMENT is made this _____ day of _____, 2007, 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.

Section 4 - The parties agree that all work done under this contract shall be completed in the United States and that none of the work will be partially or fully completed by either an offshore subcontractor or offshore business interest either owned or affiliated with the contractor. For purposes of this contract, the term, "offshore" refers to any area outside the contiguous United States, Alaska or Hawaii.

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:

a. Contractor shall maintain statutory workers compensation and employers liability insurance. Limits shall be no less than \$1,000,000 for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease, and \$1,000,000 disease – policy limits.

b. Contractor waives all rights against the County of Washtenaw, its agents, public officials, employees and volunteers for recovery of damages to the extent these damages are covered by workers compensation and employers liability insurance obtained by the Contractor.

c. If Contractor is self-insured for purposes of workers compensation, the Contractor must submit a copy of a current letter, permit or certification issued by the appropriate state agency.

2. Commercial General Liability and Umbrella Liability Insurance:

a. Contractor shall maintain commercial general liability (CGL), and, if necessary, commercial umbrella/excess insurance with a limit of not less than \$5,000,000 each occurrence. If the CGL insurance contains a general aggregate limit, such limit shall apply separately to this project.

b. CGL insurance shall be written on ISO occurrence form or a substitute form providing equivalent coverage and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract, including this contract and all contracts relative to this project.

c. The County of Washtenaw shall be included as an additional insured under the CGL, using ISO additional insured endorsement CG 20 26 11/85, if available, or a substitute endorsement providing equivalent coverage, and under the commercial umbrella, if any. This insurance shall apply as primary insurance with respect to any other insurance or self-insurance program afforded to the County of Washtenaw.

There shall be no endorsement or modification of the CGL insurance coverage limiting the scope of coverage for Completed Operations coverage

d. Contractor waives all rights against the County of Washtenaw and its agents, public officials, employees, and volunteers to the extent these damages are covered by the CGL or commercial umbrella liability maintained pursuant to this agreement.

3. Business Auto and Umbrella Liability Insurance:

a. Contractor shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$5,000,000 each accident.

b. Such insurance shall cover liability arising out of any auto, including owned, non-owned, and hired.

c. Business auto policy shall be endorsed to provide statutory Michigan No-Fault coverages.

d. Contractor waives all rights against the County of Washtenaw and its agents, public officials, employees, and volunteers for recovery of damages to the extent these damages are covered by the business auto liability or commercial umbrella insurance obtained pursuant to this agreement.

4. Insurance companies, named insureds and policy forms may be subject to the approval of the Washtenaw County Administrator, if requested by the 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 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 – HOLDHARMLESS CLAUSE

The Contractor shall defend, pay on behalf of, and hold harmless the County of Washtenaw, its employees, agents, public officials, and volunteers from and against any and all losses, damages, expenses, claims, suits and demand of whatever nature resulting from damages or injuries, including death, to any persons or property, and including any claim for losses incurred by reason of project delay, impact (soft) costs, or other intangible losses that might result from Contractor's late or defective performance, caused by or arising out of any action, omission or operation performed in connection with work attributable to the Contractor, any Sub-contractor, any Sub-subcontractor, any materialmen, any of their respective employees, agents, servants or representatives; provided, however, the Contractor shall not be required to indemnify the County of Washtenaw, its employees, agents, public officials and volunteers for any damages or injuries, including death, to any person or property caused solely and exclusively by the negligence of the County of Washtenaw, its employees, public officials, and volunteers.

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, 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 current 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 State of Michigan for Washtenaw County. 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 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.

ATTESTED TO: WASHTENAW COUNTY

By: _____ By: _____
Lawrence Kestenbaum (DATE) Robert E. Guenzel (DATE)
County Clerk/Register County Administrator

APPROVED AS TO CONTENT: CONTRACTOR

By: _____ By: _____
(DEPARTMENT HEAD) (DATE) (CONTRACTOR'S NAME) (DATE)

APPROVED AS TO FORM:

By: _____
Curtis N. Hedger (DATE)
Office of Corporation Counsel

SERVICE CONTRACT ADDENDA

1. This addenda made as of the ___ day of ____ 2007 by and between the County of Washtenaw (Washtenaw County) hereinafter called the OWNER AND _____ hereinafter called the CONTRACTOR, witnesseth that whereas the OWNER intends to purchase materials and services _____ hereinafter called the PROJECT, in accordance with the Drawings, Specifications and other Contract Documents prepared by Plante Moran Technology Consulting and Solutions (Plante Moran). NOW, THEREFORE, the OWNER and CONTRACTOR for the considerations hereinafter set forth, agree as follows;

2. CONTRACTOR AGREES to furnish all the necessary labor, materials, equipment, tools, permits, bonds, and services necessary to perform and complete in a quality workmanlike manner all work required for the completion of the PROJECT, in strict compliance with the Contract Documents herein mentioned, which are hereby made a part of the Contract, including the following Addenda:

<u>Addendum No.</u>	<u>Dated</u>
1	_____
2	_____

3. CONTRACTOR AGREES:

A. Sub-Contractors: The CONTRACTOR agrees to bind every sub-contractor by the terms of the Contract Documents. The Contract Documents shall not be construed to create a contractual relationship between any sub-contractor and the OWNER. CONTRACTOR agrees to indemnify and hold OWNER harmless of and from any consequence of CONTRACTOR'S failure to abide by this provision.

4. OWNER AGREES:

A. Progress payments will be made in accordance with the General Conditions of the Contract.

5. CONTRACT DOCUMENTS:

A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the PROJECT. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The Contract Documents comprise the following:

1. Documents relating to the Agreement
 - a. Modifications issued by Plante Moran, after execution of the Contract such as Change Orders, written interpretations and written orders for minor changes in the PROJECT.
 - b. Addenda to Contract Documents (this document and others that may be issued)
 - c. Agreement (Service Contract)
2. Documents related to solicitation of Proposal
 - a. Answers to post-RFP questions
 - b. Contractor Proposal
 - c. Detailed Specifications Requirements
 - d. Drawings included in the Request for Proposal Document
 - e. The entire Request for Proposal Document #WA-0701
 - f. Instructions to Bidders
 - g. Advertisements
3. Certificates of Insurance Coverage

- a. Workers' Compensation
- b. Comprehensive General Liability
- c. Automobile Public Liability and Property Damage
4. Bonds
 - a. Performance Bond, and Labor and Material Bond
 - b. Bid Bond

B. In the event that any provision of one Contract Document conflicts with the provision of another Contract Document, the provision in that Contract Document first listed above shall govern, except as otherwise specifically stated.

C. Items not covered in the Contract Documents will not be required unless it is consistent therewith and reasonably inferable there from as being necessary to produce the intended results.

D. Nothing contained in the Contract Documents shall create any contractual relationship between the OWNER or Plante Moran and any SUBCONTRACTOR or SUB-SUBCONTRACTOR.

E. By executing the Contract, the CONTRACTOR represents that he has visited the site and familiarized himself with the local conditions under which the PROJECT is to be performed.

F. The PROJECT comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

6. **AUTHORITY AND RESPONSIBILITY OF THE OWNER:** The PROJECT shall be done under the general supervision of the Representative of the OWNER, Plante Moran. The Representative of the OWNER shall decide any and all questions which may arise as to the quality and acceptability of material furnished, work performed, rate of progress of work, interpretation of Drawings and Specifications and all questions as to the acceptable fulfillment of the Contract on the part of the CONTRACTOR.

7. **INTENTIONALLY OMITTED.**

8. **TECHNICAL DESIGNER:** Plante Moran Technology and Consulting Solutions (Plante Moran), the technical designer, will provide administration of the Contract and will be the Representative of the OWNER during construction and until final payment is due.

A. Plante Moran shall at all times have access to the PROJECT wherever it is in preparation and progress.

B. Plante Moran will visit the site at intervals appropriate to the stage of construction to familiarize it generally with the progress and quality of the work and to determine in general if the PROJECT is proceeding in accordance with the Contract Documents. However, Plante Moran will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. On the basis of its on-site observations as a technical designer, it will keep the OWNER informed of the progress of the PROJECT and will endeavor to guard the OWNER against defects and deficiencies in the work of the CONTRACTOR. Plante Moran will not have control or charge of and will **not** be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the PROJECT, and it will not be responsible for the Contractors failure to carry out the PROJECT in accordance with the Contract Documents.

C. Based on Plante Moran' observations and an evaluation of the Contractors Applications for Payment, Plante Moran will determine the amounts owing to the CONTRACTOR and will issue Certificates for Payment in accordance with Section 15.

D. Plante Moran will be the interpreter of the requirements of the Contract Documents. It will make decisions on all claims, disputes or other matters in question between the CONTRACTOR and the OWNER. The CONTRACTOR will be liable for the results of any interpretation or decision rendered in good faith. Plante Moran' decisions in matters relating to technical effect will be final if consistent with the intent of the Contract Documents. All other

decisions of Plante Moran except those which have been waived by the making or acceptance of final payment, shall be subject to arbitration upon the written demand of either party.

E. Plante Moran will have authority to reject work which does not conform to the Contract Documents.

F. Plante Moran will review and approve or take other appropriate action upon the CONTRACTOR'S submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the PROJECT and with the information given in the Contract Documents.

G. OWNER reserves the right to change its Representative and to so notify CONTRACTOR

9. OWNER: The OWNER shall furnish all surveys and a legal description of the site.

A. The OWNER shall approve and CONTRACTOR shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or permanent changes in existing facilities.

B. The OWNER shall forward all instructions to the CONTRACTOR through Plante Moran.

C. If the CONTRACTOR fails to correct defective work or persistently fails to carry out the PROJECT in accordance with the Contract Documents the OWNER, by a written order, may order the CONTRACTOR to stop the PROJECT, or any portion thereof, until the cause for such order has been eliminated; however, this right of the OWNER to stop the PROJECT shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of the CONTRACTOR or any other person or entity.

10. CONTRACTOR: The CONTRACTOR shall supervise and direct the PROJECT, using his best skill and attention and he shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the PROJECT under the Contract.

A. Unless otherwise specifically provided in the Contract Documents, the CONTRACTOR shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the PROJECT, whether temporary or permanent and whether or not incorporated or to be incorporated in the PROJECT.

B. The CONTRACTOR shall at all times enforce strict discipline and good order among his/her employees and shall not employ on the PROJECT any unfit person or anyone not skilled in the task assigned to him/her. (CONTRACTOR and CONTRACTOR'S employees, SUBCONTRACTORS and agents shall abide by all OWNER Policies / Bylaws and codes of conduct. This includes the background checks on all employees that will be involved with the PROJECT.)

C. The CONTRACTOR warrants to the OWNER and Plante Moran that all materials and equipment incorporated in the PROJECT will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not conforming to these requirements shall be considered defective.

D. Unless otherwise provided in the Contract Documents, the CONTRACTOR shall pay all sales, consumer, use and other similar taxes which are legally enacted at the time bids are received, and shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the PROJECT.

E. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the PROJECT and CONTRACTOR'S obligations hereunder, and shall promptly notify Plante Moran if the drawings and specifications are at variance therewith.

F. The CONTRACTOR shall be responsible to the OWNER for its acts and omissions and those of his/its employees, SUBCONTRACTORS and their agents and employees, and other persons performing any of the work under a contract with the CONTRACTOR.

G. The CONTRACTOR shall review, approve and submit all Shop Drawings, Product Data and Samples required by the Contract Documents. The PROJECT shall be in accordance with approved submittals.

H. The CONTRACTOR at all times shall keep the premises free from accumulation of waste materials or rubbish caused by the CONTRACTOR'S operations. At the completion of the work, CONTRACTOR shall remove all waste materials and rubbish from and about the job site as well as tools, construction equipment, machinery, and surplus materials.

I. The CONTRACTOR shall pay all royalties and license fees. The CONTRACTOR shall defend all suits or claims for infringement of any copyrights, patent rights or licenses and shall save the OWNER harmless from loss on account thereof including all costs and legal fees incurred.

J. To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the OWNER and Plante Moran and their agents, Board members, students, volunteers and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, to the extent arising out of or resulting from the performance of the PROJECT or CONTRACTOR'S breach of this Agreement provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the PROJECT itself) including the loss of use resulting therefrom, or (2) is caused in whole or in part by any negligent act or omission or breach on the part of the CONTRACTOR, any SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Paragraph. In any and all claims against the OWNER or Plante Moran or any of their agents, Board members, volunteers or employees by any employee or agent of the CONTRACTOR, or any SUBCONTRACTOR, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any SUBCONTRACTOR under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. The obligations of the CONTRACTOR under this Paragraph shall not extend to the extent of the liability of Plante Moran, its agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by Plante Moran, its agents or employees.

K. The CONTRACTOR shall provide all necessary information for all CONTRACTOR staff and SUBCONTRACTOR staff for the OWNER to perform County mandated security checks. Failure to comply or pass required security checks will eliminate staff from working on this project.

11. SUBCONTRACTS: SUBCONTRACTOR is a person or entity who has a direct contract with the CONTRACTOR to perform any of the work at the site.

A. Unless otherwise required by the Contract Documents or in the Bidding Documents, the CONTRACTOR, as soon as practical after the award of the Contract, shall furnish to Plante Moran in writing the names and addresses of SUBCONTRACTORS for each of the principal portions of the PROJECT. The CONTRACTOR shall not employ any SUBCONTRACTOR to whom Plante Moran or the OWNER may have a reasonable objection. The CONTRACTOR shall not be required to contract with anyone to whom the CONTRACTOR has a reasonable objection. Contracts between the CONTRACTOR and the SUBCONTRACTOR shall (1) require each SUBCONTRACTOR, to the extent of the PROJECT to be performed by the SUBCONTRACTOR, to be bound to the CONTRACTOR by the terms of the Contract Documents, and to assume toward the CONTRACTOR all the obligations and responsibilities which the CONTRACTOR, by these Documents, assumes toward the OWNER and Plante Moran, and (2) allow to the

SUBCONTRACTOR the benefit of all rights, remedies and redress afforded to the CONTRACTOR by these Contract Documents. No Subcontract between CONTRACTOR and a SUBCONTRACTOR may be used as a basis to increase CONTRACTOR'S payment hereunder. CONTRACTOR shall immediately discharge any SUBCONTRACTOR lien of any nature or kind and shall indemnify and hold OWNER harmless of and from any consequence of its failure to do so.

12. WORK BY OWNER OR BY SEPARATE CONTRACTORS: The OWNER reserves the right to perform work related to the PROJECT with his own forces, and to award separate contracts in connection with other portions of the PROJECT or other work on the site under these or similar Conditions of the Contract. If the CONTRACTOR claims that delay or additional cost is involved because of such action by the OWNER, CONTRACTOR shall make such claim as provided elsewhere in the Contract Documents.

A. The CONTRACTOR shall afford the OWNER and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate work with theirs as required by the Contract Documents.

B. Any costs caused by defective or ill timed work shall be borne by the party responsible therefore.

13. INTENTIONALLY OMITTED.

14. TIME: All time limits stated in the Contract Documents are of the essence of the Contract. The CONTRACTOR shall expedite the PROJECT and achieve Substantial Completion within the Contract Timeline.

A. The Date of Substantial Completion of the PROJECT is the date certified by Plante Moran when construction is sufficiently complete so that the OWNER can occupy or utilize the PROJECT for the use for which it is intended.

15. PAYMENTS AND COMPLETION: Progress payments shall be made by the OWNER to the CONTRACTOR on account of the contract amount for work completed, based upon Applications for Payment submitted by the CONTRACTOR to Plante Moran using AIA Document G702 (Application & Certificate for Payment) and sworn statements from CONTRACTOR and every SUBCONTRACTOR certifying the amount each such CONTRACTOR and SUBCONTRACTOR is currently owed through the date of the Application for Payment. Such applications shall be submitted no more often than once per calendar month, and approved by Plante Moran Retainage of ten (10%) per cent may be withheld from each progress payment. Final payment, constituting the entire unpaid balance of the contract sum, shall be made by the OWNER to the CONTRACTOR when the work has been completed, the contract fully performed, and the application for final payment approved by Plante Moran

A. Payments may be withheld on account of (1) defective work not remedied, (2) claims filed, (3) failure of the CONTRACTOR to make payments properly to SUBCONTRACTORS or for labor, materials, or equipment, (4) damage to the OWNER or another CONTRACTOR, (5) persistent failure to carry out the PROJECT in accordance with the Contract Documents, or (6) a breach by CONTRACTOR of this Agreement.

B. When Plante Moran agrees that the PROJECT is substantially complete, it will issue a Certificate of Substantial Completion.

C. Final payment shall not be due until the CONTRACTOR has delivered to the OWNER a complete release of all liens arising out of this Contract or receipts in full and corresponding sworn statements covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the OWNER indemnifying it against any lien. If any lien remains unsatisfied after all payments are made, the CONTRACTOR shall refund to the OWNER all moneys the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

D. The making of final payments shall constitute a waiver of all claims by the OWNER except those arising from (1) unsettled liens, (2) faulty or defective work appearing after Substantial Completion, (3) failure of the PROJECT to comply with the requirements of the Contract Documents, or (4) terms of any special warranties required by the Contract Documents. The acceptance of final payment shall constitute a waiver of all claims by the CONTRACTOR.

16. PROTECTION OF PERSONS AND PROPERTY: The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the PROJECT. CONTRACTOR shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to (1) all employees on the PROJECT and other persons who may be affected thereby, (2) the PROJECT and all materials and equipment to be incorporated therein, and (3) other property at the site or adjacent thereto. CONTRACTOR shall give all notices and comply with all applicable laws, ordinances, rules, regulations and orders of any public authority bearing on the safety of persons and property and their protection from damage, injury or loss. The CONTRACTOR shall promptly remedy all damage or loss to any property caused in whole or in part by the CONTRACTOR, any SUBCONTRACTOR, any SUB-SUBCONTRACTOR, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, except damage or loss attributable to the acts or omissions of the OWNER or Plante Moran or anyone directly or indirectly employed by either of them or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the CONTRACTOR. The foregoing obligations of the CONTRACTOR are in addition to his obligations under Paragraph 10 J.

17. INTENTIONALLY OMITTED.

18. CHANGES IN THE PROJECT: The OWNER, without invalidating the Contract, may order Changes in the PROJECT consisting of additions, deletions, or modifications, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the PROJECT shall be authorized by written Change Order signed by the OWNER and Plante Moran

A. The Contract Sum and the Contract Time may be changed only by Change Order.

B. Adjustment, if any, in the amounts to be paid to the CONTRACTOR by reason of any such change, addition or deduction shall be determined by one or more of the following methods, the OWNER reserving the right to select the method or methods at the time of the written order is issued:

1. By unit prices contained in the CONTRACTOR'S original bid and incorporated in the construction contract.
2. By a supplemental schedule of prices contained in the CONTRACTOR'S original bid and incorporated in the construction contract.
3. By an acceptable lump sum proposal from the CONTRACTOR.
4. On a cost-plus-limited basis not to exceed a specified maximum limit of cost, said cost to include labor, material, equipment and increased insurance necessitated by a Change Order plus 10% of said cost to cover superintendence, general expense and profit.

C. "COST" as used herein shall be the actual and necessary costs incurred by the CONTRACTOR by reasons of the change in the PROJECT for:

1. Labor
2. Materials
3. Equipment rental
4. Insurance premiums

FURTHER DEFINITIONS OF CHANGE ORDER NECESSITATED INCREASED COSTS:

Labor costs shall be the amount shown on the CONTRACTOR'S payrolls with payroll taxes added when such taxes can be shown to have been incurred. In no case shall the rates charged for labor exceed the rates paid by the CONTRACTOR for the same class of labor employed by him to perform work under the regular items of the contract.

Material costs shall be the net price paid for material delivered to the site of the PROJECT. If any material previously required is omitted by the written order of the OWNER after it has been delivered to or partially worked on by the CONTRACTOR and consequently will not retain its full value for other uses, the CONTRACTOR shall be allowed the actual cost of the omitted material less a fair market value of the material as determined by the OWNER.

Equipment rental shall be the actual rental cost incurred for necessary equipment procured solely to accomplish the change in the PROJECT. No costs shall be allowed for equipment already in use on the site and/or previously in regular use on site. Costs shall not be allowed in excess of usual rentals charged in the Detroit district for similar equipment of like size and condition, including the costs of necessary fuel, supplies and repair for operating the equipment. If equipment not on the site is required for the change in the PROJECT only, the cost of transporting such equipment to and from the site shall be allowed.

Insurance premiums shall be limited to those based on labor payroll and to the types of insurance required by the Contract. The amount allowed shall be limited to the net cost incurred as determined from the labor payroll covering the PROJECT. The CONTRACTOR shall, upon request of the OWNER, submit verification of the applicable insurance rates and premium computations. "SPECIFIED MAXIMUM LIMIT OF COST" is the amount stated in the written order of the OWNER authorizing the change in the PROJECT. The amount to be allowed the CONTRACTOR shall be the "Cost" and "Plus" percentage, or the "specified maximum", whichever is the lesser amount. The CONTRACTOR shall keep complete, accurate, daily records of the net actual cost of changes in the PROJECT and shall present such information in such form and at such times as the OWNER may direct.

19. CORRECTION OF WORK: The CONTRACTOR shall promptly correct any work rejected by Plante Moran as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any work found to be defective or nonconforming within a period of one (1) year from the Date of Substantial Completion of the Contract or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents. The provisions of this Section 19 apply to work done by SUBCONTRACTORS as well as to work done by direct employees of the CONTRACTOR.

20. TERMINATION OF THE CONTRACT: If Plante Moran fails to issue a Certificate for Payment for a period of sixty days through no fault of the CONTRACTOR, or if the OWNER fails to make payment thereon for a period of sixty days, the CONTRACTOR may, upon seven additional days written notice to the OWNER and Plante Moran, terminate the Contract and recover from the OWNER payment for all work executed and for any proven loss sustained upon any materials, equipment, tools, and construction equipment and machinery, including reasonable profit and damages applicable to the PROJECT.

A. If the CONTRACTOR defaults or persistently fails or neglects to carry out the PROJECT in accordance with the Contract Documents or fails to perform or conform to any provision of the Contract, the OWNER may, after seven days written notice to the CONTRACTOR and without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof, including compensation for Plante Moran' additional services made necessary thereby, from the payment then or thereafter due the CONTRACTOR or, at his option, OWNER may terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the CONTRACTOR and may finish the PROJECT by whatever method the OWNER may deem expedient, and if the unpaid balance of the Contract Sum exceeds the expense of finishing the PROJECT, such excess shall be paid to the CONTRACTOR, but if such expense exceeds such unpaid balance, the CONTRACTOR shall pay the difference to the OWNER.

21. All indemnification and hold harmless obligations herein shall survive any end or termination of this Agreement.

22. This Agreement is the product of equal input of the parties hereto and, therefore, no ambiguity shall be construed in favor of any particular party.

23. INTENTIONALLY OMITTED.

24. The signatory for CONTRACTOR warrants and represents that he/she is authorized to execute this Agreement.

25. INTENTIONALLY OMITTED.

26. In the event any provision herein shall be declared unlawful or unenforceable by a competent court or tribunal then, at OWNER'S option, this Agreement may either be enforced as to its remaining provisions or terminated.

27. The contract is for a period of three (3) years from the date of final project acceptance. If both the OWNER and CONTRACTOR agree, the contract could be extended for two (2) additional years on a year by year basis with the same terms and conditions. No pricing changes are allowed during the initial three (3) years of the contract.

28. SPECIAL PROVISIONS: The OWNER and CONTRACTOR mutually agree that this Agreement shall be subject to the following Special Provisions, which shall supersede other conflicting provisions of this agreement.

IN WITNESS WHEREOF, the parties have made and executed this Agreement, the day and year first above written.

County of Washtenaw
(OWNER)

(CONTRACTOR)

BY: _____
(Authorized Signature)

BY: _____
(Authorized Signature)

Title: _____

Title: _____

Date: _____

Date: _____